

Unraveling the Landscape of Capacity Building in Digital Services: A Bibliometric Study

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Abstract. This research aims to provide a comprehensive overview of the current state of knowledge regarding capacity building for digital services by identifying key themes, trends, geographic disparities, and gaps in addressing social and ethical implications, this research will serve as a valuable resource for policymakers, practitioners, and researchers. This research utilized an extensive dataset sourced from the Scopus scientific database. It examined 126 articles published between 1981 and 2025 (inpress), employing bibliometric meta-analysis through R-Bibliometrix and VOSviewer, an open-source program for bibliometric analysis. The primary finding indicates a rising trend in the number of publications and citations, impact factors, author-country networks, as well as the emergence related thematic clusters. The result of study can becomes provide a valuable foundation for future research, policy development, and practical interventions aimed of organizations and governments at strengthening digital service delivery global.

Keywords: capacity building; digital service; bibliometric study

1. Introduction

The digital revolution has fundamentally reshaped how governments interact with citizens and deliver public services. This shift toward digital services necessitates reevaluating capacity-building initiatives to ensure governments can effectively navigate this evolving landscape. While the concept of capacity building in governance is well-established, its application to digital services challenges and opportunities still needs to be explored[1]. The digital revolution has fundamentally altered the landscape of public service delivery, requiring governments to enhance their capacity for providing efficient and effective digital services. Citizens increasingly expect accessible, user-friendly online service platforms for accessing information, completing transactions, and solving problems with government services. However, despite widespread acknowledgment of the importance of digital transformation in the public sector, significant gaps still need to be in understanding the specific components and effective strategies for building institutional capacity in this rapidly evolving domain[2]. The rapid proliferation of digital services has drastically reshaped the landscape of public service delivery, creating opportunities and challenges for governments worldwide. While the potential benefits of digital services are vast, realizing them hinges on a crucial factor of capacity building. Despite the growing recognition of capacity building's significance in digital service delivery, a comprehensive understanding of its multifaceted nature remains elusive. Effective implementation and utilization of digital services necessitate a comprehensive understanding of the diverse elements contributing to capacity, ranging from technological infrastructure to human resource skills and institutional readiness[3].

Therefore, this bibliometric analysis aims to unravel the landscape of capacity building in digital services, identifying key themes, trends, and gaps within existing literature. This analysis will explore the evolving literature on capacity building, specifically focusing on its relevance and applicability to the digital service government. This analysis will explore how existing literature addresses these diverse facets, examining their potential interrelationships. The existing literature, while burgeoning, often needs a comprehensive framework for analyzing the various dimensions of capacity and their interplay. This study will provide a comprehensive overview of the existing research landscape by analyzing key terms, influential authors, and prominent research clusters and identify potential areas for future investigation using bibliometric analysis. Furthermore, this research aims to illuminate the geographic distribution of knowledge production regarding capacity building for digital services.

Existing literature might exhibit a concentration within developed countries, overlooking the unique challenges and innovative solutions emerging from developing economies. This study will identify potential biases and areas requiring further research by analyzing the geographic distribution of publications. This analysis will contribute to a more nuanced and inclusive understanding of capacity building, encompassing diverse contexts and highlighting best practices applicable across different regions and levels of technological advancement. A vital aspect of this research problem involves identifying and analyzing the impact of different capacity building initiatives related to digital services.

1. How has the scholarly discourse on capacity building in digital services evolved?
2. Which countries or regions are most actively contributing to the literature on capacity building in digital services, and what are the predominant themes in their research?
3. What are the most influential articles, authors, and journals in the field of capacity building for digital services, and how do they shape the ongoing discourse?
4. Which institutions are most influential in the field of capacity building for digital services?
5. What are the primary topics and themes emerging from the literature on capacity building in digital services, and how do these themes align with current policy initiatives and challenges in digital transformation?

By this bibliometric analysis, this research result can provide valuable insights for policymakers and practitioners seeking to design and implement impactful capacity-building programs. The paper is organized as follows: Section 2 details our literature review. Section 3 details our methodology, including the study design, data collection and data cleaning from Scopus for bibliometric analysis. Section 4 presents the results of our analysis. In Section 5, we engage in a comprehensive general discussion, exploring the implications of our findings on the critical role of capacity building in digital service. Finally, in Section 6, we summarise our key findings and their broader significance in the evolving landscape capacity building in digital service.

