Impact of Open Educational Resources on Quality of Research

Wajeeha Muazim

MPhil Scholar, Department of Education, PMAS Arid Agriculture University, Rawalpindi, Pakistan

Dr. Muhammad Arshad Dahar

Assistant Professor, Department of Education, PMAS Arid Agriculture University, Rawalpindi, Pakistan

Dr. Qaisara Parveen

Associate Professor, Department of Education, PMAS Arid Agriculture University, Rawalpindi, Pakistan

Corresponding Author: drarshad1969@uaar.edu.pk

Abstract: The abundant range of OER (Open Educational Resources) are rapidly going through the massive scale changes. Due to Covid-19 the call for digitalization is making all around the globe. The work places, academic places and even at every houses. Which is creating the whole new world of digitalization. Sometimes due to competitive world they run for race but to gain the better outcome it needs to maintain quality insurance. So, as we are aware of OER and even know many of the tools which are in regularly use. In my study my main focused OER tools were "Google application" as they are user friendly. The purpose of this study was to about to see the Impact of these mostly above given tools on quality of research and how much the impact it making on research related matters. The research methodology was mixed method approach. This study was much of self-created questionnaire and semi-structured discussions as a data collection instrument to collect data from respondents in the selected research institutes. The study is in support of proving OER tools to be insured as great impactor-based technologies for research. The population of the study was consisting of 6 universities from Rawalpindi and 6 universities from Islamabad. Sample size of this study was 597 undergraduate students and currently post-graduate students preferred. Self- developed questionnaire was used via "Google applications" Google forms for the collection of data. The researcher developed the Survey questionnaire from the supervision of her supervisor and latest previously done most relevant researches. Data was analyzed by one of "Google application" Google forms. Which to made sure for using one of its tools practically for most authentic findings. Detailed results are mentioned below in paper.

Keywords: OER, research, Impact, Information, Communication, Technology

INTRODUCTION

Conceptualizations of Open Educational Practices (OEP) is widely and ranges from those commence essential technologies on the development for the educational perspectives. For the use of open educational resources (OER) to wider circle to check the impact assumption of OEP, inclusively of research purposes in educational areas. Open Educational Resources help to support you in the gaining.

The unbolted available content also allows for multiple entries to support the sources of the research. This paper explores the theoretical and empirical literature to outline how the concept of OEP has evolved historically. The paper aims to provide a useful synthesis of OEP literature for education researchers and practitioners.

ICT is characterized as any innovation used to help data gathering, handling and use. (Lange et al., 2020). For the clear understanding of the entities Impact: The action of having effect, especially something new, has on a situation or person. ICT Tools.

Such Informational Technological tools are becoming more and more indispensable.addingto this the current technology. ICTs consists various supportive tools such as of internet, television, radio, mobile, networks. Muntajeeb, 2019 showed that MOOCs is a new innovation in distance education, which became popular in a very short span of time. In this study analysis of the impact of MOOCs on students' achievement was conducted by reviewing literature. (Muntajeeb, 2019) .

In research it uses various ICT tools to intuitive notices and for work for informative purposes and also for the better of the outcomes. These OER various categories support and encourages the learner creativity and to promote the equity for the material found in libraries with the collaborations among the students to continue on the vast range of information via such technological tools as Open Educational Resources (OER). (Read, K.at el (2020)

LITERATURE REVIEW

Literature review is process to review text of scholarly paper derived from previous research studies carried out in a similar direction at the relevant topic. these reviews include the current and historical knowledge. it also includes the practical and graphical findings with also theoretical and methodological framework.

Literature review is basically the derived source to enhance understanding and knowledge that do not provide new original experimental work. Most frequently it is associated with academic oriented research and literature, such reviews can be founded in academic research journals and it may also to be found in books. literature review are the prerequisites nearly in every academic field of research.In this research article "ICT Tools and Trends in Research, Education and Science" From given research article was close to my research area of interest. Observing the previously work done on it. specifically, the internationally because of the innovative ideas used in developed countries are still in encouraging to the both students and researchers. (Strutynska,O. &Mariia Umryk; January 2017).

