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Information Literacy in English-Language Higher Education Teaching Journals: A Review

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Abstract

Wider visibility of information literacy (IL) outside of the library and information science (LIS) field is important to the success of IL instruction, learning, and research. The development and major updates of several information literacy documents in the past decade evidence the changing landscape of IL research, but how these changes have impacted other disciplines remains to be seen. To aid in this discussion, this article examines a wide range of higher education teaching journals to expand on Badke's (2011) work, "Why Information Literacy is Invisible." Specifically, this study examines articles published in 30 general higher education and 32 disciplinary higher education journals between 2012 and 2022. Although there is a notable increase in the discussion of IL within higher education and non-LIS disciplines journals, there is a gap in references to the five major information literacy documents, supporting Badke's notion that some LIS work remains underrepresented in the broader academic literature.

Keywords: information literacy, instruction, publishing, library and information science, higher education

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A Review of References to Information Literacy in Higher Education English-Language Teaching Journals

In an influential 2011 Perspectives column, Badke argued that information literacy (IL) was "invisible" to disciplinary instructors and university administrators. He presented several interlocking reasons for the lack of understanding, including the isolation of IL scholarly discussions to library and information science (LIS) research. He illustrated this point by reviewing prominent higher education journals for the term "information literacy." A review of 32 journals published before 2009 showed that over half included no mention of IL, and only about a quarter had more than two referencing articles. Library and information science researchers have been calling for IL to be embedded in the curriculum since well before Badke's (2011) article, including Grafstein's foundational work in 2002. Today, it is generally accepted that IL must be integrated into the curriculum to be meaningful to students, though the real-world application varies (Association of College and Research Libraries [ACRL], 2015; Coonan & Secker, 2011). With this in mind, the researchers sought to understand if IL is more visible to higher education instructors and administrators now than it was thirteen years ago. Badke's method of reviewing higher education journals was adapted and expanded for the ten years between 2012 and 2022 to gauge the visibility of IL. The three main research questions were:

- RQ1: What percentage of well-known higher education journals in the last ten years include articles referencing information literacy?
- RQ2: How frequently does information literacy appear in higher education journals over the last decade compared to pre-2009?
- RQ3: What does the change, if any, in the frequency of information literacy in higher education journals mean for the "visibility" of information literacy among disciplinary instructors and university administrators?

The definition and conceptualization of IL in higher education has greatly evolved over the last decade, in part due to the development and refinement of new curriculum and IL standards, the increasing incorporation of IL within higher education accreditation (Saunders, 2007) and national disciplinary standard documents (Faulkner & Ford-Baxter, 2021), and the surging prominence of "misinformation" within the national conversation (Faix & Fyn, 2020). Moreover, the definition of IL remains an evergreen topic, even as

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prominent scholars argue for librarians to start focusing on additional literacies, such as media, digital or metaliteracy (Jacobson & Mackey, 2013; Jones-Jang et al., 2021; Koltay, 2011). Due to the substantial advancement of IL, particularly within Western higher education (Hsieh et al., 2013), it is imperative to revisit previous assumptions regarding IL's visibility to our colleagues in other disciplines to see if the IL field's massive growth has made as significant of an impact on the outside of our LIS "bubble." Already, recent research by Hicks et al. (2022) has suggested that IL "remains poorly leveraged across and between disciplinary landscapes" (p. 12).

While it is known that certain fields have a higher publication rate for articles using the term information literacy, such as healthcare and education (Bhardwaj, 2017; Hicks et al., 2022), it is valuable to see how often IL has appeared in other subject-specific research-focused journals, as it can guide practitioners in assessing how familiar outside faculty are with IL standards. Multiple articles focus on how faculty perceive librarians (Oakleaf, 2010), their role in academia (Perez-Stable et al., 2020; Pinto, 2022), their expertise (Dawes, 2019a; Saunders, 2012), and the LIS definition of IL (Cope & Sanabria, 2014; DaCosta, 2010; Dawes, 2019b). These articles are helpful in relationship-building between librarians and academic partners.