2. Literature Review

2.1 Capacity Building

Capacity building refers to the processes and strategies aimed at improving the abilities of individuals and organizations. This includes enhancing skills, knowledge, and resources necessary for effective performance. The terms capacity building and capacity development are often used interchangeably, emphasizing the improvement of capabilities to produce, perform, or deploy effectively. Capacity building involves improving an individual's or organization's ability to produce, perform, or deploy resources effectively. This concept is often used interchangeably with capacity development and strengthening. Nicholas Henry (2018) emphasizes the crucial role of public human resource management (HRM) in shaping the

bureaucracy and its impact on capacity building within public organizations. HRM practices are essential for establishing a government characterized by transparency and accountability, which enhances the responsiveness of bureaucratic institutions and builds public trust. Public HRM has actively contributed to capacity building by promoting diversity and inclusion by opening job opportunities for underrepresented groups, enriching the workforce, and improving public service delivery[4]. Furthermore, as HRM practices evolve to address contemporary societal needs, they implement innovative strategies that enhance talent acquisition, workforce development, and performance management. This adaptability plays a crucial role in increasing operational efficiency, ensuring that public organizations are well-equipped to respond to the governance challenges of the 21st century, ultimately reinforcing the effectiveness and integrity of government operations[5, 6].

2.2 E-Government

Hughes' E-Government Theory (2003) explores the role of information and communication technologies (ICTs) in improving government operations, with the goal of enhancing service delivery, increasing citizen engagement, and boosting administrative efficiency. Key aspects of this theory include improving accessibility, allowing citizens to access government services through online platforms; enhancing efficiency by digitizing processes to reduce bureaucracy and streamline operations; and fostering transparency and accountability through better information sharing and data management, which builds trust between governments and the public[7]. To achieve these goals, Hughes advocates for strategic investments in infrastructure, the development of user-friendly digital platforms, and active citizen engagement in the design and delivery of services. Ultimately, he posits that e-government can fundamentally transform the relationship between citizens and government, promoting more direct communication and participatory governance.

3. Methodology

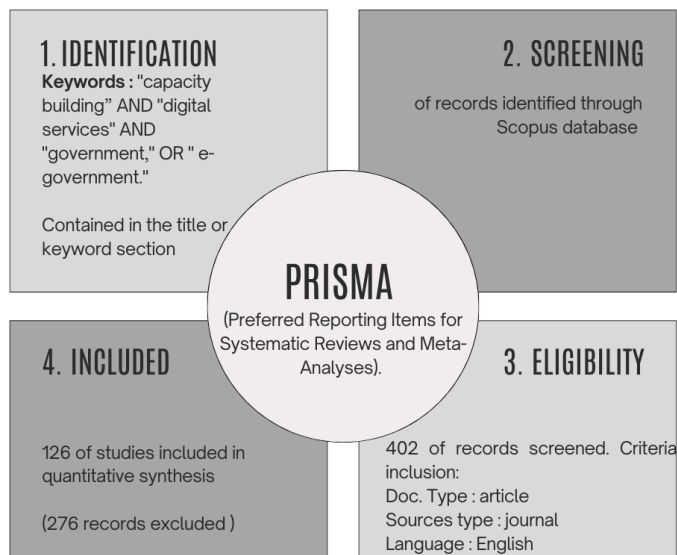


Figure 1 Preferred Reporting Items for Systematic Reviews and Metaanalyses (PRISMA)

Source: Authors' creation

In order to unravel the landscape of capacity building in digital services, this research will employ a mixed-method approach combining the strengths of bibliometric analysis using R-bibliometrix and network visualization using VOSviewer. The initial step involves data collection and construction of a comprehensive bibliographic database. Relevant research articles will be retrieved from reputable academic databases such as Scopus using keywords like “capacity building,” “digital services,” “government,” and “e-government.” This database will be imported into R and processed using the bibliometrix package. The package offers a wide range of analyses, including descriptive statistics (e.g., publication trends, author productivity), co-occurrence network analysis (e.g., identifying key terms and research clusters), and co-citation analysis (e.g., mapping the intellectual structure of the field).

The results from the bibliometric analysis in R will then be visualized and further explored using VOSviewer. This software facilitates the creation of insightful network maps representing relationships between key terms, authors, and sources. For instance, co-occurrence networks will highlight clusters of frequently used keywords, indicating prominent research themes within the field. Similarly, co-citation networks will reveal how different publications are interconnected, illustrating the intellectual genealogy and influential works within the capacity building literature. By combining these tools, this research methodology provides a robust and multifaceted approach to understanding the landscape of capacity building in digital services. The quantitative insights from R-bibliometrix combined with the visual representations from VOSviewer will enable a deeper understanding of the evolution of the field, prominent themes, key actors, and potential areas for future research. During the data collection and cleansing phase, we applied the PRISMA method (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). As evidenced in prior bibliometric studies, such as, PRISMA is essential for ensuring the data's validity and reliability[8-10]. The screening and eligibility phase, for example, confirms the data's validity by ensuring it meets the established inclusion and exclusion criteria. The overall research process is illustrated in Figure 1.

