Empowering legal minds: enhancing virtual information literacy training for law students at a university in South Africa

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The study explores the development and implementation of a virtual Information Literacy (IL) programme for first-year law students at the University of Venda. Conducted via Microsoft Teams between April and June 2021, the programme aimed to enhance the information-seeking, evaluation, and application skills of 311 students enrolled in the Introduction to Theory of Law course (INT 1141). Using innovative teaching strategies and technology, the programme fostered an engaging learning environment aligned with the American Association of Law Libraries (AALL) standards for legal research competencies. A quantitative approach evaluated the programme's impact through a Google Forms survey shared with the students' INT 1141 WhatsApp group. Additionally, students completed an online test on Moodle, achieving an average pass rate of 79.4%. The findings highlight students' positive perceptions of the IL programme and underscore its effectiveness in meeting their specific information needs. This research offers valuable insights into integrating technology-enhanced education into legal curricula, emphasising the importance of cultivating information literacy skills essential for success in the legal profession. By addressing these needs virtually, the study contributes to advancing digital literacy in higher education.

1 Introduction

Information literacy (IL) is an essential skill in the digital age, enabling individuals to access, evaluate, and use information effectively. This concept of IL has been defined in various contexts, reflecting its multifaceted nature. According to the *Framework for Information Literacy for Higher Education* (2016) by the Association of College and Research Libraries (ACRL), information literacy encompasses a set of integrated abilities that include the reflective discovery of information, understanding how information is produced and valued, and using information to create new knowledge while participating ethically in learning communities. The ACRL Framework emphasises that information literacy involves not only locating and using information but also understanding how knowledge is organised, thereby fostering lifelong learning.

Building on this, Martzoukou et al. (2022) specifically defined IL for law students as mastering the tools and strategies necessary to find, analyse, and apply legal information. This includes understanding legal citations, navigating research platforms like Westlaw and LexisNexis, and critically evaluating legal precedents, statutes, and regulations. Combining these perspectives, the researcher's definition of IL highlights its practical application: it is the ability to recognise when information is needed and to locate, evaluate, and use that information effectively. For law students, this means developing skills to identify authoritative legal sources, utilise legal databases efficiently, and apply research methods to address complex legal problems. This comparative approach underscores the shared emphasis on the critical evaluation and ethical use of information while tailoring the concept to the specific needs of law students.

At the University of Venda (UNIVEN), law students, particularly from rural and underprivileged backgrounds, face challenges due to limited digital and information skills (Tlakula and Fombad 2017). Most students lack basic computer, information and computer skills, highlighting the need for customised IL programmes (Tlakula and Fombad 2017; Shibambu and Mojapelo 2024). As the legal profession transitions to the digital age, law libraries play a crucial role in preparing students to navigate vast legal information sources (Temiloluwa and Modupe 2020). To address this, a virtual IL programme was implemented to equip first-year law students with essential legal research skills. This programme or training, conducted via Microsoft Teams, was made available to law students through the UNIVEN Law Library LibGuide, which can be accessed via the UNIVEN website, which was accessible on: https://www.univen.ac.za/library/. Mulroy (2019) defines LibGuides as guides and information management systems curated by librarians. The LibGuide served as a dedicated platform that consolidated all relevant legal databases and resources, functioning like a mini-website specifically designed

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for law students. The initiative aimed to bridge the digital divide and prepare students for modern legal practice (Temiloluwa and Modupe 2020). By fostering digital fluency and enhancing research competencies, the programme contributed to integrating technology-enhanced education into legal curricula and meeting the evolving demands of the legal profession in 4IR.

2 Statement of the problem

Information and Communication Technologies (ICTs) have revolutionised higher education, including legal studies, but pose challenges for first-year law students at UNIVEN, where traditional research skills—such as locating legal materials in physical libraries, using printed case law reporters and statutory compilations, critically evaluating textual resources, and mastering manual citation techniques—are increasingly insufficient (Temiloluwa and Modupe 2020). While legal education historically emphasised doctrine and research, integrating IL into curricula remains inadequate, leaving students unprepared for digital legal practice (Selby 2022). The COVID-19 pandemic accelerated virtual learning but highlighted gaps in IL integration (Temiloluwa and Modupe 2020). This research evaluated a virtual IL programme's impact on students' research skills and confidence, addressing challenges to better prepare them for modern legal careers (Cuffe 2002).