My research is about the impact of ICT tools of research. In this research the use of ICT tools gave more knowledge considering about any of questionnaire likely to develop my own data instrument for data collection. This research article observes the student mobility's, they selected the English medium for avoiding the barrier of any other language.The area of the education has been affected by ICT which have clearly affected the literacy, exploration and tutoring(Yusuf, 2005). The huge compact of study has proved the benefits to the quality of the education. (Al- Ansari, 2006). In this research report the technologies were present which makes the selection of the ICT tools effective to the use of need and to the utilization for the research purpose in the digitalization world. In the global perspective this research report created the place for study of beneficial in the aspect to the use of the technologies for education.

ICT as range from simple slide shoes to very sophisticated and professional programs. Depending on the nature and complexity of the presentation, the tools was also varying (Izquierdo,2019).

Typesof ICT Tools

Technology has many dimensions. Now a day the latest technology are being in use and in the most of or everyday life. ICT tools include all the technology that is used for the communication and gaining information. Different types of ICT tools are used now a day in the education. Most common amongst them are as following.

Internet

Walsham, G. quoted that to internet connection, anyone can easily do their businesses around the world. Internet connection provides best of the contact. People can easily share their views with others. Experts can easily find their work ideas through ICT tools and internet. The internet makes the world global village. Social networking sites are getting more user friendly and can easily accessible from anywhere. (Walsham, G. (2012). In the doctoral dissertation of Medlin, it was said that individual takes the inspiration from its required to join ICT in instructing learning measures. The specialists can be fruitful when they propel understudies and instructors to execute innovation based showing learning measures. (Medlin, B. D. 2001). Internet referring to certain framework as such only to the hardware's specific software's but it should not be limited to it as because it makes the no boundaries to information sharing, enhancing the communications and to the skill development. Internet make the tools of the knowledge as spreading medium for more information sharing and for the advertisement. Internet make more people more connected to each other and due to which is called now the global village. Information communication technology is not the terms they are removing the barriers of the developments and it steps up the leading runoff with the cycle to the growth of any nation. This is because digital content is an important to the factor for growth with the increments in which is widely spread the impact to every perspective of education, learning, organizational and society.

OER (Open education resources)

Open educational resources provide a learner-centered platform that authenticity connects the technology with education and provide access and equity to education resources for all. Use of digital science will assist to beautify each instructing and learning. (Sarode, R. D.2018). Open content/open educational resources/ open courseware are educational material which are discoverable online and openly licensed that can be shared freely. Open educational resources are developing and sharing the knowledge interest and for the development and advancement of educational perspective and it is removing. The educational distance for the open sources and for the availability of low-cost education to everyone. It is helpful for the both of the learner and the teacher who are using the research for the removing the names their off educational perspective or other concern related to the awareness of the learnings open educational resources are working as the most developed tool for the adoption of any new style of learning and teaching methods and also shows the advancement of trend in educational sources for the creation of assessment and procedure for research purpose in education for the quality assurance and sustainable . OER removes the concern of educational barriers for the maintaining of educational programs. Maintaining the distance learning objectives and its indication for promoting the open educational resources two equally for quality education to promote everyone.To add further more

OER the instruction ideas for open educational resources to the teaching and learning effects. It makes the better design material for providing to the schooling institutes or to the reusable quality education sources as it comes from the word of open educational resources. It does mean that it is approachable is easily approachable and its easy assessable information medium to everyone. It can also be considered as the distance education as it is provided by as many nowadays due to covid-19 educationist are preferring to convert it to open educational resources. They are recommending to use a CMS and LMS for the better approaching educational needs in also with the providing and creating the trending educational reforms. they are basically for the learning and training was properly to reshaping and adopting and for the using of licensed material for educational development significant challenges. As we can see the trending reports suggest and also gives the glimpse for MOOCS which are removing the barriers and gaps for the adoption of newly developed educational changes. Open educational resources recommends that it should be the evidence that education is approachable and easily accessible to every learner. The one of the best examples from open educational resources is Open Universities such as Allama Iqbal Open University and virtual University for providing a vast range of educational material and all the assess to knowledge and information for learners. To give the use and openness and freedom to personalize their own learning stars and to get to know about more education by the use of the technology as it is not now a days a challenge for implementation of OER.

MOOC (Massive Open Online Courses)

The above-mentioned abbreviation is Massive Open Online Courses which are online and mostly friendly user courses available for anyone to get them enrolled. Massive Open Online Courses (MOOCs) provide an inexpensive and virtual way to learn required skill to advance in for further polishing of need in your carriers and to deliver the quality educational experiences at scale. MOOC are most significant trends from the learning perspectives. MOOC's introduction is not as old but not as much new either person is still struggling to learn much about it. The huge different stats came after Covid-19 pandemic from which several organizations and learning platforms even the formal teaching platforms as such universities started recommending it to their regular students. There are rapidly increasing courses such as Coursera, Pluralsight, Udemy, Future Learn and edX. They are making the milestone to the hard works to keep the follow up.

