

## Article

# Integrating service-learning into information literacy education: A case study from the Philippines

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## Abstract

This study examines a gap in Library and Information Science (LIS) education in the Philippines: the limited integration of practical, community-based learning within traditional Information Literacy (IL) courses. Conventional IL instruction often falls short in fostering the critical thinking, civic engagement, and real-world application of knowledge essential for future information professionals. To address this gap, the research investigates the incorporation of service-learning (SL) into an undergraduate IL course within an LIS program and explores how it can effectively enhance IL instruction.

The existing IL course was revised to include key SL components: academic integration, meaningful service, and structured reflection and 12 undergraduate students from a Philippine university participated in the redesigned course. Qualitative data, gathered through small group discussions and reflective journals, were thematically analysed, revealing significant student learning outcomes in academic, civic, and personal domains. Results indicate that SL significantly enriches the LIS IL course by enhancing critical thinking, encouraging reflective learning, and preparing students for socially responsible roles.

This approach offers a powerful pedagogical model for LIS educators, moving beyond traditional methods to cultivate holistic student development and bridge the gap between theoretical knowledge and practical application. The study highlights the real-world impact of SL in equipping LIS graduates to address complex information needs within communities, underscoring the need for further research into its broader applicability and long-term effects on LIS education.

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**Keywords**

experiential learning; information literacy; Philippines; reflective practice; service-learning; teaching

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**1. Introduction**

In the Philippines, the Commission on Higher Education (CHED) issued CHED Memorandum Order (CMO) No. 24 in 2015 to improve the competency and outcomes-based education of graduates of Bachelor of Library and Information Science (BLIS). This memorandum provided core competencies that every graduate had to possess to ensure that targeted learning outcomes were achieved and the quality of education and training in Library and Information Science (LIS) was enhanced.

The BLIS program in the Philippines was grounded in globally recognised competencies from the Special Libraries Association (SLA) and the National Competency-Based Standards for Filipino Librarians (PRBFL). It also followed the Guidelines for Professional Library and Information Education Programs established by the International Federation of Library Associations (IFLA) and incorporated curricula from international library schools. The program equipped students with skills to gather, organise, and provide access to information while ensuring adherence to ethical standards and best practices. Although Higher Education Institutions (HEIs) in the Philippines offering the BLIS program had the flexibility to tailor their curricula, certain LIS courses remained mandatory in the core curriculum. These included Collection Management of Information Resources, Information Resources and Services I & II, Organisation of Information Resources I & II, Indexing and Abstracting, and Management of Libraries and Information Centers, among others. This was supported by studies showing that universities had been integrating information literacy (IL) into their academic programs for over a decade (Derakhshan et al., 2015; Moselen & Wang, 2014).

Central Philippine University (CPU) is an academic private university in the Philippines offering the BLIS program. Among the 53 courses in the program, totalling 152 units, *Information Literacy (LIS 3201)* was a core course worth 3 units. This course aimed to provide students with the essential skills for lifelong learning, enabling them to critically evaluate and effectively utilise information. Students were expected to acquire the ability to find, assess, and choose pertinent information while enhancing their critical thinking and digital competencies, along with gaining insight into ethical practices regarding resource utilisation. HEIs possessed the autonomy to determine their approach to teaching this subject. However, this course was limited in several aspects, including its emphasis only on the theoretical content and none for its practical application, insufficient community engagement, and a weak focus on fostering critical thinking and problem-solving skills. The traditional assessment methods used in the course did not effectively evaluate practical IL skills, and the curriculum did not adequately promote collaboration or service-learning (SL) related acquired skills. Incorporating service-learning SL could help address these deficiencies by offering experiential learning that seek to enhance academic, civic learning, and personal growth.

Recently, HEIs in the Philippines are encouraged to review and update some undergraduate courses by incorporating a SL approach to better align with current educational goals. A recent technical report by Largoza and Fernandez (2025) highlights that Philippine undergraduate

programs significantly surpass the international unit requirements observed in ASEAN countries, Australia, and the European Union. This disparity is primarily attributed to a curriculum structure that emphasises general education courses while offering limited internship opportunities. In this context, SL emerges as a viable approach to providing students with practical, experiential learning opportunities that complement their academic training.