Less research is focused on how librarians can crossover to other disciplines and build bridges between LIS scholarship and other fields (Faulkner & Ford-Baxter, 2021; Foster, 2020; Hicks et al., 2022). This article hopes to highlight how IL is currently addressed in non-LIS literature to encourage librarians to publish or consume research in potentially unrelated fields and to further add to the steady growth and development of information literacy as a multifaceted, highly contextualized concept.

Literature Review

It is important to note that the definition of what is contained and signified by the phrase *information literacy* (IL) is variable and contextual, with Addison and Meyers (2013) recognizing that IL is rooted in diverse scholarly traditions and is applied differently depending on the field and information medium. A recent systematic review by Sample (2020) documented the evolution of the definition of IL in LIS literature across the last decade and has found an exact definition continues to elude most LIS practitioners into the current day. Information literacy in earlier decades (1970s to 2000s) was defined as a set of obtainable skills that could be translated into a prescriptive curriculum for students to

memorize and practice (Sample, 2020). However, later IL definitions broadened to include cognitive models or "habits of thinking" (Sample, 2020, p.4). The push to view IL as culturally contextual and reflective of societal values also rose in prominence during this time, as did the popularity of metaliteracy as a broader term encompassing multiple skillsets and cognitive frames of mind necessary for the modern student (Jacobson & Mackey, 2013; Sample, 2020; Tewell, 2015). As a result of more broadening definitions, multiple standards attempted to codify and define IL, rooting them in specific higher education traditions. This article focuses on English-language standards and frameworks and thus reflects the Western tradition of knowledge. We focus specifically on IL documents because they are the most recognized definitions of IL within higher education and stand to impact academic curriculum as some are recognized by higher education accrediting bodies. Specifically recognized are the following documents.

The Framework for Information Literacy for Higher Education (Association of College and Research Libraries [ACRL], 2015) (henceforth, the ACRL *Framework*) is a set of "interconnected core concepts" that "organize many other concepts and ideas about information" (p. 7). Created by the Association of College and Research Libraries, it reflects the perspective of North American information science professionals and was officially adopted in 2016. The ACRL *Framework* centers around six *threshold concepts*, ideas or frames that reflect concepts and values surrounding information creation, dissemination, and discovery. The ACRL *Framework* replaces an older set of professional standards, *Information Literacy Competency Standards for Higher Education* (ACRL, 2000) (henceforth, the ACRL *Standards*), created in 2000, revised in 2011 and retired in 2016. Because of their longevity, many faculty members outside of LIS may be more familiar with the ACRL *Standards* than the relatively recent ACRL *Framework*.

Outside of North America, several other English-language standards exist. *The Australian and New Zealand Information Literacy Framework* (ANZIL) was adapted from the ACRL *Standards* in 2001 and revised in 2003 (Bundy, 2004). While exploring how to integrate IL into United States foreign language curriculums, Hicks (2013) described ANZIL as flexible and "far more attuned to cultural representations of information" than the ACRL *Standards* (p. 56). The Society of College, National and University Libraries from the United Kingdom published *Information Skills in Higher Education: A SCONUL Position Paper* (SCONUL), which introduced the "Seven Pillars of Information Skills Model" in 2000 and was revised in 2011. The pillars introduce "a series of statements, relating to a set of skills/competencies and a set

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of attitudes/understandings," upon which one moves from novice levels of knowing to "expert" (SCONUL, 2011, p. 4).

In 2011, Cambridge University Library released *A New Curriculum for Information Literacy* (ANCIL) as a practical and adaptable IL curriculum for UK-based undergraduate students (Coonan & Seeker, 2011). ANCIL acknowledged and built upon the definition of IL and the competencies of an information literate individual described in SCONUL's Seven Pillars model and created "ten thematic strands encompassing the full range of facets comprised in information literacy" (ANCIL, 2011, p. 4). These strands or concepts explore the necessary components of an information-literate student and provide suggested learning objectives and activities. The strands range from novice skills, such as "transitioning from school to higher education," to advanced concepts, such as the ethical dimensions of information" and "synthesizing and creating new knowledge" (ANCIL, 2011, pp.14-15).

