Journal of Ecohumanism
2025
Volume: 4, No: 2, pp. 87 – 101
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v4i2.5789

Exploring the Current State of Information Literacy Education: A Systematic Literature Review

Retno Sayekti[1]

Abstract

Information Literacy Education is a skill taught to students of various educational levels, from elementary school to college and even postgraduate programs. This research aims to present the current state of Information Literacy Education, identify the dominant research themes, the methods of teaching and learning used, the context of learning in which the skill is taught, and recommends future research development in related fields. A systematic literature review was conducted using large electronic journal databases such as Taylor and Francis, and Science Direct, which obtained 37,633 articles. Furthermore, The PICOC and PRISMA protocols were applied to analyze 17 relevant articles and identify 14 themes in learning, 14 learning methods, 12 research methods used, and 7 scientific fields in the implementation of Information Literacy Learning from 2017 to 2021. These results provide direction for future research and contribute to enhanced information literacy curriculum development, effective integration of information literacy in specific disciplines, transitioning to online information literacy instruction, development of engaging and interactive information literacy modules, assessing learning outcomes and informing instructional strategies, collaboration and professional development in information literacy, diverse and effective teaching methods, and advancements in research methods for information literacy.

Keywords: *Information Literacy, Information Literacy Education, Systematic Literature Review, PICOC, PRISMA.*

Introduction

Information literacy is an important skill that enables individuals to find and use information effectively and ethically. It encompasses a range of skills including searching, accessing, interpreting, analyzing, managing, creating, and communicating information. Furthermore, it is essentially related to the skill of critical thinking (CILIP Definition of Information Literacy 2018, 2018, p. 1). Information literacy is a lifelong learning skill that equips individuals to recognize their information needs, find, evaluate, and use the needed information effectively. According to the latest definition by *the Chartered Institute of Library and Information Professionals* (CILIP), information literacy involves critical thinking and decision-making skills to find and utilize information (CILIP Definition of Information Literacy 2018, 2018, p. 7). It is a set of abilities that enable individuals to recognize their information needs and find, evaluate, and use the needed information effectively (Riedling, 2007, p. 6). Similarly, information professionals such as librarians require information literacy skills as they create, collect, and help others use various types of information in an ethical manner. Other professions such as teachers, academic advisors, and educational technology specialists also require collaboration with information professionals to ensure that everyone has the significant information literacy skills.

Information literacy in higher education involves an understanding of the process of creating and discovering information (Association of College and Research Library, 2016), to improve students' learning process (Lokse, 2017; Løkse et al., 2017). Information literacy should be taught throughout academic careers (*Information Literacy: Concepts and Teaching Strategies | Teaching and Learning Resource Center*, n.d.) and require comprehensive solutions.

The standards for information literacy skills are set based on the *Framework for Information Literacy for Higher Education* established by the ACRL in 2015. This framework is based on the belief that information literacy is a reform movement in education that will reach its potential through the assets of data and increasingly complex information (Association of College and Research Library, 2016). According to the Information

[1] Universitas Islam Negeri Sumatera Utara Medan, Indonesia, Address: Jl. Nusaindah no. 16 Tanjungsari Batangkuis Deli Serdang Sumatera Utara, Indonesia, Email: retnosayekti69@uinsu.ac.id, ORCID: https://orcid.org/0000-0003-3491-3599

Journal of Ecohumanism
2025
Volume: 4, No: 2, pp. 87 – 101
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v4i2.5789

Literacy theory, the skills that an individual should possess are: 1) there is a need for information, 2) the available information resources, 3) how to find information, 4) the need to evaluate information, 5) how to deal with irrelevant information, 6) ethics and responsibility in using information, 7) how to communicate or share information findings, and 8) how to manage obtained information (CILIP, 2012, 2017).

Hammons (2020b) introduced the "teach-the-teachers" approach to develop teaching information literacy. This approach emphasizes the importance of cooperation between librarians and faculty members in including information literacy in the curriculum. Due to limited staff, librarians often rely on the support of faculty to design and implement the curriculum. As the official institution with the authority to manage the curriculum, the involvement of faculty is crucial in ensuring the successful integration of information literacy into the classroom. This approach allows librarians to focus on the institution's initiatives and enables instructors to better convey the importance of information literacy to their students.

A literature review by Morris (2020) focused on information literacy in higher education and reviewed articles that compared face-to-face, online, and blended learning models. The results indicated no significant difference between these teaching methods in terms of learning outcomes. Therefore, this study aims to conduct a systematic literature review of themes, teaching and research methods, and contexts of information literacy education in recent literature from 2017 to 2021. By analyzing these aspects, the study aims to identify patterns and trends in the field and highlight areas for further development.

Although there is a lot of research on Information Literacy in academic publications, studies using a systematic literature review approach remain scarce. This research aims to fill this gap and identify aspects of Information Literacy education that require further development.

In this systematic literature review, the analysis focused on extracting data regarding the themes of teaching Information Literacy discussed in the research that were published, the methods used for teaching and research, and the context in which Information Literacy education is delivered. Despite the extensive number of studies, there is a lack of comprehensive review of these themes. This study aims to fill this gap in understanding the patterns and trends of research in Information Literacy education by reviewing literature published within the last five years from 2017 to 2021. Specifically, this study focuses on:

- Identifying the themes discussed in teaching information literacy research from 2017 to 2021.
- Examining the teaching methods used in information literacy research from 2017 to 2021.
- Determining the groups of students taught information literacy in the research from 2017 to 2021.
- Investigating the research methods used in research of teaching information literacy from 2017 to 2021.