The following questions were raised to guide the study:

- Which devices did law students use to attend the virtual sessions?
- What is the frequency of visiting the UNIVEN law LibGuide among students?
- What are the primary barriers to effective participation in the UNIVEN Law Library virtual IL programme?

2.1 IL Standards for Law Students

Universities must align their IL programmes with national or international standards to ensure effectiveness (ACRL 2016; Tibaldo 2022; Ramabina and Ndou 2023). This study, guided by the American Association of Law Libraries (AALL) Principles and Standards for Legal Research Competency (AALL 2020), assessed first-year law students' perceptions of the IL programme at a law library. The AALL standards, revised in 2020, are pivotal in shaping IL within legal education, focussing on adaptability to digital environments, and fostering critical evaluation skills (AALL 2020). Table one (1) below outlines the key AALL standards relevant to this study. In South Africa, while there are no nationally mandated IL standards for universities, frameworks developed by oversight bodies like the Committee for Higher Education Librarians of South Africa (CHELSA) provide valuable guidance for aligning IL programmes (Esterhuizen and Kuhn 2010).

The current study emphasises the importance of assessing the IL content offered to law students at UNIVEN against the AALL standards. This is due to their law-specific focus, which offers a more tailored framework compared to the general CHELSA standards. Furthermore, these standards have been successfully adopted in other contexts to enhance the quality and relevance of IL programmes for law students, as highlighted in studies by Callister (2003), which discussed the adoption and application of the AALL standards in legal research education, highlighting their role in improving law students' research competencies. Although Hutchinson and Duncan's (2012) study focused on doctrinal legal research, this paper referenced the significance of using frameworks like AALL for enhancing research skills specific to the legal discipline. This alignment ensures that the IL curriculum meets the specialised needs of legal education and prepares students to operate effectively in a legal environment.

Table 1: The five (5) AALL principles are as follows:

Principle I	A successful legal researcher has foundational knowledge of the legal system and sources of legal information, including analytical tools
Principle II	A successful legal researcher gathers information through effective and efficient research strategies
Principle III	A successful legal researcher critically evaluates information
Principle IV	A successful legal researcher applies information effectively to resolve a specific issue or need
Principle V	A successful legal researcher distinguishes between ethical and unethical use of information and understands the legal issues associated with the discovery, use, or application of information

(Source: Adapted from AALL Principles and Standards for Legal Research Competency)

3 Literature review

The section reviews the relevant literature on information literacy for law students.

3.1 The Role of devices and the Library LibGuide platform in enhancing virtual IL Sessions

Virtual IL programmes significantly enhance research skills and confidence by offering interactive, digital learning experiences that improve information retrieval, evaluation, and critical thinking (Secker 2004; Çukadar and Kahvecioğlu 2012). These programmes, featuring modules on database navigation and citation management, engage learners through gamification and multimedia resources (Pinto et al. 2024). Evidence highlights improved academic performance, better-structured research outputs, and higher-quality publications among participants (Toteng et al. 2011; Li et al. 2023). They foster resilience in digital research environments and support lifelong learning, equipping learners with practical skills for academic and professional success (Olorunfemi et al. 2015).

The use of various devices such as laptops, tablets, and mobile phones has become essential for law students attending virtual IL sessions or classes. These devices provide flexibility and convenience, enabling students to access sessions from anywhere and at any time (Al-Rahmi et al. 2022; Yu et al. 2022). Laptops and tablets, with their larger screens and robust functionalities, allow students to efficiently navigate complex legal databases, take detailed notes, and participate in interactive elements of the sessions. Meanwhile, mobile phones offer accessibility for students who may not have access to more expensive devices, ensuring inclusivity in the learning process. Research suggests that the ability to use multiple devices promotes a more personalised and adaptive learning experience, as students can choose the tools best suited to their needs and circumstances (Al-Rahmi et al. 2022; Yu et al. 2022). For first-year law students, these devices not only enhance engagement but also prepare them for the technology-driven nature of modern legal practice.

