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## Bibliometric Perspectives on E-book Evaluation

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**Abstract:** The remarkable advancement in the computing technology brings a new paradigm shift in the book perspective, transitioning from the physical book to the virtual book. It involves multiple sectors such as in the educational, health, engineering, economics, arts and many more. Rapid evolvement in the economic sector creates innovative platform that allows the authors to delve into E-book business that can reach to a wider audience without geographical limitations. Nowadays, anyone able to produce an E-book, however, to ensure that the E-book meets the usability and requirements of the audience is also important and cannot be neglected. Therefore, E-book evaluation is critical in this perspective. This study aims to explore the publication trends in E-book evaluation from 1984 until 2025. Several key aspects were investigated in this study that related to the (1) publication trends and growth, (2) the key authors and collaboration patterns, (3) institutional and country influence and (4) keyword analysis. The data were derived from the Scopus database by using the keywords (e-book OR ebook OR "electronic book" OR "digital book") AND evaluation. There are 595 obtained results in which after screening, the number of publications included for the study is 452. Data analysis and visualization were made using the biblioMagika and VOSviewer. The most productive years in E-book evaluation publications is in 2019 with 33 publications. The most prolific author is Ogata, Hiroaki from Kyoto University with total of 19 publications. Meanwhile for the influential institution for E-book evaluation is Kyoto University, Japan with 11 total publications with 90 total citations. The most productive country is United States with 85 publications in E-book evaluation. The E-book evaluation can be done either quantitatively or qualitatively. Notably, the advancement of artificial intelligence offers new dimensions for assisting in the evaluation process.

**Keywords:** E-book, E-book evaluation, Bibliometric analysis, VOSviewer

## Introduction

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The proliferation of digital technologies has significantly transformed the landscape of reading and information consumption, with e-books emerging as a prevalent medium in both academic and recreational contexts. E-books offer advantages such as instant access, portability, and interactive features, making them appealing to a broad spectrum of users. However, the effectiveness of e-books is contingent upon their usability, which encompasses factors like interface design, navigation, and user satisfaction. Usability evaluation is thus essential to ensure that e-books meet the needs and expectations of their users, facilitating efficient and enjoyable reading experiences.

The acceptance and usage of the E-books in the higher academic setting is increasing since the emergence of COVID-19 pandemic (Jallas et al., 2023). The COVID-19 pandemic markedly accelerated the acceptance and usage of e-books in higher education, with studies reporting a 99% acceptance rate among students, highlighting e-books' effectiveness in supporting learning and seamless integration with online education platforms (Wardaya, 2022). This trend was also evident at Kyushu University, where e-book access surged significantly in 2020 compared to 2019 (Kodama et al., 2021). Together, these findings highlight the critical role of e-books in ensuring academic continuity and adaptability during periods of disruption.

The reviewed literature highlights several significant challenges in e-book and e-textbook design, particularly in transitioning from traditional print formats to interactive, digital experiences. Chen et al. (2016) underscore the limitations imposed by linear, paper-based design models, advocating for more nonlinear and interactive structures that leverage digital media's potential. Similarly, Huang et al. (2012) identifies challenges in adapting to information-based learning environments, emphasizing the need for comprehensive instructional design frameworks that integrate user experience, multimedia, and content evaluation. Dick and Goncalves (2019) further point out the complexities of e-book design, stressing the importance of a systemic approach that considers content, technology, and stakeholder dynamics. Finally, Sioki (2021) critiques the prevailing tendency to prioritize usability over typographic and visual innovation, noting that while major e-reader platforms hinder design evolution, independent creators are beginning to explore more expressive digital text formats. Together, these studies call for a more holistic, innovative approach to e-book design that transcends traditional paradigms and meets the evolving needs of digital readers.

The aim of this research is to conduct a bibliometric study on e-book evaluation to identify publication trends, key contributors, influential institutions and countries, and the authors' keywords that reflect the focus of the field. Conducting a bibliometric analysis is essential as it offers a systematic and quantitative overview of research developments, assisting scholars and practitioners to understand the structure and evolution of a domain, as well as to identify gaps and future research directions (Donthu et al., 2021; Kumar, 2025). Bibliometric methods also enhance the visibility of influential works and collaborations, thereby supporting strategic decisions in academic research (Kumar, 2025).

This study aims to answer the following research questions pertaining to the E-book evaluation.

1. What are the publication trends in the field of E-book evaluation?
2. What are the most highly cited documents?
3. Who are the most productive and influential authors?
4. What are the patterns of co-authorship?
5. Which institutions contribute most significantly to the research?
6. What are the most active countries?
7. What are the most frequently occurring keywords in literature?

## **Method**

This study conducted a bibliometric analysis focused on the evaluation of e-books. The methodology followed several key steps as illustrated in Figure 1. The chosen topic for investigation was "E-book Evaluation," reflecting the interest in understanding how electronic books are assessed in academic research. The bibliometric data was sourced from the Scopus database. The search was made through the article titles, abstract and keywords to ensure relevance and specificity. The time frame for the study spanned from 1991 to 2025, covering more than three decades of scholarly work. Publications in all languages in the Scopus database were considered, and all source types were included. The document types were limited to articles, conference papers, and book chapters. The search string used was (e-book OR ebook OR "electronic book" OR "digital book") AND evaluation. This query was designed to capture a wide range of terminologies associated with electronic books, combined with a focus on their evaluation. The search was executed, and data was extracted on March 20, 2025.

