Academic integrity and copyright literacy policy and instruction in K-12 schools: a global study from the perspective of school library professionals

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Abstract

This study examined the policies and instructional practices related to academic integrity and copyright literacy in K-12 schools through the lens of school library professionals. Since school librarians play a key role in promoting academic integrity and copyright literacy in schools, they were chosen. An online survey was administered to school library professionals in 85 countries using a mixed methods approach, yielding 569 responses. The results revealed that many K-12 schools lack policies on academic integrity and copyright, and there is variability in the perceived value, implementation and teaching of these literacies. While most school library professionals reported teaching academic integrity and copyright literacy in their schools, implementing effective pedagogies remains challenging. Collaboration between school library professionals and teachers, along with the use of multimedia resources, were identified as potential strategies for practical education and instruction. The study highlights the need for greater attention to be given to these literacies in K-12 education and calls for the development of policies, necessary support and effective teaching methods to ensure students are knowledgeable and well-prepared for higher education.

Keywords: Academic integrity, Copyright literacy, K-12, School education, Secondary education, Plagiarism, High school, School librarian

Introduction

Ethical and responsible information usage can be achieved through academic integrity and copyright literacy—a subset of information literacy. Information literacy, according to the Chartered Institute of Library and Information Professionals, UK (CILIP, 2018), "helps to understand the ethical and legal issues associated with the use of information, including privacy, data protection, freedom of information, open access/open data

and intellectual property" (p. 3). It can therefore be said that information literacy is also related to using information in an ethical and responsible manner (Forster 2013).

Both academic integrity and copyright literacy have a profound impact on the quality of education and research, as evidenced in scholarly communication (Emmott 2013; Pyman & Sundsbø, 2021). Educating students on academic integrity and copyright literacy in their pre-university years is crucial (Çelik & Razı, 2023; Hossain 2022a, b; Merga 2022; Morrison & Secker, 2015) as students need to be made aware of the importance of respecting intellectual property rights and attribution of other works from an early age (Hossain 2020; Lagola 2021). By instilling these values early on, students develop a strong ethical foundation that will guide their behavior throughout their academic and professional careers (Lee 2023; Sefcik et al. 2019). As such, educational institutions have an important responsibility to instill these literacies within the school curriculum at the earliest opportunity, preferably prior to students' transition to higher education. This proactive approach to upholding rigorous standards of academic integrity and copyright literacy in K–12 schools holds the potential for promising outcomes in higher education.

There has been considerable research into academic integrity in higher education that shows that students arrive at university lacking academic integrity competencies or related skills, such as how to cite, reference, paraphrase, and what causes plagiarism and how to prevent it (Hossain 2022a, b; McCarthy 2020; Morrow 2022; Rossi 2021; Sbaffi & Zhao 2022). The importance of educating students about copyright literacy (CL) has also been recognized by leading education standards organizations. The International Society for Technology in Education (ISTE, 2016), states that being a digital citizen requires students to "demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property," including "abiding by copyright and fair use, citing resources, gaining or giving permission to use [content], avoiding plagiarism, understanding and using creative commons" (p. 3). Therefore, students should be aware of, and educated about academic integrity and copyright literacy (including the concepts of plagiarism, copyright infringement and fair use) in order to be ethical and responsible participants in their academic and civic engagement.

Despite the profound implications of academic integrity and copyright literacy education in the pre-university years, little research has been conducted on these concepts. Studies also confirmed that there is often no formal policy regarding the ethical use of information in many K–12 schools (Hossain 2020; Stoesz 2022), and no one is assigned the task of teaching students academic integrity (Beaudry 2019; Hossain 2022a, b), including how certain actions may affect copyright and ethical behavior. In light of this background, our study explored academic integrity and copyright literacy policies and instructional practices in elementary (primary) and secondary schools by collecting data from qualified school library professionals (SLPs) worldwide. A qualified SLP is also known as a school librarian, a school library media specialist, or a teacher librarian (Hossain 2017) depending on the school or location where they work.

SLPs were selected for this study based on their knowledge and authority in academic integrity and copyright literacy instruction reported in previous literature (Hossain 2020; Hossain 2022a; Menéndez and Valle, 2018; Merga 2022; Perrot 2012; Rodriguez et al. 2014), as they can provide students and teachers with both point-of-need instruction and the expertise necessary to ensure that these critical information literacy issues

are addressed in their contexts. Specifically, this study sought to gain a better understanding of academic integrity and copyright literacy policies and instructional practices in K–12 schools, including, but not limited to, identifying who is involved in teaching these literacies and to what extent, as well as how school leadership and teachers view these subjects.