This comprehensive and systematic analysis will contribute valuable knowledge to the ongoing discourse surrounding digital service delivery and its implications for citizens and governments alike. This research aims to address this gap by conducting a bibliometric analysis of existing literature to map the evolution, key themes, and emerging trends in capacity building for digital services. A comprehensive understanding of the existing research landscape is crucial to identify knowledge gaps and guide future research endeavors. This bibliometric analysis will delve into the conceptual frameworks, methodologies, and empirical findings of previous studies to provide a structured overview of the field. This study will explore the specific challenges and opportunities facing local governments in building capacity for digital service delivery, identifying potential strategies and best practices emerging from the literature.

4. Result

The bibliometric analysis conducted in this study aimed to evaluate the trends and patterns within the selected articles over the specified period. By employing advanced bibliometric tools, we examined various metrics, including publication counts, citation rates, and the collaboration networks among authors and countries. This initial analysis provides a foundation for understanding the significant themes and developments in the field, highlighting the growing interest and research output related to the topic.

4.1 Publication Trend Capacity Building in Digital Services

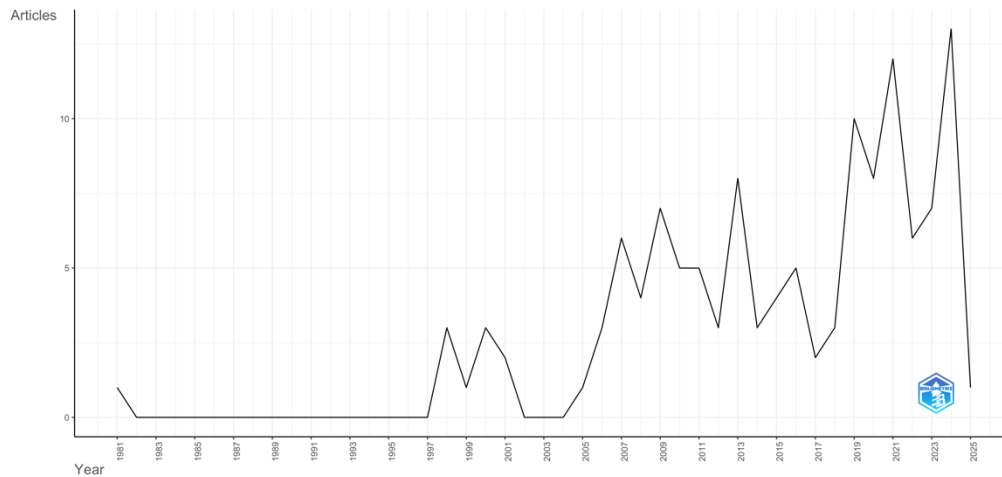


Figure 2 Trends of Publications

Source : Authors' own creation by R-Bibliometrix

The data illustrates a gradual increase in articles published in a capacity building in digital services. Starting from a low point in the early 1980s, where publication numbers were minimal or nonexistent, there was a notable rise after the late 1990s. From 1998 onwards, there appears to be a consistent upward trend, peaking particularly in recent years, with the highest articles in 2024. This increase might indicate a growing recognition of the importance of capacity building within digital services, highlighting a shift in academic focus and interest as digital technology has become increasingly integrated into various sectors[11]. The rising number of publications reflect an expanding field of research that seeks to address the challenges and opportunities presented by digital transformation[12]. As society becomes more reliant on digital services, there is an increasing need for frameworks and strategies to enhance the capabilities of individuals and organizations. This trend aligns with a broader global shift towards increased focus on digital services as governments and organizations seek to enhance their operational capabilities and service delivery[5]. Following the COVID-19 pandemic, there was an accelerated drive for digital transformation. This resulted in heightened research activity as stakeholders recognized the need for robust digital infrastructure and capacity building. Moreover, as technology rapidly evolves, many governments have instituted regulations and policies to facilitate the adoption of digital tools and platforms across various sectors[6]. These efforts are aimed at building resilience, enhancing efficiency, and ensuring that citizens can access essential services seamlessly[13].

Based on Figure 3; beginning in 2019, a significant increase in citations of publication numbers was observed, jumping to 12 articles that year. This upward trajectory continued with 23 articles in 2020, 28 in 2021, 33 in 2022, and peaking at 42 articles in 2023. The rise in citations each year can be attributed primarily to the accelerating focus on digital services due to the COVID-19 pandemic, which necessitated rapid digital transformation across various sectors, including government and public health[11, 14]. As organizations recognized the need for efficient service delivery in a digital-first world, research in capacity building became increasingly relevant to guide these transformations[15]. Additionally, heightened awareness of the importance of digital equity and the need for effective governance strategies in digital

service implementation contributed to the growing volume of scholarly articles[16]. Even with a slight decrease to 22 articles in 2024, the data still reflects a robust and ongoing interest in the subject, demonstrating a mature research field adapting to the ever-changing landscape of digital services and the critical importance of capacity building in achieving success in this area.

