

Exploring the Intersection of Open and Distance Learning, Sharing Economy and Economic Development: A Systematic Literature Review

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ABSTRACT

This study presents a Systematic Literature Review (SLR) examining the intersection of Open and Distance Learning (ODL), the Sharing Economy (SE) and economic development. ODL has emerged as a transformative educational model by enhancing accessibility, flexibility along with lifelong learning opportunities, while the sharing economy emphasizes collaborative, technology-enabled resource utilization. Using the PRISMA framework, this review systematically analyses 62 peer-reviewed studies published between 2009 and 2024, sourced from databases including Google Scholar, ERIC and the Directory of Open Access Journals (DOAJ). Thematic analysis was conducted following Braun and Clarke's six-phase approach to identify dominant patterns in the literature. The review reveals four major themes: (i) the contribution of ODL to economic development through human capital formation and improvements in indicators such as HDI and GDP; (ii) the convergence of ODL with sharing economy principles, including openness, digital infrastructure, and peer-to-peer knowledge sharing; (iii) stakeholders' perspectives on ODL, highlighting the roles of students, teachers, and learner support centers in shaping adoption and effectiveness; and (iv) emerging methodological trends reflected in systematic reviews and bibliometric studies. The findings indicate that ODL aligns closely with sharing economy mechanisms to democratize education and support inclusive economic development. However, empirical evidence addressing regional and context-specific dynamics, particularly within India, remains limited. This study identifies critical research gaps and provides a foundation for future empirical investigations and policy-oriented research aimed at strengthening ODL systems through sharing economy principles in developing economies.

Keywords: Systematic Literature Review, Open and Distance Learning, Sharing Economy, Economic Development, PRISMA Framework, Thematic Analysis.

Introduction

Open and Distance Learning (ODL) is a transformative style of education that enhances flexibility and access to education through technology. ODL aligns with Sharing Economy (SE) principles as they commonly focus on resource sharing, collaboration, accessibility and the use of technology. This nexus creates opportunities for broader participation in education and knowledge sharing. ODL has evolved over time by adapting technology and socio-cultural shifts to develop advanced curriculum, pedagogical practices and flexible learning models that are learner centric. ODL was initially considered as a supplementary mode of education which gradually transitioned into a mainstream educational approach (Gaba, 2017). This transition was further accelerated during the COVID-19 pandemic, which highlighted the importance of technology-enabled education systems and its sustainable capacities (UNESCO, 2022). Education significantly contributes to long term economic development by equipping human capital with knowledge, skills and competencies. This thrives to create economic opportunities

leading to poverty reduction and higher per capita income. Human capital development is widely recognized as a key driver of productivity and inclusive economic development (Tilak, 2002). ODL contributes to this by enabling lifelong learning, professional skill-building and greater participation in the knowledge economy. Coexistence of conventional as well as distance education enhances the overall participation to education. ODL learners require a level of self-discipline, time management and independent study skills. This style of education is more suitable for mature learners and contributes to development of higher education in an economy. Numerous studies associate education with economic goals but this study aims to identify how ODL advances economic development. SE has revolutionized multiple sectors through technology driven resource-sharing models. Sectors like transportation, accommodation, crowd-funding, asset sharing, space sharing, etc. have already benefitted from the principles of SE but these principles are also relevant to education sector as well. The optimisation of educational resources through digital platforms, peer-to-peer learning and collaborative content creation has reshaped traditional educational delivery models (Botsman & Rogers, 2010). Initiatives such as Open Educational Resources (OER), community-based learning and co-created digital content reflect a growing convergence between ODL and SE models (Peters et al., 2021). Despite expanding literatures on ODL, limited researches systematically examines how ODL incorporates with SE principles and simultaneously contributes to economic development. Empirical evidence addressing regional and country-specific contexts remains sparse particularly within India. To address these gaps the SLR helps to explore the intersection of ODL with SE and how it eventually influences economic development. The study addresses the following research questions:

- How has existing literature conceptualised the role of ODL in economic development?
- In what ways does prior research link SE principles with Open and Distance Learning?
- What factors influencing stakeholders' preferences for ODL are identified in existing studies?
- What thematic trends and research gaps emerge from SLRs and bibliometric analyses across these domains?