Research objectives

This study was be revolving around to find the following objectives

1.   To find latest trends of OER tools on quality research.
2.   To inspect the impact of OER tools in quality research.

Research Questions

1.   Which ICT tool have most influence in research quality?
2.   Does ICT tool have impact on the quality research?

Significance of the study

While seeing the requirement of some situations and the comparison of most recent articles what has been done in this topic but I did the narrowing of the topic for the authenticity of the research.

In my research it will help in finding the most updated OER tools which are being in use for the research purpose such as in educational aspect, any other social sciences subject or regardless of any specific subject. It will help in taking the initiatives to take for the making of any upcoming research more accurate for the maintenances of quality assurance. The views taken from the research study that "The technocentric view that technology can solve these challenges combines with a vision of education as a product that can be packaged, automated, and delivered to students."(Veletsianos, G., & Moe, R. (2017).

The whole framework for research purposes

As the ICT which is the basic tool to every field now a days. Living in the days of the rapidly changes the technology. Which could be make or break point. Using of the ICT tools in research clarifies the perspective of the latest upgrade to the education regarding any research area. So, while knowing the importance of the tool's usage in research. This study will help in the understanding of the intensity use of any further tool. Using if the ICT use is in already every field of work, education and research study relevant to the learning perspective. Although it's a user friendly but in few places, it becomes complex according to the new users of computer. William and Sawyar (2005) shared in their study that problematic IT come as the science tool. Which supports for thefurther process,communicate, and cooperate in information proceedings. It is expected to assist teachers with effectively incorporating innovation into their instructing practice. Computers need a particular pace to run an operation which could varies with the work. Technology plays vital role to the development of any area with the aspects of the information and communication it revolves around the changes which are occurring.
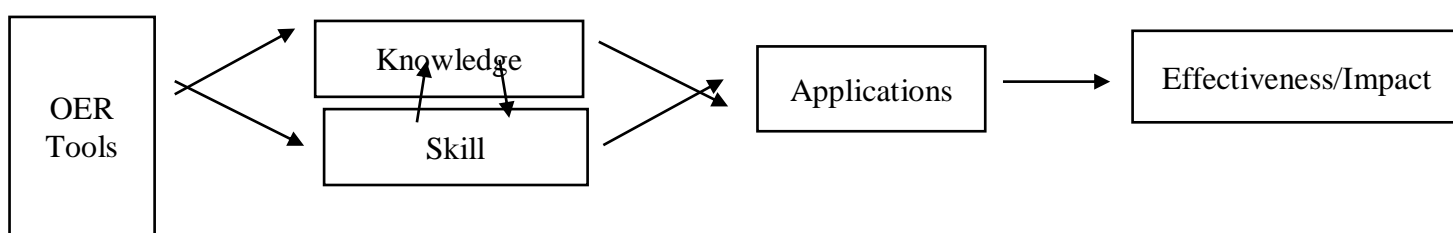
Conceptual Framework:

Figure 1: Conceptual framework of Impact check of OER

_____

Methodology

The study method is one of the most important part which used to define the mean quality of the research. In addition to this the methods section must give the readers sufficient information to their relevant study experiment. Element methods I used in my studies or as following.The nature of the study was qualitative, descriptive survey method. I've used mixed method research. Self-Developed questionnaire was used in discussion. Due to Covid-19 pandemic situation both Offline and Online data