This analysis will contribute to developing knowledge and understanding of teaching information literacy. Furthermore, the results will contribute to state-of-the-art in information literacy education, constituting a foundation for future research. Based on the analysis of this systematic review, future research can also be conducted to develop collaborative learning models in the field of information literacy education to fill existing gaps.

Methods

This research used the Systematic Literature Review (SLR) method following the steps of Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) protocol for filtering and analyzing the literature.

In this research study, the Systematic Literature Review (SLR) method was employed as the chosen approach for conducting the literature review. The SLR method is a rigorous and structured process that

Journal of Ecohumanism
2025
Volume: 4, No: 2, pp. 87 – 101
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v4i2.5789

aims to systematically identify, evaluate, and synthesize existing literature on a specific research topic. By following the steps outlined in the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) protocol, the researchers ensured transparency and reproducibility in their review process.

The PRISMA protocol is a widely recognized guideline for conducting systematic reviews and meta-analyses. It provides a comprehensive checklist of items that researchers should follow to ensure a systematic and transparent literature review process. By adhering to the PRISMA protocol, the researchers in this study ensured that their review was conducted with integrity, minimizing bias and enhancing the reliability of the findings.

The first step in the SLR method involved identifying relevant articles through a comprehensive search strategy. This included searching multiple databases and utilizing specific keywords and search terms related to the research topic. The researchers aimed to be thorough in their search, minimizing the risk of missing relevant studies.

Following the identification of articles, the researchers applied the filtering process outlined in the PRISMA protocol. This involved screening the articles based on predefined inclusion and exclusion criteria, such as relevance to the research questions, publication date, and study design. By applying these criteria consistently and transparently, the researchers ensured that only the most relevant and appropriate articles were included in the review.

Once the filtering process was completed, the selected articles underwent a detailed analysis. The researchers extracted key information from the articles, such as research methods, findings, and implications. They systematically synthesized the extracted data to identify patterns, themes, and gaps in the existing literature. This process allowed for a comprehensive understanding of the current state of knowledge on the research topic.

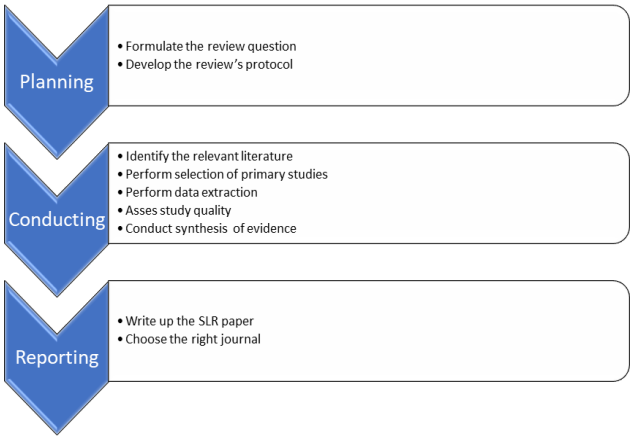
By employing the SLR method and following the PRISMA protocol, the researchers ensured a rigorous and systematic approach to their literature review. This methodological rigor enhances the credibility and trustworthiness of the research findings and provides a solid foundation for further analysis and interpretation of the literature.

The selected literature were then analyzed using NVIVO 12 application to find themes, context, teaching methods, and research methods used. Meanwhile, NVIVO was used because of its ease of analyzing and organizing qualitative data as mentioned in several studies (Elliott-Mainwaring, 2021; Mattimoe et al., 2021; Zamawe, 2015).

The systematic research stages included planning, implementation, and reporting, as shown in Figure 1.

Journal of Ecohumanism
2025
Volume: 4, No: 2, pp. 87 – 101
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v4i2.5789

Figure 1. Stages of Systematic Literature Review



Strategies for tracing and collecting research published in various journals were taken from the Taylor and Francis Online Database and ScienceDirect. These two are considered large databases that contain reputable journals. Furthermore, these databases were chosen due to their extensive array of relevant literature. The publication period was the last five years (2017-2021). The research objectives were framed using the PICOC framework, which stands for population, intervention, comparison, outcomes, as shown in Table 1.

Table 1. PICOC Framework

Population	Teaching information literacy
Intervention	Themes, teaching methods or models, research methods, the context of the learning environment
Comparison	n/a
Outcomes	Research themes in teaching Information Literacy, various Information Literacy teaching methods, and research methods used in the studies, as well as contexts or information literacy learning cohort
Context	College or university 5 years period from 2017 – 2021

A protocol review was then developed which included background components, research questions, search terms, selection criteria and procedures, data extraction strategy, and data synthesis strategy. The research questions developed are listed in Table 2.

Table 2. Research Questions

ID	Research questions	Motivation
RQ1	What are the themes discussed in teaching Information Literacy research in existing publications?	Identify themes that appear in information literacy teaching research in existing publications in the 2017-2021 period.
RQ2	What learning methods are used in teaching Information Literacy in existing research?	Identify the methods used by teachers or instructors in teaching information literacy.
RQ3	What contexts or cohort of students is information literacy course given in the research published during 2017-2021?	Identify groups or groups of students receiving lectures on information literacy.

Journal of Ecohumanism
2025
Volume: 4, No: 2, pp. 87 – 101
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v4i2.5789

ID	Research questions	Motivation
RQ4	What research methods are used in studying Information Literacy in existing publications?	Identify the methods used in the research of teaching Information Literacy.

