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# The Opportunities and Challenges of Integrating Information Literacy as a Credit-Bearing Module into First-Year Academic Programmes

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#### **Abstract**

Rationale of Study – This study aimed first to establish the level of knowledge about IL content of the existing IL programmes and to explore the perceptions regarding opportunities and challenges of integrating IL as a credit-bearing module into first-year level academic programmes at the UNIVEN.

Methodology – This study adopted a convergent research design using both quantitative and qualitative approaches. The purposive sampling technique was used to include eight deans of schools and six information librarians. In contrast, stratified random sampling was adopted for selecting adopter and non-adopter academics within the eight schools in UNIVEN. Online Google Form questionnaires, and interview guides were used to collect quantitative and qualitative data, respectively.

Findings – The findings reveal that adopter academics have some knowledge regarding the IL programmes as they have endorsed the offered IL content. Notwithstanding the challenges of limited resources, results suggest that integrating the IL programme into the academic programmes improves students' academic literacy skills.

Implications – This study acknowledges the need for IL programmes to be integrated into all first-year-level academic programmes. There is a need to develop strong IL institutional policies that take cognisance of contextual conditions, including indigenous languages.

Originality – This study is the first of its kind to be conducted at UNIVEN. It is envisaged that findings might strengthen the IL programme at UNIVEN.

# **Keywords**

Information literacy; intra-curricular information literacy programme; academic programmes; University of Venda, South Africa

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# 1 Introduction and background to the study

The definition of information literacy (IL) varies from source to source. However, the common denominator amongst many is that someone who is information literate can "recognize and articulate information needs; develop effective search strategies; select and use information retrieval tools; locate and retrieve information sources; analyse and critically evaluate information; organize and synthesize information; ethically use information" (Obermanet al., 2019). Hence, IL programmes are essential in producing graduates of critical thinkers and lifelong learners.

Library and information literacy (LIL) instruction programmes are not new in many universities, and librarians have been the facilitators for a long time (Harris, 2013; Wang, 2010, 2011). However, what has been less familiar are the well-organised IL programmes that involve good planning in teaching and assessing IL instructions or education (Harris, 2013). Furthermore, as the concept of IL is evolving to include other literacies such as academic literacy, media literacy, digital literacy, visual literacy, and other literacies, it is unclear whether IL programmes and curricula of the universities in South Africa (SA) have incorporated these new literacies.

It cannot be denied that this evolvement of the IL concept encompasses other new literacies. It calls for all the relevant stakeholders to collaboratively become change agents in creating critical thinkers and lifelong learners. For example, Wang (2010) asserts that "what makes contemporary IL instruction or education more important than the traditional library instruction programmes is that it encompasses more than accessing and finding information and library resources, but the understanding of information needs, how to use the acquired information, communicate it, and keep updated regarding ethics of today's world of information" (p. 17).

Notwithstanding the importance of IL instruction programmes in higher education, Derakhshan and Singh (2011) argue that "it is still not an integral component of many higher education programmes and students who are going to be graduated are "ill-equipped" with information skills. Preparing students for lifelong learning and work is an important educational objective. IL is viewed as a key component for doing so" (p. 218). Furthermore, these authors assert that UNESCO acknowledges that IL should be introduced into the national curricula, tertiary, non-formal, and lifelong education programmes (Derakhshan & Singh, 2011, p. 218). In this digital era (2023), this is considered necessary in building a knowledge society.

In South Africa, one of the aims of the education system is the improvement of IL skills; hence the Core Teaching Programme was introduced in 1994 (Moll, 2009, p. 40). The National Curriculum Statement (2004) aims to improve critical and developmental outcomes for learners, such as the ability to identify, collect, analyse, manage, critically evaluate, and use information effectively; become critical thinkers; work as a team; and acquire various skills as indicated in the broader definition of the concept of IL. This definition includes ICT, communication skills, reading, listening, writing, and other literacies (Moll, 2009). Given the challenges experienced in the dearth of educational resources, including school libraries, the future seems bleak should no aggressive remedial programmes be implemented (Zimu, 2020, p. 57). The dearth of resources at the primary school level impacts the IL skills of student cohorts produced at the university level. Many studies report limited IL skills among undergraduate and postgraduate students (Noll & Brown, 2018; Lwehabura, 2018; Zimu, 2020). For example, Tiemensma (2012) asserts that many South African students come from disadvantaged backgrounds and lack the IL skills needed for their academic programmes. There is an under-provision of computer and internet facilities and library resources. For example, very few schools in South Africa have functional libraries. The school and community level IL is underdeveloped (p. 162). Neerputh's (2012) study on IL skills of first-year students at the Durban University of Technology (DUT) revealed that even those students who were cell phone 'savvy' displayed weak IL skills in terms of internet searches, information retrieval, assignment writing, topic analysis, and other skills needed to master their academic programmes (p. 263).