was collected. In this study its designed to analyze the effectiveness of OER various tools on quality of research. Population was be researcher who have any know-how of ICT tools in learning.Accessible population was be from 6 universities from Islamabad and 6 Rawalpindi. Population was 597 undergraduate student and current post graduate students from selected universities.Sampling is the procedure of analyzing the data collection from larger number. Simple random sampling technique was be used for questionnaire from Non participant observation for data analyzing. Data was be selected from selective university's various graduated and post- graduate students. As the both methods were be used in research. Questionnaire and interview question was self- prepared and approved by the help of supervisory committee. Reliability was determined by questionnaire. It'll was checked by subject experts from pilot testing.The collection of data and non-participant documentation went through pilot testing. 2 universities from Islamabad and 2 from Rawalpindi was be selected. 29 number of students participated. Questionnaire was filled by the students randomly. Up gradation was expected on different questions and it was consisted of different categories as Skill based knowledge, Skill based application, Effectiveness based knowledge and Effectiveness based application. Data collection was administered personally from the respondents of the study. Data Collection was in "Google form". It was analyzed by the researchers. Data analysis was done through SPSS .22 using Percentage and Frequency. It was be analyzed and tabulated to draw conclusions and recommendations. Data was collected from selective university's undergraduate and post-graduate students. Who are being directly or indirectly related to the regularly use of ICT tools. Validity of the instrument was essential in the study as it certifies that self-developed questionnaire is valid for the established on the collected data. The pre-testing helped me to make the questionnaire more reliable and valid for the study. Below mentioned is results of reliability checked via SPSS 22.

Scale: ALL VARIABLES

Case Processing Summary		N	%
Cases	Valid	29	100.0
	Excluded	0	.0
	Total	29	100.0
a. Listwise deletion based on all variables in the procedure.			

Reliability Statistics

Cronbach's Alpha	N of Items
.925	24

Findings

Table: 1 Skills based knowledge: [I use OER tools only to develop the research material authenticity]

Skills based knowledge: [I use OER tools only to develop the research material authenticity]		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	25	4.2	4.2	4.2
	Disagree	53	8.9	8.9	13.1
	Neither Agree nor Disagree	70	11.7	11.7	24.8
	Agree	328	54.9	54.9	79.7
	Strongly Agree	121	20.3	20.3	100.0
	Total	597	100.0	100.0	

In table 1. Its showing that 4.2% students Strongly disagree to Skills based knowledge category: I use OER tools only to develop the research material authenticity statement ,8.9 % students disagree to above mentioned statement. 11.7 % students neither agree nor disagree
toabove mentioned statement, 54.9 % students agree to above mentioned statement and 20.3 % strongly agree to above mentioned statement.

Table: 2 Skills based application: [Presence of OER tools polishes the skills of finding right research source]

Skills based application: [Presence of OER tools polishes the skills of finding right research source]					
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	Strongly Disagree	64	10.7	10.7	10.7
	Disagree	41	6.9	6.9	17.6
	Neither agree nor disagree	62	10.4	10.4	28.0
	Agree	320	53.6	53.6	81.6
	Strongly Agree	110	18.4	18.4	100.0
	Total	597	100.0	100.0	

In table 2. Its showing that 10.7 % students Strongly disagree to Skills based application: Presence of OER tools polishes the skills of finding right research source statement,6.9 % students disagree to above mentioned statement. 10.4 % students neither agree nor disagree
toabove mentioned statement, 53.6 % students agree to above mentioned statement and 18.4 % strongly agree to above mentioned statement.

Table: 3 Effectiveness based knowledge: [Use of OER tools improve the quality research]

Effectiveness based knowledge: [Use of OER tools improve the quality research]					
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	Strongly Disagree	29	4.9	4.9	4.9
	Disagree	25	4.2	4.2	9.0
	Neither agree nor disagree	41	6.9	6.9	15.9
	Agree	346	58.0	58.0	73.9
	Strongly Agree	156	26.1	26.1	100.0
	Total	597	100.0	100.0	

In table 3. Its showing that 4.9% students Strongly disagree to **3 Effectiveness based knowledge: Use of OER tools improve the quality research** statement ,4.2 % students disagree to above mentioned statement. 6.9 % students neither agree nor disagree to above mentioned statement, 58.0 % students agree to above mentioned statement and 26.1 % strongly agree to above mentioned statement.

Results

The data analysis showed that 4.2% students Strongly disagree to Skills based knowledge category: I use OER tools only to develop the research material authenticity statement ,8.9 % students disagree to above mentioned statement. 11.7 % students neither agree nor disagree to above mentioned statement, 54.9 % students agree to above mentioned statement and 20.3 % strongly agree to above mentioned statement. The continuous data analysis showed that 10.7 % students Strongly disagree to Skills based application: Presence of OER tools polishes the skills of finding right research source statement,6.9 % students disagree to above mentioned statement. 10.4 % students neither agree nor disagreeto above mentioned statement, 53.6 % students agree to above mentioned statement and 18.4 % strongly agree to above mentioned statement. The further data analysis showed 4.9% students Strongly disagree to Effectiveness based knowledge: Use of OER tools improve the quality research statement ,4.2 % students disagree to above mentioned statement. 6.9 % students neither agree nor disagree to above mentioned statement, 58.0 % students agree to above mentioned statement and 26.1 % strongly agree to above mentioned statement.