Eligibility Criteria

The criteria for inclusion in the literature review were established as follows: The literature should discuss about teaching information literacy and be published in English in Taylor and Francis indexed journals (https://www.tandfonline.com/) and ScienceDirect (https://www.sciencedirect.com/search) as the designated journal databases in this research. In addition, the literature should be Open Access (OA) to facilitate further analysis and be relevant to the research objectives. Conversely, several types of research mentioned below were considered irrelevant to this systematic literature review and were not included. These include a) research using literature review methods, b) information literacy programs taught outside the higher education context, c) research written and published not in English, and d) literature that meets the above inclusion criteria but is close access or not given full-text access.

Literature Search

The bibliographic search was conducted on January 29, 2022, using the Taylor and Francis and ScienceDirect databases. The information search used terms related to information literacy education. To find accurate search results, the Boolean operators AND and OR were both used to combine terms, expand the terms used in searched literature, and exclude unwanted terms.

The same term search strategy was also used to search both journal databases as follows: (teaching **OR** learning) **AND** (information literacy) **AND** (student **OR** undergraduate) **AND** (library and information) **AND** (school **OR** program **OR** science **OR** studies). Search terms were developed through the following:

- Identify the PICOC framework as listed in Table 1.
- Identify research objectives.
- Identify the terms listed in the title, abstract and relevant keywords.
- Identify synonyms and alternative spellings of the terms used in the search.
- Compose terms with search strings (search strings) by using the Boolean Operators AND and OR. AND is used to combine terms, while OR is used to expand concepts using different terms.

Selection

Among the total articles found through both databases, some were removed for the following reasons:

- The article was not open access, therefore, it cannot be used for further research.
- Did not involve teaching information literacy topics.
- Articles not written in English
- Articles were proceedings, books, ideas, perspectives, or literature reviews.
- Article was a book review.

Journal of Ecohumanism
2025
Volume: 4, No: 2, pp. 87 – 101
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v4i2.5789

During the initial search process, a considerable number of articles were identified from the databases. However, certain articles had to be excluded from the analysis due to specific criteria set by the researchers. One of the exclusion criteria was related to the accessibility of the articles. If an article was not available as open access, it was deemed unsuitable for further research since the researchers required unrestricted access to the full text. Open access articles ensure that the findings and insights within them can be thoroughly examined and utilized in the research study.

Another criterion for exclusion was whether the articles addressed teaching information literacy topics. Since the research study focused on a specific subject area, it was essential to filter out articles that did not directly contribute to the exploration of information literacy. This criterion ensured that the selected articles would provide relevant insights and findings related to the research questions.

Furthermore, articles that were not written in English were excluded from the analysis. This decision was made to maintain consistency and ease of understanding during the coding and analysis process. By limiting the selection to English-language articles, the researchers could effectively interpret and extract information from the texts, ensuring accurate representation and comprehension.

Additionally, certain types of articles were deemed ineligible for inclusion. Proceedings, books, ideas, perspectives, and literature reviews were excluded from the analysis. Proceedings often contain conference presentations or abstracts, which may not provide sufficient depth or detail for the research study. Books, ideas, perspectives, and literature reviews are valuable in their own right but may not align with the specific focus of the research study, which requires empirical research articles to address the research questions effectively.

By implementing these exclusion criteria, the researchers were able to refine the selection of articles, ensuring that only relevant and appropriate sources were included in the analysis. This helped to maintain the integrity and quality of the research findings and facilitated a more focused investigation into the teaching of information literacy topics.

Data Extraction and Coding of Results

The process of data extraction and coding of selected articles was conducted with the NVIVO application. Coding was carried out using the node function to mark the concepts from the articles being analyzed and place them into categories appropriate to the research questions, including themes, learning methods, learning cohort (context), and research methods used.

In the research study, the process of data extraction and coding plays a crucial role in analyzing the selected articles. To accomplish this task, the researchers utilized the NVIVO application, which is a powerful qualitative data analysis software. NVIVO provides a systematic approach to organizing and analyzing data, enabling researchers to efficiently manage large volumes of information. By employing NVIVO's features, such as the node function, the researchers were able to mark and categorize concepts from the articles according to the research questions.

Coding using the node function involves identifying key concepts or themes within the articles and creating nodes to represent them. These nodes act as containers that hold relevant information related to the identified concepts. The researchers could create multiple nodes to represent different categories or themes that emerged from the analysis. For example, they may have created nodes to represent different learning methods, such as experiential learning, collaborative learning, or online learning. Additionally, nodes could have been established to categorize the research methods used in the articles, such as case studies, surveys, or experiments.

By utilizing the node function and creating appropriate categories, the researchers were able to organize the data in a structured manner. This facilitated the identification of patterns, relationships, and trends within the selected articles. Furthermore, it allowed for a comprehensive analysis of the research questions at hand. Through the coding process, the researchers could systematically explore the articles, extract relevant

Journal of Ecohumanism
2025
Volume: 4, No: 2, pp. 87 – 101
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v4i2.5789