Objectives of the Study

The objectives of the study are addressed through a systematic synthesis of existing literature rather than through primary empirical investigation. The primary objectives of this study are:

- To synthesise existing literature on how ODL accelerate economic development.
- To examine how SE principles are applied to ODL frameworks in existing studies.
- To identify and categorise factors influencing stakeholders' perceptions and preferences towards ODL as reported in prior research.
- To review existing systematic literature reviews and bibliometric analyses in the domains to identify research trends and gaps.

Methodology

- **Research Design:** This study attempts to identify, evaluate and synthesize existing scholarly works that examine the relationship between ODL, SE and economic development. SLR is a transparent and structured approach that reduces selection bias and improves the reliability of findings drawn from existing literatures (Boland et al., 2017).
- **Review Protocol and PRISMA Framework:** The review process followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2009) guidelines (Moher et al., 2009). The PRISMA framework was employed to ensure systematic identification, screening, eligibility assessment and inclusion of relevant studies. The review process was carried out in four stages of identification, screening, eligibility and final inclusion. PRISMA flow diagram presents a clear overview of the selection process and shows the number of articles included and excluded at each stage.
- **Data Sources and Search Strategy:** A systematic search of existing literature from multiple academic databases was conducted to identify peer-reviewed and open-access studies relevant to the objectives of the study. The primary databases included Google Scholar, ERIC (Education Resources Information Center), Directory of Open Access Journals (DOAJ), Érudit and selected open-access publications indexed in ResearchGate. These sources bridge education and social sciences by offering insights into research areas of ODL and the sharing economy. The search strategy uses predefined keywords and Boolean combinations like: "Open

and Distance Learning", "Distance Learning AND Economic Development", "ODL AND Sharing Economy", "Knowledge Sharing AND Online Education" and "ICT AND Distance Education". The search was constrained to studies published between 2009 and 2024 to capture contemporary developments in digital education and sharing economy frameworks. This timeframe captures the era of advancements in digital learning technologies along with the growth of open educational resources and also acknowledges the rise of SE models that have influenced educational practices.

Inclusion and Exclusion Criteria

Purposive searches were made by using keywords and search codes in different research databases. These search results were screened primarily on the basis of overlap in the title and keywords and eventually selected if commonalities were observed. Studies focusing on COVID-19 were rejected intentionally to understand the true impact of ODL. During and after the pandemic period an abnormal surge in this research area was observed which might create a bias in reflecting the true picture of ODL. Secondary screening was conducted by reviewing abstracts of the papers available on open sources. Data pertaining to title, author/author's, journal name, year of publication, methodology and key findings were collected from each paper. The secondary screening process resulted in the removal of four duplicate journals and eight further papers were deemed irrelevant as their abstracts did not overlap with the objectives of the study. Screening the studies resulted in 62 core papers that fit well for the study and initiate the SLR.