It is a cause for concern that Tiemensma (2012) reported the challenges regarding the scarcity of resources in South Africa, Mojapelo (2018) reiterated the same challenge hence Zimu (2020) is of the view that in South Africa, there is a dire need to improve scarcity of resources, and IL programmes, as they impact on IL skills of students and educators. Collaboration between educators and librarians is considered imperative in the IL improvement initiatives. Mnkeni-Saurombe (2015) reiterates that partnership is crucial, especially in the open and distance learning (ODL) environment of the fourth industrial revolution (4IR). Given the highlighted challenges, many universities in South Africa have been striving hard to improve their IL programmes (Zimu, 2020).

Furthermore (Zimu, 2020) reports that, at the University of Pretoria (UP), an entire IL course is compulsory for all first-year students. It is a credit-bearing course offered by the Department of Information Science. At the University of South Africa, the course "Developing information skills for lifelong learning" is compulsory for information science students but optional for students from

other disciplines. The Tshwane University of Technology (2016) and the Cape Peninsula University of Technology (CPUT) (2013) have both introduced certificate-based IL courses (Davids & Omar, 2018). At the CPUT, the short course is called the "Certificate of Information Literacy" and was started in 2012. Its development was informed by the IL deficiency in the subject guides (p. 57). Despite these initiatives, studies point to the limited IL skills among undergraduate and postgraduate students (p. 57).

The authors of the paper argue that it is not clear whether UNIVEN has similar experiences as other universities in terms of weak IL programmes and limited or lack thereof IL skills for students; hence this study that aims to understand the perspectives of deans, academics, and librarians regarding opportunities and challenges of integrating IL into academic programmes of first-year students. The first author working as an information literacy librarian at UNIVEN opines that UNIVEN IL programmes are fragmented as each department independently offers its own IL programme. In addition, students do not need to attend library-led IL programmes. No university policy serves as a guiding framework on how the IL programme must be conducted. This study is essential in adding to the existing evidence regarding perceptions about opportunities and challenges of integrating IL as a credit-bearing module into the curriculum of first-year UNIVEN students.

# 2 The problem statement, purpose, and objectives of the study

Literature reveals that many IL instruction or library education programmes have failed or rather have not had a sufficient impact because they are fragmented and have been the sole responsibilities of only the university libraries and librarians (Derakhshan & Singh, 2011; Wang, 2010). According to Zimu (2020); Lwehabura (2018); Tiemensma in Gwyer et al. (2012), many academics are reluctant to collaborate with librarians to facilitate the integration of IL into academic programmes. Lanning and Mallek (2017) posit that most first-year university students do not have the IL skills required to engage in their academic tasks. In Africa, integrating IL into academic programmes is considered critical as several IL-related studies have revealed that first-year students are not sufficiently prepared for higher education academic programmes (Lwehabura, 2018; Noll & Brown, 2018; Neerputh in Gwyer et al., 2012). Moreover, Baro and Keboh (2012) highlighted that the leading African universities, including SA universities, face challenges in offering IL programmes as credit-bearing modules in academic programmes. However, in SA, little is known about integrating IL as a credit-bearing module into academic programmes, particularly at historically disadvantaged universities.

Information librarians facilitate library education programmes at the UNIVEN. They are conducted from January to December, depending on the availability of the students. It must be noted that other IL programs are conducted by various schools independently. The schools do not need to integrate IL programmes into their academic programmes; hence the schools run their IL programmes independently, depending on the discretion of each school. Table 1 below shows the IL-related modules the different schools offer to their undergraduate students. It also explains whether the module offered is a formal or a core programme. For example, English Communication Skills (ECS 1541) is considered a core module because it is mandatory for all first-year students as it helps them cope with university studies and everyday communication in English. Basic computer literacy is also mandatory for all first-year students. However, the standard modules are considered electives for each department.

Table 1: IL-related modules offered at the UNIVEN

School	Module name	Module code	Programme	
All schools	English Communication Skills	ECS 1541	Core	
Education	Computer Literacy	PSC 3521	Formal	
Law	Introduction to Computer Literacy	ICL 1141	Formal	
Mathematical and	Information Technology	FIT 1140	Formal	
Natural Sciences	Fundamentals			

Source: UNIVEN 2022 calendar.

The narration shows that modules that aim to inculcate IL skills are fragmented and not integrated, as each department does its own thing independently. This confirms Wang's (2010) view regarding the dearth of systematic integration of IL programmes across an academic programme. UNIVEN has not been an exception, as IL programmes are only offered to some first-year students. Under this premise, this study was triggered to explore the opportunities and challenges of integrating IL into the first-year level academic programmes at the UNIVEN. Table 1 indicates some schools, such as the Schools of Education, Law, and Mathematical and Natural Sciences, that have strived to introduce what this study can consider a standalone, bottom-up approach to IL programmes or formal modules. Wang (2011) explains the bottom-up approach as when the curricular integration of IL is implemented by the teaching staff, such as lecturers and academics. However, bottom-up can

only take place if lecturers are aware of the importance of IL and are willing to have it integrated into their modules or course curriculum. Student needs, and feedback are critical in this process (p. 709). The top-down approach means integrating IL into the curriculum has been endorsed by the heads of departments and the deans (Wang, 2011).

