Research Article

OER sustainability and implementation in Management education

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I N F O

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A B S T R A C T

This paper examines the concept of Open Educational Resources (OERs) and emphasises the significance of OER sustainability for their success. This paper talks about important parts of OER sustainability, such as instructional design and presentation, production and maintenance costs, support systems, and the OER community, especially those that have to do with scalability. Also, a survey was conducted to raise awareness about the availability and usage of OER in business and management education in Mumbai.

Keywords: Open educational resources (OER), sustainability, scalability, instructional design

Introduction

The importance of open educational resources (OER) has grown significantly with the rise of open-access initiatives. The easy and unrestricted availability of OER for teaching and research is a great advantage for higher education. Additionally, ensuring the sustainability of OER is vital for keeping these resources accessible to future generations of learners.

The number of Open Educational Resources (OERs) has grown significantly in recent years, as more organisations and individuals share their digital learning materials freely and openly on the Internet. In this paper, the researcher surveyed management institutes in Mumbai to assess the awareness and usage of OER among users.

Definition OER

The William & Flora Hewlett Foundation (2013) defined "Open Educational Resources (OER) as teaching, learning, and research materials that are either in the public domain or released under an intellectual property license that allows for their free use and modification by others. OER includes a wide range of materials, such as full courses, course content, modules, textbooks, streaming videos, tests, software, and various tools or techniques that support access to knowledge.[1]

Sustainability

Sustainability means fulfilling the needs of the present while ensuring that future generations can also meet their own needs. It is a business approach aimed at creating long-term value by recognising and managing the opportunities and risks related to economic, environmental, and social changes (Jeremy, Galbreath 2011). [2]

There are significant concerns regarding the long-term sustainability of Open Educational Resources (OERs). The concerns are as follows.

Instructional Design and Presentation Techniques

Open Educational Resources (OERs) should have value as learning tools. The educational value of open digital content

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makes it more likely to survive. The quality of its design and presentation can determine its value. The sustainability of OER depends on a few key things, such as instructional design based on learning theories and presentation based on user interfaces.

Cost of Production and Maintenance of OER

While Open Educational Resources (OER) are available to students at little or no direct cost, their production and maintenance incur substantial institutional expenses. The total cost of ownership for OER includes the costs of developing it, supporting it, and keeping it up to date.

OER Support

OER requires support in funding, technical assistance, content development, and staff; without these elements, OER does not exist.

Literature review

The Open Educational Resources (OER) movement has changed the way scientific papers are published and is opening up new doors for scientific research all over the world.Tlili et al. (2020)[3] this paper utilised the triangulation method to analyse the current Open Educational Resource (OER) sustainability models employed by universities, including the challenges encountered and possible avenues for enhancement. The results of this study could help organisations make their own plans for how to keep OER going, encourage its use around the world, and help the UN reach its Sustainable Development Goals.

Llamas-Nistal & Mikic-Fonte (2014)[4] discussed the experience of recording lectures and generating corresponding videos as a step toward enhancing the learning process. It also focuses on studying and analysing students' experiences with these recorded videos as a support tool for their education.

Hulbert & McBride (2025)[5] they mentioned that as higher education changes, OERs become a promising option. But their future success depends on long-term support from their institutions and their ability to address the challenges of sustainability in a competitive setting.

Kohnke et al. (2023) [6] this study seeks to improve the current understanding of Open Educational Resources (OERs) by exploring the challenges and opportunities linked to their development and implementation within an English for Academic Purposes context. It gives a new look at the OER movement by showing how important it is to look at the specific needs and problems that each field faces.Koohang & Harman (2007)[7] the main objective

of this paper is to introduce readers to Open Educational Resources (OERs) and to discuss several key issues regarding their sustainability. This paper concentrates on significant subjects, including instructional design and presentation, production and maintenance costs, support for OERs, and scalability-related communities of practice associated with OERs.

Objectives

- To find out what kinds of Open Educational Resources (OER) are available for Business and Management studies.
- To examine the level of utilization of OER among students and faculty within business and management institutes in Mumbai

Need and significance of the study

Business and Management Studies are vital for economic growth. Consequently, Open Educational Resources (OER) are essential in institutions offering these programmes. This study aims to evaluate the awareness and usage of open educational resources in Business and Management studies, as well as their sustainability.

Research Methodology

Research is considered the art of scientific investigation. In this paper, the researcher employed a survey method utilising an exploratory approach. An organised questionnaire was developed, featuring both open-ended and closed-ended questions, to conduct a user survey aimed at assessing awareness of open educational resources and their applications. The questions were designed using the Likert scale.