An initial 595 records were identified and screened. Screening involved checking duplicate entries and assessing relevance to the topic based on titles and abstracts. This was done manually by the author. A total of 143 records were removed due to duplication and irrelevance to the theme of e-book evaluation. After screening, 452 records were retained and included for subsequent bibliometric analysis. These records form the basis for examining publication trends, influential sources, authorship patterns, and thematic developments in the field of e-book evaluation.

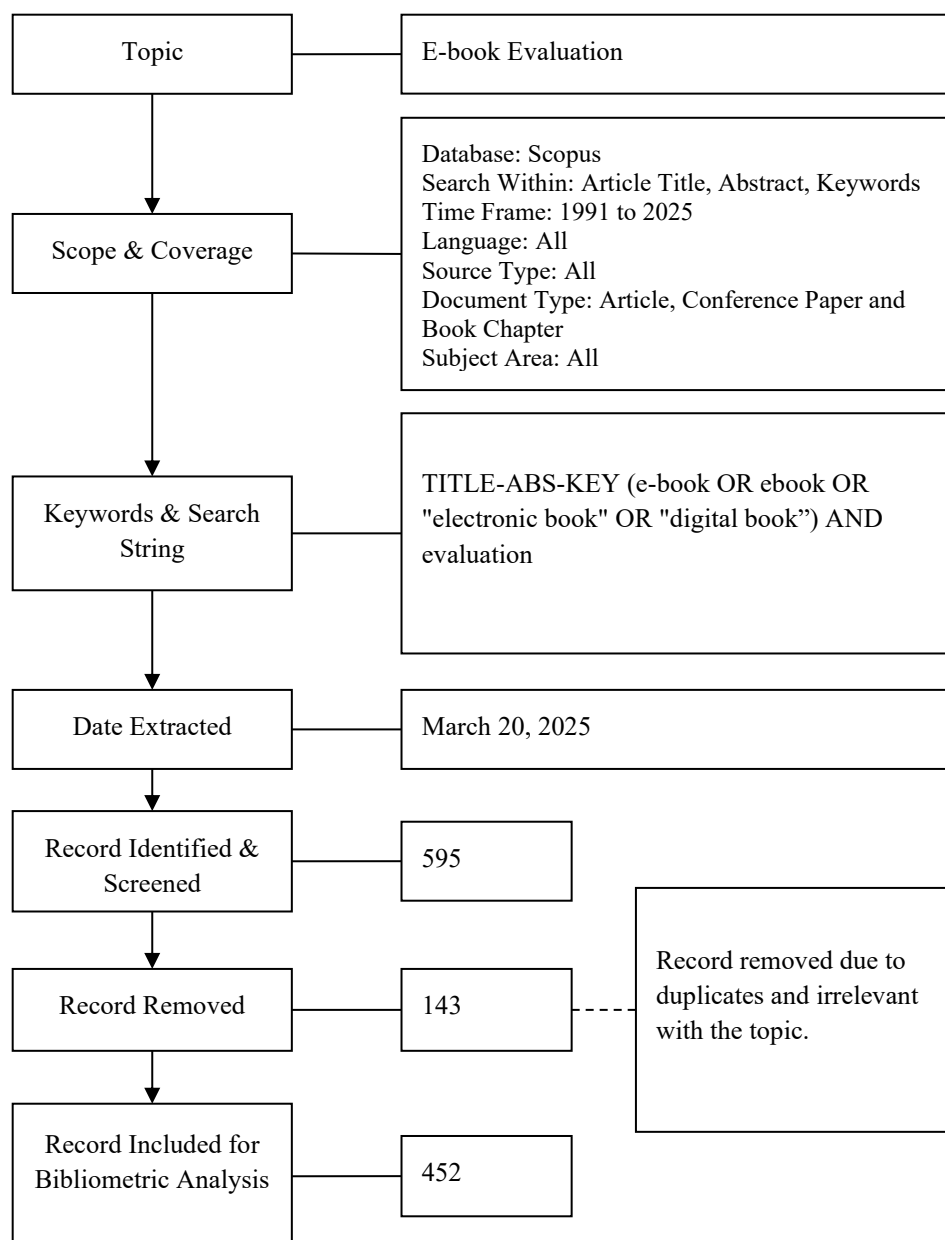


Figure 1. Flowchart of bibliometric search strategy and record screening Source: Lim et al. (2024)

Before conducting the bibliometric analysis, a thorough data cleaning and harmonization process was performed. This step involved standardizing and correcting variations in the authors' full names, affiliations, and keywords to ensure consistency across the dataset. Any missing data detected during this phase was carefully resolved to maintain the integrity of the analysis.

Tools such as biblioMagika (Ahmi, 2004) and OpenRefine (Ahmi, 2023) were employed to assist in the cleaning and harmonization processes, helping to merge duplicate entries and correct inconsistencies. After the dataset was refined, bibliometric analysis was conducted using biblioMagika and VOSviewer (Van Eck & Waltman, 2014) to generate comprehensive insights into publication trends, collaboration and keywords networks.

## Results and Discussion

This section presents the findings of the bibliometric analysis on e-book evaluation research. The discussion begins by examining the publication trends and growth over the selected time frame, highlighting the evolution and increasing scholarly interest in the field. It then explores the contributions of key authors and collaboration patterns, identifying influential researchers and mapping their networks of cooperation. Following this, the analysis addresses the institutional and country influence, showcasing leading organizations and nations driving research in this area. Finally, a keyword and thematic analysis is provided to uncover the major research themes, emerging topics, and shifts in focus within the literature.