The platform used to host these virtual sessions plays a critical role in their success. At UNIVEN, the use of the Library LibGuide as an accessible platform for hosting and organising the IL programme demonstrated several benefits. LibGuides, integrated into the library website, serve as a centralised repository for legal resources, tutorials, and session materials (Mulroy 2019). This integration simplifies access to essential tools and ensures that students can easily navigate, and revisit training content as needed. By leveraging the LibGuide, the programme ensured that students were introduced to a platform designed to mimic the resource-oriented approach of professional legal research environments, fostering skills essential for their academic and professional careers (Mulroy 2019). Moreover, hosting sessions via a platform tied to the library reinforces the importance of the library as the primary hub for scholarly and legal research, promoting the habitual use of library resources. This approach aligns with best practices in library science, which advocate for the seamless integration of technology and traditional library resources to enhance student learning outcomes.

3.2 Challenges in developing IL skills for first-year law students

Developing IL skills among first-year law students is essential, yet challenging, due to the specialised demands of legal research and scholarship. Legal research requires proficiency in navigating complex databases, understanding case law hierarchies, and mastering precise citation styles (Olorunfemi et al. 2015; Montana 2017). Transitioning from general academic research to these specialised competencies poses difficulties for students (Toteng et al. 2011; Montana 2017), compounded by the critical need to evaluate legal sources for relevance and authority (Montana 2017; Goodsett and Schmillen 2022). The dynamic nature of legal information and the rise of online resources necessitate ongoing updates to the IL curriculum (Montana 2017). Addressing these challenges involves tailored instruction, practical exercises, and adaptive learning strategies to support legal education effectively (Toteng et al. 2011; Çukadar and Kahvecioğlu 2012; Montana 2017).

3.3 Perception of IL training and its relevance to future legal careers

IL training is essential in legal education, equipping law students with critical skills for effective legal research and practice. It enhances their ability to retrieve, evaluate, and synthesise information, navigate legal databases, critically analyse case law, and apply legal principles practically (Romig and Burge 2024). These competencies are indispensable in a dynamic legal landscape shaped by technological advancements and expanding information sources (Secker 2004). IL training fosters lifelong learning and professional development, preparing students for the complexities of legal practice and promoting successful careers (Romig and Burge 2024).

Recent studies highlight virtual IL programmes as effective in enhancing research skills and critical thinking. Interactive digital platforms, incorporating gamification and multimedia resources, engage students and improve knowledge retention (Montana 2017; Goodsett and Schmillen 2022). However, first-year law students often struggle with specialised IL skills, such as navigating complex databases and mastering citation practices (Toteng et al. 2011; Montana 2017). The literature underscores a gap in tailored IL instruction for these students, emphasising the need for adaptable curricula to address the evolving legal information landscape (Çukadar and Kahvecioğlu 2012; Montana 2017). This study evaluates a virtual IL programme at UNIVEN, aiming to better support first-year law students' academic and professional success.

4 Research methodology

This study adopted a quantitative approach to assess the impact of an IL programme integrated into the INT 1141 module at UNIVEN. The quantitative method was chosen for its ability to objectively measure and analyse students' IL proficiency and engagement, yielding statistically significant results. The research adhered to the AALL Principles and Standards for Legal Research Competency (AALL 2020), which emphasise structured training to address challenges in navigating legal information resources (Wang 2011; Lloyd 2017). A census sampling method was used to include all 311 first-year law students enrolled in the module, comprising 157 Bachelor of Laws (LLB) students and 60 Bachelor of Arts (BA) in Criminal Justice students. This ensured a comprehensive representation of the student population and eliminated sampling bias, allowing for the generalisation of the findings (Kothari 2004; Martinez-Mesa et al. 2016; Polak 2009). The participation levels reflect the true enrolment proportions in this course. LLB students constituted the majority, which aligns with the actual demographic makeup of the cohort. This methodological rigour highlights the effectiveness of census sampling in accurately representing student experiences and underscores the importance of equitable resource allocation.

