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User Education and Computer Literacy Skills as Determinants of Electronic Resources Use Among Undergraduate Students in State Universities in South-West, Nigeria

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This study investigated the user education and computer literacy skills as determinants of electronic resources use among undergraduates in South-west, Nigeria. The descriptive survey research design was employed for this study. The results indicated that; nearly all the electronic resources were grossly not available and only few were available when the need arise; students had low frequency of usage as regard electronic library resources; there is a positive non-significant relationship between user education and the use of electronic resources among undergraduate students of state university in South-west Nigeria; there is a positive significant relationship between computer literacy and the use of electronic resources among undergraduate students of state university in South-west, Nigeria. It was recommended that; there should be an expansion of all existing computer departments in the universities to enable them produce more of computer literacy, libraries should employ professionally trained and competent librarians who should be sent periodically to seminar and workshops to update their knowledge and the library should strive to equip their students with sufficient practical skill to make them self-reliant in the global market of unemployment.

Key words: User education, Computer literacy skills, Electronic resources use, Undergraduate students, State universities

INTRODUCTION

The benefits of e-resources, according to Oyedun (2005), are that they can be traced easily from indexing and abstracting data bases. Access to them can be from so many points such as the user's home, office, or dormitory whether or not the physical library is open. In addition, the library can get usage statistics that is not readily available for print collections. Electronic resources collections save space and are relatively easily to maintain (Montgomery and King, 2000) when total processing and space costs are taken into account, electronic collection may also result in some overall reductions in library costs.

The most likely cause of the non-use of e-resources by undergraduate students in university libraries for research work is probably lack of user education. Ajala (2007) opined that user education is critical for retrieving e-resources for scholarly work. Also, to educate library users implies equipping and providing them, with training on how to use the library tools in order to use e-resources. Cram (2000) define user education as an attempts to change the behaviour of an individual who will be developing a search strategy to retrieve useful information. According to Ojasaar (2003), user education is defined as an instruction which equips library users with the skills to enable them to be independent and sophisticated users of libraries and their resources. The activities of education, according to Ojassar (2003) include teaching users how to make the best possible use of library resources, services and facilities including formal and informal instruction delivered by a librarian or other staff member one-on-one, or in a group.

Some of the undergraduate students might have received training on user education and probably could search and retrieve e-resources for their research. This might be due to their course of study such as those purchasing degrees in computers and information science for better academic performance, all under graduate students are expected to retrieve and use their needed and precise e-resources without hitch and waste of time. This will eliminate frustration and promote scholarship. Undergraduate students that acquire user education training are more likely to locate, retrieve and use e-resources in maximizing their learning than those without user education training. (Omelezor, 2010). Nithyanandam et al., (2000) posit that if study programmes are to be based on the student's active search for knowledge, then students must acquire sound knowledge for searching, evaluation and utilization of scientific and scholarly information.

User education programme which entails teaching students how to use this library to locate, retrieve, use and communicate information in described by Alimohamadi and Sajjadi (2006), as organized in certain university libraries. However, the courses varies in scope and are not always well integrated into the teaching process. User education ought to be integrated as much as possible into the different parts of each study programme. Agyen Gyesi (2008) opined that the compartmentalization of university into faculties and departments has necessitated the introduction of an enhanced user education because of increase in the amount of literature. Students with user education knowledge might be able to speed-up e-resource retrieval process thus facilitating learning while those without user education would probably retrieve worthless literature, loaded with unwanted information and finally become dissatisfied.

Computer literacy may be another factor that can influence the use of e-resources for undergraduate student's work. Idowu Adagunojo, and Idowu (2004) define Computer Literacy as the ability to make use of computer system to word process documents, analyse data, and develop small computer programmes, browse the internet and install software. The Department for Education in the United State of America (1996) cited by Hall (2005) reported that information literate individuals, in addition to knowing how to use computer for word processing, spreadsheets and internet access, make use of increased learning opportunities provided by such technology. In addition, Thomas Rivers Policy Institute (2002) in the United State noted that students who are not computer literate and also lack access to the Internet (among other technologies) are likely to lag behind their peers. Such deprived student would miss the instant links which information e-resources provide. This scenario may lead to poor academic output and finally result to discouragement.