Who Teaches IL

A lack of scholarship or discussion in leading higher education journals on IL may lead the observer to assume that professors are unconcerned with IL or believe that librarians adequately impart IL skills to students without them. However, several studies show that professors increasingly teach IL in their classes. Early studies focused on faculty incorporation of IL into courses (DaCosta, 2010; Leckie & Fullerton, 1999) showed that 30% to over 50% of participants embedded IL in their classes in some way, including by having a librarian teach the skill. Significant research by Bury in 2011 and 2016 showed rising rates of professors engaging in IL instruction themselves without librarian support, jumping from around a quarter of participants in 2011 to just over 40% in 2016. The trend has continued to rise, with recent studies by Foster (2020) and Ford-Baxter et al. (2022) showing that faculty overwhelmingly see themselves as responsible for teaching IL in the classroom.

In a separate study, Saunders (2012) identified knowledge of IL documents, including accreditation standards and LIS-derived IL standards, as strongly linked to faculty instruction of IL. The extent to which regional accreditation standards discuss IL varies and has been raised as a concern by Badke (2011), who believed that the reluctance of national accrediting bodies to extensively incorporate IL into standards has contributed to the invisibility of IL. He argued that of the six major bodies operating at that time, only The Middle States Commission actively included IL. However, an extensive review of the six accreditation standards by Saunders (2007) three years earlier showed that three standards

included the phrase information literacy, two more included significant IL concepts, and the final standard had at least minimal references to IL concepts. Although it is unclear what led to this discrepancy, a glance at the standards reviewed by Saunders (2007) suggests that interest in IL is increasing as the Northwest Commission on Colleges and Universities now directly references IL.

Similar Studies

It is often unclear how non-LIS faculty first become aware of IL or begin to teach it themselves. Faculty may read about IL by name or concept in an accreditation standard, disciplinary learning standard (Faulkner & Ford-Baxter, 2021), or through outreach by a librarian. Both possibilities may lead to increased involvement by non-LIS faculty in IL instruction and research, thus increasing the visibility of IL. Since Badke's 2011 article, several bibliometric studies have centered on IL research in other disciplines outside of higher education. While studies may include varied or complex methods, simply put, bibliometrics is the analysis of textual sources (books, articles, etc.) using mathematics and statistics, typically using citation and indexing databases to pull source metadata (Bredahl, 2022). Pinto et al. (2013) similarly evaluated social science and health sciences journals indexed in Web of Science and Scopus between 1974 and 2011. Hsieh et al. (2013) published a bibliometric analysis of IL-focused theses and dissertations in the United States and Taiwan published between 1988 and 2010, while Bhardwaj (2017) performed a bibliometric study on IL research in social sciences and humanities journals indexed within Scopus between 2001 and 2012. The Bhardwaj article is notable for having identified publishing trends, citation patterns, the most common journals used for publishing IL research (nearly all LIS journals), distribution by language, country, prolific authors, and the Transformative Activity Index (TAI) as "a way to compare relative change in the research output" (p. 76).

More recently, Sample's 2020 systematic review searched multiple LIS and education databases for the keyword "information literacy" and refined it by limiting it to articles on undergraduate IL education. Pinto et al. (2020) analyzed research collected from five databases on the emerging area of mobile information literacy between 2006 and 2019 and discovered that IL is blending with e-learning. Rarely have these studies aimed at data collection and analysis on IL in higher education research outside the LIS field. Hicks et al. (2022) sought to address this gap by investigating IL within five areas, "Higher Education, Management and Business, Public Health, Nursing and Psychology." (p. 4). They found that, unsurprisingly, IL is more widely found in the professional fields of psychology, education,

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and nursing and that outside of these fields, many utilize multiple literacies (media, visual, etc.) or use their definitions of IL (Hicks et al., 2022). This study seeks to build on the work of Hicks and gauge the presence of IL in discipline-specific research journals to see how IL as a concept has permeated various disciplines.