A self-administered questionnaire was distributed via Google Forms to participants on their WhatsApp groups. As one of the world's most widely used messaging platforms with over one billion users (Coleman and O'Connor 2019), WhatsApp provides a lightweight, mobile communication tool (Reeves, Alkhalaf and Amasha 2019). Its key advantages include fostering increased discussion, collaboration, and accessibility beyond regular working hours (Barhoumi 2015). The questionnaire was validated by being reviewed by a fellow Information Librarian at UNIVEN, consisted of eight questions. However, the current study focuses on three questions relevant to the research objectives. The questionnaire, which included both open-ended and closed questions, achieved a 69.7% response rate, effectively minimising response bias (Polak 2009; Nsibirwa 2012). Students also completed an online test through Moodle to assess their practical application of IL skills, with an average pass rate of 79.4%. The test results were given to the INT 1141 lecturer, and it contributed 10% towards the semester marks for students. The IL programme was delivered through Microsoft Teams (with Moodle used for course content), supporting virtual learning during the COVID-19 pandemic (Eisenberg and Berkowitz 1990; Crocker 2018). Table two (2) below provides an overview of the IL programme structure and content. To promote inclusivity and accessibility, all sessions conducted on Microsoft Teams were recorded, enabling students who were unable to attend live sessions to access the materials at their convenience. This approach catered to diverse learning needs and ensured equal opportunities for academic success. Descriptive statistics were used to analyse the collected data, providing an overview of students' performance and perceptions (Rahmat 2021). The study adhered to ethical guidelines, ensuring voluntary participation and confidentiality. These methodologies allowed for a systematic evaluation of the IL programme's effectiveness, contributing valuable insights for improving curriculum design in legal education.

Table 2: Content of virtual UNIVEN law library IL programme

SESSIONS	COVERAGE	PRESENTER
Session 1	Introduction and Importance of Library Trainings	Librarians
Session 2	Microsoft Word and PowerPoint (practical)	Librarians
Session 3	Catalogue & Discovery platforms (Searching for previous exam papers, Course Outlines, Classnotes, Tutorials, Memos, Books, etc.) **Principle I and II**	Librarians
Session 4	Law Library Orientation. How to physically locate materials (textbooks, statutes, and law reports) on the shelves of the Law Library. A video was made and is available on Youtube. **Principle I**	Librarians
Session 5	Legal databases (how to search for articles for assignments and research) **Principle I**	Librarians
Session 6	Searching for legislation / statutes **Principle II**	Librarians
Session 7	Searching for case law **Principle II**	Librarians
Session 8	Referencing and plagiarism **Principle V**	Librarians
Session 9	Turnitin presentation (Assignment / Task 1) **Principle IV**	Librarians
Session 10	Evaluation / Test / Assignment / Task 2 **Principle IV**	Librarians

(Table 2: UNIVEN virtual IL programme)

5 Research findings

The data from the questionnaire are presented below and the findings are analysed and discussed. The survey's high response rate ensures that the results are representative of the entire population, allowing meaningful insights to be drawn from them.

5.1 Demographic Data

The study achieved a high response rate of 69.7% (217 out of 311 students), indicating strong participation and enhancing the reliability of the findings. The sample showed balanced gender representation, with 107 men (49.3%) and 110 women (50.7%), ensuring diversity. Most of the respondents (130) were between 20-30 years (59.9%), indicating a young adult demographic that can limit generalisability to other age groups. Regarding academic programmes, 156 (71.9%) were LLB students, and 61 respondents (28.1%) pursued BA Criminal Justice students, suggesting a skew toward LLB respondents, as explained under research methodology.