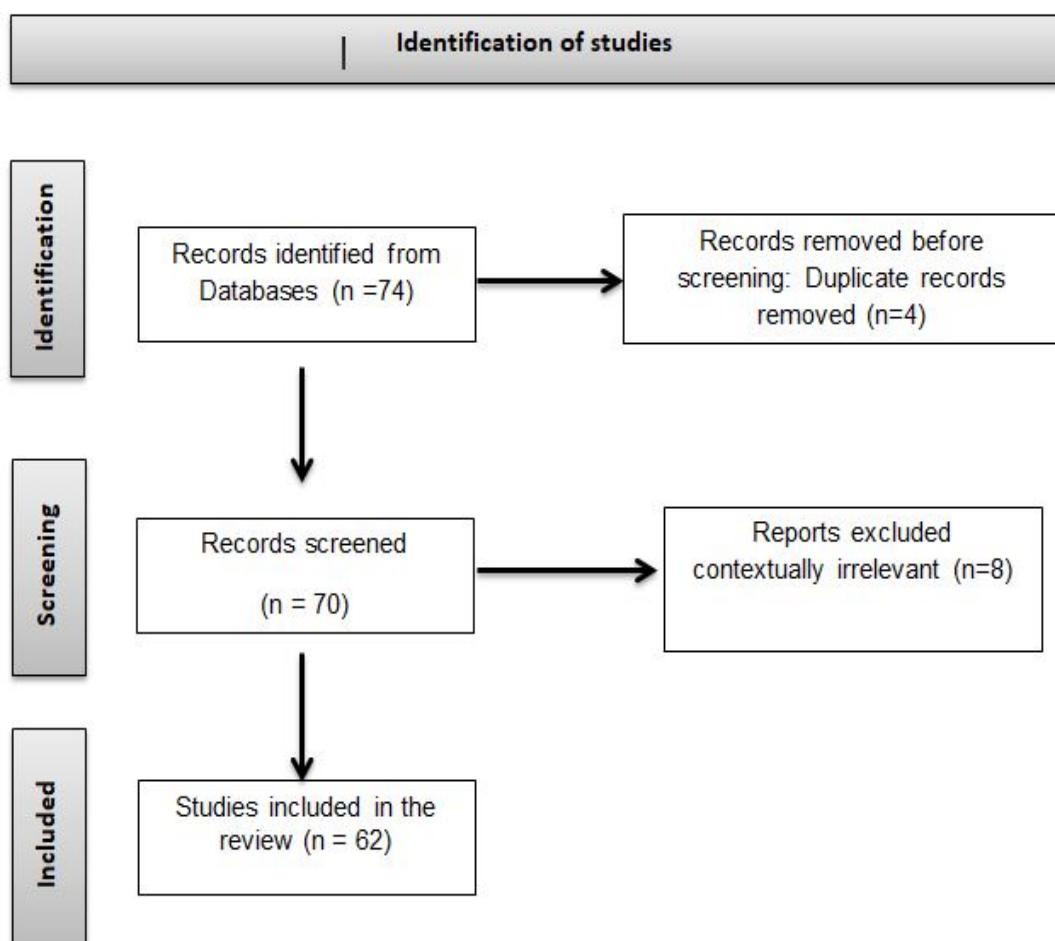


Figure 1: PRISMA Framework

Source: Author generated from SLR data.

Thematic Analysis

Flexibility of Braun and Clarke's approach is essential to integrate different disciplines of education, economics and technology related literature (Braun, V., & Clarke, V. 2006). The framework integrates various perspectives while keeping the analysis organized. This six-phase method ensures that the literature is synthesized systematically to provide more practical and insightful results. The method enables the recognition and analysis of significant patterns within textual information. To familiarise data these 62 articles were read and re-read thoroughly to develop a deep understanding of gaps identified, objectives framed, methodologies adopted and findings along with conclusion. In the second phase short codes were assigned based on research focus. These codes were further grouped in the third phase to formulate themes. The fourth phase involved refining and validating the preliminary themes by cross-checking them against the entire dataset. Themes were found to be consistent and provided a faithful representation of both the coded extracts and the data as a whole. In the 5th phase themes were named based on codes generated. The final phase involves synthesising the analysis under each theme wherein finding under each theme is explained.

Following the PRISMA guidelines and clear inclusion-exclusion criteria alongside thematic analysis the study reflects transparency and a roadmap for future inquiry. This structured approach strengthens the overall validity of the review by creating a robust foundation for identifying current research gaps and suggesting future directions.

Findings

The findings of SLR can be organised into two segments. The first segment provides a descriptive overview of the reviewed literature, including publication trends, research methodologies, data sources and leading journals in the field. The second part presents the thematic analysis conducted using Braun and Clarke's six-phase framework, highlighting major themes relevant to the objectives of the study. Figures and tables are used to support the analysis and to visually summarise the patterns identified across the reviewed studies.