### Publication Trends and Growth

#### *Document Type*

Table 1 presents the distribution of document types related to e-book evaluation research. Out of a total of 452 publications, articles constitute the largest proportion, accounting for 50.66% (229 publications). Conference proceedings closely follow, representing 47.35% (214 publications), indicating that scholarly communication on this topic is actively shared through conference platforms, possibly due to the rapidly evolving nature of digital technologies. Book chapters make up a small fraction, comprising only 1.99% (9 publications), suggesting that while the topic is significant, it is less frequently explored in longer, edited volumes. Overall, the results highlight that journal articles and conference proceedings are the primary mediums for disseminating research on e-book evaluation.

Table 1. Document type

Document Type	Total Publication	Percentage (N=452)
Article	229	50.66
Conference proceeding	214	47.35
Book chapter	9	1.99

#### *Publication and Citation Trends*

Table 2 and Figure 2 illustrate the publication trends and growth of e-book evaluation research within the global academic community. The publication trend on e-book evaluation research from 1991 to 2025 reveals a gradual but significant growth over the years. The early period (1991–2000) showed very low publication activity, with only 1 to 2 publications per year and modest citation impact. This period represents the emerging phase of research on e-book evaluation.

A notable increase began in 2002, where the number of publications rose to 5, followed by consistent outputs between 5 to 8 publications annually until 2009. This indicates a slow maturation phase, where interest in the topic steadily grew but remained modest. A major milestone occurred in 2010, with publications jumping to 20 articles, marking the beginning of a more accelerated growth phase.

From 2010 to 2019, publication numbers continued to rise, peaking at 33 publications in 2019, suggesting that the academic community's interest in e-book evaluation had significantly expanded during this decade. This period also shows a corresponding increase in total citations, particularly notable in 2011 (606 citations) and 2017 (1065 citations), indicating that publications during these years were highly influential. After 2019, a slight fluctuation is observed. Although publication numbers remained relatively high (21–31 publications per year between 2020 and 2024), the total citations in more recent years (2020–2024) were lower, likely due to the shorter time window for newer articles to accumulate citations. In 2025, only 4 publications were recorded, which is expected as the data extraction date was March 20, 2025, and the year was still ongoing.

The notable rise in publications from 2010 onward reflects the increasing integration of digital technologies in education, libraries, and publishing. The proliferation of e-readers like the Amazon Kindle which was launched in 2007 (Ascoli et al., 2008) and tablets such as the iPad that was introduced in 2010 (Merchant, 2015) significantly boosted both consumer and academic interest in e-books. These technological shifts encouraged research not only into e-book adoption but also into how e-books were evaluated for usability, accessibility, and learning outcomes.

Table 2. Total publication and total citation per year

Year	Total Publication	Total Citation
1991	1	49
1995	2	1
1996	2	13
1997	1	4
1998	2	3
1999	2	18
2000	1	19
2001	2	36
2002	5	108
2003	5	144
2004	7	58
2005	8	125
2006	5	38
2007	5	47
2008	13	126
2009	5	59
2010	20	192
2011	19	606
2012	23	522
2013	26	225
2014	26	147
2015	23	172
2016	27	271
2017	29	1065
2018	28	151
2019	33	387
2020	21	95
2021	29	144
2022	24	123
2023	23	44
2024	31	30
2025	4	0
Grand Total	452	5022