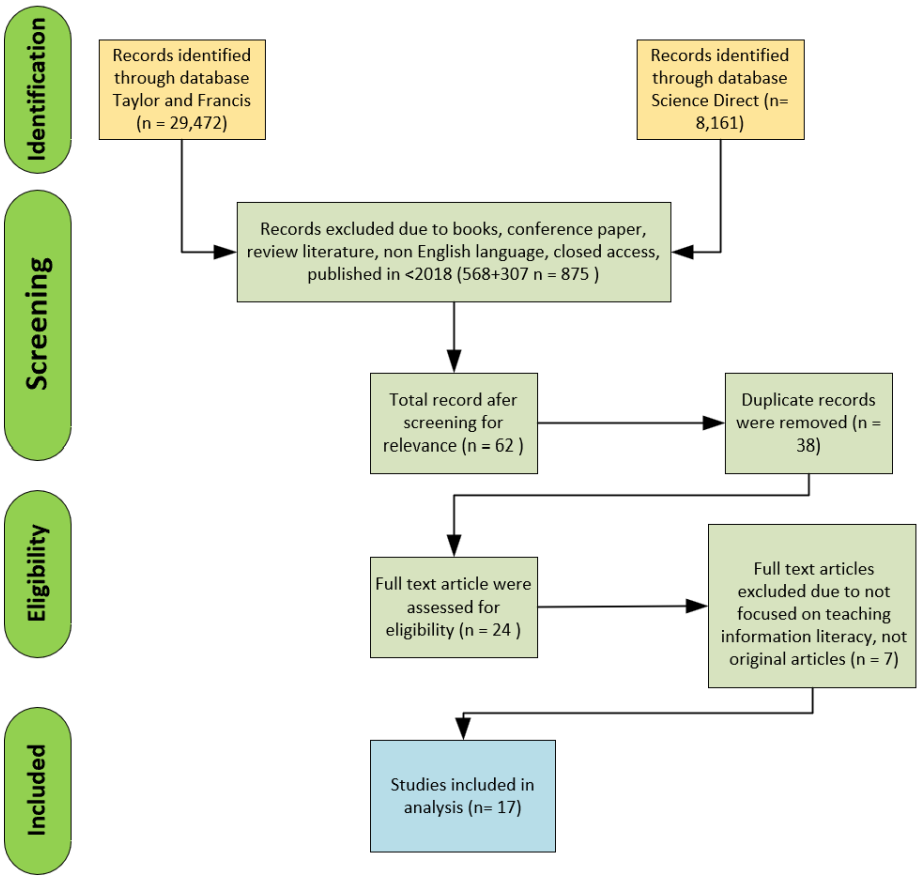
information, and gain insights into the various aspects of the research topic, including learning methods, learning cohort, and research methods used.

Overall, the use of the NVIVO application and its node function provided a robust framework for the data extraction and coding process. It enabled the researchers to effectively manage and analyze the selected articles, ensuring that the research questions were adequately addressed. By categorizing the concepts into appropriate nodes, the researchers could identify themes, patterns, and relationships, leading to a comprehensive understanding of the research topic. The systematic approach facilitated by NVIVO contributed to the rigor and reliability of the study's findings, enhancing its overall quality.

Protocol

The articles obtained through search on both databases, Taylor & Francis and ScienceDirect, were analyzed using the PRISMA protocol, as shown in Figure 2.

Figure 2. The PRISMA Protocol Used in This Research



After carrying out several screening stages according to the inclusion and exclusion criteria, 17 articles were obtained and analyzed in this information literacy teaching research. A detailed description of these articles is shown in Table 3.

Journal of Ecohumanism
2025
Volume: 4, No: 2, pp. 87 – 101
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v4i2.5789

Table 3. Summary of the List of Articles Analyzed

Author, Year	Title	Publication
Black, 2020	Instructional design for single information literacy sessions	Public Services Quarterly
F Brady, 2021	Training peer teachers to teach first-year graduate level information literacy sessions	The Journal of Academic Librarianship
Chang, 2020	A comparison of the learning outcomes for a PBL-based information literacy course in three different innovative teaching environments	Libri
Charles, 2021	Using a TeachMeet model to enhance collaboration in an information literacy instruction program	Journal of Academic Librarianship
Chen et al., 2017	The effects of inquiry-based information literacy instruction on memory and comprehension: A longitudinal study	Library and Information Science Research
Franklin et al., 2021	Redesigning an online information literacy tutorial for first-year undergraduate instruction	Journal of Academic Librarianship
García, 2017	Peer evaluation of teaching in an online information literacy course	Portal
Guo & Huang, 2021	Information literacy education during the pandemic: The cases of academic libraries in Chinese top universities	Journal of Academic Librarianship
J Hammons, 2020	Teaching information literacy: Developing an online course for faculty	College and Research Libraries News
Humrickhouse, 2021	Flipped classroom pedagogy in an online learning environment: A self-regulated introduction to information literacy threshold concepts	Journal of Academic Librarianship
Laretive, 2019	Information Literacy, Young Learners and the Role of the Teacher Librarian	Journal of the Australian Library and Information Association
Brandi Lawless, 2021	Can you spot a troll? Teaching information literacy through conversations about social media attacks	Communication Teacher
Liu, 2021	Information literacy instruction for international graduate engineering students: A case study at University of Windsor	Journal of Academic Librarianship

Journal of Ecohumanism
2025
Volume: 4, No: 2, pp. 87 – 101
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v4i2.5789

Author, Year	Title	Publication
Pang, 2020	Teaching mode of library information literacy course based on hierarchical embedded service	International Journal of Emerging Technologies in Learning
Sezer, 2020	Implementing an information literacy course: Impact on undergraduate medical students' abilities and attitudes	Journal of Academic Librarianship
Sharun, 2021	Practicing information literacy: Practicum students negotiating information practice in workplace settings	Journal of Academic Librarianship
Wegener, 2018	We May Be Teaching Information Literacy, but Are the Design First Year Students Actually Getting It?	Journal of Academic Librarianship