# 3 Purpose of the study

Therefore, this study aimed to explore perceptions regarding the opportunities and challenges of integrating IL as a credit-bearing module into first-year-level academic programmes at the UNIVEN.

The research objectives of the study were to determine the level of knowledge regarding IL content of the existing IL programmes at the UNIVEN; explore the opportunities of integrating IL into first-year-level academic programmes at the UNIVEN; establish the challenges faced in integrating IL into first-year level academic programmes at the UNIVEN; and develop a conceptual framework that may enhance the IL programmes for the first-year-level academic programmes at the UNIVEN.

#### 4 Literature review

Wang (2011) asserts that integrating IL into curricula is the most effective way of providing IL education. This has been advocated by the Association of College and Research Library's (ACRL) Information Literacy Competency Standards (2001) and the Australian and New Zealand Institute of Information Literacy (ANZIL) Framework (p. 704). For Wang (2011), information literacy cannot be learned effectively without engaging the discipline-specific subject matter; hence, 'integration' is used interchangeably with 'embedded' (p. 704). Munoo in Gwyer et al. (2012) views the issue of embedding IL as an innovative strategy to deliver IL programmes that take cognisance of new literacies such as digital literacy, academic literacy, copyright literacy, media literacy, and others. Munoo (2012) agrees with Wang (2011) that an embedded IL programme must be implemented throughout the term to cater to students' IL needs. (p. 119). Derakhshan and Singh (2010) reiterate that students need high-quality instruction in IL, which only academics and librarians can provide. There is a view that students' IL skills can improve by integrating IL into the curriculum (p. 219). This is possible for Zimu (2020), provided there is a commitment to learning displayed by all the relevant stakeholders, such as students, academics, and librarians (p. 60).

The authors deem it essential to consider what IL integration means before addressing challenges.

According to Wang (2011), there are four approaches to IL education in higher education. They include: extra-curricular, a course outside the academic curriculum; inter-curriculum, a session, or add-in to academic courses; intra-curriculum, integrated into a course (curricular integration or embedded approach); and standalone, an independent course within an academic curriculum.

As the paper's title indicates, the focus is on option three. This article strives to establish the level of knowledge regarding the content of the current IL programmes offered by some of the UNIVEN academic departments and the library. In addition, it aims to explore the perceptions regarding opportunities and challenges of integrating IL as a credit-bearing module into first-year-level academic programmes at the UNIVEN. The study is deemed necessary because of the historical and geographic demographics of the institution, yet expected to keep up with the evolving trend of IL in order to be able to produce critical thinking and lifelong learning students. However, many studies agree that the end goal (IL-competent students and academics) depends on a well-planned IL programme guided by institutional policy and a strong partnership between academics and librarians. While research indicates that embedding IL into the curriculum can help improve IL skills for students and academics, what are the limiting factors in embedding or integrating IL into the curriculum?

# 5 IL integration policies, academics, and librarians

As previously highlighted, the study adopted the ILIM model, which focuses on answering the questions such as what, who, and how. For Wang (2011), the 'what' question deals with the IL guidelines for the intended curriculum, such as what the university intends to teach. This may include institutional graduate IL attributes, the graduate IL requirements as required by a professional accrediting body, and the institutional and national IL policies and standards (p. 707). Guidelines, policies, and standards, including local and indigenous languages, are essential. However, Derakhshen and Singh (2011) raise concerns that there is a lack of knowledge of IL concepts among academics., They have limited knowledge to strengthen the instructional practices of their students or teach IL skills to students hence the importance of collaborating with librarians (p. 205) Moselen and Wang (2014) revealed in their study that librarians did not have sufficient knowledge regarding concepts such as curriculum processes, course-related IL, IL integration, assessment, evaluation, teaching plan and learning outcomes (p. 11 – 12). Munoo in Gwyer et al. (2012) opine that IL instruction programmes have matured in many academic institutions (p. 117). For Munoo (2012), the number of librarians involved in teaching, training, and instruction programmes has also

increased. Based on this, the question of where and how instruction librarians are equipped with the necessary skills to design, develop, and deliver programmes must be considered (Munoo, 2012, pp. 117-118). Therefore, the importance of first understanding the level of knowledge about IL content among the studied academic community, including students, is essential. The authors opine that this can serve as a guiding framework when answering the questions on what content to include in the IL programme, who will be responsible for what, and how the IL programme will be structured and executed in line with the pre-set policy, guidelines, and standards including local standards.