Owing to information explosion, university libraries are becoming increasingly automated. The implication of this is that more information is digitized. It is, therefore, expedient for undergraduate students to be computer literate because searching for books in a card catalogue is gradually giving way to searching for information through the Online. Public Access Catalogue (OPAC). It is more likely that only undergraduates with adequate computer literacy can access, retrieve and use the digitized information. This view is supported by Tella and Mutula (2008) who argued that students with higher computer literacy may vary among higher education student entering university. It is therefore, important to include computer literacy in the curriculum of higher education students. First-Bowe, Boger, Franklin Mcintyre, Polansky and Sclough (1995) studies the computer literacy of graduate students entering university and found that computer university libraries will present enormous and diverse of e-resources for use by undergraduate students. This means that some of the students that have access to computers and computer network's may have some flexibility of doing their research work while those students without ICT access will not be flexible in the course of their study. in addition, ICT access to undergraduate students will simplify their word processing activities, making their editing work easy, improve the presentation of their assignment and research reports. The web is a quick and easy way to accessing lots of information on any topic. Students access to the web might surmount the inadequacy of research literature, especially when they lack ICT access in their libraries and will miss information through their subject gateways and this will result to confusion and frustration.

The implication for the non-use of e-resource by undergraduate students could result in poor performance in their academic pursuits, delay in submitting

assignments, term paper and adequate research output. This may subsequently affect them in the larger society as being long-life learners, consequently resulting to poor productivity on their jobs. Others will be delayed at graduation for not optimally using e-resources that will influence and quicken student's product. It could be assumed that the possible factors that will probably influence the use of e-resources in public libraries in Nigeria; by undergraduate students may include user education and computer literacy

RESEARCH QUESTIONS

The study will answer the following research questions:

1) What are the electronic resources available for use among undergraduate students in state universities in South-west, Nigeria?
2) What is the frequency of use of electronic resources by undergraduate students in state universities in South-west, Nigeria?
3) Is there any relationship between user education and use of electronic resources among undergraduate students in state universities in South-west, Nigeria?
4) Does any relationship exist between computer literacy and use of electronic resources among undergraduate students in state universities in South West, Nigeria?
5) What is the composite relationship of user education and computer literacy on use of electronic resources among undergraduate students in state universities in South -west, Nigeria?

LITERATURE REVIEW

Many of the university libraries have made a significant amount of investment on providing services through electronic information resources and other computer based technologies so that users such as undergraduate students can gain access to electronic information resources that will add value to their scholarly research work.

Although the value of e-resources used by undergraduate students is commonly and globally accepted as contributing to their research work, existing literature records e-resources use to be underused in most libraries in Nigeria by undergraduate students. This has diminished the potentials and benefits considering the huge investment of their resources. This might occur because some of the undergraduate students are unaware of the potentials and benefit of e-resources and therefore, do not use them for their research while some

that use them do not optimally utilize them for their research works. This may probably be due to lack of adequate user education on the part of the students on the potentialities and benefits of resources, how to locate and retrieve them. Also some of the students may lack the computer literacy skills which will enable them to use computer knowledge and retrieve their needed electronic information resources.

User education as defined by Kumar and Phil (2009) is the programme through which potential users of information in the library are made aware of the information source. To Islam and Tsuji (2010), user education refers to the broad set of skills and understanding that enable a person to recognise information needs, decide which resources will best answer those needs, know how to use the resources effectively and evaluate the information. In most university libraries in the world, user education is formally integrated into their curricula of general education and major (Bockman, 2002). User education programme normally encourage faculty/library collaboration with the goal of helping students develop information skills to enable them to recognise various information source particularly e-resources that are lately coming up into many university libraries.

According to Clyde (2002), there are many terms that are used to indicate library user education, these include; bibliographic education, library tour, library orientation, library instruction, library research course, user training, library skills instruction and library customer education. Others are information skills instruction, research instruction and information literary education..

Aguolu and Aguolu (2002) believed that user education in university libraries is aimed at developing the bibliographic skill of library user so that they can make the most effective use of the library and its information resources (print and e-resources). However, some existing studies have revealed that Nigeria University Librarian pay more attention to acquisition, processing and preservation of library materials with less emphasis on user education programme which would equip the students with bibliographic skills to enable them maximize the e-resources available in their libraries (Lawal, 2002; Oyedun, 2005; Ajayi and Adetayo, 2005).