The LIS field, with its nature so deeply rooted in service, seems to be a natural fit for the idea of service-learning. Service was not a new concept to the field of LIS; LIS students can learn more by doing than by discussion alone. It is known that the engagement of students with communities created avenues for shared learning, fostering a sense of social responsibility and civic education in LIS field (Lim & Bloomquist, 2015; Montesi et al., 2025). In line with the University's initiative to strengthen the implementation of each program courses, the LIS department selected the IL course, as this course effectively met both the academic needs of students and the required and expected practical, real-world engagement.

Accordingly, this study aims to examine the pilot implementation of the redesigned IL course for undergraduate LIS students, grounded in the theory of service-learning. This theoretical framework offers a valuable basis for enhancing the IL course by enabling students to acquire practical knowledge and skills, align more closely with industry demands, and graduate with increased hands-on experience and meaningful experiential learning. Given the problem, this study explored how the Service-Learning theory aided the development and implementation of an IL course in library and information science in the Philippines, addressing the following research questions (RQ):

RQ1. How are Service-Learning components designed for an LIS information literacy course?

RQ2. How can a Service-Learning learning approach impact information literacy instruction?

## 2. Literature Review

### 2.1 The SL approach

Service-learning is a credit-bearing educational experience, through which students participate in organised service activities that meet specific identified community needs. This is coupled with reflection on the service experience, allowing for deeper comprehension of course material, a wider appreciation of the field, and a strengthened sense of civic responsibility (Bringle & Hatcher, 2000). Sigmon's Typology of Service-Learning (see Table 1) (Phelps, 2012) classified the service-learning approaches based on a focus on either educational or service outcomes. Specifically, the Service-LEARNING model put the educational goals in the lead, placing the service part as supplementary. On the other hand, the SERVICE-learning model placed the need to address community needs above all educational goals. The balanced SERVICE-LEARNING model held the importance of both service and education within its approach, promoting a symbiotic relationship for students and the community. This was further reinforced by the disjunction caused between service and learning goals by the service-learning model alone. It helped the LIS educators and curriculum developers to understand and organise service-learning projects with the help of this classification.

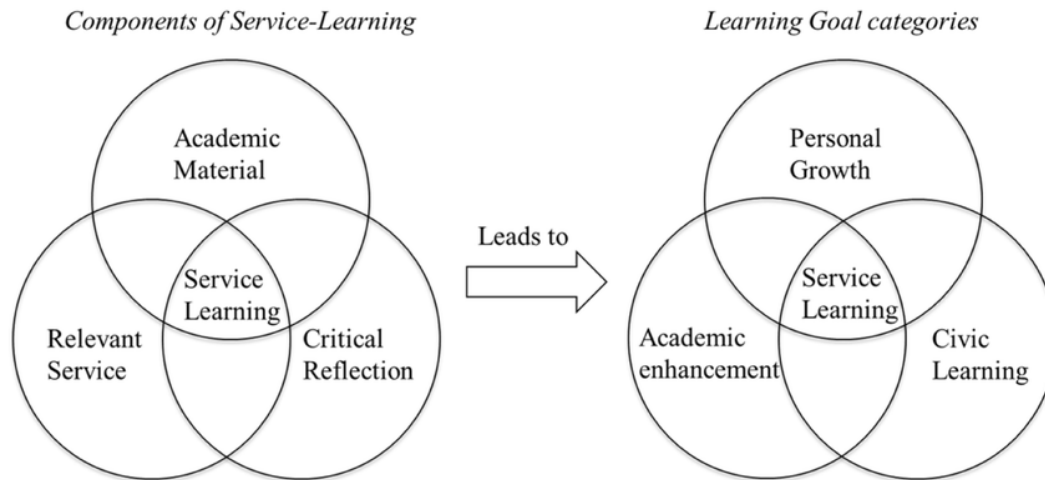
**Table 1:** A service and learning typology by Sigmon (Phelps, 2012)

| Type              | Definition                                                                                  |
|-------------------|---------------------------------------------------------------------------------------------|
| Service-LEARNING: | Learning goals primary; service outcomes secondary                                          |
| SERVICE-learning: | Service outcomes primary; learning goals secondary                                          |
| service-learning: | Service and learning goals completely separate                                              |
| SERVICE-LEARNING: | Service and learning goals of equal weight and each enhances the other for all participants |

Figure 1 presents a conceptual representation of the theoretical framework of service-learning, developed by Ash and Clayton (2009) as cited in the study of Daniel & Mishra (2017). This framework places the service-learning components in dynamic interaction with the learning goal categories. The left-hand side of the picture depicts the cyclical and interrelated nature of pertinent service, critical reflection, and academic content. It posits that meaningful service experiences exceed the mere act of volunteering; they link with educational objectives and community needs. These experiences are followed up with critical reflection, which acts as the linchpin between action and understanding.

