

## Web-Based Education: Perceptions of Teacher-Trainees Regarding OERs

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*Open educational resource (OER) has become very popular in the field of academics due to its specific characteristics. This study explores the perceptions of teacher trainees regarding open educational resource. OERs are being regarded as the trustee of the educational transactions and it constantly endeavours to fulfill its mission by enhancing repositories and supporting access to knowledge. In information rich environment, instructors and learners must design and implement OERs that prepare individuals for a life that requires cognitive skills, strong belief, problem solving, inquiry and practical proficiency. Consequently, there is a growing need to promote and integrate emerging technologies for better output. This study explored the perceptions of teacher-trainees regarding OERs. Teacher-trainees having considerably favourable perception regarding OERs with hardly any difference found between a) male and female; b) arts and science streams; and c)  $\leq 2$  years and  $>2$  years experience of browsing Internet, but differed between d) urban and rural teacher-trainees. An analysis of the perceptions of teacher-trainees revealed that OERs are an integrated activity of online creating and sharing of educational materials for the people to use.*

**Key words:** - Web-based Education; Perception; Teacher-Trainees; OERs

OERs are often considered the defining characteristic of tech-driven knowledge era. Such resources provide learners ample opportunities to access knowledge in different contexts for their application, while also allowing them to develop and share their experiences. Undoubtedly, in recent years, an increasing number of scholars and teachers have moved their way towards creation and sharing of educational materials. The term open educational resource (OER) is used to describe a networked provision of publishing educational materials accessible freely under some licenses from all over the world. OERs have become significantly important as it opens its access to educational materials by transcending geographical, cultural and political boundaries. As a digital mode of content creation and sharing, OER contributes to open publishing of educational materials. The term "open educational resources" was first adopted at UNESCO's 2002 forum on the Impact of Open Courseware for Higher Education in Developing Countries (Johnstone, Sally M., 2005).

OERs are designed to encourage active participation and an increased sharing of ideas. The purpose of an Open Educational Resource is to be freely available for people around the world to use (Daniel, J., et al, 2008, p.7). OER creators must be researchers, teachers and other scholars for quality production and dissemination at a wider scale. In the context, knowledge is disseminated both through conventional and non-conventional modes. New web technologies are driving a revolution, not only in the way students consume and institutions deliver higher education, but in the very idea of what makes a university (Swain, Harriet, 2009). It is important that people should be prepared to respond to the enormous challenges of tech-driven knowledge era. The fact to which pointed attention needs to be drawn is that:

"Leading institutions are now using it to provide individualized learning at a distance and upload their courseware as open resource, with the result that it has become world's most valuable knowledge repository. Every life-long learner has opportunity to become discoverer/ researcher/ navigator/ collaborator by surfing through the information highway, interpret it and share knowledge with many and varied users (Gupta, S., Garg, S. and Dikshit, J., 2011, p.5)".

Consequently, the term OER has gained currency among educators and other instructional designers. OERs are the expression of an Internet empowered world wide community effort to create global intellectual and educational commons (COL, 2009, p.25). Another transformation in the production and dissemination of educational materials has arisen as a result of increased emphasis on open educational resources

through ICT. Johnstone (2005) maintains that OER includes learning resources, resources to support teachers and resources to assure the quality of education and educational practices. Many scholars, teachers and experts are given the responsibility of creation and dissemination of OERs with considerable standard requirements involved. Centres at specific institutions should be identified so that the faculty of these institutions will eventually own, modify, and expand OER repositories (NKC, 2007, p.52)

## **Background: Open Educational Resources**

Given the 21<sup>st</sup> century learners aspirations for greater and equitable access to knowledge it is essential that the OERs help to promote new ideas, creative minds and encourage the pursuit of higher knowledge. Students can engage in meaningful hands-on and field-based activities using simulations, software and laboratory kits (Mawn, M.V., 2011, p.143). Every day in and day out scholars are creating educational materials and learning resources that can be accessed through Internet. The potential of open educational resources, to make quality learning materials available at low cost has attracted the support of donors that wish to increase access to education worldwide (Daniel, J. et al, 2008, p.30). OERs attributes may include: i) wide range of educational materials, ii) increased accessibility, iii) liberally licensed educational resources, and above all iv) designed in a way to allow easy reuse in a diverse settings.