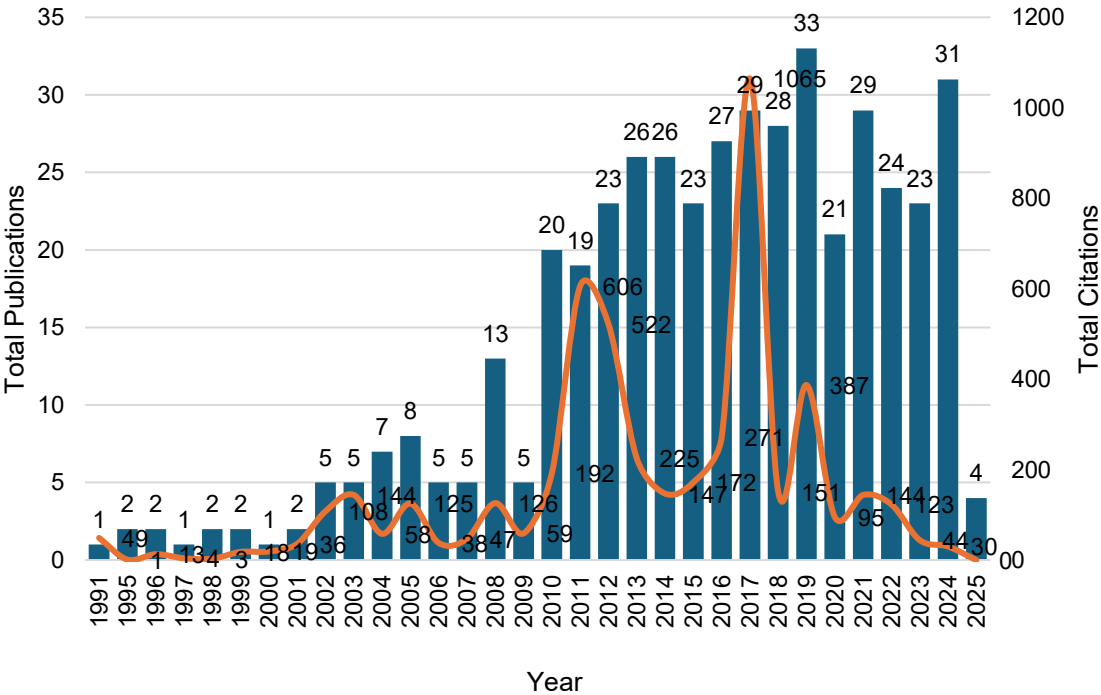


Figure 2. Total publication and citation per year

The significant spike in citations in 2011 and 2017 suggests the publication of highly influential works or systematic reviews consolidating previous findings. Studies during this time began focusing more highly interdisciplinary, blending technology, education, usability, accessibility, and content quality that contributed to significant advancements in the field of e-book evaluation and usage (G.-D. Chen et al., 2016; Colombo, 2011; Hussain et al., 2017; Wong et al., 2011). Additionally, increased institutional investments in digital collections during this period may have stimulated related e-books usage, evaluations and research (Klatt & Meeks, 2020; Maceviciute et al., 2014).

### *Productive Source Title*

The analysis of the most productive source titles related to e-book evaluation research highlights several key publication venues as shown in Table 3. Lecture Notes in Computer Science, including its subseries in Artificial Intelligence and Bioinformatics, is the leading source with 35 publications (TP), contributed by 125 authors (NCA), 23 of which were cited (NCP), and accumulating a total of 122 citations (TC).

Table 3. Most productive source title

Source Title	TP	NCA	NCP	TC
Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)	35	125	23	122
Journal of Physics: Conference Series	16	51	12	48
AIP Conference Proceedings	12	46	6	58
ACM International Conference Proceeding Series	11	31	6	23
Electronic Library	7	16	7	157
Library Hi Tech	6	14	6	207
Proceedings of the International Display Workshops	6	28	0	0
Communications in Computer and Information Science	5	13	3	3
ASEE Annual Conference and Exposition, Conference Proceedings	5	12	3	13
International Conference on Information and Knowledge Management, Proceedings	5	7	4	25
Educational Technology and Society	4	12	4	131
International Journal of Information and Education Technology	4	15	4	8
Advances in Intelligent Systems and Computing	4	13	3	60
Medical Reference Services Quarterly	3	6	2	12
Publishing Research Quarterly	3	3	3	16
Education and Information Technologies	3	9	3	16
Computers and Education	3	12	2	94
International Journal of Interactive Mobile Technologies	3	12	2	22
CEUR Workshop Proceedings	3	14	2	14
Procedia Computer Science	2	3	1	8

*Note:* TP=total number of publications; NCA=number of contributing authors; NCP=number of cited publications; TC=total citations

Following this, the Journal of Physics: Conference Series ranks second with 16 publications, 51 contributing authors, 12 cited papers, and 48 total citations. The AIP Conference Proceedings and the ACM International Conference Proceeding Series also show significant activity, with 12 and 11 publications respectively, though their total citation counts are moderate at 58 and 23 citations. Among journal publications, the Electronic Library and Library Hi Tech stand out with 7 and 6 publications respectively. Notably, Library Hi Tech exhibits a strong impact relative to its number of publications, gathering 207 total citations, indicating a high influence of individual articles published in this journal. The findings suggest that while conference proceedings dominate in terms of the number of publications, journal articles tend to have a higher citation impact, emphasizing the importance of both dissemination channels in the evolution of e-book evaluation.

### *Highly Cited Publication*

The analysis of the most highly cited publications reveals several key studies that have significantly influenced the field of e-book evaluation research. The top ten of the highly cited publications can be referred to at Table 4. The highest-cited publication is by Wilson et al. (2002), which emphasizes the importance of user-centered design and user experience in the development of electronic textbooks. Their study led to the formulation of the

Electronic Textbook Design Guidelines, offering practical recommendations for developers and content creators to enhance the design and usability of educational digital publications.

Table 4. Top 10 highly cited publication

No.	Authors	Title	Source Title	Total Citation
1	Wilson et al. (2002)	A user-centred approach to e-book design	Electronic Library	46
2	Richardson and Mahmood (2012)	eBook readers: User satisfaction and usability issues	Library Hi Tech	45
3	Gibson and Gibb (2011)	An evaluation of second-generation ebook readers	Electronic Library	41
4	Korat and Falk (2019)	Ten years after: Revisiting the question of e-book quality as early language and literacy support	Journal of Early Childhood Literacy	40
5	Roskos et al. (2017)	An analysis of e-book learning platforms: Affordances, architecture, functionality and analytics	International Journal of Child-Computer Interaction	35
6	Zhang-Kennedy et al. (2017)	Cyberheroes: The design and evaluation of an interactive ebook to educate children about online privacy	International Journal of Child-Computer Interaction	35
7	Bozkurt and Bozkaya (2015)	Evaluation Criteria for Interactive E-Books for Open and Distance Learning	International Review of Research in Open and Distributed Learning	33
8	Hsin-Chieh et al. (2007)	Ergonomic evaluation of three popular Chinese e-book displays for prolonged reading	International Journal of Industrial Ergonomics	31
9	Chang et al. (2015)	A hybrid fuzzy model for selecting and evaluating the e-book business model: A case study on Taiwan e-book firms	Applied Soft Computing Journal	29
10	Crestani et al. (2006)	Appearance and functionality of electronic books: Lessons from the Visual Book and Hyper-TextBook project	International Journal on Digital Libraries	26