Yager et al. (2013), as cited in Zimu (2020), argue that research is yet to identify the most appropriate form of IL programme; hence the need for the IL programmes to be continuously updated in line with technological and other trends is made (p. 57). This is critical for improving IL skills for academic communities, particularly students. A vast body of knowledge laments limited or lack thereof IL skills among students, including those from the historically disadvantaged school background hence the importance of this study.

# 6 IL integration and students

As previously highlighted in this context, many theoretical and empirical studies lament limited and weak IL skills among students in areas such as academic writing, synthesis of facts, and referencing patterns hence the tendencies of plagiarising, patchwriting, fabrication, and other academic dishonesty practices (Mnkeni-Saurombe, 2015; Neerputh, 2012; Noll & Brown, 2018; Fourie & Bothma 2005 as cited in Zimu 2020, p. 56). There have been lamentations that students face many challenges during the process of information searching, access, retrieval, analysis, and use. This may include the issues of language barriers, digital literacy skills, computer use skills, and broad experience in library use, including virtual library (Lwehabura 2018 as cited in Zimu 2020, p. 56). Due to these challenges, Dolinger (2019) recommends moving away from one-shot library instruction programmes to IL-integrated programmes. In addition, the paper's authors recommend that the IL-integrated programmes be credit-bearing. Luckett and Sutherland (2000) aver that for most students, assessment is the heart, the barometer, and the cash nexus of their learning; hence it is essential to make IL programmes credit-bearing. IL programmes must also promote the integration of local standards, such as using indigenous methods of knowing and strong partnerships between academics and librarians. The study is attempting to address that gap.

# 7 Conceptual framework

According to Ngulube (2018), conceptual or theoretical frameworks act as the glue that holds social research components together, and with this glue, the research design will stay strong. This study adopted the conceptual framework of the Information Literacy Integrated Model (ILIM) and the Association of College and Research Libraries (ACRL) IL standards. The ILIM was regarded as applicable in accommodating the study's research objectives. The IL learning outcomes, based on ACRL IL standards, stipulate that a literate student should be able to (i) find the information needed; (ii) evaluate information sources; and (iii) use the information for a specific purpose in an ethical manner.

The IL Integration Model (ILIM) is "based on sociocultural theories and practitioners' experiences in IL curriculum integration in higher education," which was developed by Li Wang in 2010 (Moselen & Wang, 2014). The ILIM, which has been used or adopted at institutions of higher learning to integrate IL into academic programmes, can be applied in different undergraduate academic programmes (Wang, 2011, p. 707). The ILIM represents the process (what), people (who), and resources (how) involved in the integration of IL into academic programmes. These three elements – what, who, and how – aim at producing an information-literate person (Moseley & Wang, 2014, p.118; Wang, 2011, p. 707).

The three interconnected ILIM elements represent the processes, people, and resources leading to the integration of IL in academic programmes. The guidelines of the ILIM show what (IL content) the university wants the students to be taught in IL programmes and what IL students should be able to do after the programmes (Wang, 2011). The IL Curriculum Working Group referred to all stakeholders to be involved in integrating IL into academic programmes as stakeholders. This group may include librarians, academics, and policymakers, who all significantly integrate IL into academic programmes (Wang, 2011).

According to Zimu (2020), models and standards suggest themselves as possible instruments for the assessment of IL (p. 61). In this context, ILIM helped gain insight into what the IL programmes of the library and early adopter academic departments entail (IL programme content) and whether some guidelines and policies guide the development of these programmes. The question of 'who' helped us understand the people responsible for executing these IL programmes. The question of 'how' answered how the existing IL programmes were executed. As previously highlighted, there has been a call for integrated or embedded IL programmes that give space to emerging or new literacies

such as academic, copyright, and media literacies. Jones-Jang et al., 2019 aver that media literacy education is critical in this digital era (2023) as it helps readers handle fake news better. For Ellis and Pena (2015), if a social media user has crowdsourcing skills, which is an ability not only to consume but also contribute content, he or she can then quickly recognise or cast doubt on fake stories by reading peer users' comments (Jones-Jang et al., 2019). Furthermore, Ellis and Pena (2015) posit that crowdsourcing in libraries, particularly academic libraries, can be helpful for marketing strategy, peer learning, and self-regulated learning, especially among first-year students. Crowdsourcing can be a valuable tool to promote the collaborative teaching of integrated library and information literacy instruction programmes between faculties, libraries, and students, especially first-year students (Ellis & Pena, 2019). This paper has highlighted that the IL concept has evolved to include new literacies and consequently prepare students to become lifelong learners. However, it is not clear if new literacies such as media literacy and copyright literacy are accommodated in today's library and information instruction programmes. For example, Ellis and Pena (2019) argue that while students may be technologically savvy, they may not be media and copyright literate. Neerputh (2012) reiterates that students may be cellphone-savvy but struggle with information analysis, search, retrieval, synthesis, and use.