Analysis and Interpretation of Data

Table 1: OER for business & management studies of learning resources.The data showed that faculty members frequently utilise case studies for teaching, with a high mean score of 0.85. In contrast, the use of software, study guides, and simulations was notably lower, with mean scores of 0.13, 0.20, and 0.28, respectively. This information is presented in Table 36 and illustrated in Figure 1.

The sample showed the usage of Open Educational Resources (OER) provided by the government. Among the various government OER initiatives, the National Program on Technology Enhanced Learning (NPTEL) and the National Digital Library of India (NDLI) recorded a 100% usage rate. In contrast, the Online System for Central Accounting & Reporting (OSCAR) reported the lowest awareness at 93.3%, as illustrated in Table 2

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Table 1.OER for Business & Management Studies of learning Resources

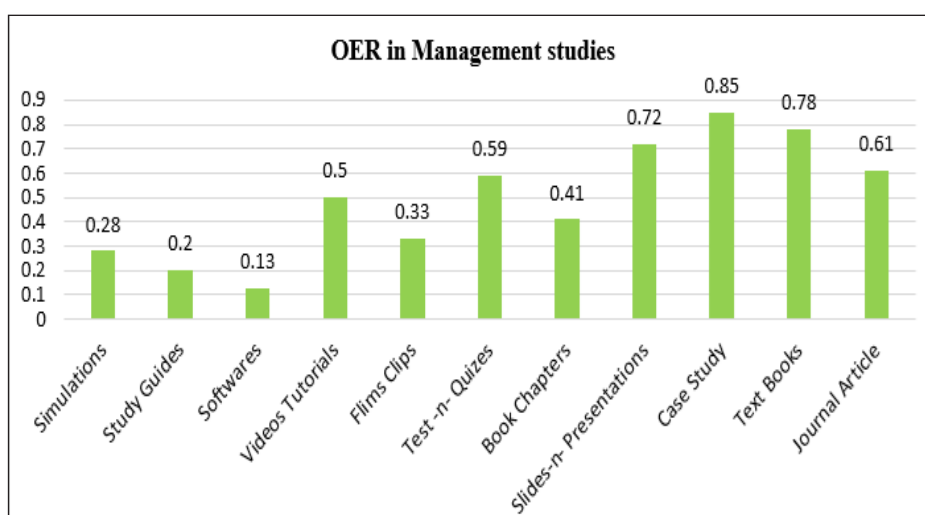| Particular	N		Mean	Median	Mode	Std. Deviation
	Valid	Missing				
Simulation	46	0	0.28	0	0	0.455
Study Guides	46	0	0.2	0	0	0.401
Software's	46	0	0.13	0	0	0.341
Videos Tutorials	46	0	0.5	0.5	0ᵃ	0.506
Films or clips	46	0	0.33	0	0	0.474
Test & Quizzes	46	0	0.59	1	1	0.498
Book Chapters	46	0	0.41	0	0	0.498
PPT's	46	0	0.72	1	1	0.455
Cases	46	0	0.85	1	1	0.363
Books	46	0	0.78	1	1	0.417
Articles	46	0	0.61	1	1	0.493

Figure 1.OER in Management Studies

Table 1.OER for Business & Management Studies of learning Resources

Sources	Mode	Frequency	Percentage	Cumulative Percentage
NPTEL	Yes	15	100	100
	No	0	0	0
NDLI	Yes	15	100	100
	No	0	0	0
VIDWAN	Yes	5	33.33	33.33
	No	10	86.77	100
Shodhganga	Yes	11	73.3	73.3
	No	4	26.7	100

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OSCAR	Yes	1	6.7	6.7
	No	14	93.3	100
AICTE Online Courses	Yes	4	26.7	26.7
	No	11	73.3	100
Virtual Lab	Yes	1	6.7	6.7
	No	14	93.3	100
Total		15	100	

Conclusion

This paper discusses the sustainability of Open Educational Resources (OERs), which is crucial for their success. It also addresses several key issues, including instructional design and presentation, production and maintenance costs, and support for OERs. The study concludes that increasing awareness and utilisation of OERs benefits the academic community by enhancing access, affordability, and adaptability of learning materials.

The awareness of government initiatives regarding OERs is notably high. Among various government OERs, the National Program on Technology-Enhanced Learning (NPTEL) and the National Digital Library of India (NDLI) both reported 100% usage. In contrast, the Online System for Central Accounting & Reporting (OSCAR) indicated the lowest awareness, at 93.3%. This suggests that while most government initiatives are well recognised and utilised, there remains a gap in awareness regarding specific programmes like OSCAR. Therefore, additional efforts may be needed to increase the visibility and understanding of its offerings among users.

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