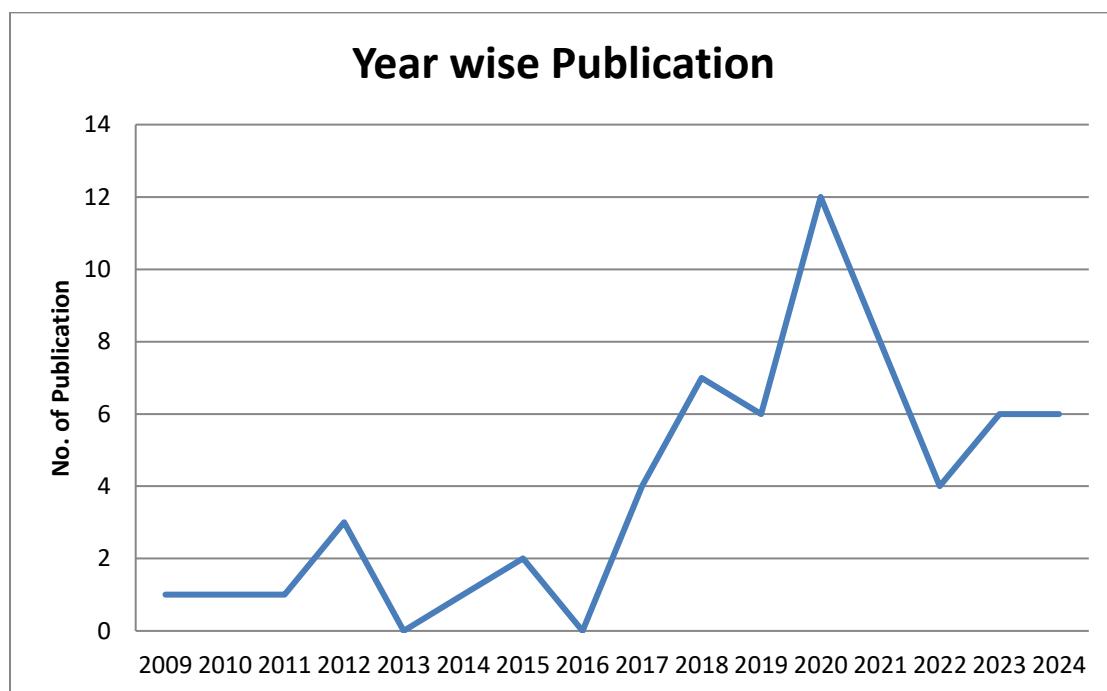


Figure 2: Year wise Publication

Source: Author generated from SLR data.

Out of 62 studies acknowledged in SLR most of the studies were published in the year 2020 and 2021 and the reason for that consciousness is the pandemic period that the world witnessed but the studies included in the study after thorough review were not specific to pandemic period. 59% of the papers adapted a secondary research methodology relying on existing data sources, including

systematic literature reviews, bibliometric analyses, conceptual papers and studies based on secondary datasets. Relatively few numbers studies adopted primary data collection. Studies conducted through primary data collection were focused on research areas like Students Perception (Dr. Tapan Kumar BASANTIA, 2018), Demographic profile (Hsiao, J. C. Y., Moser, C., Schoenebeck, S., & Dillahunt, T. R., 2018) Learner Interface, Learning Community, Content and Personalization (Nguyen, Dat-Dao; Zhang, Yue, 2011), staff attitudes (Vivien Rolfe, 2012), perceived usefulness, perceived ease of use (Ean Teng Khor, 2014), Employment Opportunity, Preference on Learner Support Services, View on recognition of ODL degrees (Gowthaman, K., Singh, N., & Awadhiya, A. K., 2017), faculty perception (Panda, S. & Santosh, S., 2017), Self-regulation, self-paced/ self-directed learning (Kocdar, S. et. al., 2018), students loyalty (Yon Rosli Daud, el. at., 2020) etc. remaining 4% of the studies used mixed approach of data collection where both primary and secondary data were included in the study. Forty studies were recognised as quantitative in nature and 22 studies were qualitative in nature.