Literature review

Students today are exposed to powerful technologies from a very early age. Given the rise of artificial intelligence (AI) over the last decade and the recent progression of that to Generative AI which can create new data or content based on existing information, teachers today need to ensure that students are literate on how to interact with technology-generated resources and creative work in a way that is both ethical and legal. As K–12 students gain access to media, the potential for infringement is enormous, and they can unwittingly enter the realm of copyright infringement when they leave school (Perrot 2012). When it comes to teaching copyright to students, Lagola (2021) stated that many teachers are apprehensive, largely because of their own lack of understanding of copyright nuances and 'fair use'. It is believed that a lack of knowledge about copyright and fair use, combined with fear, uncertainty, and doubt, may prevent educators from implementing innovative instructional practices, reducing quality instruction and negatively impacting student learning outcomes (Media Education Lab 2010). More than 200 K–12 technology and library media educators in the City of Virginia Beach School District were surveyed by the Media Education Lab (2010), and only a quarter of respondents said they knew anything about fair use, and none of them had received any formal education on this topic. The same applies to students in K–12 schools. With the proliferation of technology in homes and classrooms, Perrot (2012) stated that it is important for teachers and students to receive comprehensive copyright education to prevent potential and costly legal proceedings and to protect educational creativity.

Studies have found that students have difficulty understanding and adhering to academic integrity guidelines for a variety of reasons, including instructional methods and course design (Çelik & Lancaster 2021); lack of a solid education in academic integrity in schools (Hossain 2022a, b), conflicting guidance from instructors and a lack of clarity regarding the school's academic integrity guidelines (Mukasa et al. 2023); instructors who have a lack of related knowledge, uncaring and ineffective teaching (Curtis & Clare 2017), insufficient and futile guidelines and policies that are not compatible with real-world practices (DeCoster 2022), and poor academic integrity policies and guidelines at educational institutions (Bretag & Mahmud 2016; Hossain 2020; Mukasa et al. 2023). A study by Bista (2011) reported that students who breach academic integrity are more likely to have language and communication incompetency, unfamiliarity with academic culture, are international students, lack access to educational resources, have poor student–teacher relationships, and psychological pressure.

Additionally, Rogerson et al. (2023) stated that a difference between how academic integrity is taught in schools and the academic integrity requirements of higher education causes problems for both students and educators. Academic studies and personal experiences suggest that teachers in K–12 schools often jump right into discussions about the consequences of academic breaches, but do not, to some extent, teach in a way

that could intrinsically motivate students to adhere to academic integrity. Price-Mitchell (2015) argues that even though academic curricula are continually updated to meet the needs of the knowledge society, educators and institutions pay much less attention to ethical and moral principles.

As posited by Bretag et al. (2011), it is imperative to view academic integrity as an educational construct rather than a mere matter of compliance. This perspective aligns with the stance put forth by the International Baccalaureate Organization (IB), which underscores that "understanding the principle of academic integrity in any educational endeavor should come first" (IB, 2019, p. 40). Such foundational principles can be instilled early in a student's educational journey, in accordance with the recommendations of Campbell (2019), who advocates for the incorporation of integrity-related terminology into pedagogical practices. Additionally, fostering ethical values within the home environment, as recommended by Harding et al. (2004), can further reinforce these concepts. Notably, academic integrity education (AIE) has demonstrated its capacity to cultivate positive attitudes among students, as evidenced by the findings of Sefcik et al. (2019). Consequently, the integration of AIE into educational curricula holds promise as a means to mitigate instances of academic dishonesty.

Building on the previous concepts, research shows that librarians, including SLPs, play an essential role in supporting academic integrity and copyright literacy in their institutions—whether it is through policy development or instruction (Hossain 2020 & 2021; Menéndez & Valle 2018; Morrow 2022). Likewise, many schools and university libraries offer standalone library classes taught by librarians as default experts in copyright (Hossain 2021; Morrison & Secker, 2015). According to Merga (2022), school librarians "promote understanding and compliance around issues of academic integrity and plagiarism, copyright and digital rights management, research ethics and online safety" (p. 7).

Several studies have also demonstrated and described how SLPs develop research, information literacy, digital literacy and academic integrity skills such as citation, referencing, and plagiarism prevention in K–12 settings (Martzoukou 2020; Merga 2022; Valenza et al. 2022). A recent study by Valenza et al. (2022) found that students who attended high schools equipped with qualified school librarians felt better prepared for academic research. Likewise, other research (Farmer & Phamle 2021; Hossain 2020 & 2022a; Menéndez & Valle 2018) also revealed that qualified SLPs have the strong potential to prepare students for transitioning to higher education academically with a particular focus on media literacy, academic integrity and copyright literacy skills.

Methodology

Using mixed-methods research, an online survey was conducted with qualified SLPs globally from March 2021 to May 2022. By providing a fuller picture, mixed-methods research can improve the description and understanding of phenomena, allowing for a better and deeper understanding (Creswell, 2017). In other words, a mixed-methods study helps to gain a holistic perspective on the problem by comprehending the situation [what], meaning, norms, and values [the why or how] (David 2006). Several factors contributed to the creation of the survey questionnaire, including a literature review, professional (teaching and school librarianship) and research experience of the researchers,

Hossain *et al. International Journal for Educational Integrity* (2024) 20:4

Page 5 of 17

and expert feedback from several other professionals regarding terminology and the study objectives.

Google Forms was used to create the survey, utilizing closed, semi-open (using a 5-point Likert scale), and one (1) open-ended question, in three distinct sections: 'Academic Integrity Policy & Instruction', 'Copyright Literacy Policy & Instruction' and 'Demographics & Professional Questions'. The demographics and professional questions section asked participants for their gender, educational background, school systems they were employed in, professional status/title, and years of experience. The open-ended question e.g., "Do you have any further thoughts about teaching/coaching Academic Integrity and Copyright Literacy in K–12 that you would like to share?" provided the opportunity to explore the additional perspectives of SLPs that might not have been considered in our questionnaire. Thematic analysis was conducted on the responses to the open-ended questions. The qualitative data collected from the open-ended question were analyzed using thematic analysis under the four (4) broad categories that aligned with the objectives of the study.