5.2 What device or devices did you use to attend virtual UNIVEN law library training?

The study investigated the devices used by the respondents to attend virtual IL sessions at UNIVEN. The institution launched an initiative in 2011 to provide tablets to all first-year students (Egberongbe 2011), but delays in implementation often forced newcomers to rely on their personal devices for virtual training sessions. Figure 1 shows that hundred and eighty-two of the respondents (84%) used mobile phones, while 30 (14%) opted for laptops; only one student used a tablet. Four (4) (2%) respondents did not answer the question.
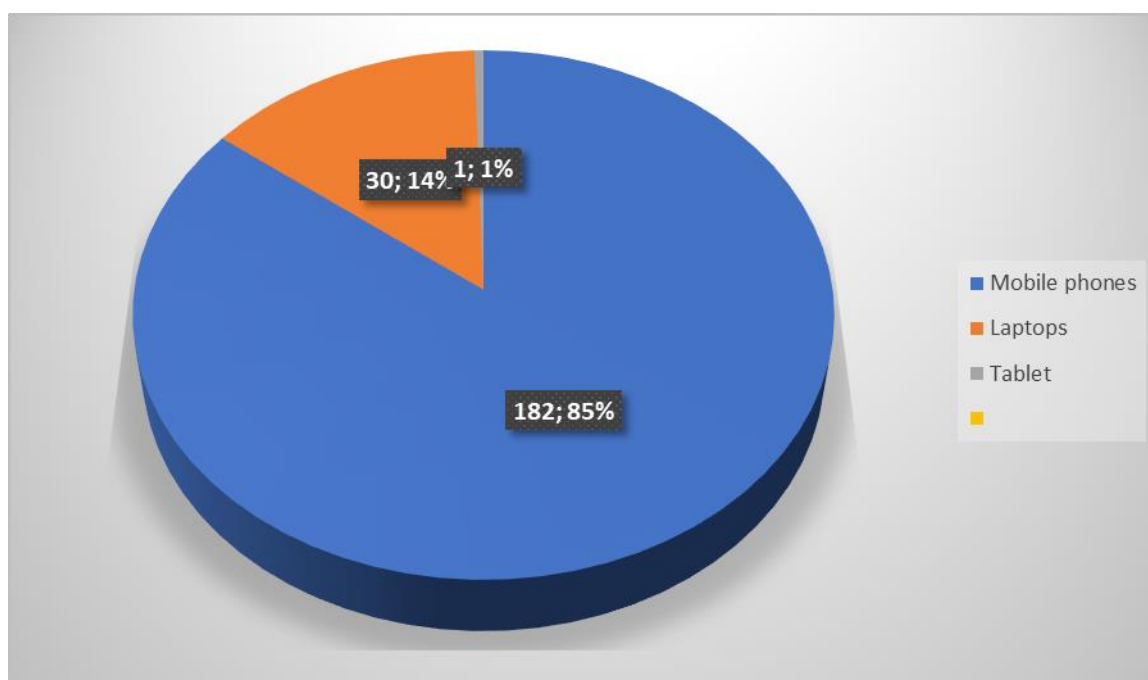
Figure 1: Devices used to attend UNIVEN law library virtual training (n=213)