Methodology

This study intends to develop a more nuanced understanding of how IL is discussed in research outside of the LIS field by expanding on Badke's (2011) initial review on the same topic by reviewing English-language general higher education and disciplinary education journals. The researchers identified and reviewed articles published in 30 general higher education and 32 disciplinary higher education journals (see Appendix A) for references to "information literacy" and IL frameworks and standards (henceforth, IL documents) between 2012 and 2022. In his Perspectives article, Badke (2011) did not identify which higher education teaching journals he searched. Therefore, this study could not replicate the journals and used research from Tight (2008; 2012), one of the foremost researchers in higher education, and an Early Career Higher Education Researchers (ECHER) blog post (Bentley, 2019) to guide the purposive selection of the general focus journals. General education journals not primarily focused on teaching and learning were excluded. The researchers employed purposive sampling to select high-impact disciplinary teaching and learning journals from a broad range of disciplines using the ACRL Instruction Section's list of subject-specific teaching and learning journals (Research and Scholarship Committee, 2021) and by reviewing impact rankings on SCImago Journal & Country Rank.

Research, review, theory, and editorial articles were included, while non-substantive content was excluded, such as front matter, table of contents, letters to the editor, author biographies, definition pages, editor introductions, introductions to issues, and so on. The researchers searched for references to the phrase "information literacy" in the articles, along with references to five of the major information literacy documents:

- *Information Literacy Competency Standards for Higher Education* (ACRL *Standards* (2000)
- *A New Curriculum for Information Literacy* (ANCIL) (2011)
- *The Australian and New Zealand Information Literacy Framework: Principles, Standards, and Practice* (ANZIL) (2004)

- *The Seven Pillars of Information Literacy* (SCONUL) (1999)
- *The Framework for Information Literacy for Higher Education* (ACRL *Framework*) (2015)

Since several journals reviewed are published outside the United States, the researchers intentionally included several international English-language IL documents. Derivatives of these documents, such as ACRL's many subject-specific standards and companion documents, were outside this project's scope (ACRL, n.d.).

Three researchers searched the journal publishers' websites to avoid indexing and subscription issues. If a publisher's website did not include a search option or the search systems were flawed, Google Scholar, JSTOR, and other databases were used to locate articles. The articles were reviewed for the number of times "information literacy" was referenced, where information literacy was referenced (title, abstract, body, or references), and references to the five information literacy documents. Searching for the phrase "information literacy" in PDFs proved challenging in some instances due to how the searchable text was generated. As such, the researchers also searched for "literacy" and "information" individually to double-check for missed references. Keywords were applied and provided inconsistently across publications and articles. As such, the authors did not include articles that only referenced information literacy as a keyword and did not count them in the total number of information literacy references. After the initial data collection, one researcher searched all the sample journals indexed in Scopus for the phrase "information literacy" and the information literacy documents to find any missed articles. Next, the same researcher reviewed all gathered articles to ensure that references to information literacy and information literacy documents were not missed and that each count was accurate.

Findings

From 2012 to 2022, higher education researchers progressively mentioned IL in the literature (see Table 1). This study identified 617 articles that referenced IL across 62 higher education journals (see Table 2).

Journals averaged publishing 9.95 articles that reference IL over ten years. However, this number was skewed by the *Journal of Chemical Education*, where researchers actively discussed information literacy (see Table A1). The median number of articles referencing IL (5.5) was consistent across the entire sample ($N = 62$) and across the general higher

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education (n = 30) and disciplinary higher education journals (n = 32). Five journals did not reference information literacy:

- *Anthropology and Education Quarterly* [discipline-specific]
- *Journal for Research in Mathematics Education* [discipline-specific]
- *Journal of Dance Education* [discipline-specific]
- *Journal of Philosophy of Education* [discipline-specific]
- *Minerva: A Review of Science, Learning, and Policy.* [general education]

Table 1: Number of Higher Education Articles Referencing IL 2012–2022

2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
35	39	44	35	62	41	47	50	68	86	107

Table 2: Number of IL Articles by Journal Category

Journal Category	Number of Articles
General Higher Education	296
Disciplinary	321
Total	617

IL was most frequently referenced in the main body of an article (n = 408) and references (n = 386), and to a lesser degree in the abstract (n = 73) and title (n = 44). Over a third of the articles (n = 217) discuss IL but do not cite an IL document or an article with IL in the title. Thirty-five articles generously infused IL into all sections of the research articles, while approximately a third of the articles (n = 205) only reference IL in the citations section. Even more confusing is one study that only references IL in the title, another that references it only in the abstract, and a final article that references IL in the abstract and references but not the main article.