In order to ensure that all participants understood academic integrity and copyright literacy, the terms were defined as follows: Academic Integrity is "the ethical use of information when utilizing knowledge, skills and actions as part of the responsible use of information and ideas in academia and everyday life" (Hossain 2020), and Copyright Literacy is "acquiring and demonstrating the appropriate knowledge, skills and behaviors to enable the ethical creation and use of copyright material" (Morrison & Secker 2015, p. 211).

There were a variety of methods and platforms used to distribute survey questionnaires to the target population, including the listservs of the International Association of School Librarianship (IASL), the International Federation of Library Associations and Institutions (IFLA) Schools Section listservs, national library and school library associations, provincial, state, cantonal, and city associations of school libraries/librarians. Various social media platforms were also used to reach out target audience, including Twitter, Facebook, and LinkedIn. The authors sent or posted emails, tweets, and posts within their social networks as well.

Respondent profiles

There were 569 (*n*) responses received from 85 countries, including 210 from the Americas, 28 from Africa, 50 from Asia, and 126 from Europe. The top 10 countries where survey respondents worked include the USA (143), Australia (38), Canada (29), Switzerland (29), India (28), China (20), Germany (15), Japan (12), Singapore (11) and Puerto Rico (11). Sixty-seven percent of participating SLPs hold a master's degree in Library and Information Science or a related field, followed by a bachelor's degree (26.83%), a diploma (6.50%), or a Ph.D. (5.96%).

The respondents' demographic information also revealed their years of work experience in the library profession. Their length of service as school library professionals was 21.8% 'between 1–5 years', 20.4% 'between 6–10 years', 22.3% 'between 11–15 years', 18.3% 'between 16–20 years', 7.9% 'between 21–25 years', 4.2% 'between 26–30 years' and 5.1% participants indicated that they have 'more than 30 years' experience. Gender-wise, females constituted 83.3% of participants, while men represented only 12.7%. A total of

Table 1 Participants' school systems and curricula (*n* = 569)

School System	Curriculum	Frequency	(%)
International Schools	IB curriculum	157	27.6
International Schools	Non-IB but various international curricula	38	6.7
Public Schools (government-funded & regulated)	Primarily National Curriculum of the participating countries along with a few IB and other international curricula	240	42.2
Private and Independent Schools	Various international curricula	52	9.1
Private school	National Curriculum	60	10.5
Parochial School (run by religious authority/organization)	Various curricula	22	3.9

4% of participants chose not to disclose their gender identity, except for one who identified as transgender.

Participants' school systems, along with the curriculum their schools followed, were identified, which provided a valuable context for the study. Data revealed that most respondents worked at public schools, followed by IB and private schools, as illustrated in Table 1 below.

Findings and analysis

A descriptive analysis was performed to investigate the current situation regarding policy and instruction on AIL and CL in K–12 schools. The survey specifically asked whether the participants' schools had an academic integrity literacy (AIL) and copyright literacy (CL).

Figure 1 shows the percentage of SLPs' responses to whether their schools have an AIP and/or CP in Primary, Middle, and High Schools. According to the data, the percentage of librarians reporting the existence of AIPs and CPs varies across the different school levels. Significantly, a majority of respondents (35%) reported that their schools do not have an AIP in Primary/Elementary Schools, which decreases to 17% and 13% respectively in Middle and High Schools.
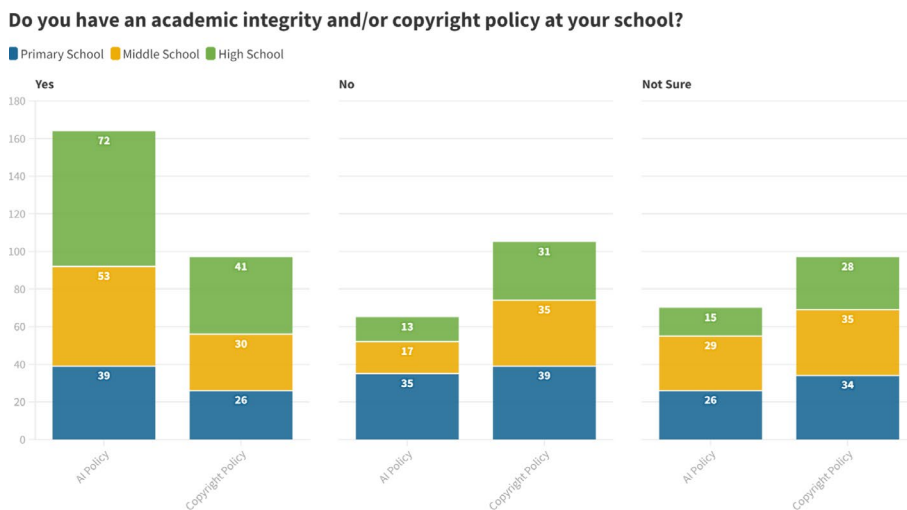

Do you have an academic integrity and/or copyright policy at your school?