Computer literacy refers to effectiveness in searching for needed information by using electronic sources. In other words, it is the extent to which undergraduate students are capable of conducting electronic information searching or use computer facilities to locate relevant source of information for their scholarly work. Computer literacy can be defined as comprising a variety of complex skills (which include: Booting a computer, how to use a key board, edit work, retrieve information from computers, send and receive e-mails etc) which users need in order to function effectively in digital environments (Eshet-Alkala, 2014). According to Shih

(2006), computer literacy is defined as competencies such as word processing database knowledge and use of spreadsheet to use ICT to satisfy personal needs or to maximize the performance of specified tasks. The need for computer literacy has become widely accepted as a kind of value natural and technological necessity of modern life (Stephen and Shotic, 2007). The importance of computer literacy in higher education is overwhelmingly necessary for using e-resource and word processing (Tella and Mutala, 2008). In the increasingly automated library environments, students cannot find book by looking in a card catalogue but they must use computerized database (Hall, 2005). It is therefore in the interest of students particularly undergraduate students that embark on serious research to be computer literate and use e-resource with ease in their libraries.

Ownes et al., (2002) emphasized the importance of computer literacy in information search through a computer networks that it allows students to organise and edit their project easily.

As argued by Tsakonas and Papatheodorou (2006) digital libraries and e-resources provide services supporting students to perform intense task that require complex interaction activities. This implies that undergraduate students cannot access e-resources without adequate computer literacy skills. How can undergraduate students access e-resources when they are comfortable with computer usage? Also, how can they access e-resources when they cannot navigate or search through the internet? These are some of the pertinent questions confronting undergraduate wanting to use e-resources in university libraries (Okello – Obura and Ikoja Odongo, 2010). Students sometimes lack both computer literacy and research skill and so do not find the best appropriate information and therefore are tempted to use whatever information they can find first and fast. (Mac Whinnie, 2003 and Thachill, 2008). Normally, even with a good and easy to use integrated system, students occasionally need the expertise of a librarian to apply search techniques and find the information they need (Thanchill, 2008).

Oduwole, Oyesiku & Lalubo (2002) citing Idowu and Mabawonku (1999) and Ajala (2001) pointed out that, studies in Nigeria have reported the use of computer information and communication technology in university libraries. Such studies also include, those of (Ogunleye, 1997; Oketunji, 2001 and Akintunde, 2006). Also, the study by Ozomelem (2009) on the use of e-resources by undergraduate students of the Department of Library and Information Science of Delta State University, Abraka, Nigeria observed that there is low level of computer literacy among the respondents. This low level of computer literacy has also been reported by Issa, Amusa and Daura (2009) among students of the University of Ilorin, Kwara State, Nigeria where they reported that only 25 of their respondents use computer for searching

education related database. These reports corroborated with that of Rosenberg (2006) who investigated the current status of university libraries in Africa and reported that the majority of libraries undertake computer literacy training at the undergraduate level in one form or another. However, she maintained that only 16% support integrated computer literacy programmes of their university. In her final report to the international network for Accessibility to Scientific Publications (INASP), Rosenberg (2006) concedes to end-user training for undergraduate. The norm she states "is for libraries to offer one-off workshop in computer literacy related subjects" and she noted that attendance is always poor and therefore low level of computer literacy, e-resource knowledge and use therefore remains a problem in university libraries for undergraduate students.

Computer literacy can be a tremendous asset that will assist in retrieving vital information needed by students in university libraries. With ICT facilities available in most university libraries in Nigeria, undergraduate students who are computer literate could find it easy to search for their information needs in the libraries. In summary, in today's world, digital libraries are fast becoming real. The internet and various forms of web-enabled technologies are growing exponentially, more and more information are becoming digitized. Therefore, for effective information searching to be achieved by undergraduate students, computer literacy is critical.

METHODOLOGY

The research design adopted for this study was the descriptive survey method.