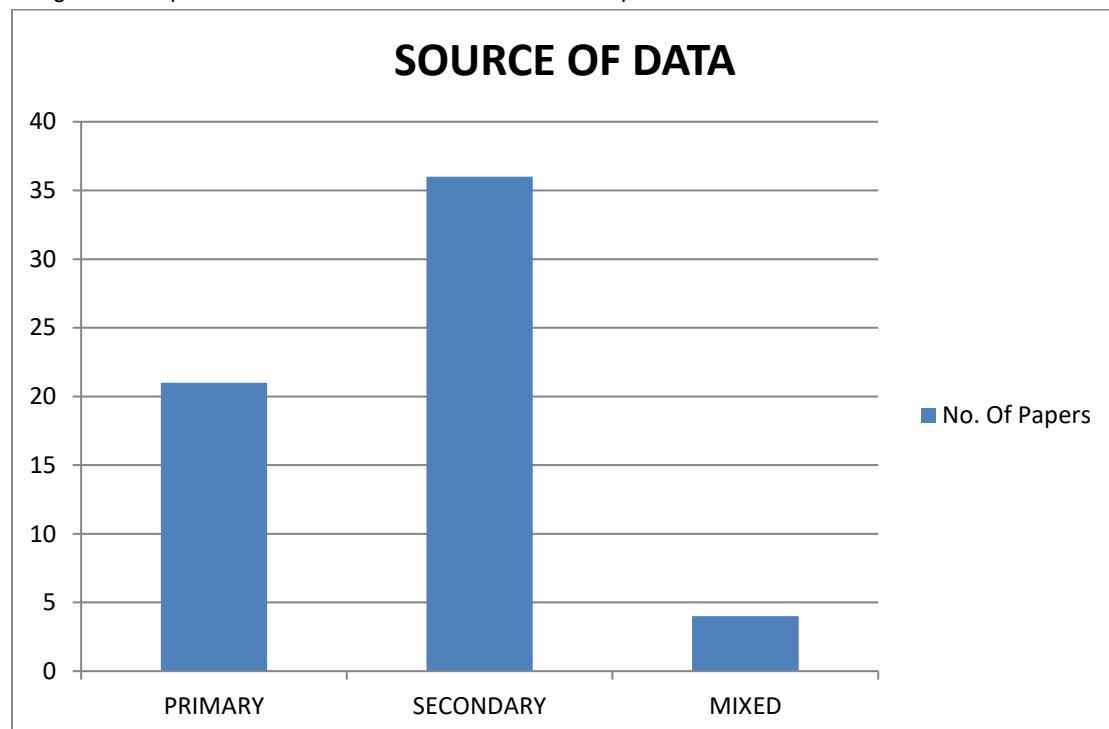


Figure 3: Source of Data

Source: Author form SLR data.

While identifying papers from various databases it was identified that specific journals which focused on open and distance education, while other papers were found to be published in journals of other disciplines. In the study the highest frequency of publication was observed in International Review of Research in Open and Distributed Learning.

Table 1: List of Journals reflecting most published articles

| Sl. No. | Journals | No. of Publication |
|---------|--|--------------------|
| 1 | International Review of Research in Open and Distributed Learning | 10 |
| 2 | Asian Association of Open Universities Journal | 4 |
| 3 | Asian Journal of Distance Education | 3 |
| 4 | International Journal of Academic Research in Business and Social Sciences | 2 |
| 5 | International Journal of Asian Education | 2 |
| 6 | International Journal of Educational Management | 2 |
| 7 | Turkish Online Journal of Distance Education | 2 |

Source:- Author generated SLR data.

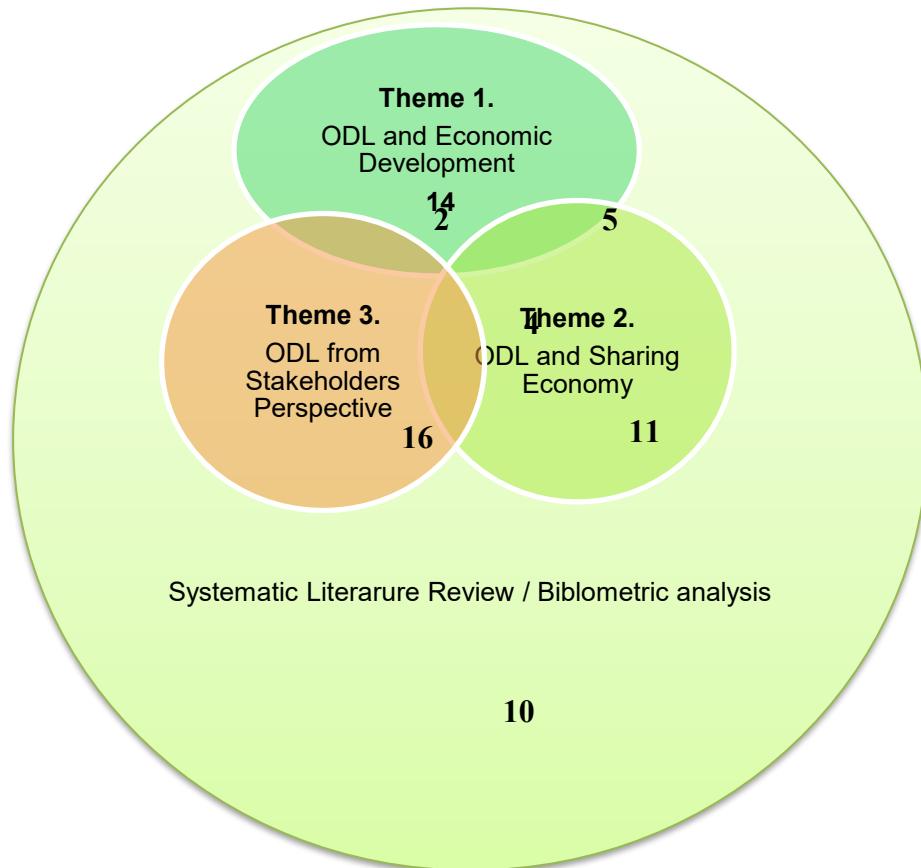


Figure 4: Thematic Representation

Source:- Author Generated SLR data.