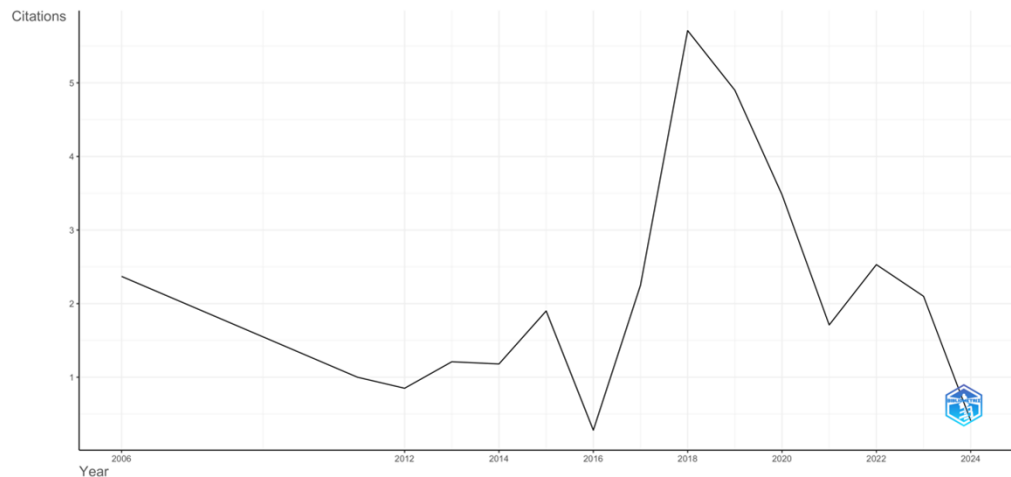


Figure 3 Trends Citation of Publications
Source: Authors' creation by R-Bibliometrix

4.1 Countries are most actively contributing to the literature and the predominant themes

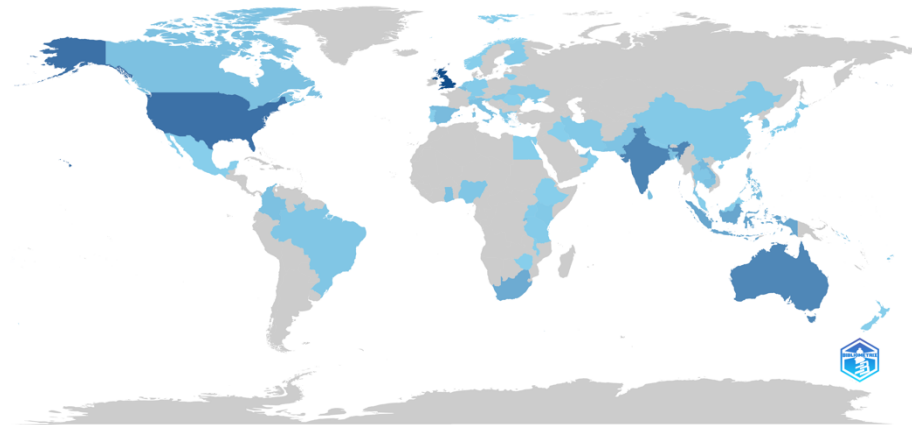


Figure 4 Most Actively Countries
Source: Authors' creation by R-Bibliometrix

United Kingdom, Hong Kong, and the United States: In advanced economies like the United Kingdom, Hong Kong, and the United States, there is a strong alignment between citizens' demands for robust digital public services and the strategic commitments of

government leaders. According to the IMD World Digital Competitiveness (WDC) ranking, these countries have effectively adopted digital technologies to enhance service delivery. High-income nations accounted for over 82% of global exports of digitally delivered services in 2022, underscoring their dominance in the digital sphere. By improving access to digital services, these countries not only facilitate social learning and enhance civic engagement among citizens but also accelerate the overall adoption of innovative technologies, thereby solidifying their status as digital leaders[17, 18].

India, Ethiopia, and Kenya: In contrast, countries like India, Ethiopia, and Kenya face unique challenges and opportunities as they strive to build their digital capabilities. For these nations, technology and innovation play a pivotal role in poverty alleviation and sustainable development. Capacity building in digital services is crucial to fostering economic growth, improving access to information, and reducing inequalities. Investments in human and institutional capacities are essential to achieving the Sustainable Development Goals (SDGs). By prioritizing education and digital skills development, these countries can equip their populations with the necessary tools to thrive in an increasingly competitive digital economy, setting a foundation for future progress[19].

Malaysia, Australia, and South Africa: The digital transformation evident in Malaysia, Australia, and South Africa has significantly improved internet access and productivity for millions of individuals. As the global economy becomes increasingly digitized, digital trade regulations are increasingly featured in international agreements, affecting how these nations engage in global markets. To compete effectively, enhancing digital capabilities is crucial not only for boosting productivity but also for empowering individuals in both their professional lives and everyday activities. Capacity-building strategies that focus on knowledge transfer, technological infrastructure, and digital literacy will be fundamental in supporting these countries' journeys toward successful digitalization, addressing existing challenges, and fostering sustainable economic growth[20].