5.3 How often do you visit UNIVEN law library LibGuide

Respondents were asked to indicate how often they visited the UNIVEN law library LibGuide, which was the platform used to conduct these training sessions. The law library LibGuide is a platform where all UNIVEN law library resources have been grouped together; it is a mini website for law students where they access their virtual resources. The options available for the frequency of use of the platform were regularly, sometimes, and never. As shown in the Figure 2 below, most of the students, 156 (71.9%) indicated that they visited the law library LibGuide, demonstrating a significant level of engagement with this platform, while 42 students (19.4%) indicated that they visited the platform regularly, indicating that they rely on it as a primary source of information and support for their study. This suggests that the library LibGuide effectively meets the needs of these students and plays a crucial role in their academic activities. Nineteen (19) students (8.8%) indicated that they had never visited the library LibGuide. This suggests that the library LibGuide is perceived as a valuable resource by a large portion of the student population.
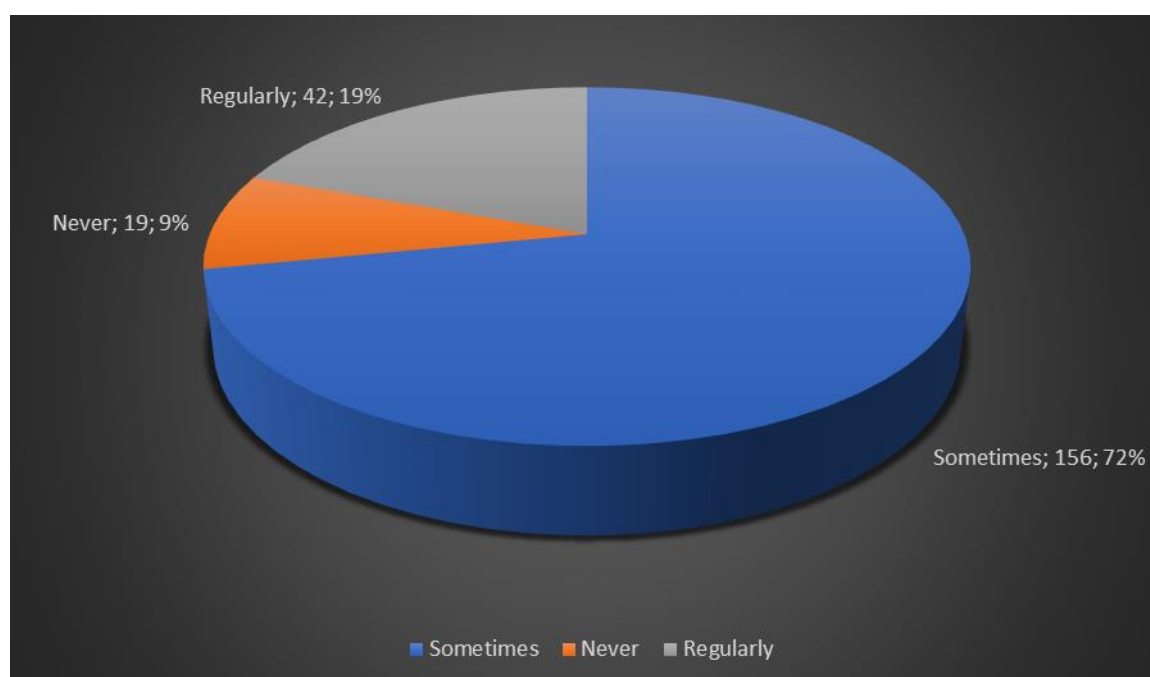

Figure 2: Visit to the UNIVEN law library LibGuide (n=217)

To verify an upward trend in visits based on the research LibGuide statistics, Table 3 illustrates that the IL programme significantly enhanced engagement, resulting in a 126% increase in views during the programme and continued growth, reaching 8,784 visits by December 2021.

Table 3: UNIVEN law library LibGuide usage statistics

UNIVEN law library LibGuide number of visits: January-March 2021 (before the programme)		UNIVEN law library LibGuide number of visits: April-June 2021 (during/after the programme)	
January	181	April	212
February	353	May	871
March	156	June	774
Total	690	Total	1873

5.4 What were the challenges you encountered with this UNIVEN law library virtual information literacy programme?

This finding provides insight into the challenges facing students participating in the virtual programme. The most common challenge reported by the respondents, as shown in Figure 3, was connectivity problems, with 71 students (58.7%) experienced difficulties maintaining a stable internet connection. A considerable number of respondents, 39 students (32.2%), cited the lack of data as a challenge that prevented them from attending some sessions. Five students (4.1%) reported audio problems during virtual sessions, such as difficulty hearing the presenter or experiencing frequent audio interruptions. Four respondents (3.3%) mentioned that they did not have the necessary gadgets to attend virtual sessions, indicating a barrier related to access to technology. One student (0.9%) reported a challenge where the programme schedule clashed with their classes. Although this was an isolated case, it underscores the importance of coordinating schedules to minimise conflicts and accommodate other academic commitments.

