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Open Educational Resources Effective for Students Learning Experiences: A University Students Perspective

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Abstract

The focused of this study was to know the factor affecting learning experience of the students through open educational resources (OER) at higher educational level. Open educational resources means that give unbiased entrance to information and knowledge at any level for everyone. A quantitative research method was used, and data was collected from (n=320) students. Sampling technique was purposive sampling technique and survey was conducted. Data was analyzed through SPSS-23 software. The current study investigated open educational resources influence on the learning experiences of students. OER has significant predictive relationship with students learning experiences at university. As a conclusion, OER services should be mandatory for every academician and learner and no discrimination among students.

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Introduction

The main purpose of this particular study is to analyze that student's opinion on use of open educational resources. While learning expectancy is affecting through open educational resources at higher educational level, there is little research done on this particular area of study. Such as Hilton III et al. (2012) suggested that no existing empirical research showed that learning expectancy can affect through open educational resources if it is not provided to the higher level of education then students would not be able to learn material on low cost. Similarly, open educational resources can save the money of any institution and also provide deeper learning to the student in all aspects. However, students are feeling difficulties when they have no excess to open educational resources. The students could not maintain his future success because he/she has no enough knowledge to compete in the global world.

In addition, the backgrounds of the learners are totally diverse on the basis of age, gender, cultural, or any of multidimensional factors which affect alternately learning expectancy of the individual. Sometime we did not understand this diversity but thoroughly affecting our leaning (Atkins et al., 2007). Equivalently, institutions of higher education should take initiative to design online courses which have fill up from different materials and resources and students approach efficiently access and expend knowledge. These initiatives can develop good learning among students and they can transform effectively to others (Svihla et al., 2009). As like, institutions of higher education should take action on the providing different types of instructions and opportunities to their students which expend horizons of the learning as well a student use this resources to transform other (Herman et al., 2010).

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Study Significance

OER's educational value and quality are very important in student life. Unfortunately, it has not been deeply explored in the opinion of students. This is one particular issue that has gained researchers' interest. Colleges and universities face financial maintenance for each department to provide their students with all the books and materials because they face financial burdens and difficulty getting a quality education at the higher education level. Open educational resources could provide quality education to current students and improve learning experiences in every specialization. Due to this vital interpretation, the cost of textbooks can be reduced, and students will get quality education everywhere. This study is significant because it analyses factors affecting learning expectancy through open educational resources at the higher education level, such as UB, effort expectancy, learning expectancy, social influence, facilitation of consideration, m-learning technology characteristics, self-management learning technology, and behavioral intention to use m-learning technology. So, it is justifiable to study.

Research Objective

To measure OER on learning experiences of students at higher education level.

Literature Review

Rodriguez and Anisate (2010) noted that mostly students appreciate course information and their reading material online for their own ease. The role of a screen cast is also involved in increasing the leaning expectancy when students watch computer screens in video form and the explanations are coming in audio. There is a close relationship between learning expectancy and audio-video listening regarding learning. The process of narration also positively enhances the learning experiences of students (Sugar, Brown, & Luterbach, 2010). Bishop and Verleger (2013) revealed that short videos were preferable in students when it is presented on multimedia. It was concluded that students could not read more textbooks as compared to online books. However, students face difficulties when reading study materials on computer screen and feel uncomfortable experience in learning expectancy (Baek & Monaghan, 2013).