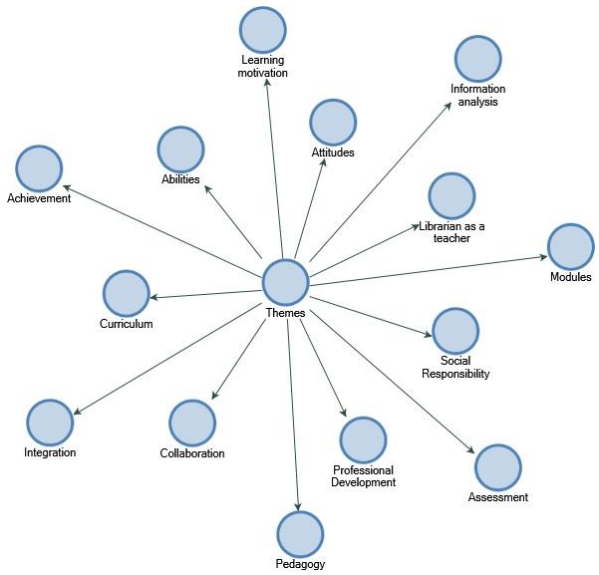
Findings

The results of the analysis of 17 selected articles using NVivo12 application are presented in this section. The articles were published in various journals, including Journal of Academic Librarianship (56%), International Journal of Emerging Technologies in Learning (6%), Communication Teacher (6%), College and Research Libraries News (6%), Portal (6%), Library and Information Science Research (6%), Libri (6%), and Public Services Quarterly (6%).

Themes Discussed in Teaching Information Literacy Research

The research conducted on teaching information literacy in the period of 2017-2021 covered 14 themes, including information literacy skills, increasing motivation in learning, individual attitudes towards information, information analysis, librarians as educators, developing learning modules, social responsibility development, assessment of information literacy skills, professional development in information literacy learning, pedagogy, collaboration, integration, the learning curriculum, and learning outcomes. These themes are shown in Figure 3.

Figure 3. The Themes Discussed in Teaching Information Literacy Research in the 2017-2021 Period

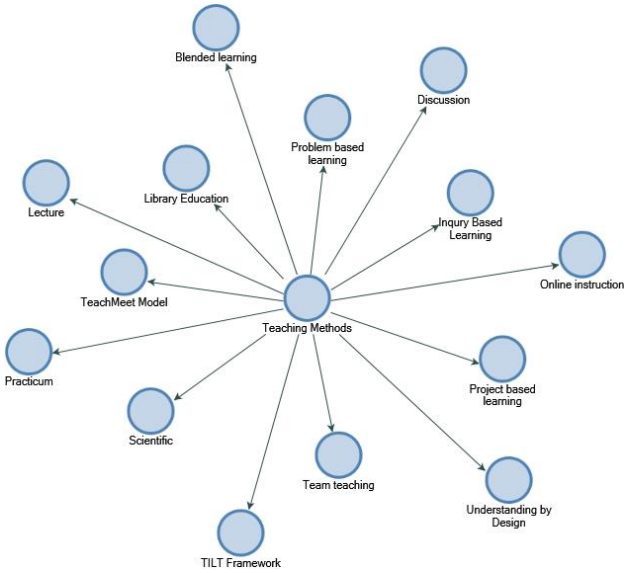


Journal of Ecohumanism
2025
Volume: 4, No: 2, pp. 87 – 101
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v4i2.5789

The Methods Used in Teaching Information Literacy

The methods used by educators or instructors in teaching information literacy vary. The results from the literature review of research articles published between 2017-2021 showed that 14 research methods were identified, including problem-based learning, discussion, inquiry-based learning, online instruction, project-based learning, understanding by design, team teaching, TILT framework, scientific learning, practicum, TeachMeet model, lecture, library education, and blended learning. Figure 4 shows the different models and learning methods of Information Literacy used by instructors, including both librarians and lecturers.

Figure 4. The Methods Used in Teaching Information Literacy in Research from 2017 - 2021



Recipient Group (Cohort) in Information Literacy Teaching

In the articles reviewed, several contexts were identified in which information literacy was taught. The communities or groups that received information literacy learning include undergraduate and graduate students across various disciplines, such as communication, arts, liberal education, health, management, business, and culture. Furthermore, the word cloud in Figure 5 demonstrates that the largest group receiving information literacy learning are undergraduate students, particularly in communication classes.

Figure 5. Context of Teaching Information Literacy in This Research for the 2017 – 2021 Period

Journal of Ecohumanism
2025
Volume: 4, No: 2, pp. 87 – 101
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v4i2.5789

The Method Used in Research of Teaching Information Literacy

The articles analyzed in this study applied a variety of methods to analyze information literacy learning. Among the methods, the most widely used include empirical research, usability and case studies, surveys, social media, research and development, phenomenology, participant action research, pilot projects, longitudinal studies, classroom action research, as well as the CIPP evaluation model. Figure 6 represents an evaluation matrix displaying the usage of different research methods in the field of information literacy learning. The empirical method was found to be the most frequently utilized, with the smallest number of studies using the CIPP evaluation model.

Figure 6. Research Methods Used in the Field of Teaching Information Literacy in the 2017 – 2021 Period

Discussion

This literature review analyzed the themes that emerged in research on teaching information literacy from 2017 to 2021. It also evaluated the most commonly used teaching methods and the groups that received information literacy learning. Lastly, it examined the most popular research methods used in this field.