Several highly cited studies have shaped the understanding of e-book development and evaluation. They investigate user satisfaction and usability issues in e-book readers, emphasizing factors such as screen readability, navigation, battery life, and ergonomic design improvements. Research on early childhood education highlights the role of high-quality multimedia in supporting literacy development. Evaluations of e-book learning platforms focus on their educational affordances, system architecture, and analytics capabilities. Other studies explore the use of interactive e-books for teaching cybersecurity to children, propose comprehensive evaluation criteria for interactive e-books in open and distance learning, assess ergonomic factors affecting prolonged e-book reading, analyze business model selection for the e-book industry using fuzzy modeling approaches, and examine the balance between appearance and functionality in electronic book interfaces.

## Key Authors and Collaboration Patterns

### *Most Productive Authors*

The analysis of publication data for 10 researchers as illustrated in Table 5 reveals significant variation in both productivity and impact. Hiroaki Ogata from Kyoto University stands out as the most prolific and influential contributor, with 19 total publications, 16 of which are cited, and a total of 185 citations which demonstrate both high output and academic influence. Monica Landoni from the University of Lugano also shows a remarkable impact, with all 10 of her publications cited and accumulating 143 citations, indicating consistently high-quality work. Noriko Uosaki and Kousuke Mouri both produced 11 publications with 10 cited, each receiving 76 citations, reflecting solid scholarly performance. In contrast, Masaru Miyao and Takehito Kojima also have 11 publications but only one cited publication and a modest citation count of 11, suggesting limited reach or niche research areas. Several other researchers (Ishii, Iwata, Lege, and Koizuka) have fewer publications, ranging from 6 to 8, with little to no citations, possibly indicating early-career stages or recent entry into publishing. Overall, while a few

researchers contribute heavily to scholarly output and impact, others show potential but may require more time or broader dissemination strategies to increase their visibility and citation rates.

Table 5. Top 10 most productive authors

No.	Full Name	Current Affiliation	Country	TP	NCP	TC
1	Ogata, Hiroaki	Kyoto University	Japan	19	16	185
2	Uosaki, Noriko	Osaka University	Japan	11	10	76
3	Miyao, Masaru	Nagoya University	Japan	11	1	11
4	Kojima, Takehito	Chubu Gakuin University	Japan	11	1	11
5	Mouri, Kousuke	Tokyo University of Agriculture and Technology	Japan	11	10	76
6	Landoni, Monica	University of Lugano	Switzerland	10	10	143
7	Ishii, Yuki	Nagoya University	Japan	8	0	0
8	Iwata, Kohei	Nagoya University	Japan	6	0	0
9	Lege, Ranson Paul	Nagoya University	Japan	6	0	0
10	Koizuka, Tatsuya	Nagoya University	Japan	6	1	11

Note: TP=total number of publications; NCP=number of cited publications; TC=total citations

The co-authorship network visualization and data reveal two distinct clusters of collaboration among the authors, with Masaru Miyao serving as a central connecting figure as illustrated in Figure 3. The green cluster, which includes Masaru Miyao, Takehito Kojima, Tatsuya Koizuka, and Shunta Sano, demonstrates a tightly connected group with strong and frequent collaborations. Notably, the strongest co-authorship link exists between Miyao and Koizuka, who co-authored 11 publications together. These authors appear to work closely, possibly within the same research team or academic university. In contrast, the red cluster features authors such as Shigusa Matsunaga, Ranson Paul Lege, Yuki Ishii, Kohei Iwata, and Nobuhiro Ishio. This group exhibits broader but generally weaker connections, indicating more dispersed or early-stage collaborations, possibly among junior researchers or those working on interdisciplinary projects.

Masaru Miyao plays a crucial bridging role in the network, connecting both clusters and collaborating with nearly all the other authors. His position suggests that he may be a senior researcher or project leader, facilitating collaboration across different groups. The co-authorship strengths, reflected in the number of joint publications, vary widely from single collaborations to highly productive partnerships, such as those between Miyao and Koizuka, as well as with Kojima and others. Overall, the network demonstrates a balanced structure that includes both established, productive teams and emerging scholars, with strong potential for expanded interdisciplinary collaboration.