All the undergraduate students in state universities in the South-west, Nigeria is the population of this study

The multi-stage sampling technique was used for this study. Four stages were involved in the sampling procedure. The first stage involved the purposive selection of all the state universities in the South-west, Nigeria. All the state universities were included in order to ensure that all members of the population have an equal chance of being selected and also to have manageable sampling frame. Thus the primary sampling unit was the eight (8) state universities out of the thirty-six (36) universities in the South-west, Nigeria. They are; Adekunle Ajasin University, Akungba, Ekiti State University, Ladoke Akintola University of Technology, Ogbomosho, Lagos State University, Ojo, Lagos, Olabisi Onabanjo University, Ago-Iwoye, Ondo State University of Science and Technology, Okitipupa, Osun State University, Osogbo and Tai-Solarin University of Education, Ijebu-Ode, Ogun State

The second stage was the purposive selection of four

facilities, that is, the Faculties of Art, Education, Science and Social Sciences in the eight state universities in South-west, Nigeria. These faculties were selected because they always have high population of students in any university and because of the relationship of unit courses being shared with other faculties.

Thirdly, two departments was purposively selected from each of the selected faculties from the field data, two departments that has the highest number of students population was chosen in all the selected faculties and state universities.   Lastly, a proportionate random sampling technique was used to select fifty students across the selected departments. In effect, the total population of the undergraduate students used for the study is fifty.

The instrument used to elicit information from the undergraduate students was the Questionnaire called Undergraduates' Electronic Resources Response Scale (UERRS)

The copies of the questionnaire were collated, coded and analyzed using the Statistical package for Social Science (SPSS).   Descriptive statistics such as percentages, means and standard deviation was also used to analyze the research questions. Table 1

RESULTS AND FINDINGS

Research Question 1: What are the electronic resources available for use among undergraduate students in state universities in South-west, Nigeria?

Table 2 presents the distribution of respondents by the electronic resources available for use among undergraduate students in state universities in South-west Nigeria. According to the result of the analysis presented above, it is glaring that nearly all the electronic resources listed above was grossly not available for student at all time of their need. One could deduce that most of the resources were only available when the need arise. For example, 23 (46%) of the students indicated that e-journals were available as the need arise, 6 (12.0%) indicated monthly, 5 (10.0%) indicated twice a week, 5 (10.0%) indicated once a week and 11 (22.0%) indicated daily. Also for E-data archives, 25 (50.0%) of the students indicated that e-data archive were available as the need arise, 6 (12.0%) indicate monthly, 4 (8.0%) indicate twice a week, 5 (10.0%) indicate once a week and 10 (20.0%) indicate daily. More so, for E-Manuscript, E-Book, E-Magazine, E-Thesis, etc they also follow the same trend.
Moreover, for database like Agora, 59 (58.0%) of the students indicated that AGORA were available as the need arise, 7(14.0%) indicate monthly, 6(12.0%) indicate twice a week, 5 (10.0%) indicate once a week and 3 (6.0%) indicate daily. Also for HINARI, 31 (62.0%) of the

students indicated that HINARI were available as the need arise, 5 (10.0%) indicate monthly, 7 (14.0%) indicate twice a week, 4 (8.0%) indicate once a week and 3 (6.0%) indicate daily. In addition, the same trend of availability were also applicable for JSTOR, EBSCOHOST, MEDLINE and others. This finding is in line with Ibrahim (2004), wh reported the diffusion and achievements in the utilization of electronic resources and services in libraries.

Research Question 2: What is the frequency of use of electronic resources among undergraduate students in state universities in South-west, Nigeria?

Table 3 presents the distribution of respondents by the frequency of using electronic resources available among undergraduate students in state universities in South-west, Nigeria. According to the result of the analysis, presented above, it is obvious that undergraduate students in South-west, Nigeria were not making use of electronic resources in large proportion when the need arise. Take for example, 24 (48.0%) of the students indicated that they make use of e-journals as the need arise, 10 (20.0%) indicate monthly, 1 (2.0%) indicate twice a week, 9 (18.0%) indicate once a week and 6 (12.0%) indicate daily. Also, for E-data archives, 30 (60.0%) of the students indicated that they make use of e-data archive as the needs arise, 6 (12.0%) indicate monthly, 4 (8.0%) indicate twice a week, 5(10.0) indicate once a week and5 (100.0%) indicate only. More so, for E-Manuscript, E-Book, E-Magazine, E-Thesis, etc they also follows the same trend. This is in line with Oyewusi and Oyeboade (2009) in their study of Accessibility and use of library resources by undergraduates. They found out that students have access to library electronic resources, though, some of them don't make use of these resources. One can therefore generalise that students had low frequency of usage as regard electronic library resources.