The Journal of Academic Librarianship was found to have published the most articles on teaching information literacy during the period of 2017 to 2021. The themes discussed in these articles were varied. However, the most frequently discussed topic was the information literacy learning curriculum. Out of the 17 articles analyzed, four addressed the design of the curriculum. These included works by Black (2020), Laretive (2019), Sezer (2020), and Humrickhouse (2021). Black (2020) discussed the development of an information literacy learning curriculum that was achieved in three stages: identifying learning objectives, determining appropriate assessments, and creating learning plans. Laretive (2019) focused on the application of the Australian Curriculum General Capability, and ICT curriculum in information literacy education by teacher librarians. This curriculum defines learning stages, including identifying and planning for information retrieval, finding and accessing information, and evaluating information sources. Furthermore, Sezer's article (2020) explored the integration of information literacy learning modules into the national curriculum at the Faculty of Medicine in Turkey, as well as the measurement of their effectiveness. Humrickhouse (2021) examined the information literacy learning curriculum in libraries that transitioned from a traditional curriculum to a fully online format using the Canvas application. The results showed that the online curriculum design, incorporating both synchronous and asynchronous models, facilitated self-regulated information literacy learning behavior and enhanced the transfer of knowledge, thereby strengthening the overall learning process.

Other topics that appeared include the development of information literacy modules (Franklin et al., 2021; Hammons, 2020a). Franklin (2021) developed an online tutorial module for educational programs in libraries, while Hammons (2020a) suggested the stages of developing online learning designs. Research on Information Literacy learning that focused on outcomes was conducted by Chen et al. (2017), Sezer (2020),

Journal of Ecohumanism
2025
Volume: 4, No: 2, pp. 87 – 101
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v4i2.5789

and Wegener (2018). Meanwhile, Charles (2021) assessed information literacy learning by developing the TeachMeet model for input on learning and assessment techniques, as well as increasing collaboration among librarians. Information literacy learning research that focused on information-seeking behavior was conducted by Laretive (2019). According to Laretive, librarians that teach information literacy require background knowledge on student behavior for effective learning to take place. Relevant research was also carried out by Sezer (2020), which emphasized that information literacy training would change student attitudes. Furthermore, Wegener (2018) developed a model in the library to integrate collaboration qualities, social responsibility, and attitudes. Lawless (2021) suggested several steps in teaching information analysis skills which include authority, objectivity, context, relevance, and purpose. Pang (2020) suggested integration between librarians and teachers or lecturers in teaching information literacy skills. Chang(2020) observed that the integration of the ARCS motivation model into learning effectively increased student motivation in information literacy learning. Garcia (2017) studied the role of librarians as teachers in teaching information literacy. Moreover, teaching information literacy online by librarians needs to be evaluated for its performance. Brady (2021) and Charles (2021) emphasized the significance of information literacy learning as a subject in professional development. This literature review showed that research in the field of information literacy learning is growing and encompasses a wide range of themes.

Information literacy learning methods used by instructors or teachers are very diverse. Of the 17 articles analyzed, the most popular was library education or library instruction which totaled 8 articles (47%) written by Guo & Huang (2021), Liu (2021), Laretive (2019), Black (2020), Franklin, et al. (2021), Pang (2020), Chen (2017), and Charles (2021). Other methods include online instruction with 6 articles (35%), team teaching with 6 articles (35%), project-based learning with 3 articles (18%), blended learning with 4 articles (24%), discussion, inquiry-based learning, lecture, practicum, scientific learning, TeachMeet, TILT framework, and understand by design, each with only 1 article (6%), problem-based learning with 2 (12%), as well as team teaching with 6 articles (35%).

A total of 5 articles (20.83%) showed that information literacy learning was presented to undergraduate students in the field of communication (5 or 18.75%). Only 3 articles (12.50%) reported on postgraduate students who received information literacy instruction. Meanwhile, 3 articles (12.50%) discussed information literacy learning conducted in university libraries. Apart from economics students, other disciplines that received information literacy instruction included business, with 3 articles (10.42%), and arts, culture, health, liberalism, and management, each with only 1 article (4.17%). Therefore, undergraduate students were observed to be the largest recipient group of information literacy learning.

In this literature review analysis, the most prevalent method found was empirical research, used in 7 articles (41%). Furthermore, other methods used included research and development in 2 articles (12%), as well as case studies, CIPP evaluation model, class action research, longitudinal studies, participant action research, phenomenology, pilot projects, social media, surveys, as well as usability testing, each with only 1 article (6%). The limited use of certain methods suggests that they may not be as commonly used in the research of teaching information literacy or may still be in the process of development. Although empirical research was the most dominant method in this literature review, there was no indication that it is the most appropriate method for researching information literacy learning. Research methods are continuously evolving with the advancement of science, and it is expected that future research on teaching information literacy will utilize a variety of new methods not mentioned in this study, including research and development method.

Based on these findings, the research using systematic literature review has made several significant contributions to the field of information literacy education. Below are some potential contributions based on the findings.

Enhanced Information Literacy Curriculum Development. The research contributes by providing a comprehensive understanding of the stages involved in developing information literacy education curricula. It offers insights into the process of identifying learning objectives, selecting appropriate assessments, and creating effective learning plans. This can guide curriculum developers in designing information literacy programs that align with educational objectives and promote meaningful learning experiences.