■ Primary School ■ Middle School ■ High School

Fig. 1 Do schools have AIP and/or CP (*n* = 569)?

As part of the study, we asked participating SLPs at what grade they start teaching AIL and CL to their students. The majority of librarians (46%) reported that AIL and CL are taught in their schools as depicted in Fig. 2. There was a small percentage of librarians (4%) who reported that their schools do not teach AIL, while 14% do not teach CL.

The study also investigated the status and roles SLPs play in teaching AIL and CL. Results show that out of the respondents, 34% reported having dedicated lessons on copyright, while only 47% reported having dedicated lessons on AIL as illustrated in Fig. 3.

Conversely, 25% of respondents stated that they rarely have the opportunity to teach students about copyright, compared to 19% who reported rarely having the opportunity to teach academic integrity. Additionally, 26% of respondents stated that they unofficially teach copyright whenever possible, while 24% reported doing the same for academic integrity. It is worth noting that a relatively high percentage of respondents (26% and 24%) reported unofficially teaching about copyright and academic integrity respectively, indicating that these topics may be considered important by a considerable portion of SLPs even if they aren't officially responsible for them.

We also asked about the most effective ways they employ to teach AIL and CL at their schools. SLPs reported that for teaching both AIL and CL, they prefer co-teaching with teachers (AIL = 24%, CL = 23%), utilizing in-house resources e.g., school's brochures/booklets (AIL = 15%, CL = 12%), websites/libguides (AIL = 15%, CL = 12%) and video tutorials during the lessons (AIL = 13%, CL = 14%). SLPs, however, highlighted a lack of classroom teaching opportunities as a librarian, poor support from principals/headmasters, teachers and program/curriculum coordinator(s), and a lack of relevant teaching resources as challenges in implementing AIL and CL instruction and education. There

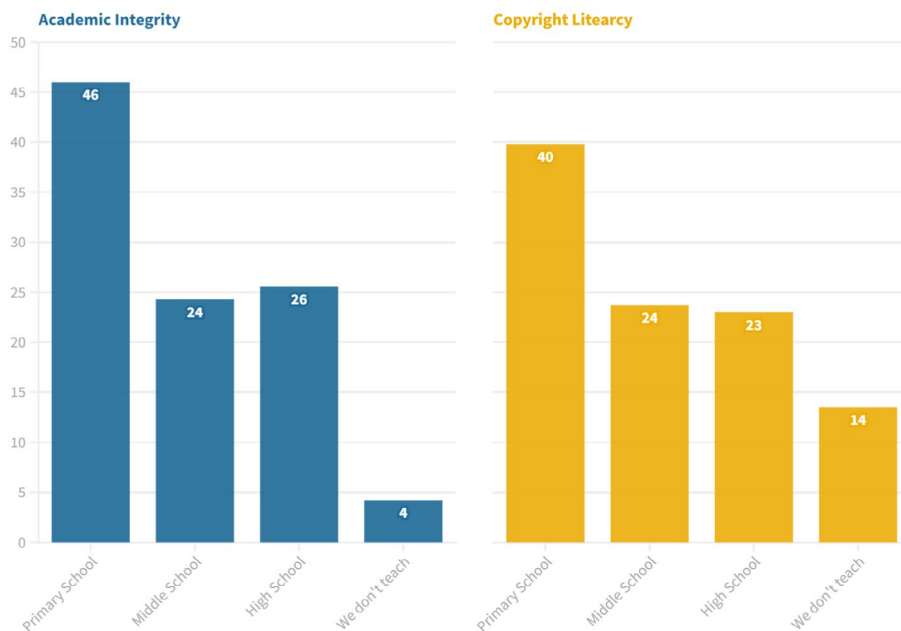**At what grade do you start teaching academic integrity/copyright literacy?**

Fig. 2 What grade schools start teaching academic integrity and copyright literacy (*n* = 569)?

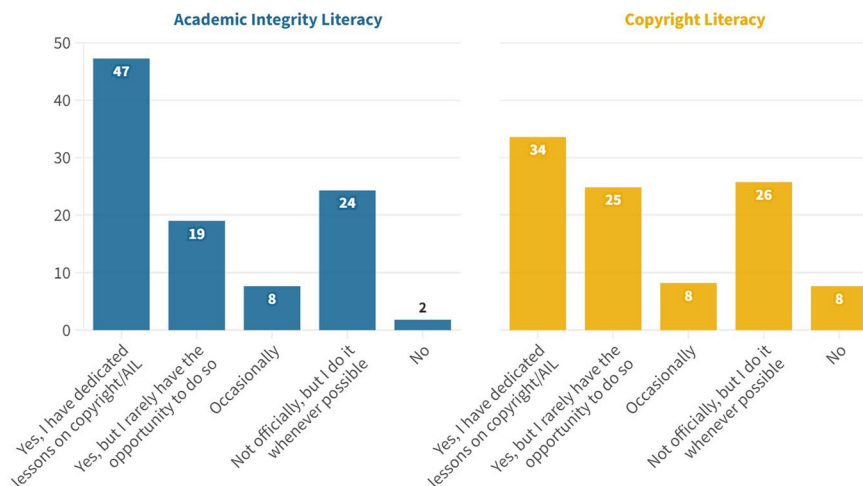## Status and roles of SLPs in AIL and CL Pedagogy

Fig. 3 Status and roles of SLPs in AIL and CL Pedagogy (*n* = 569)

were also a few participants (4%) who indicated their insufficient knowledge and skills about academic integrity and copyright limit their effectiveness.