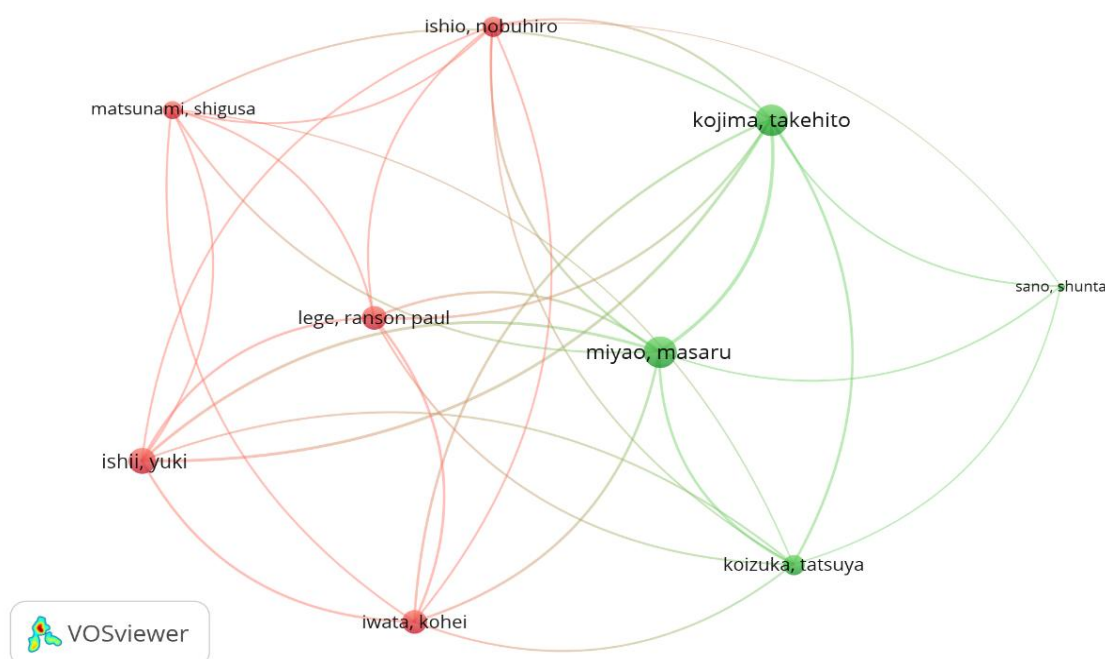


Figure 3. Network visualization of co-authorship by authors



## Institutional and Country Influence

### *Most Productive Institutions and Countries*

Table 6 shows the analysis of institutional research performance highlights notable trends in publication output, citation impact, and collaborative reach across ten institutions. Among these, the University of Strathclyde (UK) stands out prominently, with 10 total publications and all 10 cited, resulting in the highest total citations (TC = 241) which means a clear indicator of high-impact research. Similarly, National Cheng Kung University (Taiwan), with 7 publications and 6 cited, achieves an impressive 276 total citations, the highest among all, suggesting exceptional research influence despite fewer publications.

In terms of volume, Kyoto University, Osaka University, and Nagoya University (all Japan) lead with 11 publications each. However, their impact varies significantly: Kyoto has 8 cited publications and 90 citations, Osaka has 10 cited and 76 citations, while Nagoya lags in terms of impact, with only 1 cited publication out of 11 and just 11 total citations, despite having the highest number of contributing authors (58). This suggests that Nagoya's research may be less visible or impactful, or possibly skewed toward co-authored or collaborative works with less individual recognition.

Table 6. Top 10 most productive institutions

No.	Institution Name	Country	TP	NCA	NCP	TC
1	Kyoto University	Japan	11	18	8	90
2	Osaka University	Japan	11	12	10	76
3	Nagoya University	Japan	11	58	1	11
4	University of Strathclyde	United Kingdom	10	18	10	241
5	Kyushu University	Japan	10	32	10	99
6	Universitas Negeri Jakarta	Indonesia	7	18	5	32
7	National Cheng Kung University	Taiwan	7	19	6	276
8	University College London	United Kingdom	6	9	6	49
9	National Taiwan University of Science and Technology	Taiwan	6	14	4	128
10	University of Salamanca	Spain	6	18	3	12

*Note:* TP=total number of publications; NCA=number of contribution authors; NCP=number of cited publications; TC=total citations

Kyushu University (Japan) also shows strong performance with 10 publications, all cited, and 99 citations, indicating consistently recognized research. Other institutions such as University College London (UK) and National Taiwan University of Science and Technology (Taiwan) demonstrate a good balance between publication count and citation impact, with the latter achieving 128 citations from just 4 cited papers, suggesting high selectivity or breakthrough works. In contrast, University of Salamanca (Spain) and Universitas Negeri Jakarta (Indonesia) show lower citation impact despite moderate author contributions and publication counts. Salamanca, for instance, records 18 authors and 3 cited papers but only 12 citations overall, pointing to possible issues in dissemination or relevance of research topics. The total publication (TP) data across different countries and continents reveals clear patterns of global research productivity as listed in Table 7 and portrayed in Figure 4. The United States leads significantly with 85 publications, accounting for 16.80% of the total output. This dominance reflects the country's well-established research infrastructure and international presence in academic publishing.

Table 7. Top 10 most productive countries

No.	Country	Continent	TP	%
1	United States	North America	85	16.80%
2	Indonesia	Asia	53	10.47%
3	Japan	Asia	47	9.29%
4	United Kingdom	Europe	42	8.30%
5	Taiwan	Asia	40	7.91%
6	China	Asia	25	4.94%
7	India	Asia	21	4.15%
8	Brazil	South America	17	3.36%
9	Malaysia	Asia	17	3.36%
10	Spain	Europe	16	3.16%

*Note:* TP=total number of publications

Among Asian countries, Indonesia ranks impressively second overall with 53 publications (10.47%), surpassing traditional research powerhouses like Japan (47 publications, 9.29%) and China (25 publications, 4.94%). This indicates a growing research contribution from Southeast Asia, particularly from Indonesia, which is increasingly active in international scholarly work. Other notable contributors from Asia include Taiwan with 40 publications (7.91%), India (21, 4.15%), and Malaysia (17, 3.36%). Collectively, Asia represents a substantial portion of the global publication share, highlighting the region's expanding role in academic research. From Europe, the United Kingdom stands out with 42 publications (8.30%), followed by Spain with 16 (3.16%). These figures suggest consistent contributions from European institutions, albeit lower than their Asian counterparts in this dataset. Brazil, representing South America, contributes 17 publications (3.36%), showing a modest but visible role in global research.



