

## University libraries' contributions to information literacy and the UN sustainable development goals

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### Abstract

This paper examines the role of university libraries in promoting information literacy (IL) to achieve the United Nations Sustainable Development Goals (UNSDGs), with a particular focus on Bangladesh. Through a systematic review following PRISMA standards, 79 studies published between 2015 and 2025 were analyzed. The findings underscore that IL is a transformative skill essential for education, lifelong learning, and sustainable development. University libraries are identified as ideal hubs for fostering IL, playing a critical role in integrating it into academic communities. However, in developing countries like Bangladesh, barriers such as limited infrastructure, insufficient policies, lack of trained staff, and weak institutional collaboration impede the effective promotion of IL. While global IL initiatives are growing, their alignment with the UNSDGs remains fragmented in Bangladesh. The study emphasizes the need for capacity building, funding digital infrastructure, implementing policy initiatives, and embedding IL into higher education curricula. Collaborative efforts involving faculty, government, and international institutions are essential for fostering IL to support sustainable development. This review provides a comprehensive understanding of IL's strategic position within university libraries and highlights areas requiring reform for better alignment with UNSDGs.

**Keywords:** Information literacy, UNSDGs, University libraries, PRISMA, Higher education

## 1. Introduction

In the contemporary knowledge society, information literacy (IL) has emerged as a critical competency for students to navigate the abundance of information available in diverse formats. IL is the process of discovering, locating, evaluating, and using information in a resourceful manner to problem solving, decision making, and contributing to academia and professional environments (Kamgar, 2025). Central to developing these competencies are the resources, instruction, and learning environment that academic libraries provide to assist students in developing their thinking, selection, and information processing (Liu, 2025). As colleges and universities place more emphasis on evidence-based learning, the demand for organized instruction in information literacy is greater than ever.

In a recent research, IL formation was shown to be multidimensional, including cognitive and psychosocial processes of information, research process and lifelong learning (Makinde, Hamzat, & Koiki-Owoyele, 2025). For example, the relationship between digital literacy and IL in Africa emphasizes the need for context-specific approaches to developing these skills in the university libraries (Akakpo, Ahardy, & Kumankumah, 2025). Similarly, studies find in Bangladesh as well that empowering the future librarians, the library and information science (LIS) students as IL educators became an effective way to sustainable literacy education in librarianship professions (Hossain & Sormunen,

2025). These findings show that not only is IL a set of technical competences, but IL is also a social and professional practice located in cultural, institutional and technological contexts.

IL is increasingly recognized as a keystone of education, allowing individuals to access, assess, and utilize information effectively (Bernard, 2024; Chen et al., 2022). In the UNSDGs era, IL has appeared as a transformative apparatus that supports quality education, decreases inequality, and endorses lifelong learning. University libraries, predominantly in developing countries like Bangladesh, play a vital role in fostering IL among students, faculty, and researchers (Komleva, 2022; Iqal & Idrees, 2021; Islam & Tsuji, 2016). University libraries in Bangladesh are being increasingly acknowledged as vital participants in the educational ecosystem, especially in pursuing the UNSDGs. Nevertheless, the state of IL in Bangladeshi universities is still in the process of progress and development. Though several institutions have initiated IL programs, there is a requirement for a more prepared and planned strategy to synchronize these endeavors with the UNSDGs (Banik and Kumar, 2019; Islam *et al.*, 2022).

New technological developments increase the application field of IL. A potential next step for librarians would be the development of AI literacy into IL frameworks as students are being prepared for a world in which human-information interactions are intermediated by intelligent systems (Montesi et al., 2025; Hossain, 2025). Guided inquiry models that emphasize AI have been effectively transformed for use in school libraries and have enabled student roles in accessing and making sense of a mixture of human and machine-produced information (Wong & Chiu, 2025). Gamification also provides an innovative teaching tool to improve IL through an interactive, motivational and student-centred learning environment (Adewojo & Adefila, 2025). Beyond technology, IL has increasingly been presented as a powerful counter to disinformation, manipulation, and post-truth narratives. Research that formerly investigates the relationship between media and IL, similarly supports this potential through the effect on critical thinking development that may make students able to discriminate between trustworthy and biased and/or fallacious sources (Almeida et al., 2025). In an age when societies worldwide struggle with the scourge of fake news and digital propaganda, libraries cannot afford to be passive institutions when it comes to preparing learners to be thoughtful consumers of media. This systematic review explores how higher education institutions contribute to attaining the UNSDGs through IL activities. Adopting a PRISMA approach, the review synthesises both international and national studies to provide an overview of perspectives on the landscape, obstacles, and opportunities for improvement. Objectives of the study include the mapping and synthesis of the available literature concerning the role of university libraries in contributing to the advancement of IL for supporting the UNSDGs, particularly in developing country contexts, including Bangladesh.