Additionally, the study aimed to explore the perceptions of SLPs regarding the value of academic integrity and copyright literacy education and instruction among teachers, principals, and program coordinators at their schools (see Fig. 4). We asked the SLPs to respond to a series of Likert scale statements that reflected these perceptions. Results showed that 33% of SLPs believe principals place a high value on AIL education and instruction, with 25% and 36% saying the same for teachers and program coordinators. In contrast, only 5% of SLPs reported that principals do not value AIL education and instruction in their schools, while 7% and 5% reported the same for teachers and program coordinators.

As for CL, 28% of SLPs reported that principals value it, 26% for teachers, and 29% for program coordinators. Moreover, 24% of librarians reported that principals strongly value CL education and instruction, while 15% of teachers and 23% of program coordinators reported the same. The contrary is true for 9% of principals, 13% of teachers, and 9% of coordinators who, according to participating SLPs, do not value CL education and instruction.

Overall, these findings suggest that all three stakeholders (teachers, principals, and program coordinators) value academic integrity and copyright literacy in schools, albeit to varying degrees, as shown in Fig. 4.

Taking this a step further, we sought to determine SLPs' perceptions about whether subject teachers comply with AIL and CL in teaching, learning and assessment in their contexts and to what extent. According to the results of the data, SLPs perceived that teachers required their students to adhere to academic integrity (M = 3.67/5) and copyright literacy (M = 3.12/5) in their courses.

Last but not least, the open-ended question provided us with another way to explore the additional views (*n* = 279) of SLPs regarding AIL and CL issues, whether it be instructional, policy development or implementation, or the need for support from
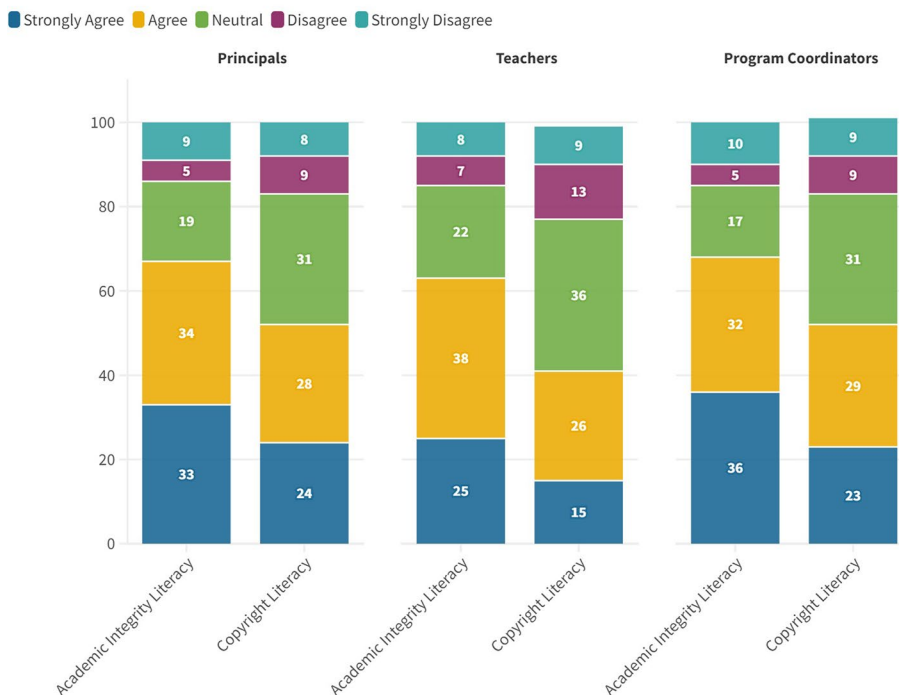
Who values AIL/CL in your school?

Fig. 4 Who values AIL/CL in your school (*n* = 569)?

other colleagues. Below is a sampling of the broader themes and perspectives from the additional feedback:

Theme 1: Instructional/educational suggestions and best practices

The foremost consensus among school library professionals was the indispensability of a school-wide, integrated policy on academic integrity and copyright literacy. The participants also collectively highlighted the necessity of continuous reinforcement of academic integrity and copyright literacy concepts in school education. According to one of the respondents, *"Academic Integrity and Copyright Literacy cannot be effectively taught in isolation. These intellectual habits of mind need consistent, routine practice and assessment."* One respondent illustrated the efficiency of this approach by sharing their experience:

> *"Having a school wide policy that is taught in context across subjects has proved successful here. Having a general note-making format (Cornell) that is used from JS [Junior School] to SS [Secondary School] also helps establish patterns of good behavior. Having a school-wide support structure of materials provided by the library helps consistency across departments and years."*

