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Prospective Teacher Perceptions: Teaching and Learning with Open Educational Resources

Shamim Ahmad

Associate Professor, Department of Education, Indira Gandhi National Tribal
University, Amarkantak-484887

Abstract

Recent developments in the field of technology have led to a renewed interest in the increased accessibility of instructional materials in education. Consequently, open educational resources (OERs) become a major teaching learning resource through which one can freely and openly access, share, manage, use and reuse information for teaching, learning, evaluation and research. Under some licenses, these resources are freely accessible by public at large. Learning community especially learners, teachers and prospective teachers can access digitized materials, open file formats, course materials, instructional modules, ebooks, videos, simulations, tests, lesson plans, software and other tools used to augment access to knowledge in the twenty first century learning environments. Open educational resources are one of the most widely used learning resources available in multiple formats residing in public domain. However, investigating the perceptions of prospective teachers regarding open educational resources is a continuing concern in teacher education. This paper examines the account of perceptions of prospective teachers on open educational resources with regard to their gender, locality and internet browsing experiences. The results of the study indicate that no significant differences in the perceptions of prospective teachers were found between a) male and female; b) rural and urban, but differed significantly between c) <4 and ≥ 4 years' internet browsing experiences.

Keywords: Open Educational Resources; Perception; Prospective Teachers; Teacher Education.

Overview

Open educational resources are increasingly recognized as public domain digital or otherwise, materials offered freely and openly for teaching, learning, evaluation and research purposes. The use, reuse, adaptation and sharing of these freely and openly accessible resources are a continuing concern within the business of educational transactions. Over the past decade or so there has been a dramatic increase in the technology based digital learning resources worldwide. Given the diversity of these resources, it is not surprising to seek these resources to be placed in the public domain. It also seeks to encompass use, reuse, adaptation and repurposing of such resources for educational purposes.

With the advent and use of new information and communication technology and its many ramifications, promoting open licensing and free sharing of course contents by universities, colleges and other institutions of higher learning and research attracted a kind of movement to this effect. Factors found to be influencing education particularly higher education have been explored in several studies. "As rising costs in

higher education affect current and potential students, faculty and students are looking for ways to cut costs where possible”(Ikahihifo et al., 2017, p.126).

A considerable amount of literature published report that “there are an increasing number of OER materials which are created and made available by multi-lateral agencies, consortia and individual organizations but it is under-utilized”(Ganapathy et al., 2015, p.62). Recent evidence suggests that “while there are many other reasons to support OER, the cost issue is a primary factor in their growing popularity amongst students and teachers”(Butcher et al., 2015, p.5).

Open Educational Resources

One of the most important events of the twenty first century is creation, use, reuse, adaptation and sharing of open educational resources (OERs) which in turn augment the wider movement to foster technology enabled education, training and development for all. “Open educational resources (OER) are free and openly licensed educational materials that can be used for teaching, learning, research, and other purposes”(Wikipedia, 2018, p.1). Being free and open, though not in absolute terms, the success of OER lies in the meticulously planned use, reuse, and repurposing and sharing these resources as and when required.

Open educational resources (OERs) are meticulously planned, well designed and developed digital or otherwise educational resources freely accessible and openly available to all under certain licenses. Johansen et al., 2011 maintains that the Massachusetts Institute of Technology (MIT), in October 2002, launched the MIT OpenCourseWare Initiative, effectively tearing down the walls that kept the masses from enjoying the knowledge and instruction available to its students”(Johansen et al., 2011, p.369). In the context, credit goes to MIT OpenCourseWare project for augmenting this global movement.

Review of Literature

Several studies investigating perceptions on open educational resources have been carried out. A number of studies have examined student and teacher perceptions and use of open educational resources (Ikahihifo et al., 2017; Butcher et al., 2015; Ganapathy et al., 2015; Johansen, 2011; COL, 2009;), but to date none has attempted to analyze the prospective teacher perceptions regarding open educational resources. Due to practical constraints, the study could not provide a comprehensive review of prospective teacher perceptions with regard to open educational resources.

The present academic inquiry provides an important opportunity to advance the understanding of open educational resources and its role in teaching, learning, evaluation and research. It also offers a few insights into the prospective teacher perceptions with reference to gender, locality and internet browsing experiences. The paper has been organized in the following way.

Objectives

The main objectives of the paper include analyzing the significant difference, if any, in the perception of prospective teachers regarding open educational resources with respect to gender, locality and internet browsing experiences.

Hypotheses

The hypotheses tested were formulated as there is no significant difference in the perception of prospective teachers regarding open educational resources with respect to gender, locality and internet browsing experiences.