## **2. Methodology**

### **2.1 Review protocol and PRISMA framework**

Literature review adheres to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure transparency and explicability (Sohrabi et al., 2021; Frost et al., 2022). The reviewed literature was limited to publications that specifically addressed information literacy and the UNSDGs in the context of university libraries. The systematic review process includes identification, screening, eligibility, and inclusion stages, as shown in the figure.

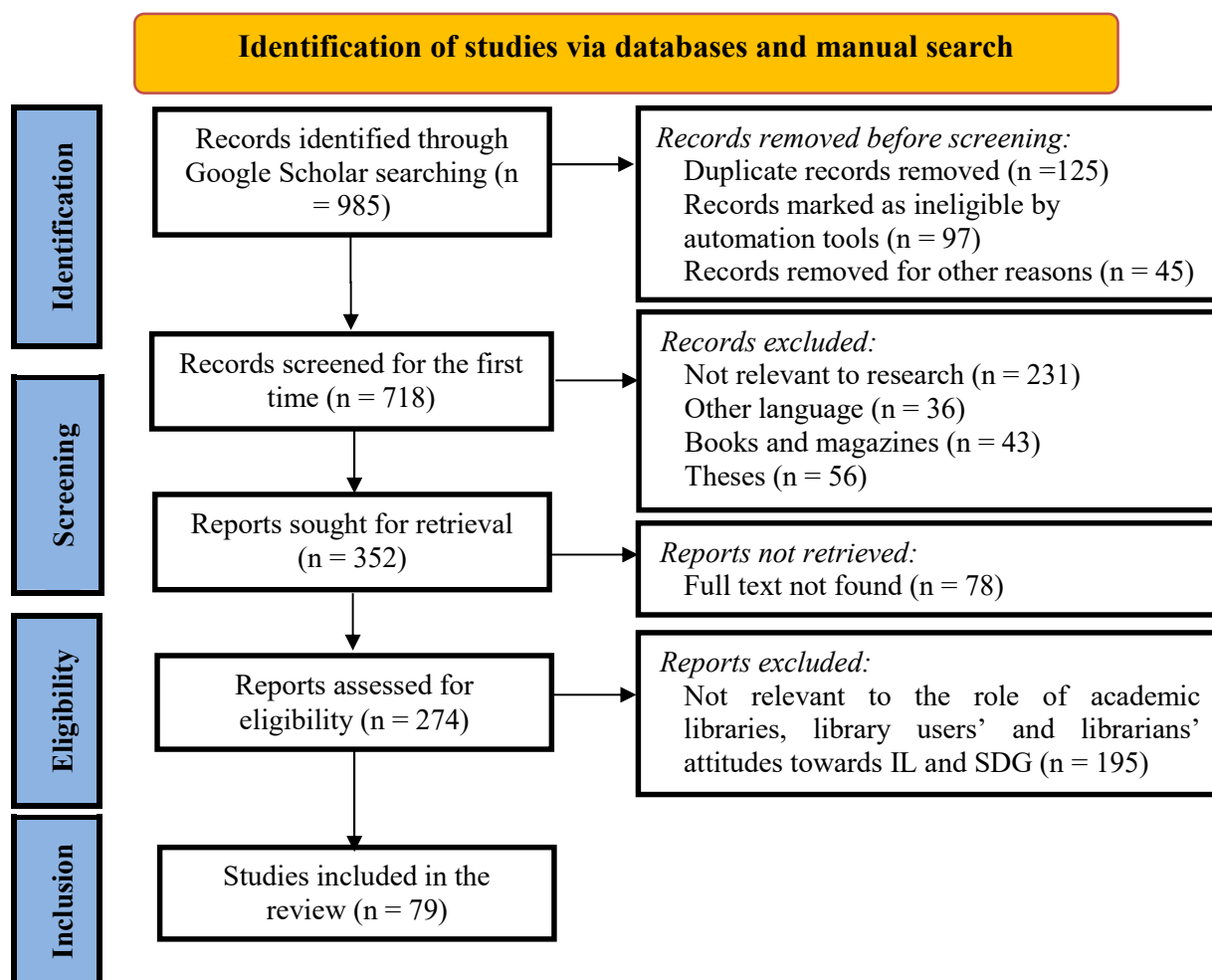


Figure 1. The PRISMA Diagram (Source: Created by author)

## 2.2 Search strategy

Searches were conducted across Google Scholar using combinations of the following keywords: “Information Literacy” AND “Librarians’ perspectives OR attitudes”, “Promoting OR Information Literacy” AND “Libraries”, “Achieving OR Sustainable Development Goals” AND “Library”, “Information Literacy” OR “Sustainable Development Goals” AND “Libraries”, “Sustainable Development Goals” OR “Information Literacy” AND “Role of University Libraries”, Only English-language peer-reviewed articles, conference proceedings, and journal papers published between 2015 and 2025 were included.

## 2.3 Study selection

A total of 985 documents were initially identified. Some articles were excluded after reading their abstracts, as they were not relevant to the topic. After removing 267 duplicates and irrelevant records through title and abstract screening, 79 articles met the eligibility criteria and were included in the final analysis.

## 3. Results and discussion

### 3.1 Thematic categorization of literature

Table 1 provides a structured summary of the full-text documents analyzed in the literature review, categorized according to the research focus. The most extensive literature source base (24 sources) is devoted to IL and its importance, presenting multiple viewpoints related to the role of IL in education and libraries. The category of UNSDGs and their relevance to IL and libraries (19 sources) contains fundamental policy documents and research on assimilating IL into sustainable development (SD) outlines. Articles on the role of university libraries in promoting IL (6 sources) emphasize their

contribution to fostering IL skills. Research on IL programs in Bangladesh (6 sources) offers the local point of view on issues related to the situation and effectiveness of intuitive learning in developing creativity in the country. The Barriers to IL for achieving UNSDGs (15 sources) confer various challenges, including resource restrictions, institutional limitations, and a lack of consciousness. Finally, the challenges faced by university libraries in promoting IL for achieving UNSDGs (9 sources) address issues related to finance, infrastructure, and policy vacuum. This categorization ensures a comprehensive literature review, aligning with the research objective.