4.2 Most influential articles, authors, and journals and the shape the ongoing discourse

Table 1 Most Influential Journal

Journal Name	Total Citation	Number of Publication	H_Index	G_Index
Sustainability (Switzerland)	595	40	13	23
Bmc Health Services Research	453	30	12	21
International Journal of Environmental Research and Public Health	398	26	11	19
Environment And Urbanization	315	9	8	9
Bmj Open	155	23	7	12

Source: Authors' creation

In the context of capacity building in digital services amid the COVID-19 pandemic, the selection of impactful journals for publication becomes essential for establishing credibility and scholarly influence. Notably, Sustainability (Switzerland) emerges as a leading avenue, evidenced by its impressive citation count of 595 and an H-Index of 13, which reflect its

4.3 Institutions are most influential



Figure 5 shows the trends in article production by various affiliations over time. The graph includes lines for the following affiliations, each represented by a different color: Angkor Hospital for Children (brown), Australian National University (red), Institute of Tropical Medicine (blue), Ministry of National Resources and Environment (green) the University of Cape Coast (cyan) the University of Cape Town (purple) the University of Kansas (pink) University of Lleida (orange). This could be interpreted as a reflection of these institutions' capacity-building efforts in the digital services field. The increase in article production could indicate increased research and development activities, suggesting that these institutions are building their capacity in digitalization service [23]. The University of Cape Coast and the University of Cape Town show significant increases in article production around the same time, suggesting similar capacity-building efforts [24]. On the other hand, the University of Kansas, University of Lleida, Angkor Hospital for Children, and Australian National University have shown a sharp increase in article production, indicating that their capacity-building efforts have started [19].

4.4 Primary topics and the aligned research with current policy initiatives and challenges in digital transformation

Figure 6 visually represents various interconnected concepts related to “capacity building.” The concept of capacity building in digital services is multifaceted and complex, as visually represented in the network diagram. At the heart of this diagram is the central node labeled “capacity building”, from which many interconnected nodes branch out. Each node represents a different concept related to capacity building, illustrating the diverse elements contributing to this process. The color-coded nodes in the diagram could be interpreted as different themes or categories within capacity building. For instance, the blue nodes related to “public service” and “governance approach” highlight the importance of effective governance and public service delivery in building digital capacity. These elements are crucial in ensuring that digital services are accessible, efficient, and responsive to the needs of the public. The red nodes, representing concepts such as “partnership approach”, “leadership”, and “innovation”, underscore the role of strategic alliances, strong leadership, and innovative thinking in capacity building.

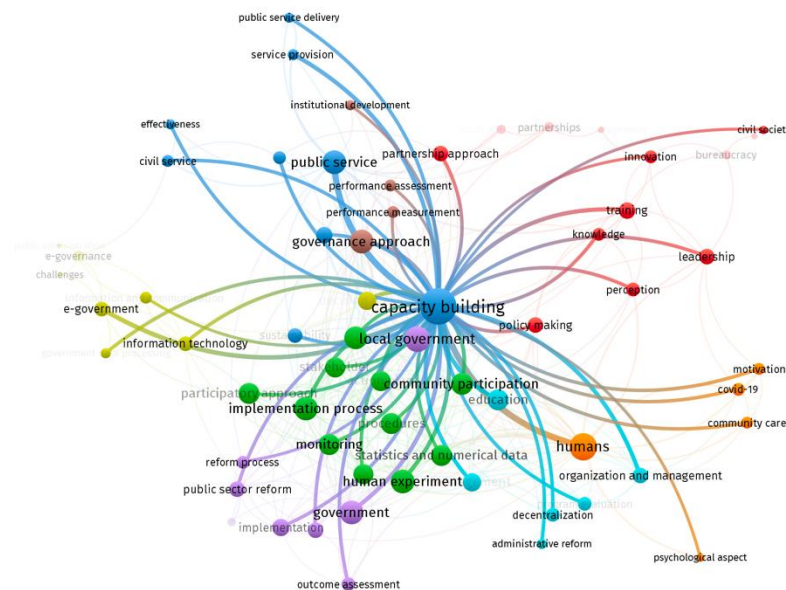


Figure 6 Network Visualization Capacity Building
Source : Authors' creation by VOSviewer

In digital services, partnerships can facilitate knowledge sharing and resource pooling, while leadership and innovation can drive the adoption of new technologies and the development of novel solutions. The green nodes related to “community participation” and “implementation process” emphasize the significance of involving the community in the capacity-building process and the importance of effective implementation strategies. In digital services, community participation can ensure services are tailored to the users' needs, while a

well-planned implementation process can ensure the successful rollout of these services. Lastly, the yellow nodes related to “e-government” and “information technology” highlight the role of technology in capacity building[1, 2, 6]. The advent of e-government services and information technology advancements have revolutionized how public services are delivered, making them more efficient and accessible. However, to fully leverage these technologies, there is a need for continuous capacity building in terms of technical skills, infrastructure, and policy frameworks.