A respondent expressed difficulty keeping up with the pace of the programme, indicating a potential mismatch between the programme's speed and the individual's learning preferences or capabilities. Interestingly, 96 respondents (44.24%) did not report any challenges with the programme. This may suggest that these students did not encounter any significant difficulties, potentially because they did not face the issues commonly reported by others, such as connectivity problems or lack of resources. It is also possible that these respondents did not participate fully in the programme and, as a result, did not experience the challenges identified by others.
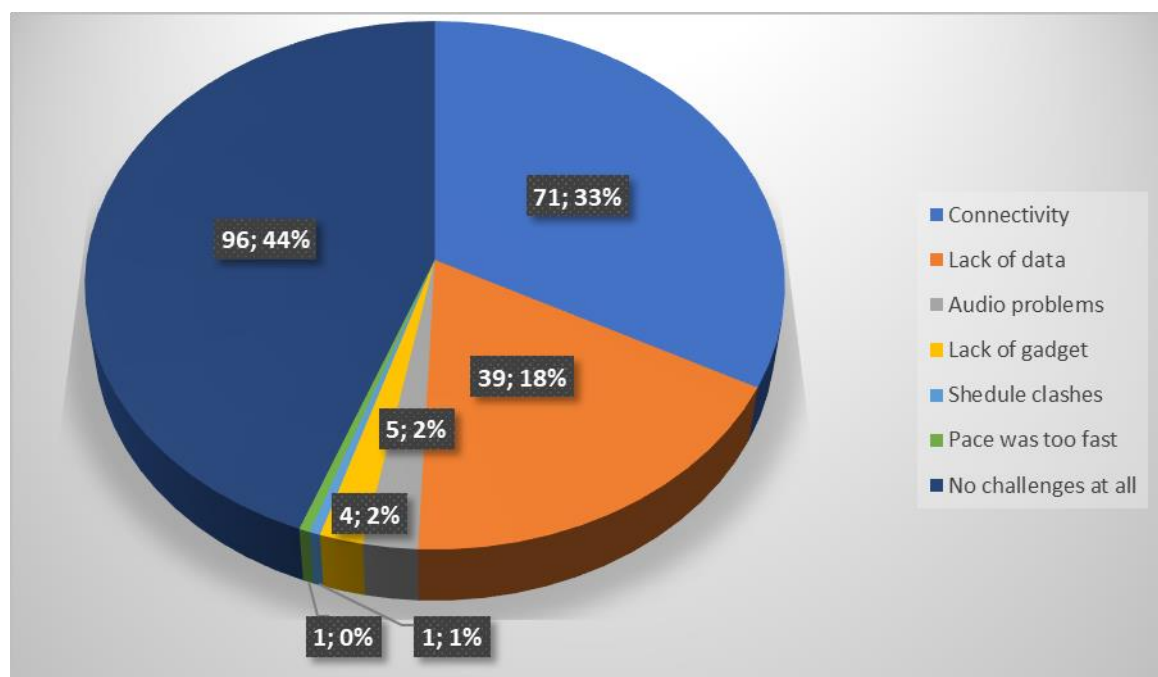

Figure 3: Challenges encountered in virtual sessions (n=217)

6 Discussion of the findings

The mandatory IL course, integrated into the INT 1141 module, was positively received by the students, who appreciated the access to resources and the ability to engage with the material in a flexible manner. However, the study also identified areas for improvement, particularly regarding the omission of specific principles in curriculum design (Crocker 2018).

6.1 Devices used by law students to attend the sessions

The findings reveal a predominant reliance on mobile phones (84%) among students attending virtual IL sessions at UNIVEN, with laptops used by a smaller group (14%) and tablets barely represented. This underscores the critical need for mobile-optimised platforms to ensure accessibility and functionality for the majority of students. While laptops, with their larger screens and enhanced capabilities, cater to a smaller but significant subset, the near absence of tablet use suggests limited adoption or accessibility despite earlier institutional initiatives to distribute them. These device usage patterns highlight the importance of responsive design that accommodates diverse devices and aligns with global educational trends favouring mobile technology (Atas and Celik 2019). To enhance the effectiveness of virtual IL programmes, addressing device-related challenges and ensuring equitable access across varying platforms are essential. Organisers should review communication strategies, clarify attendance requirements, and assess the effectiveness of virtual sessions to accommodate diverse student needs effectively.