Methodology

The design of the questionnaire was based on descriptive survey wherein the semi structured approach was chosen. For this study, researcher made questionnaire was used to explore prospective teacher perceptions regarding open educational resources with respect to their gender, locality and internet browsing experience. The population of this study includes the prospective teachers pursuing four year integrated teacher education programme at Indira Gandhi National Tribal University, Amarkantak. The study used purposive sampling technique wherein a total of 92 prospective teachers during academic session 2017-2018 were subjected to tool administration for investigation. Participants were provided research tool comprising of 20 items with response pattern on a five-point scale. The data gathered from the subjects was analyzed using suitable statistics.

Throughout the paper, the term open educational resources have been referred to those technology empowered freely accessible and openly licensed educational materials digital or otherwise that can be used, reused, adapted and shared for teaching, learning, evaluation and research.

Analysis and Interpretation

With an aim to analyze and interpret data, scores gathered were 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	Prospective Teachers	Gender		Locality		Internet Browsing Experience	
	Total (N=92)	Male (N=30)	Female (N=62)	Rural (N=53)	Urban (N=39)	<4 Years (N=58)	≥4 Years (N=34)
Mean	59.34	60.8	58.63	58.23	60.85	57.00	61.85
SD	8.27	8.05	8.34	8.35	8.01	8.17	7.75

The observed differences between means of groups as evident from the table-1 above were tested with t-ratio.

Table-2: Significance of Mean Difference between Male and Female Prospective Teachers

S#	Group of Prospective Teachers	Count	df	Mean	SD	t-value	Inference
1	Male	30	90	60.80	8.05	1.19	Not Significant at 0.05 level
2	Female	62		58.63	8.34		

Table - 2 shows that the t-value obtained for the significance of the mean scores of Male and female prospective teachers is 1.19 which is less than the table value 1.99, required for significance at 0.05 level. It indicates that male and female prospective teachers have similar perception. Hence, it is concluded that there is no significant difference in the perception of prospective teachers based on their gender regarding open educational resources.

Table-3: Significance of Mean Difference between Rural and Urban Prospective Teachers

S#	Group of Prospective Teachers	Count	df	Mean	SD	t-value	Inference
1	Rural	53	90	58.23	8.35	1.53	Not Significant at 0.05 level
2	Urban	39		60.85	8.01		

Table - 3 shows that the t-value obtained for the significance of the mean scores of rural and urban prospective teachers is 1.53 which is less than the table value 1.99, required for significance at 0.05 level. It indicates that the rural and urban prospective teachers have similar perception. Hence, it is concluded that there is no significant difference in the perception of prospective teachers based on their locality regarding open educational resources.

Table-4: Significance of Mean Difference between <4 Years and ≥4 Years Internet Browsing Experience

S#	Group of Prospective Teachers	Count	df	Mean	SD	t-value	Inference
1	<4 Years	58	90	57.00	8.17	2.84	Significant at 0.05 level
2	≥4 Years	34		61.85	7.75		

It is evident from the table – 4 above that the t-value obtained for the significance of the mean scores <4 and ≥4 years’ internet browsing experience 2.84 which exceeds the required value of 1.99 at 0.05 level. It shows that the prospective teachers with <4 and ≥4 years internet browsing experience do not have similar perception. Hence, it is concluded that there exists significant difference in the perception of <4 and ≥4 years internet browsing experience regarding open educational resources.

Learning community especially learners, teachers and prospective teachers can access digitized materials, open file formats, course materials, instructional modules, ebooks, videos, simulations, tests, lesson plans, software and other tools used to augment access to knowledge in the twenty first century learning environments.

Conclusion

The prospective teacher perceptions on open educational resources with reference to gender, locality and internet browsing experiences were compared using simple statistical analysis. The past decade has seen increasingly rapid advances in technology and thereby open educational resources (OERs) become a major teaching learning resource through which one can freely and openly access, share, manage, use and reuse information for teaching, learning, evaluation and research. The study helps to draw the following conclusions:

- there is no significant difference in the perception of male and female prospective teachers regarding open educational resources.
- there is no significant difference in the perception of rural and urban prospective teachers regarding open educational resources.
- there exists significant difference in the perception of <4 and ≥4 years’ internet browsing experience regarding open educational resources.

These open educational resources (OERs) accessible freely and openly under some licenses empower the prospective teachers as professionals thereby improving the teaching and learning environment all over.

Educational Implications

It is apparent from the study that in today's process of educational transactions, open educational resources are not only regarded as novelty but also have gained popularity among prospective teachers. Recent developments in the field of technology have led to a renewed interest in the increased accessibility of instructional materials in education. Open educational resources are one of the most widely used learning resources available in multiple formats residing in public domain. Interestingly, the vital need for an expanding network of open educational resources and its adaptation using new technological infrastructure is equally emphasized. Prospective teachers with more internet browsing experiences tend to have relatively a more favourable perceptions towards the open educational resources revealing the fact that the digital resources or otherwise which are accessible freely and openly under some licenses may be utilized by all for educational purposes. The study, however, argues that much can be learned to use, reuse, adaptation and sharing of digital or otherwise resources in order to enrich and strengthen the working ambience of teaching, learning, evaluation and research.

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