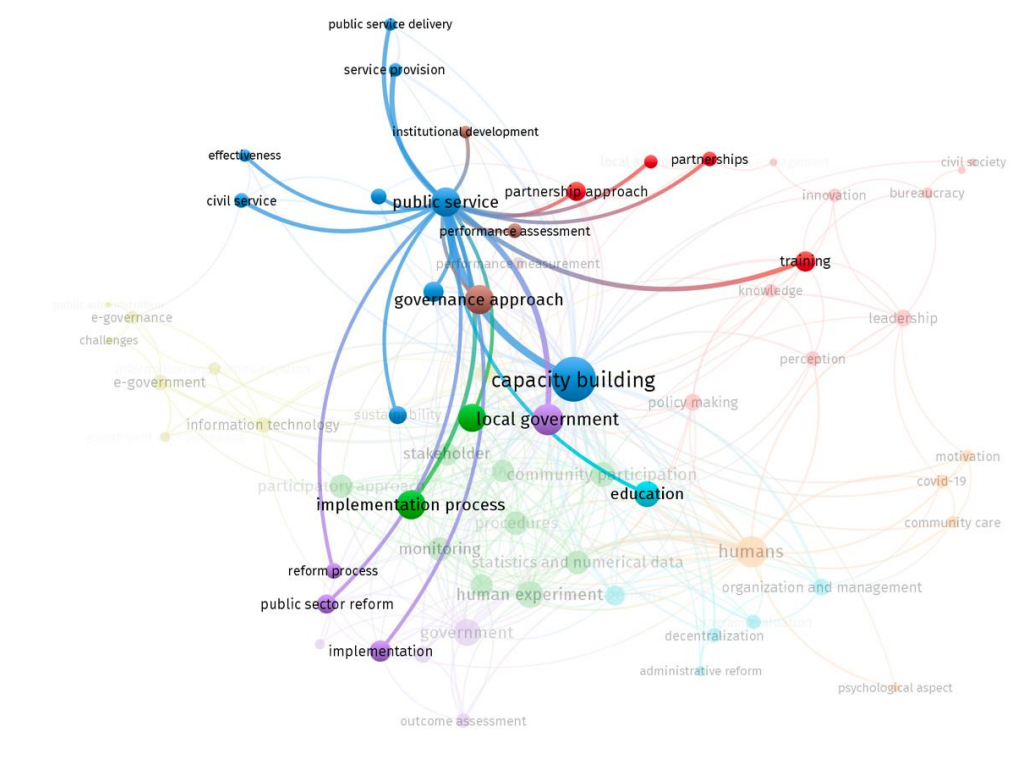


Figure 7 Network Visualization Capacity Building and Public Service
Source : Authors’ creation by VOSviewer

Figure 7 show the most prominent feature of the image is the central node labeled “capacity building”, indicating it as the primary focus of the map. Several other nodes are connected to “capacity building”, including “public service”, “local government”, “community participation”, “governance approach”, and “humans”. These connections suggest that these concepts are integral components of capacity building. Some connections, such as those between “capacity building” and “public service” “service provision”, and “public service delivery”, are more prominent, suggesting these are strong or significant relationships. The nodes and edges are color-coded, with a gradient ranging from blue to green to yellow. This color gradient likely represents a timeline from 2005 to 2025(in press), as indicated by the color bar at the bottom right of the image. Blue represents earlier years, while green and yellow represent more recent years[5]. This color-coding suggests that the relationships and importance

of the concepts have evolved over time. Additionally, there are many smaller, less central nodes that represent additional related concepts, such as “e-governance”, “information technology”, “leadership”, “training”, and “policy making[25].

Figure 7 provides a comprehensive visual representation of the multifaceted nature of capacity building in digital services, particularly in public service. The graph's central nodes - “Capacity Building”, “Public Service”, and “Governance Approach” - underscore the interconnectedness of these concepts, each playing a pivotal role in the successful implementation and delivery of digital services[1, 19]. The blue cluster, representing various aspects of “Public Service”, such as “service provision” and “institutional development,” highlights the critical role of public service in capacity building[26]. In the digital age, public services are increasingly delivered through digital platforms, necessitating a robust digital infrastructure and workforce with the necessary digital skills[4]. In this context, capacity building involves strengthening these aspects to ensure efficient and effective service delivery[27]. The green nodes, associated with “Implementation Process” and “Local Government”, emphasize the importance of effective implementation strategies and the role of local government in capacity building[28]. Local governments, being closer to the citizens, are often the first point of contact for public services. Therefore, their capacity to deliver digital services can significantly impact the public's access to them. The red nodes, representing “Partnerships” and “Training”, underscore the importance of strategic collaborations and continuous learning in capacity building. Partnerships, particularly with the private sector, can provide access to resources and expertise to enhance digital service delivery[21]. Simultaneously, training programs can equip public service employees with the necessary skills to navigate the digital landscape. Lastly, the peripheral concepts, such as “Public Sector Reform”, “Community Participation”, and “Statistics and Numerical Data” although not central, are still crucial to capacity building[13, 29]. Public sector reform can pave the way for the adoption of digital technologies, community participation can ensure that digital services are user-centric, and data can inform decision-making and track progress.