The IL-competent user, as explained in the ACRL standard, must be able to establish the need for information, find, evaluate, and use information for a specific purpose. The ILIM model answers the questions of what (process), who (people), and how (resources). Therefore, this study aimed to establish whether the existing IL programmes were guided by institutional and accreditation body policies, who were the stakeholders involved in executing the IL programmes, and what types of resources were used to ensure that IL programmes are implemented accordingly and in line with the technological trend and local needs.

# 8 Research methodology

This study used a convergent research design to explore the opportunities and challenges of integrating IL as a credit-bearing module into the first-year-level academic programmes at the UNIVEN. The convergent research design allows for gathering quantitative and qualitative data, analysing each individually, and then comparing the results to see if the findings confirm or disconfirm each other (Creswell, 2014; Creswell, 2015; Creswell & Creswell, 2018). The study population comprised eight deans of schools, 364 academics, and six information librarians at the UNIVEN. The non-probability judgemental or expert purposive sample included eight deans of

schools three and six information librarians. Purposive sampling is used when researchers choose the participants for a particular purpose (du Plooy-Cilliers et al., 2014; Kumar, 2019; Lochmiller & Lester, 2017; Monette et al., 2014). The deans of schools are responsible for setting the priorities and directions for the schools as well as communicating the schools' goals to the academics. At the same time, the information librarians maintain awareness of issues of IL, curricular support, and educational technologies' needs, and they also serve as advocates for the schools within the library. Probability-stratified random sampling was used to select 40 academics from the population of 364. Kaur (2015) asserts that in probability sampling, participants are selected from the representative population. For stratified sampling, samples are selected strategically to ensure that desired equal-sized samples are extracted from each sub-groups (p. 162).

This study used Google Forms online survey to collect quantitative data from 40 academics and Google Forms interview guides to collect qualitative data from eight deans of schools and six information librarians. The descriptive statistical analysis of the latest version of the Statistical Package for Social Sciences (SPSS) was used to analyse quantitative data, and Google Forms to analyse qualitative data. Tables and figures were used to present the analysed data, and data was computed in frequencies, percentages, and mean/s.

# 9 Findings and discussion

The study's findings are discussed in line with the study's objectives.

Table 2 presents the response rate of 91% of the total 49 respondents from the sample size of 54. Of these responses, 37 were academics; six were deans of schools, and six were information librarians.

Table 2: Respondents (N=54)

Category	Targeted number	Responses	0/0
Deans of schools	8	6	75%
Academics	40	37	93%
Information librarians	6	6	100%
Total	54	49	91%

# 9.1 The level of knowledge regarding the IL programmes

To establish the level of knowledge regarding the IL programmes, this study examined the views of the respondents based on the preferred IL content offered to the first-year level students and IL programmes offered as mandatory for all first-year level students at the UNIVEN.

# Preferred IL content offered to the first-year level students

It is significant to consider the IL content before integrating IL into academic programmes (Buchanan et al., 2015; Davids & Omar, 2018). Several studies advocate the following content: construct search query, search the web, search the databases and electronic journals, the process of evaluating information, plagiarism, copyright, information ethics, reference and referencing techniques, writing assignment, and tips for presentation as the essential content to be offered to the university students (Bothma et al., 2017; Lwoga & Sukums, 2018; Moyo & Okemwa, 2022)

The current study presented a list of IL content and asked the academics to choose their preferred content suitable for the first-year level students at the UNIVEN. The selection of the components of IL content as appearing on the list was informed by the ACRL standards and ILIM model, which were adopted for this study. As previously highlighted, studies such as Moyo and Okemwa (2022); Lwoga and Sukums (2018) recommend similar components to assess IL programmes. Tiemensma in Gwyer et al. (2012) asserts that ACRL competency standards for higher education must be able to assess five standards as the ability to establish the nature and extent of the information needed; the ability to access needed information effectively and efficiently; the ability to evaluate information and its sources critically; use it effectively to accomplish a specific purpose and understand economic, legal, and ethical issues regarding information use (p. 157-158). Neerputh in Gwyer et al. (2012) used the ACRL competency standards when assessing the DUT IL program (p. 257). Furthermore, Neerputh in Gwyer et al. (2012) report that the DUT IL program is formalised with many faculties so they can position IL in their teaching calendar. Statistics and feedback indicated a strong correlation between students attending IL classes and academic performance (p. 257).

The findings of this study indicated that academics preferred all the listed IL content suitable to be offered to the first-year level students at the UNIVEN (see Figure 1). Moreover, Figure 1 reveals that searching the web; searching databases and e-journals; plagiarism; reference and referencing techniques; and writing assignment as the top five IL content preferred by the academics to be offered for first-year level students at the UNIVEN. The finding on the top five preferred content is supported by several studies that reported that IL content should cover the use of databases, guide

students on the ethical issues of information use, equip students with information search skills, and enables students to use quality information sources appropriately (Bawack & Kala-Kamdjoug, 2020; Lwehabura, 2018; Lwoga & Sukums, 2018; Moyo & Okemwa, 2022; Mugwisi, 2015; Tarango et al., 2017).