Journal of Ecohumanism
2025
Volume: 4, No: 2, pp. 87 – 101
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v4i2.5789

Effective Integration of Information Literacy in Specific Disciplines. The research highlights successful examples of integrating information literacy education in specific disciplines, such as medicine and communication. This contributes by showcasing the benefits and strategies of incorporating information literacy into disciplinary curricula. It provides educators and curriculum developers in various fields with practical guidance on integrating information literacy skills and competencies into subject-specific contexts.

Transitioning to Online Information Literacy Instruction. The research explores the transition from traditional to online information literacy instruction, specifically using the Canvas application. It offers insights into the design and implementation of online curriculum models that incorporate both synchronous and asynchronous components. This contribution is valuable for institutions and educators seeking to effectively adapt information literacy instruction to online environments, ensuring learner engagement and knowledge transfer.

Development of Engaging and Interactive Information Literacy Modules. The research identifies the development of online tutorial modules and educational programs in libraries. It provides valuable examples and approaches for creating interactive and engaging resources that facilitate information literacy learning. This contribution assists educators and instructional designers in developing innovative and learner-centered modules that enhance students' information retrieval, evaluation, and utilization skills.

Assessing Learning Outcomes and Informing Instructional Strategies. The research emphasizes the importance of assessing learning outcomes and understanding student behavior in information literacy learning. It contributes by showcasing research that focuses on measuring the effectiveness of information literacy instruction and its impact on student attitudes and behavior. This informs educators about effective assessment techniques and instructional strategies that promote desired learning outcomes and address students' information-seeking behavior.

Collaboration and Professional Development in Information Literacy. The research highlights the role of collaboration among librarians and the significance of information literacy learning in professional development. It contributes by showcasing successful models of collaboration and professional development initiatives that enhance information literacy instruction. This can inspire librarians, educators, and administrators to establish collaborative networks and promote ongoing professional development opportunities to strengthen information literacy education.

Diverse and Effective Teaching Methods. The research identifies various teaching methods employed in information literacy instruction, such as library education, online instruction, team teaching, and project-based learning. It contributes by providing a comprehensive overview of effective instructional approaches that promote information literacy skills. This helps educators in selecting appropriate teaching methods and diversifying their instructional strategies to engage and empower learners in information literacy acquisition.

Targeted Information Literacy Instruction for Undergraduate Students. The research highlights undergraduate students as the primary recipient group of information literacy instruction. It contributes by focusing on specific disciplines, such as communication, business, and economics, and providing insights into the information literacy needs and challenges faced by undergraduate students. This contribution enables educators to tailor information literacy instruction to the unique requirements of undergraduate students and foster their information literacy competencies.

Advancements in Research Methods for Information Literacy. The research explores different research methods employed in information literacy research, such as empirical research, research and development, case studies, and surveys. It contributes by showcasing the current landscape of research methodologies and their applications in investigating information literacy learning. This encourages researchers to explore and adopt innovative research methods to expand the knowledge base of effective information literacy instruction.

Overall, this research using systematic literature review has provided valuable insights into various aspects of information literacy learning, including curriculum development, instructional methods, target audience,

Journal of Ecohumanism
2025
Volume: 4, No: 2, pp. 87 – 101
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v4i2.5789

disciplinary focus, and research methodologies. These findings can inform the design, implementation, and evaluation of information literacy programs and contribute to the advancement of the field.

Conclusion

The field of information literacy research encompasses standard skills that have broad applications across various domains of knowledge. Prior research in the area of information literacy teaching has investigated a variety of topics and strategies for the development and education of information literacy skills. This study reviewed 17 articles on information literacy learning published between 2017 and 2021, which were indexed in Taylor & Francis and ScienceDirect. Furthermore, the analysis revealed 14 themes that emerged in the research on information literacy teaching, with curriculum development being the most widely analyzed topic. Information literacy education is extensively taught by libraries through educational or instructional programs. However, the model of incorporating information literacy into the curriculum with a credited course is still limited. Despite undergraduate students being the primary group receiving information literacy education, not all academic fields have integrated it into their curriculum with credit courses. This study also discovered that some universities provide this educational program to postgraduate students. The data analysis showed a variety of methods used, with empirical studies more prevalent than others. Further research and development in methods for teaching information literacy is necessary to formulate new theories and models that are suitable for the current advancement in technology and information.

Based on this literature review, this study identifies gaps in terms of themes, learning strategies, learner groups, and research methods used in teaching information literacy. Further research is necessary to address these gaps by examining areas that have not been widely discussed and utilizing diverse methods. For example, analyzing the development of information literacy teaching models for aspiring librarians who will serve as instructors of information literacy skills. This study highlights these gaps and contributes to literature in information literacy teaching for future research. The results provide direction and contribute to the discussion on increasing methodological efforts to generate new theories in line with the development of information technology.

Acknowledgement

We would like to thank to all librarians of the Universitas Negeri Medan who provide us with access to journal resources.

References

Association of College and Research Library. (2016). Framework for Information Literacy for Higher Education. Association of College & Research Libraries. http://www.ala.org/acrl/files/issues/infolit/framework.pdf.

Black, E. L. (2020). Instructional design for single information literacy sessions. Public Services Quarterly, 16(3), 161–171. https://doi.org/10.1080/15228959.2020.1775753

Brady, F. (2021). Training peer teachers to teach first year graduate level information literacy sessions. Journal of Academic Librarianship, 47(2), 102308. https://doi.org/10.1016/j.acalib.2020.102308

Chang, N. (2020). A comparison of the learning outcomes for a PBL-based information literacy course in three different innovative teaching environments. Libri, 70(3), 213–225. https://doi.org/10.1515/libri-2018-0132

Charles, L. H. (2021). Using a TeachMeet model to enhance collaboration in an information literacy instruction program. Journal of Academic Librarianship, 47(5), 102393. https://doi.org/10.1016/j.acalib.2021.102393

Chen, L. C., Huang, T. W., & Chen, Y. H. (2017). The effects of inquiry-based information literacy instruction on memory and comprehension: A longitudinal study. Library and Information Science Research, 39(4), 256–266. https://doi.org/10.1016/j.lisr.2017.11.003

CILIP. (2012). Information literacy skills.