Embedding copyright literacy within the wider curriculum of academic integrity was another practice highlighted by the respondents. This integrated approach is strengthened by using external resources to teach digital and visual literacy, which can include lessons on copyright violations. Collaboration between librarians and academic staff was also emphasized. One participant noted:

> *"Cooperating with teachers and academic deans is an advantage and I run these classes with [while] following curriculum. Term Homework paper makes students pay attention so we go through the steps together with English classes. We work on research questions and select sources, start citation steps, create works cited pages, learn how to do in-text citations."*

Additional emphasis was placed on the autonomy of library professionals in scheduling classes and deciding the content and duration of instruction. Such tailored instruction allowed the professional to respond to different learning needs and paces among students. Interactive and technologically-supported learning methods were viewed favorably by participants. The use of self-directed interactive videos was noted as a successful tool in enhancing student engagement and understanding. The intellectual habits of mind associated with these, they argued, need consistent, routine practice and assessment. Several respondents advocated for the introduction of this instruction from Grade 5 through to Grade 10/11.

Theme 2: Barriers, challenges and concerns

A significant challenge noted is the perceived non-existence or low priority accorded to copyright literacy. One participant clearly illustrated this, stating, *"Copyright Literacy tends to be on the lower rung of the ladder of teaching/learning priorities."* This implies that schools, teachers, and administrative bodies often underestimate the concerns of copyright literacy, not recognizing its integral role in academic integrity. It was also observed that some teachers and school administrators view academic integrity as a concern relevant primarily to senior students. This underscores a prevalent belief that these issues are less significant in younger student contexts.

The lack of instructional practice on the topics of interest is a notable concern among participants. This was highlighted by one respondent who noted that the lack of instruction *"is creating huge future problems for individuals and organizations"*, indicating potential consequences of this knowledge gap in learners' future academic and professional endeavors. Geographical location and cultural milieu were underlined as influencing factors too. Some respondents such as one from China stated, *"I am in China, where copyright doesn't seem to exist,"* and another from Zimbabwe noted the sparse teaching of these topics in junior schools. This underscores the varying perception and level of acknowledgment of copyright issues across disparate cultural settings.

A critical barrier observed across the discussions is the time and opportunity to adequately teach copyright and academic integrity literacy skills. As one participant emphasized, *"Lack of time and opportunity is a barrier to teaching about this, more cross-curricular opportunities would be useful."* This is further echoed by the views of an elementary school librarian who points out their workload across multiple institutions as a limiting factor in co-teaching these topics. The analysis also revealed that the lack of mandatory classes on these subjects significantly hampers their promotion. As stated by one middle school librarian, *"teaching anything to do with copyright literacy and academic integrity just does not happen"* in the absence of dedicated classes.

Some SLPs expressed concerns about teachers and school leadership overlooking copyright and academic integrity in their own practices. For example, one participant mentioned, *"It is a problem that is hard to get teachers to care about and the school leadership*

to take ownership of. The lack of agreements with streaming services is making it worse." According to another participant, *"It's hard to do in a place where copyright is violated everywhere. Also difficult when admin use images that demo copyright infringement."*

Theme 3: SLPs look for support or to take action for AIL and CL promotion
A shared sentiment among SLPs is the need for a centralized, educationally appropriate and user-friendly source of current AIL and CL resources. As one participant noted, *"As a classroom instructor, I would find it extremely helpful to have a one-stop educator/K-12 friendly source for current academic integrity and copyright literacy resources."* This insight underscores the demand for comprehensive tools that can streamline the process of teaching and integrating literacy elements within the academic curriculum. Moreover, SLPs expressed the necessity of having readily available and adaptable teaching aids. The request for *"resources, ppt [PowerPoint presentation] slides or Padlet anything which supports us for teaching this,"* illustrates a desire for practical, adaptable materials that can be directly employed in instruction. For students to be able to comprehend and apply AIL and CL knowledge, such resources seem essential.

The qualitative data collected also pointed towards a collective desire for collaborative teaching. One respondent encapsulated this theme perfectly by saying, *"I would love to be able to co-teach this with my classroom teachers."* The integration of AIL and CL teachings into existing subjects further endorses SLPs' eagerness to intertwine these themes into classroom instruction. Beyond in-class teaching, the concept of knowledge-sharing among SLPs themselves was suggested as a potentially valuable approach. One librarian suggested, *"I think all school librarians make a meeting for this and we have to share our experiences for these subjects and we can share which tools we use for these subjects."* Drawing on each other's experiences and libraries of tools through a shared platform or regular meetings could indeed strengthen their collective capacity to teach AIL and CL.

SLPs also take action beyond the traditional [part of information literacy or library lessons] way of teaching AIL and CL, integrating this with the digital citizenship and digital literacy curriculum. For instance, one librarian said, *"I'm trying to integrate academic integrity and copyright literacy with the 'citizenship' classes"* and another one said, their AIL and CL lessons are embedded with the "*digital literacy [...] curriculum*". The other librarian aims to incorporate AIL into *"... the regular curriculum in each subject."*

Theme 4: Recommendations for school administration/district/national education authority
A sense of shared responsibility and community-wide involvement in instilling AIL and CL values is highlighted by the respondents. *"Academic integrity must be important for the whole school community. Librarian is the key to teach [teaching] both students and teachers who should need to train,"* noted one participant, emphasizing the role of the SLPs not just as a source of literature but also as facilitators of AIL and CL education for both students and educators.