Figure 4. World map chart according to most productive countries

## Keyword Analysis

The visualization in Figure 5 presents a comprehensive author keyword co-occurrence network related to the concept of e-books, based on bibliometric data. At the core of the map, the keyword “e-book” dominates, signifying it as the central and most influential topic across the analyzed literature. Surrounding it are multiple interconnected clusters that reflect various thematic directions in e-book research. The green cluster, which is the most extensive, encompasses terms such as “e-learning,” “mobile learning,” “learning analytics,” “reading comprehension,” and “seamless learning.” This indicates a strong focus on the role of e-books in educational technology and digital learning environments, emphasizing the integration of e-books into mobile and online learning contexts, as well as their connection to emerging educational frameworks like analytics and neural networks.

The orange cluster includes keywords like “evaluation,” “usability,” “design,” and “user study,” pointing to research interests in user experience and interface evaluation of e-books. This suggests a focus on how users interact with e-books, including interface quality, ease of navigation, and overall user satisfaction. Another notable cluster, purple, groups terms such as “e-paper,” “readability,” and “visibility.” This cluster is concerned with the technical and visual aspects of digital reading, including how text is displayed on various digital formats and devices, especially e-paper technologies.

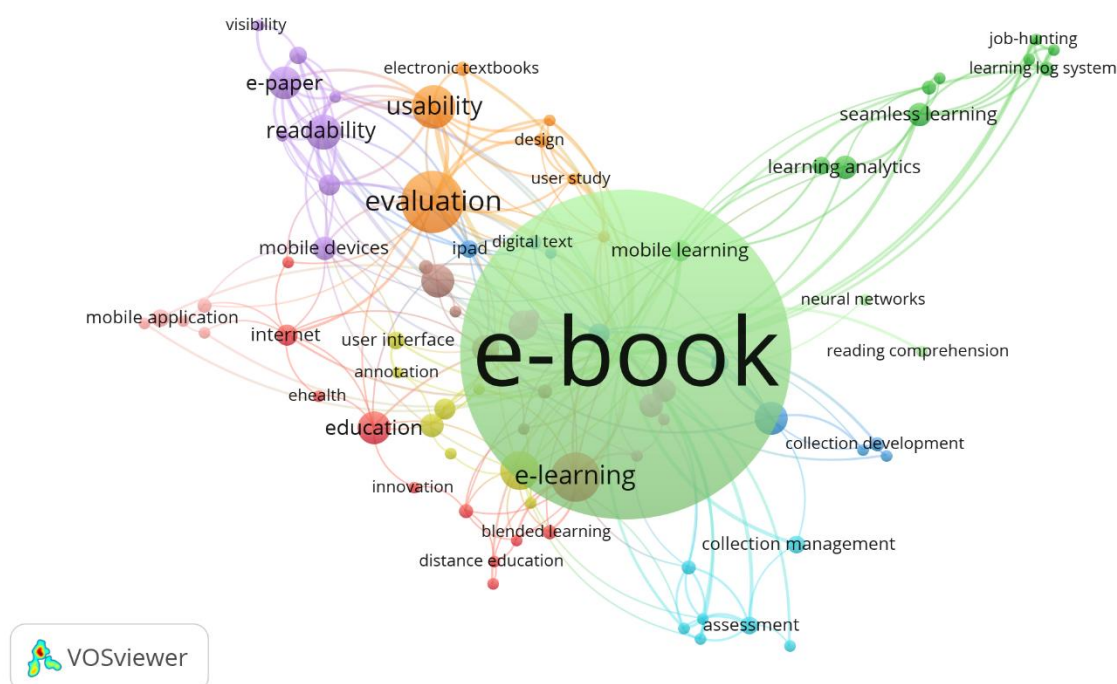


Figure 5. Networks visualization of co-occurrences by author keywords

The red cluster contains keywords like “education,” “internet,” “mobile application,” and “innovation,” indicating a broader perspective on the integration of digital tools in education, with e-books being part of a wider ecosystem that includes mobile and online learning applications. Additional smaller clusters (light blue, yellow, and brown) emphasize topics like “collection management,” “assessment,” “digital text,” and “ipad,” revealing areas of focus on library science, digital resource management, and device-specific research.

## Conclusion

This study was conducted to examine the landscape of e-book evaluation research using bibliometric analysis. By analyzing data from the Scopus database between 1991 and 2025, the research aimed to identify publication trends, key contributors, influential institutions and countries, and keywords patterns in the literature. The primary objective was to provide a comprehensive overview of how e-book evaluation has evolved over time and to uncover gaps and directions for future research in this growing area.

The findings indicate that interest in e-book evaluation has grown significantly since 2010, with a peak in publications observed in 2019. Prominent contributors include Ogata Hiroaki and institutions such as Kyoto University, while the United States emerged as the most productive country. The keyword analysis showed strong research emphasis on educational contexts, usability, mobile learning, and digital interface design. Highly cited works focused on usability, interactive features, and pedagogical affordances, emphasizing the critical role of user experience in e-book development.