**Table 1. Full-text documents found by keyword searching**

Focus on	Sources
<b>IL and its importance (24)</b>	Seifi <i>et al.</i> (2020); Aharony and Gazit (2020); Yu <i>et al.</i> (2022); Mughari <i>et al.</i> (2023); Odotola and Alegbeleye (2019); Malik <i>et al.</i> (2021); Folk (2021); Nierenberg and Dahl (2021); Franklin <i>et al.</i> (2021); Safdar and Idrees (2021); Ahmad <i>et al.</i> (2020); Vidal <i>et al.</i> (2021); Shahzad <i>et al.</i> (2021); Widén <i>et al.</i> (2021); Jan and Khan (2022); Aftab and Singh (2019); Naveed and Mahmood (2022); Asiedu <i>et al.</i> (2020); Jones and Procter (2023); Dorvlo (2016); Al-Azri <i>et al.</i> (2025); Guoxiang <i>et al.</i> (2023); Alagarsamy and Thirunavukkarasu (2020); Sommer <i>et al.</i> (2021)
<b>UNSDGs and their relevance to IL and libraries (19)</b>	United Nations General Assembly, (2015); Hansen <i>et al.</i> (2021); Adekoya <i>et al.</i> (2024); Thorpe and Gunton (2021); (Poluru, 2020); Awodoyin and Ojo (2021); Missingham (2021); Paul (2022); Hamad and Al-Fadel (2021); Anyim (2021); Alcántara-Rubio <i>et al.</i> (2022); Connaway <i>et al.</i> (2023); Mathiasson and Jochumsen (2022); Bangani and Dube (2023); Abata-Ebire <i>et al.</i> (2018); Njoku <i>et al.</i> (2022); Islam <i>et al.</i> (2022); Rahman (2021 <sup>a</sup> ); Rahman (2021 <sup>b</sup> )
<b>Role of university libraries in promoting IL (6)</b>	Dong (2023); Gullbekk (2015); Wema (2021); Jan <i>et al.</i> (2022); Fernández-Ramos (2019); Ogunmodede <i>et al.</i> (2023)
<b>IL programs in Bangladesh (6)</b>	Tabassum <i>et al.</i> (2023); Hoq (2015); Banik and Kumar (2019); Hossain and Sormunen (2023); Islam and Tsuji (2016); Helen (2017);
<b>Barriers to IL for achieving UNSDGs (15)</b>	Adedokun (2018); Ezeani <i>et al.</i> (2017); Dei and Asante (2022); Holmes <i>et al.</i> (2022); Islam and Jirattikorn (2023); Assefa and Demissie (2019); Uzuegbu (2019); Adekoya (2022); Baba Abdulrahman <i>et al.</i> (2019); Nwankwo <i>et al.</i> (2020); Mbagwu <i>et al.</i> (2020); Mansour (2020); Bradley (2016); Kear (2018); Jain and Jibril (2017)
<b>Challenges faced by university libraries in promoting IL for achieving UNSDGs (9)</b>	Hicks and Lloyd (2021); Omona (2020); Unegbu <i>et al.</i> (2023); Anasi <i>et al.</i> (2018); Okuonghae and Igbinovia (2019); Rafiq <i>et al.</i> (2020); Atta-Obeng and Dadzie (2020); Mashroofa (2022); Popoola (2019)

(Source: PRISMA diagram, Created by author)

The literature review is structured around six key concepts: *i*) IL and its importance, *ii*) UNSDGs and their relevance to IL and libraries, *iii*) Role of university libraries in promoting IL, *iv*) IL programs in

Bangladesh, v) barriers to IL for achieving UNSDGs, and vi) Challenges faced by university libraries in promoting IL for achieving UNSDGs. These themes are explored through a review of relevant research to identify gaps in the literature, which this study seeks to address.

### **3.1.1 Theme one: IL and its importance**

Research under this theme highlights the foundational role of IL in empowering students and researchers to engage critically with information. IL is intertwined with higher education, critical thinking, and informed decision-making. It is widely regarded as a foundational skill in the digital and knowledge-driven era, enabling individuals to access, evaluate, and utilize information analytically, ethically, and effectively. UNESCO (2013) and CILIP (2012) provide well-established definitions and frameworks emphasizing the cognitive, ethical, and practical dimensions of IL. The revised studies demonstrate that IL is vital for personal development, academic success, career advancement, and lifelong learning.

Some studies explore IL's influence in educational contexts. Mughari et al. (2023) highlight its role in decision-making, technology adoption, and intellectual productivity, while Seifi et al. (2020) show that IL instruction enhances self-directed learning in public universities. Yu et al. (2022) and Malik et al. (2021) discuss IL's role in improving academic engagement and adapting to innovative learning environments, noting that faculty and students often possess only basic IL competencies. Similarly, Folk (2021) and Nierenberg & Dahl (2021) examine IL's socio-cultural and metacognitive dimensions, including self-efficacy and gender differences. Franklin et al. (2021) emphasize collaborative tutorials as an advanced approach to IL education, while workplace-oriented IL is discussed by Al-Azri et al. (2025) and Ahmad et al. (2020), linking it to performance and innovation. Scholars such as Jones & Procter (2023) and Asiedu et al. (2020) further advocate integrating IL with digital literacy and ethical awareness in curricula.

Despite differences in regional and contextual factors, recurring challenges include poor integration of IL programs, a lack of qualified staff, and limited infrastructure. Nevertheless, the collective evidence supports the view that well-designed, context-sensitive IL initiatives can enhance learning outcomes, strengthen critical thinking, and help individuals navigate complex information environments in academic, professional, and social settings.