To speed up the creation, adaptation, and utilization of OER, it is necessary to launch a 'National E-content and Curriculum Initiative' (NKC, 2007, p.51). Scholars have been encouraged to contribute their bit in their discipline. NKC (2007) maintains that the teacher-training is the primary area that needs to be addressed in order to realize the benefits of extended access and improved quality through OER. Given the steadily expanding demand for open educational materials, it becomes indispensable to access the perception of teacher-trainees.

## **Objectives of the Study**

The objectives of the paper are:

- to study the significant difference, if any in the perception of male and female teacher-trainees regarding OERs.
- to analyze the significant difference, if any, in the perception of arts graduate and science graduate teacher-trainees regarding OER.
- to find out the significant difference, if any in the perception of urban and rural teacher-trainees regarding OERs.
- to study the significant difference, if any in the perception of teacher-trainees having Internet browsing experience of less than two years and above two years regarding OERs.

## **Hypotheses**

- There is no significant difference in the perception of male and female teacher-trainees regarding OERs.
- There is no significant difference in the perception of arts graduate and science graduate teacher-trainees regarding OERs.
- There is no significant difference in the perception of urban and rural teacher-trainees regarding OERs.
- There is no significant difference in the perception of teacher-trainees having an experience of Internet browsing with less than two years and above two years regarding OERs.

## **Methodology**

The methodology employed was descriptive wherein teacher-trainees' perceptions regarding OERs with respect to their stream, gender, locale and experience of browsing Internet were investigated. The study is not an exhaustive one, but only a brief. Being a case, the study was restricted to the limited number of secondary teacher-trainees. The

methodological details like population, sample, tool, procedure of data collection, analyzing data and statistical techniques are given below:

## **Population and Sample**

The population of this study includes the secondary teacher-trainees at Maulana Azad National Urdu University, Hyderabad. Keeping the objectives in view, a total of 108 teacher-trainees were selected using simple random sampling technique. Sample consists of 61 (56.48%) male and 47 (43.52%) female teacher-trainees.

## Tool

In order to achieve the objectives of the study, the investigator used a self-prepared questionnaire. The tool consisting 20 statements with response pattern on a five-point scale was developed to elicit information from the subjects under investigation. For each positive statement alternatives were given on the right hand side of the tool.

## Procedure

The questionnaires were administered along with the necessary instructions. The respondents were assured that their answers would be kept confidential and will be used only for research purposes. Hence, the respondents were asked to give free and frank answers without hesitation. Though, no time-limit was imposed, but they were instructed to complete as early as possible. The data gathered from the subjects was analyzed and interpreted using suitable statistical techniques.

## Data Analyses and Interpretation

In order to analyze and interpret data, the statistical techniques used for the present study are Mean, standard Deviation and t-ratio. The data gathered was presented in the tabular forms and analysis was done as per the objectives of the study.

**Table - 1: Distribution of Sample, and Scores of Mean and Standard Deviation**

Statistical Data	Gender		Stream		Locale		Experience	
	Male (N=61)	Female (N=47)	Arts (N=59)	Science (N=49)	Urban (N=41)	Rural (N=67)	≤2Years (N=75)	≥2Years (N=33)
<b>Mean</b>	64.31	66.74	65.13	65.65	67.86	63.85	65.59	65.48
<b>SD</b>	7.53	8.70	7.19	9.17	6.83	8.51	7.98	8.86

Table -1 reveals the distribution of scores obtained from the respondents on whom questionnaires were administered. The significance of differences observed between means is analyzed with t-test.