Alternately, publishers print hard-copy books for students to purchase or rent. Similarly, some students are taking traditional textbooks from bookstores or online vendors as well. But it is very tough for students to purchase or rent every hard-copy book. Another difficulty is every book is not available in bookshop and also e-textbooks are demanding license. Here need of Open Educational Resources, and mostly students adapted this approach to reading books. However, previous literature found that OERs are not adopted by students and there are very poor perceptions. The learning expectancy is going to decrease, and students do not like electronic books for their reading. These literature reviews concluded that students have negative perception about using e-textbooks or other electronic textbook (Brunet et al., 2011; Buzzetto-More et al., 2007; Cutshall et al., 2009; Ditmyer et al., 2012; Folb et al., 2011; Woody et al., 2010) than have reported mixed (Lindshield & Adhikari, 2013; Miller & Baker-Eveleth, 2010; Rickman et al., 2009), there are some positive perceptions (Baker-Eveleth et al., 2011; Bryant & Mims, 2012; Lindshield & Adhikari, 2013; Martinez-Estrada & Conaway, 2012) combined. Previous surveys indicated that mostly students give preference to print textbooks as compare to e-textbooks (Allen, 2009; Allen & PIRG, 2010; Bole, 2011; Lindshield & Adhikari, 2013); but it is also guess that students perception is going to change day by day. However, (Daniel, 2012) described that out of 100% just 39 % students had not purchased an e-textbook because they liked traditional hard-copy books. In addition, six colleges did survey and their (57%) students responded that digital over print books was used just for fun as well as (58%) students were using textbooks for class (Finkel, 2012). Equivalently, undergraduate economic students reported that e-textbook is not used from 2005-2010 (Miller & Baker-Eveleth, 2010).

The term open educational resources are a type of flex book and it is coined by the CK-12 Foundation. It refers to "a free and open-source textbook platform where one can build and edit collaborative textbook" (Morin, 2019). Similarly, Flex book was processed in Google Docs for Kansas State University Human Nutrition (HN 400) students, and then surveys were conducted which reported that (75%) were dependent on this platform (Lindshield & Adhikari, 2013). After that Lindshield and Adhikari (2013) have been again conducted research study and change the learning management system as well as change Adobe Portable Document Format (PDF) in Time New Roman. The student response to learning materials was higher than their previous study. Eighty per cent of students use an online open education resource which is arranged by the University Human Nutrition. The study concluded that campus students positively perceived the flex-book which increases learning expectancy of the student due to open educational resources (Hilton III et al. (2012) described that advocate of OER has significant effect on cost savings when traditional textbooks are displaced in the classroom. The study was conducted over the duration of two years, in which twenty high school science teachers and students are surveyed with approximately 3500 participants. The aim of the study was to understand the adaptation of open textbooks in the form of cost, which was compared with traditional textbooks. The result finds out that student and teachers have agreed with OER, and it is one big factor that student learning expectancy was more as compared to traditional textbooks. Where, as students and teachers had good experience with OER in the classroom and both teachers and students prefer to read books on online webpage.

The role of OER is to allow teachers and students to convert content in the local meaning and then share with students to learn a variety of resources or course materials. The best way to share materials for students and then learn in easy language is due to OER. OER has a relationship with learning expectancy among higher education students. The findings reach to the conclusion that OER has increasing learning potential in the students of higher education (Baker, 2008; Koch, 2006). Similarly, the study found that students receive open textbooks, and these learning textbooks affect the learning expectancy among higher education students. There was a close dependency between open textbooks and learning expectancy among higher education students. When open educational resources are provided to the student then their academic performance is thirty four percent increasing (Frith, 2009). Petrides et al. (2011) argued that whenever students use open educational resources textbooks, it affects teachers and students learning experiences. Likewise (Hilton III and Wiley (2011) persuaded that a school district that began using OER textbooks which are followed by CK-12 materials for the basic three science courses were no changes in the learning expectancy outcome but in fact saved the money of the school thoroughly. The findings proved that OER increasing then decreasing come in the financial expenditure of school (Wiley et al., 2012). However, author Schmidt-Jones (2012) pointed to invent that OER storage Conations was implied. She found collections of material which were open and free for learning have less time taking in learning as compared to hard-copy materials. These collections of material on OER have being used and particularly support learning expectancy just-in-time.