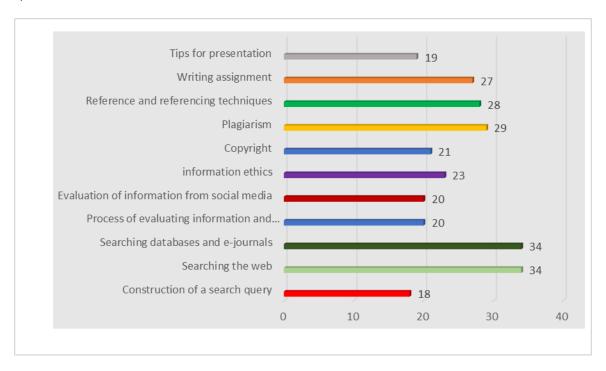


Figure 1: IL content preferred by the academics (N = 37)

From the interview guides, the study's findings revealed that the deans of schools and information librarians preferred using computer hardware and software as additional to form part of the IL content offered to all first-year level students at the UNIVEN. The recommended content aligns with what the UNIVEN Schools of Education, Law, and Mathematical and Natural Sciences offer in PSC 3521, ICL 1141, and FIT 1140, as portrayed in Table 1 of this study. Aharony and Gazit (2019), Dawes (2019), and Oyedemi and Mogano (2018) suggested that the IL content offered to university students should include the use of computers. The inclusion of the use of computers in IL content shows that the academics and librarians are acknowledging the influence of technology on the access and use of information for the student's academic activities, such as using computers for typing and submitting assignments and research activities and using reference management software for referencing and anti-plagiarism software for deterring plagiarism. Notably, categories of IL content have tended to align with the ACRL standards, primarily academic literacy competencies, than ILIM. For example, the question of what (processes) components of ILIM, such as IL

guidelines and policies in line with the institution and accreditation bodies, are not sufficiently represented. It can then be concluded that the list is not exhaustive hence the need for continuous improvement in line with the technological trend and local needs (Zimu, 2020, p. 57).

# IL programmes as mandatory for all first-year level students

When asked if IL programmes should be mandatory for all first-year level students at UNIVEN, all (100%) of the deans of schools and information librarians and the majority 35 (95%) of the academics agreed, as indicated in Table 3 below, these findings concur with the findings of several previous studies, among others, Bartol et al. (2018) and Ullah and Ameen (2019) who respectively reported that IL programmes should be mandatory for students and that it is critical to offer IL programmes as mandatory for all students in order to establish a foundation for balanced academic progress. The currently fragmented IL-related programmes offered at the UNIVEN could be avoided by offering IL programmes as mandatory to all first-year level students. Moselen and Wang (2014); Wang (2011) posit that systematically planned IL programmes and those integrated into academic programmes are more effective in enhancing students' IL skills and preparing them to become lifelong learners.

Table 3: IL offered as mandatory to all first-year level students

	Information	Academics	Deans of schools
	librarians (N=6)	(N=37)	(N=6)
Agree	6 (100%)	35 (95%)	6 (100%)
Disagree	0	0	0
Neutral	0	2 (5%)	0

#### 9.2 Opportunities of offering IL to the university students

The academics were required to show their agreement or disagreement with the listed five statements concerning the opportunities of offering IL programmes at the university. The findings in Table 4 show that academic respondents strongly agreed or agreed that all the listed statements are opportunities for offering IL programmes to university students, as indicated by the mean values of two and below. Moreover, the mean value/s of 1.30 and 1.33, respectively, show that the only

way to make students attend and acquire the intended IL skills is to make IL programme compulsory for all, and attending IL programmes increase students' academic performance.

From the interview guides, the deans of schools and information librarians agree that IL programmes should be compulsorily offered to all first-year level students at the UNIVEN because IL programmes improve students' academic performance. Notably, results in Table 4 further show that most academics at the UNIVEN believe that IL programmes equip students with an opportunity to acquire skills in using library resources, as indicated by the mean value of 1.51. The deans of schools and information librarians also stated that students who attend IL programmes could easily search library resources, whether digital or print.

The findings were supported by earlier studies such as Moyo and Okemwa (2022), Rafiq et al. (2020), Banik and Kumar (2019), Davids and Omar (2018), Tlakula and Fombad (2017), Adeleke and Emeahara (2016) and Shao and Purpur (2016). According to Rafiq et al. (2020), IL programmes should be offered as mandatory modules to university students. Moyo and Okemwa (2022), Banik and Kumar (2019), and Davids and Omar (2018) posit that IL programmes improve students' academic performance. Shao and Purpur (2016) allude that IL is one of the critical skills essential for "academic, professional and personal development and success," and it (IL) improves writing ability and academic performance among undergraduate students. Tlakula and Fombad (2017) and Adeleke and Emeahara (2016) reiterate that students who attend IL modules have an opportunity to acquire the skills how to effectively search the Internet or effectively access and use electronic library resources (ELRs).