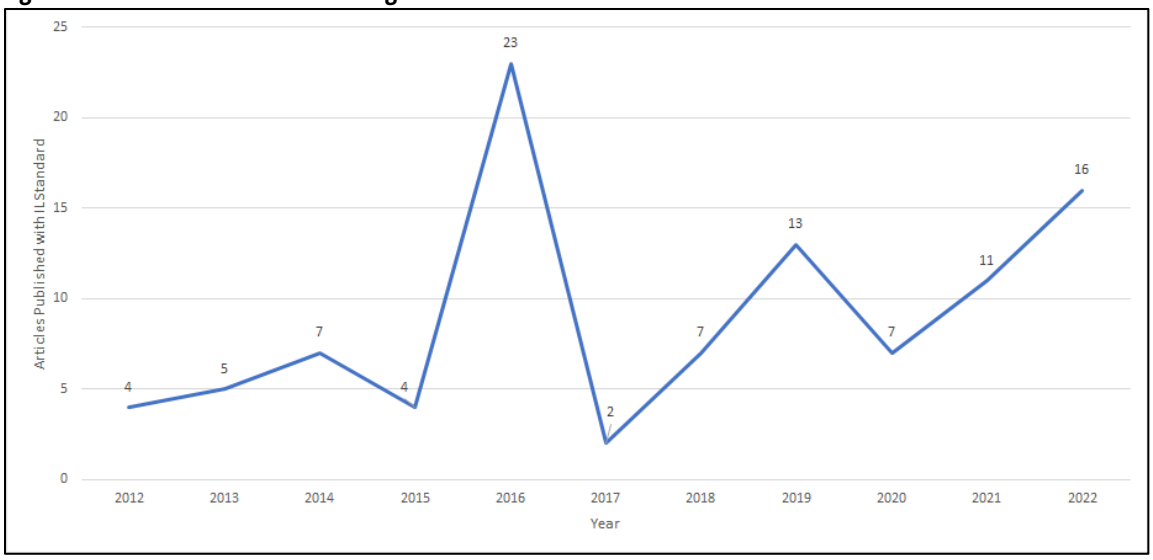
IL Standards

IL documents were named infrequently across the articles, in slightly over a tenth of the sample ($N = 617$) (see Table 3). The ACRL *Framework* and *Standards* were mentioned most often, slightly more in disciplinary education than in general higher education journals (see Figure 1). ANZIL, ANCIL, and SCONUL were discussed more frequently in general higher educational journals, while the reverse was true for the ACRL *Standards* and *Framework*. Typically, an article referenced only one IL document. However, 25 articles did reference an additional document, and one study by Rowland et al. (2020) notably mentioned all five.

Table 3: Number of Articles including IL Standards by Journal Category

Journal Category	Information Literacy Standards				
	ACRL *Standards*	ANZIL	SCONUL	ANCIL	ACRL *Framework*
General Higher Education	20	9	3	2	12
Disciplinary	27	2	2	1	21
Total	47	11	5	3	33

Figure 1: Number of Articles including IL Standards 2012–2022



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The discussion of IL documents has increased over time. A spike in publications was seen in 2016 (see Figure 1), including references to the ACRL *Standards*, ACRL *Framework*, and ANZIL. Although the ACRL *Standards* were officially rescinded by ACRL in 2016 following the publication of the ACRL *Framework*, the ACRL *Standards* continued to be frequently cited in the literature (See Table 3 and Appendix B). SCONUL, ANCIL, and ANZIL all pre-date the ACRL *Framework*; however, these documents appear to be struggling with gaining the same foothold in educational research that the ACRL *Framework* has achieved since its publication.

Discussion

This study revisited a question in Badke's (2011) decade-old study: how is IL discussed outside of LIS research? This study found that IL is increasingly referenced in general and higher education research journals. In contrast to his finding that less than half of higher education journals discussed IL, this study found that 91.9% of the journals ($N = 62$) reviewed have published IL articles (see Appendix A). These findings suggest that IL is garnering more attention from all researchers in the academy, particularly chemistry educators. In 2016, the *Journal of Chemical Education* published a special issue on chemical information specifically to highlight approaches to fostering IL in students. This spotlight may have increased awareness of IL within the chemistry field.