### **3.1.2 Theme two: UNSDGs and their relevance to IL and Libraries**

These existing studies underscore the importance of IL in advancing multiple UNSDGs, particularly Goal 4 (Quality Education), Goal 5 (Gender Equality), and Goal 10 (Reduced Inequalities). The SDGs, adopted by the United Nations in 2015, offer a global framework to address social, economic, and environmental challenges by 2030. Among the 17 goals, Goal 4 (Quality Education) and Goal 16 (Peace, Justice, and Strong Institutions) are most directly linked to IL and the role of libraries, especially those in higher education.

The reviewed studies confirm that libraries are crucial enablers of the SDGs through their work in information access, literacy education, community engagement, and knowledge sharing. Scholars such as Njoku et al. (2022) and Hamad & Al-Fadel (2021) describe sustainable libraries as institutions integrating environmental, social, and educational sustainability in their operations. The ODLIS also notes the rise of "green libraries" using eco-friendly practices. At the institutional level, Hansen et al. (2021) and Thorpe & Gunton (2021) investigate how universities and their libraries align their services and programs with SDGs, despite challenges like resource limitations and weak institutional alignment. Adekoya et al. (2024) and Alcántara-Rubio et al. (2022) show that university libraries, particularly in Nigeria and other regions, actively support Sustainable Higher Education Development (SHED) by integrating UNSDG objectives into curricula.

Several studies (e.g., Awodoyin & Ojo, 2021; Missingham, 2021; Connaway et al., 2023) emphasize librarians' growing awareness of UNSDGs and the need for stronger engagement through training, workshops, and strategic collaboration. However, obstacles such as corruption, inadequate funding, and institutional constraints limit libraries' capacity to act as effective UNSDG agents. Research in

Bangladesh (e.g., Paul, 2022; Islam et al., 2022; Rahman, 2021a, 2021b) shows that although awareness of UNSDGs is increasing, implementation remains inconsistent. Libraries in Bangladesh contribute actively to seven of the seventeen goals, particularly those related to education, health, hunger alleviation, and partnerships (Goals 1–4 and 17). Librarians acknowledge their potential to promote early literacy, adult education, and IL, advocating for partnerships with NGOs and community groups to enhance impact. Similarly, Bangani & Dube (2023) highlight the importance of community engagement in libraries to address hunger, health, and climate action (UNSDGs 2, 3, and 13). These initiatives expand the traditional role of libraries, positioning them as vital players in sustainable community development.

In summary, both academic and public libraries align with SDG agendas, though their contributions vary by goal and region. The consensus is that IL and library services have transformative potential for achieving the SDGs through education, digital access, community development, and collaborative partnerships. Realizing complete alignment with the 2030 Agenda requires addressing institutional barriers, strengthening awareness, and embedding SDG-oriented strategies into library policies and practices.

### **3.1.3 Theme three: Role of university libraries in promoting IL**

University libraries are recognized as strategic institutions for IL delivery, with their impact heavily dependent on institutional support, policy frameworks, and professional development. These libraries play a critical role in equipping students, faculty, and researchers with the ability to access, evaluate, and utilize information effectively. Their contribution extends beyond academic achievement to supporting SD through research, education, and community involvement.

Several studies examine how university libraries can institutionalize IL instruction within curricula and research practices. Dong (2023) introduced a comprehensive IL education model that extends beyond basic competencies, proposing its integration throughout the research life cycle. This approach reflects the growing emphasis on IL within open science practices. Likewise, Gullbekk (2015) discussed librarians' roles in interdisciplinary education, exploring different approaches to teaching IL across diverse academic contexts where collaborative problem-solving is crucial.

Challenges to IL implementation persist in various contexts. In Tanzania, Wema (2021) identified barriers to web-based IL instruction, including inadequate infrastructure and institutional resistance, but proposed Virtual Learning Environments (VLEs) as solutions to logistical challenges. Similarly, Jan et al. (2022) found that faculty in Pakistani public-sector medical universities had difficulty evaluating and synthesizing information, indicating a need for targeted IL training among educators. Fernández-Ramos (2019) raised comparable concerns in Mexican university libraries, where online IL instruction is underdeveloped due to a lack of technology, expertise, and collaboration. The study recommends institutional planning, investment, and faculty partnerships to improve outcomes. Despite these obstacles, Ogunmodede et al. (2023) highlight the role of university libraries as drivers of social development, particularly in developing nations. Libraries bridge digital divides, manage hybrid resources, and provide equitable access to information, making them indispensable to academic excellence and national progress.