Discussions

Specifically, ICTs have affected on educational practice in training to date in truly little ways yet that the effect will develop impressively in times to come and that ICT will turn into a solid specialist for change among numerous educational practices. logic to the current exercises and practices, the progressed with use and advancement of ICTs inside training will strongly affect ICT and showing knowledge process and quality material. The selection and operation of ICTs in instruction positively affect educating, learning, and disquisition. ICT can impact the vehicle of instruction and empower further extensive access to the original. It would give the rich condition and relief for showing knowledge process which appears to profoundly affect the way toward knowledge in instruction by offering new implicit issues for scholars and instructors.

Conclusion

Information and communication technology is taking part in a big part in education. ICT is produced training and knowledge system more practical and easier path. Research studies and knowledge has come in attention because of ICT demand in every. Scholars are exercising advanced application of similar ICT tools rather of victimization ancient strategies. During this twenty first century a capability to figure with ICT is changing into necessary in each field significantly in education. ICT and education are like 2 sides of same coin. The conflation of ICT and education has need of ICT in education. It will grease scholars to find out and academics to show a lot of effectively. It's anticipated that there'll be several edges for each the learner and also the academy learner.

Suggestions

From the observation conducted study findings. I would suggest there is utter need of upgradation of OER tools to gain the positive impact of such Informational Technological tools. For the removing of the concerns of the research students and in the best way to make the productivity reachable to the learners. From the perspectives of a current study researcher there were only minor flaws which can be cover by providing the support of continuous connectivity so they can process the OER in right way along. From the statement of neither agree or disagree we can suggest to overcome the doubtful resources of connectivity of networks so it wont effect the research paths to cross for quality check. One of the highly recommend suggestion to make research more effective is to use one of the OER tool such as "Google form" survey to get better analysis.

References

1. Al-Ansari, H. (2006). Internet use by the faculty members of Kuwait University. *The Electronic Library*, *24*(6), Pp; 791-803.
2. B. Dawn Medlin, Dinesh S. Dave & Sandra A. Vannoy (2001) Students' Views of the Importance of Technical and Non-Technical Skills for Successful it Professionals, *Journal of Computer Information Systems*, *42* (1), 65-69.
3. Baig, M. A. (2019). " Impact of Massive Online Open Courses (MOOCs) on Students' Achievement-A Research Review.
4. Izquierdo, J.; Lozano, A.A. The use of technology in second language education. *Journal of Educational Technology & Society*,*2*(3), 52–70.
5. Lange, S., Pohl, J., &Santarius, T. (2020). Digitalization and energy consumption. Does ICT reduce energy demand. *Ecological Economics*, *176*, 106760.
6. Read, K., Tang, H., Dhamija, A., & Bodily, B. (2020). Understanding the impact of OER courses in relation to student socioeconomic status and employment. *The International Journal of Open Educational Resources*, *3*(1), 25046.
7. Veletsianos, G., & Moe, R. (2017). The rise of educational technology as a sociocultural and ideological phenomenon. *Educause Review*, *4*.
8. Saleem, D. I. (2011). Role of information and communicational technologies in perceived organizational performance: Empirical evidence from higher education sector of Pakistan. *Business Review*, *6*(1), 81-93.
9. Sarode, R. D. (2018). Teaching strategies, styles and qualities of a teacher: a review for valuable higher education. *International Journal of Current Engineering and Scientific Research (IJCESR)*, *5*(5), 57-62.
10. Strutynska, O., &Umryk, M. (2017). ICT Tools and Trends in Research, Education and Science: Local Survey. Electronic Scientific Professional Journal *Open Educational E-Environment Of Modern University*, (3), 150-160.
11. Walsham, G. (2012). Are we making a better world with ICTs? Reflections on a future agenda for the International Studies field. *Journal of Information Technology*, *27*(2), 87–93.
12. William B.K. and S.C. Sawyar (2005), "Using Information Technology", 6th edition, McGraHill Publishing Co. U.S.A: pp. 3, 4 and 147.