Moreover, the respondents made it clear that the introduction of AIL and CL should not be delayed until higher grades. As one librarian stated, *"Academic integrity & [and] copyright are part of a continuum that should be integrated into the curriculum from*

Year 1 through Year 13." The continuous development of these essential skills from an early age can leverage the integration of these components into the academic culture.

The qualitative data also highlighted a need for teachers and academic staff to receive training in these areas. Phrases such as *"Teachers and other staff should get training in the same"* and *"It's definitely an area staff need more training on"* underline the urgency for professional development programs directed at these areas of concern. Furthermore, the respondents maintained the importance of teachers setting a correct example in regard to the use of others' intellectual property. *"My experience is that teachers need to model correct use of others' intellectual property, and then others will follow,"* reported a respondent. This modeling exemplifies the effect of setting a standard, as every teacher's actions with respect to academic integrity and copyright literacy ultimately influence the behavior of their students.

There was a consensus among participants that governments and education authorities need to consider the importance of academic integrity and copyright literacy education at school. Statements such as *"Government must include this [AIL & CL education] as a compulsory subject.", "It [AIL & CL education] should be a mandatory part of the curriculum nation-wide."* and *"It is an urgent need to attend to the educational system of the public sector in Mexico."* recognize the eminence of academic integrity and copyright literacy before entering university.

Discussion

The current study aimed to investigate the status of academic integrity and copyright literacy policy and instruction in K–12 schools through the lens of school library professionals. The results of this study suggest that many K–12 schools lack policies on academic integrity and copyright, and those with such policies show variability in the implementation and teaching of these literacies.

In terms of the availability of an AIP or a CP, our findings show that a significant percentage of schools do not have an AIP in Primary/Elementary Schools (35%), which decreases significantly in Middle (17%) and High Schools (13%). Furthermore, respondents did not know if their schools had policies with over a quarter of librarians in Primary/Elementary (26%) and Middle Schools (29%) reporting this, although in High School this dropped to 15%. For CP, the percentage of schools without a policy remains relatively consistent across Primary (39%), Middle (35%), and High Schools (31%), with approximately one-third or more of librarians reporting that their schools do not have such a policy. Additionally, again we noted that just over one-third are not sure if their schools have a policy in Primary (34%) and Middle School (35%), and slightly less in High School (28%). Further questioning would have to be carried out in order to determine why this variability exists regarding both an AIP and a CP.

One notable finding of this study was that most SLPs reported that while AIL and CL are taught in their schools, they are predominantly taught in a bubble or in isolation vs. being embedded into the curriculum and across subjects. However, a small percentage of librarians reported that their schools do not teach AIL, while 14% do not teach CL. Additionally, this study found that a significant proportion of respondents unofficially teach AIL (24%) and CL (26%) whenever possible. These findings suggest that while

many schools attempt to recognize the importance of teaching AIL and CL, there are still challenges in implementing effective pedagogies for these literacies.

Moreover, our study investigated the status and roles of SLPs in teaching AIL and CL. We found that less than half of the respondents reported having dedicated lessons on AIL, and only one-third reported having dedicated lessons on copyright. Furthermore, a significant percentage (19%) of respondents stated that they rarely have the opportunity to teach students about copyright or academic integrity. It is apparent that there is a need for more effective ways to teach AIL and CL in K–12 education. At this point, it can be argued that library professionals are among the key stakeholders in promoting academic integrity (Kloda & Nicholson 2007), and they have much expertise to offer to promote sustainable learning and teaching strategies for these literacies (Gunton 2022; Hossain 2020). It can be concluded that there is a need for greater attention to be given to developing policies on academic integrity and copyright in K–12 education. Developing effective academic integrity policies at the K–12 level is a sensitive issue because it significantly impacts students' approaches to academic integrity (Stoesz 2022).

Regarding effective ways to teach AIL and CL, librarians reported that they prefer co-teaching with teachers, utilizing their school's in-house resources such as brochures and booklets, websites and libguides, and video tutorials during lessons. These findings suggest that collaboration between SLPs and teachers and the use of multimedia resources may be effective strategies for teaching AIL and CL. Montiel-Overall (2008) notes that teacher-librarian collaboration renders significant outcomes for successful teaching and learning. Therefore, maximizing teacher-librarian collaboration should augment the success of AIL and CL instruction at schools.

Finally, this study investigated SLPs' perceptions of whether subject teachers comply with AIL and CL throughout their teaching, learning, and assessment. The findings of this study suggest that SLPs perceived that teachers required their students to adhere to academic integrity and copyright literacy in their courses. However, further research is needed to investigate the extent to which these perceptions align with actual practices in the classroom.

The implication of the study

According to studies, proactive and sustainable teaching approaches should be adopted in the AIL and CL instructional process, including a robust policy/program that includes all school stakeholders (Hossain 2020; Stoesz 2022). It has also been suggested in the literature that gamification (Dodd & Peleg 2021), co-creation, design thinking and video-based learning (Martzoukou 2020; McGannon et al. 2021) are possible strategies for robust AIL education. Martzoukou (2020) reported that secondary students produced educational video cartoons on digital literacy and copyright resilience in Scotland. Premat (2023) from Sweden reported another success story involving secondary school students who created a short film about academic integrity and source criticism. As part of a robust academic integrity and copyright literacy program, such strategies (gamification, co-creation and video-based learning) can be applied.