Research Question 3: Is there any relationship between user education and the use of electronic resources among undergraduate students of state university in South-west, Nigeria?

The result in the table 4 revealed a non-significant relationship (r=0.05, P >0.05). This implies that the mean score of 15.74 obtained for user education is not significantly different from the mean score of 38.70 obtained for Use of electronic resources at the 0.05 level. That is, the observed different is not statistically significant.   Thus, there is a positive non-significant relationship between user education and the use of electronic resources among undergraduate students of state university in South West Nigeria.

Research Question 4: Does any relationship exist

Table 1: Distribution of Respondents by Gender, Age and Level

Sex	Frequency	%
Male	27	54.0
Female	23	46.0
Total	50	100.0

Age Group	Frequency	%
17-19 years	2	4.0
20-22 years	18	36.0
23-25 years	25	50.0
26-28 years	3	6.0
29-31 years	2	4.0
Total	50	100.0

Level	Frequency	%
100	4	8.0
200	15	30.0
300	28	56.0
400	3	6.0
Total	300	100.0

Table 2: Electronic Resources Available for use

Electronic Resources	As the need arise		Monthly		Twice a week		Once a week		Daily	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
E-journal	23	46.0	6	12.0	5	10.0	5	10.0	11	22.0
E-Data Archives	25	50.0	6	12.0	4	8.0	5	10.0	10	20.0
E-Manuscript	25	50.0	5	10.0	6	12.0	7	14.0	7	10.0
E-Book	29	58.0	-	-	7	14.0	4	8.0	10	20.0
E-Magazine	25	50.0	4	8.0	7	14.0	5	10.0	9	18.0
E-Thesis	27	54.0	8	16.0	6	12.0	5	10.0	4	8.0
Word Wide Web	21	42.0	2	4.0	7	14.0	6	12.0	14	28.0
E-Newspaper	24	48.0	1	2.0	7	14.0	8	16.0	10	20.0
E-Mail	22	44.0	-	-	8	16.0	4	8.0	16	32.0
E-Research Report	22	44.0	6	12.0	5	10.0	4	6.0	13	26.0
E-Bibliographic Databases	25	50.0	4	8.0	10	20.0	3	6.0	8	4.0
E-Traps	26	52.0	6	12.0	6	12.0	6	12.0	6	12.0
CD-ROM	25	50.0	3	6.0	8	16.0	4	8.0	10	20.0
E-Reference source	26	52.0	9	18.0	4	8.0	5	10.0	6	12.0
E-Tutorials	29	58.0	5	10.0	4	8.0	8	15.0	4	8.0
AGORA	29	58.0	7	14.0	6	12.0	5	10.0	3	6.0
HINARI	31	62.0	5	10.0	7	14.0	4	8.0	3	6.0
JSTOR	28	56.0	9	18.0	4	8.0	6	12.0	3	6.0
EBSCOHOST	31	62.0	8	16.0	4	8.0	4	8.0	3	6.0
MEDLINE	33	66.0	9	18.0	2	4.0	2	4.0	4	8.0
Others	29	58.0	7	14.0	5	10.0	2	4.0	7	14.0

between computer literacy and the use of electronic resources among undergraduate students of state universities in South-West, Nigeria?

The result in the table 5 revealed a significant relationship (r=0.37, P<0.05). This implies that the mean score of 65.2 obtained for computer literacy is significantly

Table 3: What is the frequency of use of Electronic resources among undergraduate students of state universities in South-west, Nigeria?