Four of the five journals without references to IL were from disciplinary journals (see Table A1). Given that a single journal was reviewed for each discipline, it is important to note that the significance of these findings is limited to the journals searched and should not be used to make generalizations about the disciplines. Literature may exist for these disciplines in other journals. A glance at *Teaching Philosophy*, another philosophy education journal, shows several recent publications on IL (Gauder & Jenkins, 2016; Sackris, 2017). However, it is worth mentioning that researchers have noted a general lack of IL education literature for dance and theater (Sachs & Duffy, 2017; 2021) and mathematics (Bussmann & Bond, 2015). Hicks et al. (2022) previously found that IL research was most prevalent in disciplines from "professional fields of study, including higher education, nursing and psychology" (p. 12). If disciplinary research continues to become less siloed, disciplines that appear to be more actively engaged in IL educational research (e.g., chemistry, history, and political science) may act as encouraging forces to less engaged disciplines such as those in applied studies.

A closer look at how journal articles mention IL uncovers some curious practices. Only around 10–15% of the articles that mention IL in the body of the article include it in the abstract or title. The authors hypothesize that many articles may be only tangentially referring to IL rather than making it the focus of the research. This isn't necessarily a negative and may still show an increase in the visibility of IL as writers weave it into other research areas. Another possibility is that writers use more disciplinary language in their titles and abstracts to attract readers who may be less familiar with the term IL.

Frequently, studies will discuss IL without referencing IL documents. As such, it is unclear where article authors learned about IL or how they define it. A large number of studies (n = 386) cited articles that included the phrase "information literacy" in the article's title or the journal's name. These findings are encouraging and indicate that researchers outside of the LIS field are reading and citing IL research. While it was not within the scope of this study to review how authors were using those references or what journals were cited, librarians might be able to glean more about how IL is embedded in higher education research by conducting a bibliometric analysis.

As previously noted in the results, almost a third of studies only mentioned IL in the reference list. One reason this happened may be because the authors are discussing other literacies. A review of this study's sample article titles uncovers references to digital literacy, data literacy, visual literacy, sociological literacy, media literacy, cultural literacy, and science literacy. These findings are consistent with existing IL literature. Multiple previous LIS studies have shown that faculty view IL as indistinguishable or connected with other literacies (Bury, 2016; Cope & Sanabria, 2014; Dawes, 2019a; Ford-Baxter et al., 2022). Hicks et al. (2022) also found that non-LIS researchers tend to "place the term 'literacy' as a suffix to any subject or notion" (p. 13). A recent scientometric study by Park et al. (2020) found that authors applied the keywords media literacy and digital literacy more frequently than IL in articles found in Web of Science after searching for "digital literacy," "ICT literacy," "information literacy," and "media literacy."

As researchers continue to explore the similarities, differences, and applications of IL and other literacies, those seeking to investigate how IL is taught might consider examining IL through the lens of metaliteracy. Fulkerson et al. (2017) noted that initial drafts of the ACRL *Framework* spoke heavily to metaliteracy, but the final draft referenced metaliteracy primarily in concept and rarely by name. Metaliteracy may be understood as "an overarching and unifying framework that builds on the core information literacy

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competencies while addressing the revolutionary changes in how learners communicate, create, and distribute information and participatory environments" (Jacobson & Mackey, 2013, p. 84). Given its coverage of a broad array of literacies and contexts, such an approach might nurture a more nuanced understanding of IL's place in general higher education research (Sample, 2020). However, the phrase metaliteracy may be burdened with the same shortcoming of information literacy of being too broad to be of value for researchers outside the LIS discipline (Hicks et al., 2022).