This bibliometric review contributes to the field by systematically mapping its intellectual structure and research dynamics. It highlights influential sources and collaboration networks that shape the discourse on e-book usability and evaluation. Additionally, the study provides valuable insights for researchers, librarians, and developers by identifying prominent authors, impactful studies, and dominant keywords, which can inform strategic decisions in research, library acquisitions, and digital content design.

Despite its comprehensive scope, the study is limited by its reliance on a single database (Scopus) and exclusion of non-indexed literature, which may omit some relevant contributions. Future research can expand by incorporating multiple databases and conducting content or citation analyses to deepen the qualitative understanding. Furthermore, emerging technologies such as AI-driven content personalization and immersive e-reading experiences present new avenues for exploration in usability and evaluation studies.

## Scientific Ethics Declaration

\* The authors declare that the scientific ethical and legal responsibility of this article published in EPES Journal belongs to the authors.

## Conflict of Interest

\* The authors declare that they have no conflicts of interest.

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## References

- Ahmi, A. (2004). *biblioMagika*. Retrieved from <https://bibliomagika.com>
- Ahmi, A. (2023). OpenRefine: An approachable tool for cleaning and harmonizing bibliographical data. *AIP Conference Proceedings* (Vol. 2827, No. 1). AIP Publishing.
- Ascoli, A., Cullina, D., Kunes, L., Peng, C. C., & Xu, S. (2008). *Amazon kindle*. New York, 94-96.
- Chen, G. D., Wang, C. Y., & Chang, C. K. (2016). Development and evaluation of novel ebook interface for scaffolding thinking context in the teaching of writing. *2016 International Conference on Educational Innovation through Technology (EITT)* (pp. 174-177). IEEE.
- Chen, R., Hao, J., & Sun, Q. (2016). The innovation of e-book design under the background of digital media. *Eighth International Conference on Measuring Technology and Mechatronics Automation (ICMTMA)* (pp. 801-804). IEEE.
- Colombo, L. (2011, September). Designing highly engaging ebook experiences for kids. In *International Conference on Theory and Practice of Digital Libraries* (pp. 531-534). Berlin, Heidelberg: Springer.
- Dick, M. E., & Goncalves, B. S. (2019). A framework to the digital book design process. *Proceedings of the EIPub Conference*, 1-19.
- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, 133, 285-296.
- Huang, R., Zhang, X., Chen, G., Wang, X., Zhao, S., & Gong, C. (2012). Design and development of e-textbook for information-based learning. *Open Education Research*, 18(3), 27-33.
- Hussain, A., Mkpjogu, E. O., Musa, J. A., & Mortada, S. (2017). A user experience evaluation of Amazon Kindle mobile application. *AIP Conference Proceedings*, 1891(1), 020260.
- Jallas, M., Ansani, G., Schwartz, J., & McEneely, K. (2023). "eBooks are a life saver" vs. "I'm not a fan of eBooks": Discerning student attitudes towards academic ebooks as a result of the covid-19 pandemic. Milner Library-Faculty and Staff Publications .
- Klatt, C., & Meeks, K. (2020). *Increasing e-book usage: The importance of investing time and money into access points*. Retrieved from <https://dc.uthsc.edu/>
- Kodama, M., Ishita, E., Watanabe, Y., & Tomiura, Y. (2021). Usage of e-books during the Covid-19 pandemic: A case study of Kyushu University Library, Japan. *International Conference on Information* (pp. 475-483). Cham: Springer International Publishing.
- Kumar, R. (2025). Bibliometric analysis: Comprehensive insights into tools, techniques, applications, and solutions for research excellence. *Spectrum of Engineering and Management Sciences*, 3(1), 45-62.
- Lim, R. G., Voon, S. P., Yahya, F., Mohamad, F. S., & Ahmi, A. (2024). Global and LMIC insights into acceptance and commitment therapy (ACT): A bibliometric study from 1998 to 2023. *Journal of Contextual Behavioral Science*, 33, 100796.

- Maceviciute, E., Borg, M., Kuzminiene, R., & Konrad, K. (2014). The acquisition of e-books in the libraries of the Swedish higher education institutions. *Information Research: An International Electronic Journal*, 19(2), 2.
- Merchant, G. (2015). Keep taking the tablets: iPads, story apps and early literacy. *The Australian Journal of Language and Literacy*, 38(1), 3-11.
- Sioki, N. (2021). Thinking out of the book: Visual language and textual form in the design of ebooks. In *Advances in Design and Digital Communication: Proceedings of the 4th International Conference on Design and Digital Communication*(pp. 3-12). Springer International Publishing.
- Van Eck, N. J., & Waltman, L. (2014). Visualizing bibliometric networks. In *Measuring scholarly impact: Methods and practice* (pp. 285-320). Springer.
- Wardaya, M. (2022). E-Book for education in pandemic era. In *Embracing the future: creative industries for environment and advanced society 5.0 in a post-pandemic era* (pp. 201-204). Routledge.
- Wilson, R., Landoni, M., & Gibb, F. (2002). A user-centred approach to e-book design. *The Electronic Library*, 20(4), 322-330.
- Wong, K., Liong, C., Lin, Z. X., Lower, M., & Lam, P. (2011). E-books as teaching strategy: preliminary investigation. *Changing Demands, Changing Directions, Proceedings of Ascilite2011 Conference* (pp. 1343-1352).

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