Table 4: Academics views for the opportunity of offering IL programmes to university students (N = 37)

	Respondents	Strongly		Neutral	Disagree	Strongly disagree	Mean	Standard Deviation
		Agree						
IL programme adequately equips students with the skills for writing assignments and other academic-related tasks.	Academics	20 (54.1%)	14(37.8%)	1 (2.7%)	2 (5.4%)	0 (0%)	1.59	.798
The only way to make students attend and acquire the intended IL skills is to make IL programme compulsory for all	Academics	28 (75.7%)	8 (21.6%)	0 (0%)	1 (2.7%)	0 (0%)	1.30	.618
Attending the IL programme increases student's academic performance	Academics	15 (40.5%)	19 (51.4%)	2 (5.4%)	0 (0%)	1 (2.7%)	1.33	.804
IL equips students with an opportunity to acquire skills in the use of library resources.	Academics	23 (62.2%)	11(29.7%)	2 (5.4%)	0 (0%)	1 (2.7%)	1.51	.837
The offering of an IL programme can lead to the integration of IL as a credit-bearing module into an academic programme	Academics	14 (37.8%)	14(37.8%)	6 (16.2%)	1 (2.7%)	2 (5.4%)	2.00	1.080

# 10 Challenges

To establish the challenges of integrating IL as a credit-bearing module into first-year-level academic programmes at the UNIVEN, participants (academics) were requested to agree or disagree with the seven statements that were listed. Furthermore, and through the interview guide, the deans of schools and information librarians were requested to state the challenges faced in integrating IL as a credit-bearing module into first-year-level academic programmes. As indicated in Table 5, the mean values of less than 2.5. findings revealed that the majority of academics agreed that inadequate lecturer venues with facilities needed to teach IL, inadequate human resources to teach IL, lack of collaboration between academics and librarians, methods of offering IL programmes, and lack of IL policy at the UNIVEN are challenges that could deter the integration of IL as a credit-bearing module into all first-year level academic programmes at the institution of study.

The findings of the interviews with the deans of schools and information librarians also confirmed that inadequate lecturer venues with facilities needed to teach IL, inadequate human resources to teach IL, lack of collaboration between academics and librarians, methods of offering IL programmes, and lack of IL policy at the UNIVEN are some of the challenges that hindered progress in integrating IL as a credit-bearing module into all first-year level academic programmes of the studied university. The information librarians stated that poor infrastructure, lack of support, and lack of collaboration between academics and librarians are the limiting factors in integrating IL as a credit-bearing module into academic programmes at the UNIVEN. This study is supported by the findings of Ozor and Toner (2022), Moyo and Okemwa (2022), Lwehabura (2018), Moyo and Mavodza (2016), Mnkeni-Saurombe (2015), and Omar et al. (2014) who proclaim that in most of the African universities, the integration of the IL into the academic programmes are deterred by many challenges such as lack of resources, skills, relevant policies and collaboration between librarians and academics.

Lwehabura (2018) reiterates that lack of or limited resources such as venues and information and communication technologies (ICTs) related resources are some of the biggest challenges faced in the offering of IL in African universities. According to Omar et al. (2014), three universities of Zanzibar: the State University of Zanzibar, the University College of Education, and Zanzibar University, do not have adequate numbers of qualified IL specialists. Furthermore, in South African and United Arab Emirates (UAE) universities, there is a lack of collaboration between academics and librarians in providing IL programmes (Moyo & Mavodza, 2016). African universities struggle to

integrate IL into academic programmes due to a lack of IL policy (Davids & Omar, 2018; Mnkeni-Saurombe, 2015; Moyo & Okemwa, 2022; Onwuchekwa, 2017). Davids and Omar (2018) and Lwehabura and Stilwell (2008) posit that the best IL programme is yet to be seen hence the importance of integrating various strategies depending on the context and affordability.