IL documents were infrequently mentioned (see Table 3 and Appendix B), consistent with findings by Chen et al. (2022), Hicks et al. (2022), and Tu et al. (2023). Chen et al. (2022) reviewed the 100 most frequently cited IL in higher education articles and found that only a third referenced an IL document, most frequently the ACRL *Standards* and then the ACRL *Framework*. In Sample's (2020) recent article, "Historical Development of Definitions of Information Literacy," the author described the ACRL *Standards* as the primary source for defining IL in U.S. higher education. This study's findings that the ACRL *Standards* continue to be the most cited IL documents in English-language higher education teaching and learning research appear to support the author's statement (see Table 3). The ACRL *Standard's* successor, the ACRL *Framework*, appears to have been adopted into higher education literature despite early and ongoing criticisms regarding the privileging of whiteness and white language (Leung, 2022; Tobiason, 2022), ambiguous language (Guth et al., 2018), and applicability for one-shot librarian-led instruction (Hsieh et al., 2021; Nicholson & Seale, 2022).

As stated in the findings (see Table 2), few studies directly mentioned the five IL documents. It is critical to note that the documents for North America, the ACRL *Standards* and the ACRL *Framework*, represent a substantially larger population compared to the UK's SCONUL and Australia and New Zealand's ANZIL. As such, how often the various IL documents are cited in higher education research may have as much to do with the number of people the documents represent as the documents' applicability or quality. In Folk's (2016) review of the ACRL *Standards*, SCONUL, and ANZIL, the author remarked that IL documents provide "a common language to discuss teaching and learning goals" (p. 27). If a common language can inspire dialogue regarding IL instruction, could it not do the same for research?

What is not clear is if a common language has been reached. Relatively little research exists regarding instructors' views and practices around IL (Dawes, 2019a; Dawes, 2019b;

Faulkner & Ford-Baxter, 2022; Pinto, 2022), nor disciplinary faculty's knowledge of IL documents. Authors may view IL as inherently linked to their disciplines or common knowledge and not feel the need to cite an IL standard or may simply be unaware of the documents entirely. Academic librarians may consider replicating Swanson's (2017) approach and provide professional development training around the appropriate IL document to increase awareness and usage of IL documents within higher education.

Limitations

This study's methodology relied on the phrase "information literacy" to search without incorporating other relevant keywords such as "bibliographic instruction," "library instruction," "research skills," "information competency," or "information fluency." This strict focus on the term "information literacy" may have resulted in studies, resources, or perspectives being inadvertently overlooked. Consequently, the findings and conclusions of the research might not fully encompass the breadth and depth of the broader field of IL but instead capture one view of a larger landscape for other researchers to explore further. Future studies may consider a more extensive approach by incorporating a wider range of relevant keywords to ensure a more inclusive topic exploration, such as the methodologies employed by Chen et al. (2022).

Another limitation of this research article is the reliability of the search results provided by all platforms, including the journal publishers' websites, Google Scholar, and Scopus. Additionally, it was impossible to replicate the exact methods used by similar studies, such as the one by Pinto et al. (2013) that relied on Web of Science or Scopus, because of the inclusion of disciplinary journals that are not all indexed in those databases. The authors strove to check search results within each journal; however, some searches were more reliable than others, and it's possible a small number of articles were missed. This challenge has been noted by similar studies, such as the one by Hicks et al. (2022). It is recommended that future studies avoid relying on one database or search tool to ensure a successful, thorough search.

Future Areas of Research

IL enables individuals to navigate and critically evaluate the vast amount of information available, a crucial skill in the digital age. As IL is applied in an increasingly wider array of situations and information environments, it is essential to identify and explore other literacies that complement and overlap with IL. Future research should incorporate other literacies to ensure individuals have the necessary skills and ability to navigate the digital

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world effectively. Hicks et al. (2022) approach of selecting keywords based on disciplines is just one example of how this method could be applied.

Shockingly, very little research exists regarding faculty awareness of IL documents. While several studies present components of the ACRL *Framework* to disciplinary faculty (Ford-Baxter et al., 2022; Guth et al., 2018; Kaletski, 2017), none were uncovered that surveyed higher education teachers regarding their awareness of the ACRL *Framework* or other IL documents included in this study. A growing body of literature has established that faculty teach IL (Perez-Stable et al., 2020) and discuss IL in their research without connecting it to librarians or the library (Hicks et al., 2022). However, this study and others have evidence that much remains to explore regarding how faculty understand, teach, and produce IL scholarship. Hicks et al. (2022) excluded studies written individually by a librarian; however, this study did not attempt to identify the authors. Future studies might consider analyzing authorship to understand if IL higher education research originates from non-librarians, disciplinary faculty, or both.