Technology Acceptance Model Framework

Perceived ease of use in TAM is much suitable for OER (Davis et al., 1989; Venkatesh & Bala, 2008; Venkatesh et al., 2003). Such as, social influence is one form of concept in TAM, which means the extent of individual's opinion toward using technology in his learning. This is more influential in the intention of technology use (Davis et al., 1989; Venkatesh et al., 2003). The concept of facilitating conditions in the TAM proposition in the learning experiences. This concept refers to the level of individual admits the provided infrastructure in his/her institution or organization which further help his/her use toward intended technology (Venkatesh et al., 2003). These conceptual definitions

make one clear relationship among TAM elements which further create indirect effect on acceptance determinants and use behavior, behavioral intention relatively. These all are accepted theories in work of intended technology, but it also comes under TAM. The real and basic concept of TAM is a person's action and thinking which furthers reaction and then effects intention to use technology. As a result, this process impacts an individual's actual use of that technology. Nevertheless, there is also direct influence of reactions and attitudes toward technology possible. The actual use of that technology is without having intention to use that technology. The significance of TAM theory in this purposed study is very interesting. Basically, mobile learning technology characteristics are adapted from (Chen et al., 2002). These characteristics are potentially affecting the behavioral intention of an individual when he/she is using technology. In the life of human beings there are different social changes that occurred and then it becomes need for them, such as, urgency of learning need and it is lead to initiative of knowledge acquisition. Furthermore, mobility of learning settings and it is motivated an individual to interactive learning process. Similarly, situating instructional activity is done by the individual to use of intended technology and it is further integrated instructional content. The TAM is also implemented in this theoretical debate of mobile learning to improve self-management. Smith et al. (2003) defined that self-management of mobile learning means the amount of the learners to use his ability in the management of learning separately with his self-disciplined.

Research Methodology

The study used a cross-sectional design to explain the OER practices among students at university. Quantitative research design was applied and collect data through questionnaire or survey design. The study target population is known is population. The population available to a researcher from whom a sample is drawn is termed the accessible population. This research's target population consisted of all students enrolled in BS, M. Phil, and PhD programs in Education at the public Kohat University of Science and Technology in Kohat, Khyber Pakhtunkhwa province.

Sampling Technique and Sample Size

A purposive sampling technique was used, and sample size (N=320) was selected from the whole university with nonprobability sampling technique. The researcher selected those female and male student which have already used open educational resources for their learning.

Instrument and Questionnaire Tool

The scale of Open Education Resources Survey (OERS) and learning experiences were used to collect data from the university students.

Reliability of Research Instruments

Questionnaires were distributed among 30 students for pilot tests and were not involved in the final data analysis process. The value of Cronbach's Alpha was 0.71 for each factor. The factors have good internal consistency and reliability.

Data Analysis

The researcher analyzed the collected data by using Statistical Package for Social Sciences (SPSS) version-23. Descriptive and inferential statistical techniques were applied to analyze the gathered data. Descriptive statistical approaches were used to determine Frequency, Mean, and Standard Deviation, while inferential statistical techniques, namely ANOVA, were utilized to assess differences depending on the demographic gender variable.

Table 1

ANOVA Results Based on Gender

Factors	Gender	N	Mean	Std. Deviation	Df	t-value	Sig
OER	Male	14	3.2905	.64769	398	2.644	.983
	Female	26	3.1128	.63720	398	2.631	
Learning Experiences	Male	14	3.6700	.84510	398	-3.014	.032
	Female	26	3.9162	.74142	398	-2.898	

The first factor which was related to OER and the mean score of respondents of male (M=3.29) and female (M=3.11), and Male (SD=.64769) and female (SD=.63720), while the t-value is (398) = 2.644, and p > .05. It means there is no significance difference between the opinion of male and female respondents on UB as an open education resources. The second factor which was related to open education resources "Learning Expectancy" and the mean score of respondents of male (M=3.67) and female (M=3.91), and Male (SD=.84510) and female (SD=.74142), while the t-value is (398) = -2.898, and p < .05. It means there is significance difference between the opinion of male and female respondents on learning expectancy as an open education resources (see Table 1).

Table 2

Between and Within Group Analysis

Factors		Sum of Squares	df	Mean Square	F	Sig
OER	Between Groups	6.579	2	3.290	8.175	.000
	Within Groups	159.763	318	.402		
	Total	166.343	320			
Learning Experiences	Between Groups	.718	2	.359	.579	.561
	Within Groups	246.442	318	.621		
	Total	247.160	320			

The F=8.175 and p<.05 results indicate statistical significance at the alpha level, confirming a significant finding. It is determined that there is a considerable variance in respondents' attitudes within their program-specific groups regarding the aspect of OER. The F value is .579, and p < .05, indicating statistical significance at the alpha level. It is found that there is no significant difference in the views of respondents within their program-specific groups on the element of learning experiences as open educational resources (Table 2).