6.2 The frequency of law students' visits to the UNIVEN law library LibGuide

The INT 1141 students are guided on how to access online resources, which are available on the law library LibGuide available via the UNIVEN website. The process involves visiting the UNIVEN website and navigating to the law library LibGuide, a dedicated platform that consolidates all resources for law students in one convenient location. The findings reveal a strong engagement with the UNIVEN law library LibGuide, with 71.9% of students using it and 19.4% visiting regularly, indicating its value as an academic resource. However, 8.8% of students have never accessed the platform, suggesting gaps in awareness or perceived relevance. The IL programme significantly boosted engagement, with a 126% surge in views during the programme and sustained growth with 8,784 visits by December 2021. This highlights the programme's effectiveness in raising awareness and encouraging use. To further enhance the LibGuide's reach and usability, targeted outreach, user feedback mechanisms, and marketing strategies are essential. Continuous update and integration with IL training sessions can maintain its relevance and accessibility (Çukadar and Kahvecioğlu 2012). These efforts would broaden the platform's impact, ensuring it supports more students while fostering academic success and research productivity. The study underscores the importance of adaptable and user-focused academic resources.

6.3 Challenges to effective participation in the UNIVEN law library virtual IL programme

The primary barriers to effective participation in the UNIVEN law library virtual IL programme include connectivity issues, reported by 58.7% of respondents, highlighting the critical reliance on a stable internet infrastructure. Additionally, 32.2% cited the lack of affordable or accessible data as a significant obstacle, reflecting socioeconomic challenges. Technical difficulties, such as audio issues (4.1%) and lack of devices (3.3%), further hinder engagement. Scheduling conflicts and difficulties keeping pace with the programme, although affecting fewer students, underscore the need for flexible delivery. Efforts like physical sessions and alternative group options are commendable but insufficient to address all challenges. Solutions such as subsidised data, device lending programmes, enhanced scheduling flexibility, and tailored content delivery could improve participation and outcomes. These findings align with Toteng et al. (2011), who identified similar challenges in transitioning to specialised legal research. Targeted instructional strategies, as proposed by Çukadar and Kahvecioğlu (2012), are essential for equitable and effective engagement.

In summary, the transition to a virtual IL programme at UNIVEN has highlighted both the potential and the challenges of delivering effective legal education in a digital format. The mandatory IL course, integrated into the INT 1141 module, was positively received by the students, who appreciated the access to resources and the ability to engage with the material in a flexible manner. However, the study also identified areas for improvement, particularly regarding the omission of specific principles in curriculum design (Crocker 2018). This gap presents an opportunity for further development, suggesting that the programme could benefit from enhancements that align with the AALL principles, particularly Principle III, and better address the unique needs of law students. The findings indicate that while the virtual IL programme at UNIVEN has made significant strides, ongoing refinement and adaptation are essential to maximise its effectiveness and ensure that students are well equipped for both academic challenges and their future legal careers. Additionally, the UNIVEN law library IL programme demonstrated success in raising awareness of resources like the LibGuide, with a significant increase in its usage during and after the programme.

7 Recommendations

The following recommendations are made to UNIVEN library management with the intention of improving their service to law students at the university.

- The UNIVEN IL programme should adopt a hybrid model, combining virtual and physical sessions, to accommodate students who may face challenges attending all online sessions.
- The IL offered content at UNIVEN should address Principle III of the AALL standard (a successful legal researcher critically evaluates information).
- Collaborate with faculty and librarians to integrate the virtual programme into the existing curriculum and ensure alignment with learning objectives.

8 Conclusion

In conclusion, this research highlighted the successful implementation of a virtual IL programme tailored for first-year law students at UNIVEN, demonstrating the effectiveness of technology-enhanced education in fostering essential legal research skills. By leveraging platforms like Microsoft Teams (for live classes) and Moodle (for course content), the study not only addresses the unique information needs of law students but also sets a precedent for integrating innovative instructional strategies within legal curricula. Although the programme does not address Principle III, the findings align with the AALL principles, reinforcing the importance of equipping future legal professionals with the competencies necessary for effective information seeking and evaluation. As legal education continues to evolve, this research serves as a valuable resource for academics and institutions aiming to enhance information literacy among students, ensuring they are well prepared to navigate the complexities of the legal landscape. Future research could explore long-term retention of these skills and the potential for scaling such programmes to benefit a broader audience within the legal education framework.

The implications of these results suggest that virtual IL programmes can serve as sustainable models for enhancing digital and research competencies in law schools. Moreover, integrating such programmes into mainstream curricula can bridge gaps in students' readiness for professional legal practice. Ultimately, this approach underscores the potential of technology-driven instruction to democratise access to quality legal education across diverse learning environments.

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