5. Discussion

This research sheds light on the present understanding of capacity building within digital services. Employing a bibliometric approach, it combines quantitative analysis and network visualization to offer a thorough grasp of the field. The study underscores the increasing recognition of capacity building in the context of the digital revolution, particularly as governments and organizations strive to enhance operational capabilities and service delivery. Capacity building is essential because it empowers citizens and community groups to play a prominent role with local government in addressing community issues. It is an ongoing process that produces and reproduces social capital through social interaction and formal governance, facilitating collaborative local action. Additionally, capacity building is crucial for achieving collaborative local action for a sustainable community by meeting local government and community capacity building requirements. It also helps in establishing a cooperative community culture and enhances the ability of citizens and community groups to participate in local governance. The research result reveals a dynamic shift in scholarly focus toward capacity building in digital services, driven by the intensified global focus on digital transformation and the impact of the COVID-19 pandemic. The surge in publications and citations reflects a growing academic interest in this critical area. The study identified significant contributions from various countries and institutions, including Australia, the United States, the United Kingdom, and China, highlighting the global nature of this research effort. Furthermore, the analysis explored the influence of specific institutions on capacity building, including the

University of Cape Coast, the University of Cape Town, the University of Kansas, and the Australian National University, indicating a diverse range of perspectives and approaches to this subject.

The resulting network diagrams effectively highlight the key themes and research clusters, revealing the multifaceted nature of capacity building. This visual representation emphasizes the significance of critical elements such as public service, governance approach, innovation, partnership approach, community participation, e-government, and information technology. It facilitates understanding the dynamic relationships and interactions between these diverse components. The study underscores the necessity of a multifaceted approach to capacity building, encompassing not only technological advancements but also institutional reform, community participation, and strategic partnerships. This research provides a valuable overview of the current state of knowledge regarding capacity building for digital services. It highlights the growing importance of this field and offers valuable insights for policymakers and practitioners seeking to design and implement impactful capacity-building programs. By identifying key themes, trends, geographical disparities, and gaps in existing literature, the study provides a strong foundation for future research, policy development, and practical interventions aimed at strengthening digital service delivery globally.

6. Conclusion

In conclusion, this bibliometric analysis aims to provide a comprehensive overview of the current state of knowledge regarding capacity building for digital services. By identifying key themes, trends, geographic disparities, and gaps in addressing social and ethical implications, this research will serve as a valuable resource for policymakers, practitioners, and researchers. Ultimately, it will contribute to a more nuanced understanding of the complexities inherent in building digital capacity within government institutions, paving the way for more effective and equitable digital service delivery in the future. After analyzing these themes will provide valuable insights into the challenges and opportunities associated with enabling effective digital service delivery across different contexts. As we move forward, the importance of capacity building in digital services will only continue to grow. Organizations must remain agile and responsive to technological advancements and changing user needs. By investing in digital capabilities, fostering a culture of continuous learning, and promoting collaborative efforts, public services can significantly enhance their effectiveness and responsiveness. Ultimately, a well-implemented capacity-building strategy will not only improve service delivery but also empower citizens, ensuring that they can fully engage with and benefit from digital public services. One critical aspect requiring further exploration is the specific focus on citizen participation in the context of digital service delivery. While the article you provided highlights the importance of citizen engagement in traditional governance models, its application to the digital realm requires careful consideration. The findings from this research can provide valuable insights for policymakers, practitioners, and researchers looking to navigate the challenges and capitalize on the transformative potential of digital services in the 21st century.