**Table - 2: Significance of Difference between Male and Female Teacher-Trainees regarding OERs**

Sl. No.	Gender	N	Mean	SD	t-value	Inference
1	Male	61	64.31	7.53	1.526	Not Significant at 0.05 level
2	Female	47	66.74	8.70		

Table - 2 shows that the t-value calculated for the significance of the scores of male and female teacher-trainees does not exceed 1.98, the required table value for significance at 0.05 level. It indicates that male and female teacher-trainees have similar perception regarding open educational resources. Hence, it is concluded that there is no significant difference in the perception of male and female teacher-trainees regarding OERs.

**Table - 3:** Significance of Difference between Arts Graduates and Science Graduate Teacher-Trainees regarding OERs

Sl. No.	Stream	N	Mean	SD	t-value	Inference
1	Arts Graduate	59	65.13	7.19	0.323	Not Significant at 0.05 level
2	Science Graduate	49	65.65	9.17		

Table - 3 shows that the t-value obtained for the significance of the scores of arts graduate and science graduate teacher-trainees is 0.323 which is less than the table value 1.98, required for significance at 0.05 level. It indicates that arts and science graduate teacher-trainees have similar perception regarding open educational resources. Hence, it is concluded that there is no significant difference in the perception of arts graduate and science graduate teacher-trainees regarding OERs.

**Table - 4:** Significance of Difference between Urban and Rural Teacher-Trainees regarding OERs

Sl. No.	Locale	N	Mean	SD	t-value	Inference
1	Urban	41	67.86	6.83	2.687	Significant at 0.05 level
2	Rural	67	63.85	8.51		

It is evident from the Table - 4 that the t-value obtained for the significance of the scores of urban and rural teacher-trainees is 2.687 which is higher than 1.98 at 0.05 level. It shows that both the urban and rural teacher-trainees have significantly different perception regarding open educational resources. Hence, it is concluded that there exists significant difference in the perception of urban and rural teacher-trainees, and that the urban teacher-trainees have more favourable perception than rural teacher-trainees regarding OERs.

**Table - 4:** Significance of Difference between Teacher-Trainees having less than Two Years Experience and above Two Years Experience regarding OERs

Sl. No.	Experience	N	Mean	SD	t-value	Inference
1	≤2 Years	75	65.59	7.98	0.057	Not Significant at 0.05 level
2	>2 Years	33	65.48	8.86		

As evident from Table - 4 that the t-value obtained for the significance of the scores of teacher-trainees having less than two years and above two years experience is 0.057 which is less than the required table value i.e. 1.98 at 0.05 level. It indicates that the teacher-trainees having ≤2 years and >2 years Internet browsing experience have similar perception regarding open educational resources. Hence, the null hypothesis ( $H_0$ ) is accepted. Therefore, it is concluded that there is no significant difference in the perception of teacher-trainees with ≤2 years and >2 years experience of Internet use regarding OERs.

### Conclusion

The open educational resource, which was once the novelty in the process of educational transactions, has steadily grown popularity among teachers, educators, researchers, teacher-trainees and other scholars over the years. The study helps to draw the following conclusions:

- there is no significant difference in the perception of male and female teacher-trainees regarding OERs.
- there is no significant difference in the perception of arts graduate and science graduate teacher-trainees regarding OERs.
- there exists significant difference in the perception of urban and rural teacher-trainees, and that the urban teacher-trainees have more favourable perception than rural teacher-trainees regarding OERs.
- there is no significant difference in the perception of teacher-trainees with  $\leq 2$  years experience and  $> 2$  years experience of Internet browsing regarding open educational resources.

### **Educational Implications**

There is no doubt of the vital need for an expanding network of OER, and upgradation for technological infrastructure in the country. An equal need, however, possibly with more immediate effect on the regulation of those materials, is for the quality assurance in the education sector. The study argues that much can be learned by the growing number of OER developers including the instructional system designers. The changing role indicates a need for strong policy and strategy to be followed in order to determine and ensure effective use of OERs that support wide spread target learning groups. It becomes clear, therefore, that the overall focus be given to the creation and dissemination of OERs. Cognitive knowledge and curricular details would be dominated by quality OERs with the guidelines of creative common licenses under public domain.

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