Theme 1: ODL and Economic Development

ODL is essential for enhancing educational accessibility by surmounting geographical, economical, and institutional obstacles. ODL contributes to attaining educational targets of a country which eventually leads to strong foundation of the Human Development Index (HDI). A country's achievement in health, education and income is quantified through the HDI framework (UNDP, 2020). Improved educational outcomes through ODL lead to enhanced literacy rates and mean years of schooling which are the key measures of HDI. Higher HDI is significantly connected with economic development since a better educated and competent population boosts productivity, employment prospects and income levels (Sen, 1999; Barro & Lee, 2013). Educational achievements can be boosted through ODL and simultaneously foster sustained economic growth and human capital development. The Braun and Clarke framework categorised literatures based on codes namely GDP, Education, Years of Schooling, Regression Model, ODL, Economic Development, HDI and Correlation. 14 studies purely belong to the current theme whereas 5 papers share common codes with theme 2 also. Theme 2 shares common codes like weight of digital education resources in GDP (Huseyn, A. el. at., 2023), Open Educational Resources (Rolfe, V. 2012), Access, Equity, Cost effectiveness, National development (Panda. S., 2022), Technology, Infrastructure and GDP (Sibirskaya, E. el. at., 2019). A weak association is found between theme 1 and 3 as only two studies(Joshi, B.M., el. at. 2024) were identifies which had common goals of economic development as well as stakeholders perspective of ODL. While numerous studies have examined the role of ODL in enhancing economic development but limited research has addressed its specific contribution to India. Empirical evidence from rural or underdeveloped regions in India remains sparse, leaving a gap in understanding their combined impact.

Theme 2: ODL and Sharing Economy

The pedagogical and operational frameworks used in ODL are highly congruent with the principles of SE which include digital platforms, peer-to-peer exchange, collaborative consumption and other similar practices. Both models are characterized by a shared commitment to enhancing accessibility and flexibility ensuring optimum utilisation of resource within the educational sector. SE promotes collaborative utilization of digital infrastructure, OERs and the exchange of knowledge, all of which is essential for the efficacy of ODL efforts (Wang & DeFillippi, 2020). ODL employs technology-driven platforms to provide education that transcends geographical and institutional limitations, reflecting the disruptive nature of the SE on conventional delivery methods (Pappas, 2014). The emergence of peer-to-peer learning, collaborative material development and open-source educational platforms signifies the convergence of these two paradigms (Teixeira et al., 2013). Incorporating SE ideas into ODL can improve its scalability and sustainability by utilizing community-driven support systems, shared digital resources and collaboratively developed knowledge environments, especially in resource-limited or remote areas (Anders, 2015). The thematic analysis in this theme derived codes such as Access & Equity, Technology & Infrastructure, Trust & Participation, and Digital Resource Sharing. These codes were not explicitly stated as variables in the reviewed studies but were developed through an interpretive understanding of literatures in line with Braun and Clarke's thematic analysis framework. Total 11 studies could be identified under this theme but a closer examination through methodology and finding revealed that only 6 studies actually relate to the core theme. These 6 studies highlight the use of Information and Communication Technology (ICT) and shared digital resources reflecting codes like access, technology and digital resource sharing (Schuwer, R. et. at., 2018, Gabriela A. et. at., 2022). Demographics of learners are important areas to study as it represent codes of acceptance and equity (Hsiao, J. C. Y. et. at., 2018, Robert S. et. at., 2018, Baro A. et. at., 2021). Most of these studies do not explicitly refer SE terminology but their findings reflect SE mechanisms such as collaborative access, resource optimisation and technology-mediated trust. Despite this conceptual alignment, the theme reveals a lack of direct empirical investigation into the ideological convergence between the SE and ODL highlighting the need for context-specific empirical studies.