Finally, university libraries are strategically positioned to advance IL education, foster research, and contribute to sustainable development. However, successful implementation depends on adequate infrastructure, strong faculty collaboration, institutional support, and training for both library professionals and users. Addressing these challenges will allow university libraries to realize their full transformative potential within higher education and beyond.

### **3.1.4 Theme four: IL Programs in Bangladesh**

No effort in Bangladesh has been initiated to systematize IL performance. There is no firmness, widespread application, or integration with university syllabuses in the current systems. IL programs in Bangladesh are gradually responding to the growing needs of the digital and knowledge-based

society. These courses seek to develop the IL skills of students, faculty, and communities, targeting media literacy, critical thinking, research ability, and ethical information use.

Several studies have evaluated IL competencies and identified gaps across both public and academic contexts. Tabassum et al. (2023) discovered that LIS students in Bangladesh showed moderate self-efficacy in Media and Information Literacy (MIL), being stronger in access and use but weaker in content creation. Competency was related to demographic factors, including academic level. The research also highlighted the necessity for standardized MIL curricula, government backing, and dedicated training schemes. Islam and Tsuji (2016) identified wide discrepancies in IL among ISLM postgraduate students at the University of Dhaka. The study recommended curriculum reform, including IL activities such as writing, discussions, and project-based learning, while also promoting early IL education at the primary and secondary levels.

Banik and Kumar (2019) confirmed a positive relationship between IL skills and academic performance, implying that stronger IL skills lead to higher GPAs. Other influential factors included class attendance, previous academic performance, and study hours. Hossain and Sormunen (2023) introduced inquiry-based learning models such as Guided Inquiry for Information Literacy (GIIL), observing that structured projects and instructor-led sessions significantly enhanced IL skills. This student-centered approach fosters essential research development abilities. Hoq (2015) noted that public libraries, especially those in rural areas, face significant challenges such as low literacy rates, poverty, and weak infrastructure, all of which limit the reach of IL programs. In Bangladesh, Helen (2017) and Tabassum et al. (2023) revealed concerning information about university users' IL competencies due to limited resources, institutional neglect, and insufficient training.

Generally, IL initiatives in Bangladesh are expanding, particularly within educational institutions, though serious issues persist in public libraries and rural regions. The main problems include inadequate infrastructure, untrained staff, lack of policy support, and low public awareness. Studies consistently recommend integrating IL curricula across all educational levels, capacity building for library professionals, government and community support, technological investment, and international collaboration. These measures are essential for mainstreaming IL in education and enabling individuals to navigate the complex information environment of the 21st century.

### **3.1.5 Theme five: Barriers to IL for achieving UNSDGs**

IL plays a vital role in authorizing individuals and communities to make informed decisions that contribute to SD. In countries such as Bangladesh, however, a number of challenges impede the promotion and integration of IL for the attainment of the UNSDGs. These barriers are complex, at the heart of technological, social, institutional, and infrastructural barriers to accessing, evaluating and utilizing information.

Perhaps the most significant challenge is the absence of an adequate technology platform. Numerous information entities, particularly those in rural or underserved locations, are limited by subpar internet connectivity, obsolete equipment and limited access to digital resources. These technological limitations restrict what libraries can do to provide digital literacy and access to online information services needed to achieve the SDGs. For example, Ezeani et al. (2017) pointed out that most academic libraries in Nigeria are not equipped with assistive technologies as well as an inclusive structure for disabled students, and this makes the task of equitable access to information and education a difficult one. Similarly, Nwankwo et al. (2020) further underscored the defective utilization of ICT-backed services in Nigerian libraries that prevents them from supporting developmental purposes perfectly.

Institutional obstacles also contribute meaningfully to the IL gap. Many libraries do not have well-defined inner procedures or tactical frameworks aligned with the SDGs. Dei and Asante (2022) noted that several academic libraries rely on general university policies or external UN documentation to guide their IL activities, without developing localized strategies that address particular community needs. This lack of institutional direction often outcomes in uncoordinated efforts, minimal impact,

and reduced staff motivation. Additionally, the lack of skilled personnel in IL instruction further constrains the potential of libraries to encourage critical thinking, digital capability, and responsible information usage among users.