Table 3

Regression Analysis Measuring Relationship between OER and LE

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.716a	.513	.504	.52730

a. Predictors: (Constant), OER

Table 4

Regression Analysis Through ANOVA

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	114.686	7	16.384	58.924	.000b
	Residual	108.994	312	.278		
	Total	223.680	320			

a. Dependent Variable: Learning Experiences

b. Predictors: (Constant), OER

Table 5

Regression Analysis Through Coefficient

Coefficients					
Model		Unstandardized Coefficients		Standardized Coefficients	t
		B	Std. Error	Beta	
1	(Constant)	.613	.181		3.391
	UB	.017	.043	.014	.381
	LEARN	.436	.044	.458	9.804
	SI	.132	.043	.144	3.079
	FC	.062	.047	.063	1.317
	MLTC	.136	.059	.131	2.319
	SML	.045	.046	.048	.979
	BIM	.009	.040	.011	.236

The statistical regression test was applied to measure the impact of OER on learning experiences. The R-Square value indicates that .513 of variation in the dependent variable and dependent variable was learning experiences. This model is a good fit and has significant predictors for learning experiences of the students with scores ($F = 58.924$; $p < 0.05$) (see Table 3, 4, and 5).

Discussion

Consequently, faith in technology is a positive attribute of Mobile Learning. Previous research saw it as a multi-dimensional concept that is also associated with self-management using learning technologies. M-learning technology is one of the most valued attributes of technological education in contemporary society. This research hypothesizes that self-management learning technology and mobile learning features are closely related. An individual's eyesight is also connected to self-management learning technologies. Conversely, the aforementioned research study was not correlated, as our investigation determined that there is no substantial disparity in the viewpoints of respondents among their respective faculty groups about the aspect of self-management learning technology as an open educational resource.

Prior work indicates that the qualities of mobile learning are a manifestation of faith in technology. A multitude of users depend on transportable tools, machines, and approaches, although sometimes they rely on technological systems or methods. This viewpoint delineates the connection

between mobile learning technology and self-management trust in all cost-effective manufacturing. Mobile learning technology facilitates cost-effective education for learners. The attainment of education is also integral to the self-regulation of learning technologies. Typically, self-management learning technology relies entirely on an individual's expertise with mobile technology. The properties of mobile learning technology significantly impact self-managed learning technology. Conversely, the present research revealed no substantial disparity in the perspectives of respondents within their respective faculty groups for the behavioral aspect-intent to use mobile learning technologies as a resource for open education.

Mobile learning technology has some properties that enhance student learning. Organizing learning materials with mobile learning technologies, along with comparing, translating, interpreting, and providing descriptions, is a commendable attribute. Conventional educators used this approach; nevertheless, contemporary mobile learning technology has independently adopted similar qualities. Mobile learning offers individuals the liberty to acquire new knowledge from any location worldwide. The principal attributes of mobile learning are contingent upon self-directed learning technology across several dimensions, including perceived utility, perceived fun, perceived self-efficacy, and familiarity. Likewise, the enhancement of learning expectations and performance expectancy may be facilitated using technology. The interrelationship among effort, expectation perceived fun, and self-management in learning technologies is crucial. This research shows that the properties of mobile learning technology and self-management learning technology are important determinants of effort expectancy and learning expectancy in higher education.

Conclusion

The current study investigated the factor affecting learning experiences through open educational resources at higher educational level. Open educational resources refer to any educational material which is used for a creative commons license and always in the approach of public domain. Open educational resources has relationship with students learning experiences at university level. As a conclusion, OER services should be mandatory for every academician and learner which should be enjoyed and non-discrimination for every students also.

Recommendation

- It was also recommended that all the academic material should be free for students because students are feeling difficulties to download these PDF form from internet.

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