Electronic Resources	As the need arise		Monthly		Twice a week		Once a week		Daily	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
E-journal	24	48.0	10	20.0	1	2.0	9	18.0	6	12.0
E-Data Archives	30	60.0	6	12.0	4	8.0	5	10.0	5	10.0
E-Manuscript	27	54.0	11	22.0	6	12.0	4	8.0	2	4.0
E-Book	33	66.0	4	8.0	5	10.0	2	4.0	6	12.0
E-Magazine	29	58.0	9	18.0	4	8.0	2	4.0	6	12.0
E-Thesis	35	70.0	5	10.0	5	10.0	4	8.0	1	2.0
Word Wide Web	25	50.0	5	10.0	9	18.0	-	-	11	22.0
E-Newspaper	29	58.0	8	16.0	2	4.0	3	6.0	8	16.0
E-Mail	30	60.0	5	10.0	4	8.0	4	8.0	7	14.0
E-Research Report	32	64.0	4	8.0	1	2.0	4	8.0	9	18.0
E-Bibliographic Database	33	66.0	3	6.0	6	12.0	2	4.0	6	12.0
E-Traps	32	64.0	2	4.0	6	12.0	5	10.0	5	10.0
CD-ROM	31	62.0	7	14.0	2	4.0	2	4.0	8	16.0
E-Reference source	33	66.0	-	-	7	14.0	3	6.0	7	14.0
E-Tutorials	32	64.0	8	16.0	3	6.0	2	4.0	5	10.0
AGORA	40	80.0	4	8.0	1	2.0	4	8.0	1	2.0
HINARI	38	76.0	6	12.0	3	6.0	1	2.0	2	4.0
JSTOR	40	80.0	4	8.0	2	4.0	2	4.0	2	4.0
EBSCOHOST	40	80.0	2	4.0	1	2.0	4	8.0	3	6.0
MEDLINE	37	74.0	4	8.0	3	6.0	4	8.0	2	4.0
Others	42	84.0	1	2.0	3	6.0	2	4.0	2	4.0

Table 4: Correlation between user education and the use of electronic resources

Variable	N	Mean	S.D	r	Probability
Users Education	50	15.74	1.9		
Use of Electronic Resources	50	38.70	15.5	0.05	0.710

different from the mean score of 38.70 obtained for Use of electronic resources at the 0.05 level. This is, the observed difference is statistically significant. Thus, there is a positive significant relationship between computer

Table 5: Correlation between computer literacy and the use of electronic resources

Variable	N	Mean	S.D	r	Probability
Computer literacy	50	65.2	19.17		
Use of Electronic Resources	50	38.70	15.5	0.37*	0.008

Table 6: The composite effect of user education and computer literacy on the use of electronic resources.

Parameter	Coefficient	Standard Error	t-cal	Probability
Constant	-16.875	30.832	-0.553	0.583
Ussr Education	1.410	1.361	1.036	0.305
Computer Literacy	0.441	0.985	0.448	0.656

R^2 =   0.150
Adjusted R^2 =   0.105
F-statistic =   2.195

literacy and the use of electronic resources among undergraduate students of state university in South West, Nigeria.

In table 6, User Education and Computer Literacy as the independent variables accounted for about 16.0% of the total variation in the use of library electronic resources (R2=0.160, P<0.05). This is significant. Therefore, User Education and Computer Literacy to undergraduate students play a significant role toward the use of library electronic resources.

On the other hand, the F-statistics of 2.915, which shows the overall performance of the regression model, indicated that the model is well specified and adequate for forecasting and policy analysis. This means that User education and computer literacy as independent variables explain a significant movement in the explained variable (use of electronic resources).

CONCLUSION

The results indicated that; nearly all the electronic resources were grossly not available and only few were available when the need arise; students had low frequency of usage as regard electronic library resources; there is a positive non-significant relationship between user education and the use of electronic resources among undergraduate students of state universities in South-west Nigeria; there is a positive significant relationship between computer literacy and the use of electronic resources among undergraduate students of state universities in South-west, Nigeria

The findings also showed that undergraduate students in state universities in South -west, Nigeria were not adequately trained on the use of electronic resources.

Students are professionally incompetent in computer skills that can promote their performance Every institution should try to upgrade their laboratories,. Install latest computer systems, uninterrupted power supply device and generator. Since it is imperative that we increase the quality and quantity of students in state universities in South-west, Nigeria.

RECOMMENDATIONS

1) Expansion of all existing computer departments in the universities to enable them produce more of computer literacy.
2) Libraries should employ professionally trained and competent librarians and such librarians should be sent periodically to seminars and workshops to update their knowledge and enable them impart knowledge on students.
3) Universities should strive to equip their students with sufficient practical skill on the use of electronic information resources to make them self-reliant in the global market of unemployment.

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