The person's social and demographic disposition adds more complexity to the condition. In Bangladesh and many emerging countries, the gender divide, most notably the participation of female teachers in ST studies, constrains the local diffusion of IL opportunities. Islam and Jirattikorn (2023) argued that even though girls' participation has improved at primary and secondary levels, women's participation in science, technology, engineering and mathematics remains low. The gap also diminishes women's personal empowerment and thwarts national progress towards SDG 4: Ensure inclusive and equitable quality education for all.

Households in rural areas also regularly suffer from a poverty of information as outreach services do not work efficiently and there is a need for local, comprehensible and easy to act upon information. Research such as Uzuegbu (2019) and Mbagwu et al. (2020) demonstrated that rural people derive significant benefits from context-specific IL training, which helps them participate in agricultural productivity, get health information, and participate more effectively in development programmes. However, these services are largely not available because of costs, a deficit of skilled outreach workers, and practical problems. Challenges in IL instruction at higher education levels are also apparent. Most students, but even teachers, haven't developed the skills for IL, and not in the sense of appraisal and presentation of information. This was reflected in the findings of Adekoya (2022), which highlighted that despite heavy dependence on information use in the Nigerian higher education institutions, there were unbalanced and inadequately integrated IL competencies into academic as well as administrative planning. And it doesn't help that many institutions do not have formal IL programs or that many libraries are unaware of or disconnected from the departments with which they should instead be working.

Moreover, rapid digitalization of education brings both opportunities and challenges. While online learning environments will increase the reach of IL programs, they also potentially disenfranchise students with poor access to the internet or digital proficiency. Holmes et al. (2022) underscored that it was essential to develop an online teaching model that is inclusive and cohesive with the UNSDGs and to verify the right to participation in all modes of learning. Lastly, cultural and structural issues, such as poverty, low literacy levels, and poor reading habits, especially in rural areas, persist as fundamental barriers to the development of IL. Indeed, as Manosur (2020) noted in relation to Egypt, rural libraries typically struggle to connect their activities to the SDG agenda because of inattention, limited budget, and community engagement.

Overall, IL's progress towards the SDGs is impeded by a number of interrelated barriers in the expanding contexts. This includes weak technological infrastructure, lack of institutional policies, inadequate staff training, social and gender inequalities and lack of dissemination of services to marginalized groups. Identifying these experiments must be complemented with a comprehensive strategy, which includes the consolidation of institutional dimensions; leveraging infrastructure; developing an environment of inclusion and the possibility of supportive policies; and the support of community-based IL ingenuities. Above all, IL's involvement in combining such assimilated efforts is something that can really make SD a change agent in countries like Bangladesh and others.

### **3.1.6 Theme six: Challenges faced by university libraries in promoting IL for achieving UNSDGs**

Like many in developing countries, university libraries in Bangladesh face frequent experiments in stimulating IL as a serious factor for attaining the UNSDGs. These issues range from resource restrictions and infrastructural shortages to a lack of skilled professionals and limited institutional adoption of IL and SDG-oriented advantages.

One of the significant issues confronting university libraries is inadequate infrastructure and limited resources. Many libraries struggle with outdated technologies, insufficient internet bandwidth,

irregular power supply, and limited digital tools to support modern IL instruction. As Anasi et al. (2018) emphasized with regard to Nigeria and ICT facilities in the university halls of residence libraries have the potential to act as catalysts for expediting SDG realized in such areas and infrastructural and political challenges limit their effectiveness. The same is the case found in Bangladeshi posters, creating a digital divide and barrier in libraries to inclusive and quality information.

Another challenging problem is the shortage of professional and well-trained librarians. Integrating IL without adequately trained inducers becomes a difficult proposition for academic programs without adequate inducers in library and information science professionals. Hicks and Lloyd (2021) talked at cross purposes discourses or representations at the HE level, where IL is described as empowering or where students are positioned as inadequate. Such narratives replicate a larger issue: the lack of consistent IL outlines and the limited training of teachers and professionals in conveying IL programs that align with SDGs. Institutional disconnection is also evident. Many university libraries operate in silos, with little collaboration with faculty or curriculum developers. Rafiq et al. (2020) observed that IL instruction in Lahore's university libraries was basic, and hands-on sessions were commonly used, but integration into curricula was minimal. Likewise, in Bangladesh, earlier studies (Tabassum et al., 2023; Helen, 2017; Hoq, 2015) assessed IL competency of students but did not connect IL efforts with UNSDGs, revealing a significant knowledge and practice gap in aligning IL with the global development agenda.