References

1. Tripathi, S. and T. Singh. *Empowering Local Communities through Digital Governance: A Capacity Building Approach for Inclusive Participation and Sustainable Development*. in *Proceedings of the 25th Annual International Conference on Digital Government Research*. 2024.
2. Hajnal, G., K. Kádár, and É. Kovács, *Government Capacity and Capacity-Building in Hungary: A New Model in the Making?* NISPAcee Journal of Public Administration and Policy, 2018. **11**(1): p. 11-39.
3. Nurdin, N.H. and Z.A. Purna, *Unleashing the Power of Capacity Building: Transforming Governance and Policy Implementation in the Digital Era*. KnE Social Sciences, 2023: p. 274–288-274–288.
4. Haque, M.S., et al., *Building administrative capacity for development: limits and prospects*. 2021, Sage Publications Sage UK: London, England. p. 211-219.
5. Antonova, S., *Capacity-building” in global Internet governance: The long-term outcomes of “multistakeholderism*. Regulation & Governance, 2011. **5**(4): p. 425-445.
6. Cuthill, M. and J. Fien, *Capacity building: Facilitating citizen participation in local governance*. Australian journal of public administration, 2005. **64**(4).
7. Phillips, L. and S. Ilcan, *Capacity-building: the neoliberal governance of development*. Canadian Journal of Development Studies/Revue canadienne d'études du développement, 2004. **25**(3): p. 393-409.
8. Zupic, I. and T. Čater, *Bibliometric methods in management and organization*. Organizational research methods, 2015. **18**(3): p. 429-472.
9. Karismariyanti, M., et al. *A Systematic Literature Review and Bibliometric Analysis of IT Governance Disclosure in Scopus Database*. in *Fifth Annual International Conference on Business and Public Administration (AICoBPA 2022)*. 2023. Atlantis Press.
10. Kurnia, L., M. Saifi, and C.R. Damayanti, *Trends and Future Research in Corporate Governance: A Bibliometric Analysis (2014-2024)*. Khizanah al-Hikmah: Jurnal Ilmu Perpustakaan, Informasi, dan Kearsipan, 2024. **12**(1).
11. Liberato, S.C., et al., *Measuring capacity building in communities: a review of the literature*. BMC public health, 2011. **11**: p. 1-10.
12. Vo, D.H. and T.M. Nguyen, *The impact of corporate governance on firm performance: Empirical study in Vietnam*. International Journal of Economics and Finance, 2014. **6**(6): p. 1-13.
13. Warner, K.S. and M. Wäger, *Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal*. Long range planning, 2019. **52**(3): p. 326-349.
14. Alkayed, H., et al., *Does a Female Director in the Boardroom Affect Sustainability Reporting in the U.S. Healthcare Industry?* Journal of Risk and Financial Management, 2024. **17**(2): p. 49.
15. Deakin, M., P. Lombardi, and I. Cooper, *The IntelCities community of practice: the capacity-building, co-design, evaluation, and monitoring of e-government services, in Creating Smart-er Cities*. 2013, Routledge. p. 17-38.
16. Muganyi, T., et al., *Fintech, regtech, and financial development: evidence from China*. Financial innovation, 2022. **8**(1): p. 1-20.

17. Troise, C., et al., *How can SMEs successfully navigate VUCA environment: The role of agility in the digital transformation era*. Technological Forecasting and Social Change, 2022. **174**: p. 121227.
18. Janowski, T., *Implementing sustainable development goals with digital government–aspiration-capacity gap*. 2016, Elsevier. p. 603-613.
19. Karippacheril, T.G., *Public service delivery in the era of digital governance: Case studies from Indonesia*. Washington, DC: The World Bank, 2013.
20. Joia, L.A., *A framework for developing regional e-Government capacity building networks*. Information Technologies & International Development, 2005. **2**(4): p. pp. 61-73.
21. Wamukoya, J. and S.M. Mutula, *Capacity-building requirements for e-records management: The case in East and Southern Africa*. Records Management Journal, 2005. **15**(2): p. 71-79.
22. Tregua, M., et al. *Digital transformation in the era of Covid-19*. in *International Conference on Applied Human Factors and Ergonomics*. 2021. Springer.
23. Guinan, P.J., S. Parise, and N. Langowitz, *Creating an innovative digital project team: Levers to enable digital transformation*. Business Horizons, 2019. **62**(6): p. 717-727.
24. Kalu, K.N., *Capacity building and IT diffusion: A comparative assessment of e-government environment in Africa*. Social Science Computer Review, 2007. **25**(3): p. 358-371.
25. AlNuaimi, B.K., et al., *Mastering digital transformation: The nexus between leadership, agility, and digital strategy*. Journal of Business Research, 2022. **145**: p. 636-648.
26. Kraus, S., et al., *Digital transformation: An overview of the current state of the art of research*. Sage Open, 2021. **11**(3): p. 21582440211047576.
27. Appio, F.P., et al., *Digital transformation and innovation management: A synthesis of existing research and an agenda for future studies*. Journal of Product Innovation Management, 2021. **38**(1): p. 4-20.
28. Rialti, R. and R. Filieri, *Leaders, let's get agile! Observing agile leadership in successful digital transformation projects*. Business Horizons, 2024.
29. Calderaro, A. and A.J. Craig, *Transnational governance of cybersecurity: policy challenges and global inequalities in cyber capacity building*. Third world quarterly, 2020. **41**(6): p. 917-938.