Table 5: Academics' views on challenges faced in offering IL programmes (N = 37)

	Respondents	Strongly Agree	Agree	Neutral	Disagree	Strongly	Mean	Standard
						disagree		deviation
Lack of collaboration between academics and librarians	Academics	15 (40.5%)	6 (16.2%)	11 (29.7%)	4 (10.8%)	1 (2.7%)	2.19	1.175
Inadequate human resources to teach IL	Academics	11 (29.7%)	9 (24.3%)	16 (43.2%)	0 (0%)	1 (2.7%)	2.22	.976
Offering IL as an informal programme	Academics	5 (13.5%)	9 (24.3%)	17 (45.9%)	3 (8.1%)	3 (8.1%)	2.73	1.071
Methods of offering the IL programme	Academics	5 (13.5%)	15 (40.5%)	13 (35.1%)	4 (10.8%)	0 (0%)	2.43	.867
Lack of home-grown IL standards	Academics	10 (27.0%)	5 (13.5%)	16 (43.2%)	5 (13.5%)	1 (2.7%)	2.51	1.121
Lack of IL policy in the university	Academics	10 (27.0%)	11 (29.7%)	11 (29.7%)	2 (5.4%)	3 (8.1%)	2.38	1.187
Inadequate lecturer venues with facilities needed to teach IL	Academics	16 (43.2%)	14 (37.8%)	3 (8.1%)	2 (5.4%)	2 (5.4%)	1.92	1.115

#### 11 Conclusion and recommendations

The conclusions and recommendations are discussed in line with the study's objectives.

# 11.1 Level of knowledge regarding IL content of the existing IL programme

This study concluded that IL programmes at UNIVEN are fragmented as some departments have adopted and implemented what this study can consider as standalone IL programmes. It is a concern that it is optional for first-year-level students to attend the library-led IL programmes. In addition, collaboration between academics and librarians is weak and needs strengthening. Therefore, UNIVEN IL programmes can be viewed as not sufficiently well-organised.

Regarding the perceptions of UNIVEN academics about the IL programme, a need to include the components that educate students about searching the web; searching databases and e-journals; plagiarism; reference and referencing techniques; and writing assignments emerged from the results. These components are compatible with the ACRL standards adopted for this study. In addition, the ILIM is a model that helped understand the phenomenon studied in this context. This model is anchored on three elements – what, who, and how. These three elements are critical in producing an information-literate, critical-thinking, and lifelong-learning student. The elements represent the process (what), people (who), and resources (how) involved in the integration of IL into academic programmes. Based on the study's findings that confirmed fragmented IL programmes and lack of collaboration between librarians and academics, corrective measures regarding these challenges cannot be over-emphasised. The adoption of ACRL and ILIM standards may be used as a strategy to enhance the existing IL and to integrate IL into all first-year level academic programmes at the UNIVEN.

# 11.2 Opportunities and challenges of integrating IL into the curriculum

Objective two and three focused on the opportunities and challenges of integrating IL into the curriculum. The findings indicated that the deans of schools and information librarians responded positively that IL programmes should be compulsorily offered to all first-year level students at the UNIVEN because IL programmes improve students' academic performance. Neerputh in Gwyer et al. (2012) reiterates that there is a correlation between IL programmes, student attendance, and academic performance. The level of adoption of information literacy (IL) programmes at the studied university is disproportionately unequal. It is apparent that, at UNIVEN, the implementation process of IL programmes is not guided by institutional and accreditation body's guidelines and policies, as each department uses discretion on what and how to implement. For Moselen and Wang

(2014), the implementation of the IL programme needs to be systematically organised and embedded within the academic programme for them to be effective. They also call for a strong partnership between academics and librarians.

Challenges identified, such as scarcity of needed resources, skills, relevant policies, and social and academic compact between academics and librarians, need to be turned into opportunities for the benefit of the institution considered, HDIs. Understanding that the UNIVEN spends a considerable amount of money on subscriptions and purchasing of ELRs (Ndou, 2021), the current study reiterates the need for the integration of IL as a credit-bearing module into academic programmes as a strategy to produce life-long learning and critical thinking graduates.

Therefore, stakeholders, such as the university management and the facilities, administration, and ICT departments, should come on board and ensure that the university infrastructures are suitable for offering competitive technology-based IL instruction programmes. It cannot be argued that UNIVEN has joined other institutions of higher learning to offer IL programmes to students. This indicates that UNIVEN could develop and monitor sustainable and well-developed IL programmes that are credit-bearing for all academic programmes if the government and other stakeholders provided the necessary support to improve its IL policies and infrastructure.

# 12 Limitations of the study

While the participants were aware of some crucial components of the IL programme that need to be embedded into an academic programme, it transpired that UNIVEN departments were using the standalone IL model. It is considered a bottom-up approach as the lecturers introduced it. It is unclear if the deans of the departments endorsed the initiative. The library-managed IL programme was offered to first-year-level students, but it was optional for them to attend. There was no strong partnership between academics and librarians for them to organise IL programmes systematically. There was a dearth or limited resources to conduct effective and efficient IL programmes. There was no institutional policy to guide the implementation process of IL programmes and also take cognisance of technological trends and local standards, including indigenous epistemologies and languages.

The study was more theoretical as it relied more on the participants' perceptions than in-depth document analysis of the module content of the departments considered early adopters of IL programmes and library-led IL programs. Given that, the findings of the study need to be limited to

the institution of study and only extended with caution. It is recommended that future studies focus on the detailed analysis of IL programme and their correlation to the academic performance of students, especially first-year-level students.

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