Theme 3: ODL from Stakeholders Perspective

This theme is the most explored area when it comes to evaluating ODL. 16 out of 62 papers significantly focus on stakeholder's perspective of ODL. Three main stakeholders were grouped namely Students, Teachers and Learner Support Staff. Different stakeholders behave differently but student's perspective is evaluated in most of the studies (Nwogu, R. et. at. 2021; Krishnan, A. et. at. 2023). Teachers are the pillars of sharing education through ODL so their opinions matter to a great extent (Nujid, M. et. at. 2021). Only a single paper was observed which studied about the faculty perception of ODL (Panda, S. & Santosh, S. 2017). Study centres also play a vital role by managing infrastructure, administration and coordination and learner support services. Understanding the perspectives of support staff is essential for identifying practical barriers, improving quality and tailoring ODL models to diverse educational environments (Jha, J. et. at. 2019; Musingafi, M. C., et. at. 2015). As literature suggests, stakeholder engagement is a foundational component of successful distance education systems (Anderson, 2008; Mishra & Panda, 2007; Nguyen, D. et. at. 2011). None of the 62 studies focuses on incorporating perspectives of multiple stakeholders to highlight the need for inclusive outcome based services (Cresencio. M., 2023) and none with stakeholder-informed approaches (Basantia, T. 2018) but these areas are essential for ODL and policy development. Very few studies have been recognised to share a common theme of sharing educational resources and stakeholder's perception of sharing. This gap leads to further scope of triangulated analysis perceptions of students, teachers and learner support staff cumulatively.

Theme 4: Systematic literature review/ Bibliometric analysis

Systematic literature reviews (ÇAKIROĞLU, Ü., el. at., 2019) and bibliometric analyses are essential instruments that establishes intellectual framework and guides the progression of research in ODL and other domains. This theme offers a systematic approach to synthesizing extensive material available, helps to identify new patterns and explores under-explored topics. The evolution of scholarly focus from pedagogical concerns to learner-centric models was observed in this theme. Bibliometric instruments like co-word analysis, citation mapping and cluster visualization are instrumental in uncovering latent patterns and intellectual structures within the literature (Bozkurt, A. & Zawacki-Richter, O. 2021) and knowledge networks among principal concepts, authors and organizations (Ukwoma, el. at., 2021; Çivril, H. el. at., 2024). This approach uncovers existing research gaps through the examination

of citation patterns and key literature offering strategic directions for future research. This study incorporates bibliometric and SLR as a subject to substantiate the significance of stakeholder issues and technological advancements in ODL. This dual approach provides a clear evidence-based justification for the study's focus and direction. SLR (Stracke, C. 2019; Kusmaryono, I., Jupriyanto, & Kusumaningsih, W., 2021; Izham, M. A. A. N. I., el. at. 2022) and bibliometric analyses (Kurulgan, M., 2024) can enhance theoretical frameworks and inform policy implications in remote education research. This theme provides an overall view of trends and patterns which were studied earlier as well as areas which are still unexplored.

Conclusion

The thematic synthesis of 62 studies provides a comprehensive understanding of the role of ODL within educational and socio-economic contexts. The first theme highlights a strong conceptual linkage between ODL and economic development through contributors like human capital formation and development indicators such as HDI and GDP. However, empirical evidence from Indian context remains limited. This indicates a research gap and also guides future research area. The second theme reveals a philosophical and operational overlap between ODL and SE principles in relation to accessibility, flexibility, digital infrastructure and collaborative knowledge sharing. While the theoretical alignment is well established but a gap in empirical studies examining this convergence still exists. This highlights the need for context-specific research to investigate how SE principles in education can enhance the scalability and sustainability of ODL. The third theme identifies how perspectives of students, teachers and learner support staff are important in determining the effectiveness of ODL initiatives. Despite extensive research in this area, few studies adopt a triangulated approach that integrates all stakeholder viewpoints in Indian context. The fourth theme demonstrates the growing use of SLR and bibliometric analyses helps to map research trends and identify emerging gaps in ODL research areas. These findings reaffirm the potential of ODL as a transformative educational paradigm capable of promoting access, equity and inclusive economic development. Identified gaps highlight the need for empirical research to identify core factors that overlap ODL with SE and integrated stakeholder-based analyses can provide insights which helps in policy formulation and the effective implementation of ODL within SE frameworks.

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