Conclusion

This study's findings add to a growing body of literature that seeks to understand how non-librarian members of the higher education community speak about, teach, and research IL. Results suggest that the topic of IL has developed from a glimmer to a glow in English-language higher education research, yet many authors are not citing IL documents in their publications. LIS researchers would benefit from exploring not just librarians' awareness of IL documents but also those of disciplinary faculty to ascertain a more nuanced understanding of faculty's perspectives and practices. Echoing recommendations by Hicks et al. (2022), LIS practitioners should pursue publication opportunities in higher education journals outside of the LIS field. Such practice could increase awareness of IL documents, foster collaborative research opportunities, and further the LIS field's understanding of how others engage with IL. The authors searched for one phrase ("information literacy") and five English-language IL documents, which readers may understand as one lens of information literacy that has been critiqued for whiteness and its capitalistic nature. The design and development of future studies might aim to avoid the phrase entirely and instead code faculty's language to meet them where they are.

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Appendix A: Journals Referencing IL

Table A1: Disciplinary Journals Reference IL

Journal	# Articles with IL
Anthropology & Education Quarterly	0
Journal for Research in Mathematics Education	0
Journal of Dance Education	0
Journal of Philosophy of Education	0
Computer Science Education	1
Health Education Research	1
International Journal of Music Education	1
Journal of Beliefs and Values	1
Journal of Statistics and Data Science Education	1
Studies in Art Education	1
RiDE: The Journal of Applied Theatre and Performance	2
The Physics Teacher	2
Arts and Humanities in Higher Education	5
Journal of Biological Education	5
Journal of Economic Education	5
Journal of Legal Education	5
Theory and Research in Social Education	6
TESOL Quarterly	7
College Composition and Communication	8
Social Work Education	8
Journal of Engineering Education	9
Research in the Teaching of English	9
Accounting Education	10
International Journal of Science Education	11
Teaching Sociology	12
Communication Education	13
Journal of Education for Business	13
Journal of Geography in Higher Education	15
The History Teacher	17
Teaching of Psychology	21
Journal of Political Science Education	25
Journal of Chemical Education	107

Table A2: General Higher Education Journals Referencing IL

Journal	# Articles with IL
Minerva: A Review of Science, Learning and Policy	0
Community College Review	1
Higher Education Policy	1
Research in Higher Education	1
Tertiary Education and Management	1
Higher Education Quarterly	2
Journal of College Student Development	2
Research Evaluation	2
Review of Higher Education	2
Journal of Hispanic Higher Education	3
Quality in Higher Education	3
European Journal of Higher Education	4
International Journal of Doctoral Studies	4
Journal of Studies in International Education	4
Journal of Higher Education	5
Higher Education Pedagogies	6
Journal of Higher Education Policy and Management	6
Active Learning in Higher Education	7
Innovative Higher Education	9
International Journal of Learning in Higher Education	9
Internet and Higher Education	14
Higher Education	17
Journal of Further and Higher Education	18
Teaching in Higher Education	18
Assessment and Evaluation in Higher Education	19
College Teaching	19
Journal of Scholarship of Teaching and Learning	21
Studies in Higher Education	27
Higher Education Research & Development	34
International Journal of Educational Technology in Higher Education	37

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Appendix B: Number of Articles including IL Standards by Year

Year	Information Literacy Standards					
	ACRL *Standards*	ANZIL	ANCIL	SCONUL	ACRL *Framework*	Total
2012	3	1	0	0	0	4
2013	2	2	0	1	0	5
2014	4	2	0	1	0	7
2015	4	0	0	0	0	4
2016	15	1	0	0	7	23
2017	2	0	0	0	0	2
2018	2	1	0	0	4	7
2019	5	1	0	0	7	13
2020	2	2	1	1	1	7
2021	3	0	0	0	8	11
2022	5	1	2	2	6	16