CILIP. (2017). Information literacy. CILIP.

CILIP Definition of Information Literacy 2018, CILIP Information Literacy Group 1 (2018). https://infolit.org.uk/ILdefinitionCILIP2018.pdf

Elliott-Mainwaring, H. (2021). Exploring using NVivo software to facilitate inductive coding for thematic narrative synthesis. British Journal of Midwifery, 29(11), 628–632. https://doi.org/10.12968/bjom.2021.29.11.628

Franklin, K. Y., Faulkner, K., Ford-Baxter, T., & Fu, S. (2021). Redesigning an online information literacy tutorial for first-year undergraduate instruction. Journal of Academic Librarianship, 47(1), 102277. https://doi.org/10.1016/j.acalib.2020.102277

García, S. A. V. (2017). Peer evaluation of teaching in an online information literacy course. Portal, 17(3), 471–483. https://doi.org/10.1353/pla.2017.0030
Guo, J., & Huang, J. (2021). Information literacy education during the pandemic: The cases of academic libraries in Chinese top universities. Journal of Academic Librarianship, 47(4), 102363. https://doi.org/10.1016/j.acalib.2021.102363
Hammons, J. (2020a). Teaching information literacy: Developing an online course for faculty. College and Research Libraries News, 81(7), 337–349. https://doi.org/10.5860/crln.81.7.337
Hammons, J. (2020b). Teaching the teachers to teach information literacy: A literature review. Journal of Academic Librarianship, 46(5), 102196. https://doi.org/10.1016/j.acalib.2020.102196
Humrickhouse, E. (2021). Flipped classroom pedagogy in an online learning environment: A self-regulated introduction to information literacy threshold concepts. Journal of Academic Librarianship, 47(2), 102327. https://doi.org/10.1016/j.acalib.2021.102327
Information Literacy: Concepts and Teaching Strategies | Teaching and Learning Resource Center. (n.d.). Retrieved February 3, 2023, from https://teaching.resources.osu.edu/teaching-topics/information-literacy-concepts
Laretive, J. (2019). Information Literacy, Young Learners and the Role of the Teacher Librarian. Journal of the Australian Library and Information Association, 68(3), 225–235. https://doi.org/10.1080/24750158.2019.1649795
Lawless, B. (2021). Can you spot a troll? Teaching information literacy through conversations about social media attacks. Communication Teacher, 35(1), 12–16. https://doi.org/10.1080/17404622.2020.1769849
Liu, G. (2021). Information literacy instruction for international graduate engineering students: A case study at University of Windsor. Journal of Academic Librarianship, 47(5), 102415. https://doi.org/10.1016/j.acalib.2021.102415
Lokse, M. (2017). Teaching Information Literacy in Higher Education: Effective Teaching and Active Learning. In Teaching Information Literacy in Higher Education: Effective Teaching and Active Learning. https://api.elsevier.com/content/abstract/scopus_id/85040637738
Løkse, M., Låg, T., Solberg, M., Andreassen, H. N., & Stenersen, M. (2017). Chapter Three - Things We Know About How Learning Happens (M. Løkse, T. Låg, M. Solberg, H. N. Andreassen, & M. B. T.-T. I. L. in H. E. Stenersen, Eds.; pp. 23–50). Chandos Publishing. https://doi.org/https://doi.org/10.1016/B978-0-08-100921-5.00003-5
Mattimoe, R., Hayden, M. T., Murphy, B., & Ballantine, J. (2021). Approaches to analysis of qualitative research data: A reflection on the manual and technological approaches. Accounting, Finance & Governance Review, 27(1), 1–15.
Morris, D. (2020). A review of information literacy programmes in higher education. Journal of Information Literacy, 14(1), 19. https://doi.org/10.11645/14.1.2668
Pang, L. (2020). Teaching mode of library information literacy course based on hierarchical embedded service. International Journal of Emerging Technologies in Learning, 15(10), 27–41. https://doi.org/10.3991/ijet.v15i10.13995
Riedling, A. M. (2007). An educator's guide to information literacy: What every high school senior needs to know. In Teacher Librarian: Vol. October, 3. Libraries Unlimited. http://proquest.umi.com/pqdweb?did=1379475131&Fmt=7&clientId=18803&RQT=309&VName=PQD
Sezer, B. (2020). Implementing an information literacy course: Impact on undergraduate medical students' abilities and attitudes. Journal of Academic Librarianship, 46(6), 102248. https://doi.org/10.1016/j.acalib.2020.102248
Wegener, D. (2018). We May Be Teaching Information Literacy, but Are the Design First Year Students Actually Getting It? Journal of Academic Librarianship, 44(5), 633–641. https://doi.org/10.1016/j.acalib.2018.07.009
Zamawe, F. C. (2015). The Implication of Using NVivo Software in Qualitative Data Analysis: Evidence-Based Reflections. Malawi Medical Journal, 27(1), 13–15. https://doi.org/http://dx.doi.org/10.4314/mmj.v27i1.4