In addition, policy and strategic direction are common problems. Libraries generally do not have explicit institutional mandates to support SDG-related activities, nor are they offered sufficient governmental or administrative support to develop these programs. Indeed, in their investigation into Sri Lanka, for example, Mashroofa (2022) discovered that many university libraries had offered services relevant to the UNSDGs but did not consciously relate them to the UNSDGs. The picture resembles that of Bangladesh, where there are no or broken-off strategies for IL-SDG integration.

Another issue is the dearth of collaboration and advocacy. Omona (2020) and Unegbu et al. (2023) emphasized the importance of stakeholder and information society collaboration and yet, more than libraries, especially in South Asia and Africa. The library does not have the means to engage with teachers, government bodies, and NGOs effectively. Deprived of partnerships and support, libraries remain underutilized in the national development strategy. Finally, broader socio-political and learning barriers impede the efforts of IL, including illiteracy, poverty, lack of awareness, and limited opportunities for lifelong learning. Popoola (2019) stressed that health literacy correlates with IL in supporting SDG-3 (good health and well-being), while Atta-Obeng and Dadzie (2020) called for stronger partnerships between academic and public libraries to nurture enduring education.

In brief, higher educational libraries in Bangladesh experience a heterogeneous compound of challenges in promoting IL for SDG achievement. These include infrastructural limitations, unqualified personnel, non-incorporation into the curriculum, policy gaps, low cooperation, and minimal government support. Overcoming these challenges demands a universal policy on resource investment, staff development, policy formulation, and multi-stakeholder partnerships to ensure university libraries serve as a vital link in national and international development programmes.

#### **4. Discussion**

The findings of this review show the significant capacity that university libraries could provide to advance IL and achieve the SDGs. As learning and research support institutions, university libraries have been instrumental in developing critical thinking, moral use of information, and lifelong learning in addressing complex global issues. The literature reviewed evidences that IL is a powerful facilitator in informed decision-making, academic success, digital inclusion, and civic engagement, all essential to the SDGs. However, the fact remains that university libraries are still confronted with numerous challenges in developing integrated IL programs associated with the UNSDGs in Bangladesh and other developing countries. These include poor structure, little financing, a lack of professionals, and

weak collaboration among professionals, teachers, and users. Although some universities have made efforts to modernize their IL instruction models and integrate ICT tools into library services, such initiatives are often under-resourced and fragmented.

The research shows that IL capacity among students remains moderate and its consolidation within programs presents inconsistencies between organizations. Furthermore, IL remains largely neglected beyond the academic context, such as linking it to community outreach, health literacy, and environmental awareness. Evidence from countries like Nigeria, Uganda, and Sri Lanka indicates that libraries can become active change agents when properly supported through strategic planning, policy orientation, and patron outreach. Furthermore, ICT is vital for enhancing IL access and bridging the digital divide. However, several university libraries in Bangladesh struggle with technical limitations, which hinder their ability to provide inclusive digital literacy programs. Finally, there is a need for national-level educational and development policies that recognize libraries as key contributors to national development and integrate IL into broader educational and development agendas.

Another key observation is the insufficient academic research exploring the intersection of IL and SDGs in the Bangladeshi context. While several studies have measured IL competencies among students and professionals, very few have explicitly linked IL initiatives to specific UNSDG outcomes. This replicates an important research gap and limits the strategic alignment of library services with national development goals.

## 5. Conclusion

University libraries have an important role to play in attaining the SDGs by creating information-literate citizens who can engage meaningfully in a knowledge-based society. The findings of this review show how IL empowers students, researchers, and citizens to locate, evaluate, and apply information that drives progress in social development, equity, education, and sustainability. Despite some progress in Bangladesh, university libraries continue to face systemic barriers that impede effective IL program delivery. Immediate institutional reforms, increased investment in digital infrastructure, capacity building for librarians, and integrating IL into the national education policy framework are urgently needed.

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