It would be beneficial if district, state, and provincial education authorities were required to provide clear instruction and support to school administrators regarding the implementation and promotion of AIL and CL education. During pre-service and

in-service training, current and incoming teachers need to be trained in academic integrity, copyright and related concepts such as ethical use of AI tools. It is equally important that library and information science programs have modules focusing on the same topics. The authors believe that K–12 schools need to review their existing information literacy curriculums and integrate AIL and CL components that are often taught in isolation and not taught/included in core subjects. This can be achieved by adapting a transdisciplinary transition literacy curriculum concept (Hossain 2022a, b). Transdisciplinary is a crucial concept, meaning that if students are taught an AIL skill in one subject/lesson, they can apply it across subjects without feeling overwhelmed or seeing the practice as redundant, but rather embedding it into their regular practice.

Recent literature proposes (Çelik & Razı, 2023; Hossain 2022a, b; Martzoukou 2020; Premat 2023) to develop programs earlier for academic integrity and copyright literacy education and address appropriate ways to deal with academic misconduct. Values, such as honesty and respect also need to be nurtured at home. Parents and teachers can provide guidance to youngsters and cultivate moral integrity that will serve them well in academia, at the workplace and in life beyond formal education. No matter how, where, or from whom youngsters learn the values of honesty, integrity and ethical competence, whether they are through direct lessons and emphasize vocabulary work or indirectly through interactions with parents, teachers, or peers, the long-term benefits are invaluable (Campbell 2019; Cohen 2006). In the same way, when academic misconduct occurs, younger students should be taught why it is unacceptable and how to correct it. This way they will be able to build understanding as they progress through their early education. Just as Campbell (2019) stated, when trust, fairness, and respect are part of daily routines, and modeled in the classroom, students feel safe and see the world as just and naturally incorporate these attitudes as part of their daily routine. By establishing these components in school education, we hope to provide students with strong information literacy skills so that they are well-prepared for higher education and for life beyond. It would, therefore, be appropriate to conclude that the earlier ethical behavior is introduced, the more likely it is to affect an individual's cognitive and character development as they grow up, enabling them to make honorable decisions, including adhering to academic integrity and copyright guidelines.

Conclusion

As a result of this study, insight was gained into the current landscape of academic integrity and copyright literacy policies and instruction in K–12 schools, enabling the researchers to identify challenges and opportunities in this crucial domain. The findings underscore the urgent need for a comprehensive approach to teaching AIL and CL, regardless of the specific curriculum followed by each school. As a result, these literacies should no longer be relegated to the periphery but should be emphasized and embedded at all levels of education.

As part of the research, not only were policy deficiencies of academic integrity and copyright literacy identified in many K-12 institutions, but the variability in how they are implemented and integrated was also demonstrated. This variability raises concerns about the consistency and effectiveness of AIL and CL education across the span of schools, curriculums and countries. Furthermore, the study has brought to light the crucial role of SLPs as

key stakeholders in promoting academic integrity and copyright literacy. Their expertise in these areas can make a significant contribution to the development of sustainable AIL and CL policies and instructional strategies.

In light of the findings, there are clear implications. Policymakers, including educational leaders, curriculum coordinators, teachers and SLPs, must collaborate to create robust policies that support the integration of AIL and CL into the curriculum. To ensure that these skills are effectively delivered to students, SLPs and teachers need to receive comprehensive education, training and support. The concept of an AIL continuum, combined with a transdisciplinary teaching approach, holds promise for aligning education with the dynamic needs of today's students and educational institutions. Collaboration between SLPs and teachers, along with the use of multimedia resources, emerges as a promising strategy for teaching AIL and CL in K–12 education. However, further research is needed to assess the impact and efficacy of these strategies.

A key conclusion from this study is the importance of academic integrity and copyright literacy policy and instruction in K–12 education. The study serves as a clarion call for a concerted effort among educational stakeholders to promote the teaching of AIL and CL in K–12 schools. It is imperative that these literacies are woven into the fabric of the educational experience, promoting students' readiness for higher education, their future careers and in general, public integrity to create a more peaceful world. By doing so, we can empower the next generation with the essential tools, skills and knowledge required for overarching success. The journey toward achieving this goal includes all stakeholders being involved in the education of our youth as a collective effort, wherein they committedly work together towards a shared vision.

Abbreviations
AIL   Academic Integrity Literacy
AIE   Academic Integrity Education
AIP   Academic Integrity Policy
CL   Copyright Literacy
CP   Copyright Policy
K–12   Kindergarten (K) through twelfth grade (12)
IB   International Baccalaureate Organization
SLPs   School Library Professionals

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Questionnaire design: First & Third Authors, Abstract: First and Second Authors, Introduction & Literature Review: First Author, Data analysis: Second Author assisted by First Author, Discussion and The Implication of the Study: All, Conclusion: First Author, References: First & Third Authors.

Availability of data and materials
All materials are available upon request.

Declarations

Competing interests
The authors declare no competing interests.

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