This is embedded in the course's academic content so that students make the links between theory and practice and thereby deepen their course learning. The right side in Figure 1 illustrates how this embedded model of service-learning results in a variety of learning outcomes. The intersecting circles of "Learning Goal Categories"—personal growth, academic learning, and civic engagement—demonstrate that service-learning promotes multi-dimensional learning. Students achieve personal growth as it allows them to get to know themselves and develop higher sensitivity. They realise civic responsibility and participation through their service given to their community. "Service-Learning" is at the core of each category, because without it, this kind of learning does not take place. This framework highlights that effective service-learning includes relevant service, critical reflection, and academic integration, and it has a comprehensive effect on students to become accomplished academically, personally reflective, and civically engaged.

**Figure 1:** Conceptual framework for service-learning according to Ash and Clayton (2009) as cited by Daniel & Mishra (2017)



## 2.2 The DEAL Model in Service-Learning

The Describe, Examine, and Articulate Learning (DEAL) model of critical reflection has been applied in various educational contexts to enhance learning outcomes. In service-learning (SL) programs, it has been used to examine reflection design at the program level, helping improve understanding and implementation of critical reflection (Hale Tolar & Gott, 2012). Developed by Ash and Clayton at North Carolina State University, a three-step reflective learning model serves as a critical template for generating, deepening, and documenting learning outcomes from service experiences (Ash, 2009; Kayan Fadlelmula & Qadhi, 2024). This model guides students through a progressive reflection process.

First, students describe their service experiences objectively, detailing the factual accounts of who, what, when, and where without interpretation (Kayan Fadlelmula & Qadhi, 2024; Lorenzo Moledo et al., 2021). This initial description can occur at any point during or after the service activity, capturing all relevant details. Second, students examine these experiences in relation to specific learning objectives (Lorenzo Moledo et al., 2021). This phase focuses on meaning making, where students analyse the experience from various perspectives, including a deep dive into assumptions, strengths, weaknesses, comparisons, causes, and outcomes (Kayan Fadlelmula & Qadhi, 2024). Through this examination, students connect their service experience with academic knowledge, identify influencing systems, and provide more definitive responses to social issues (Kawai, 2021). Finally, students articulate learning by answering four key questions: "What did I learn?", "How did I learn it?", "Why does this learning matter?", and "What will I do in light of it?". This articulation helps transform their experience into a substantive and applicable process, setting goals for improved future actions (Bringle et al., 2021; Kawai, 2021; Lorenzo Moledo et al., 2021).

A significant advantage of the DEAL model is its flexibility and adaptability. The reflection process can be implemented in various formats, whether written or spoken, individual or group, in-depth or cursory, while maintaining its effectiveness (George & Clevenger, 2021). Additionally, the model integrates both reflection and assessment, making it suitable for evaluating civic and other learning objectives (Bringle et al., 2021). The reflection process

begins with the SL program and continues through completion, supporting continuous improvement and deeper understanding (Hassan et al., 2023). The DEAL Model's framework has proven valuable in diverse SL applications, demonstrating its adaptability across disciplines and learning contexts.

The DEAL Model offers several distinct benefits when implemented in SL contexts. Perhaps most significantly, it enhances students' critical thinking capabilities through its structured approach to reflection. As Lucas-Darby (2011) notes, the model functions as a "critical template that maximises the reflection process," enabling students to more effectively identify systems affecting their experiences, provide more definitive responses to issues, and determine appropriate future involvement in social issues. This critical thinking development occurs because the model guides students to systematically examine their experiences rather than simply recounting them.

### 2.3 Challenges and Barriers of Service-Learning

Service-Learning in higher education faces several challenges. Despite recognising the value of service-learning, faculty members encounter numerous obstacles that hinder its adoption and implementation. One of the most significant barriers is the substantial time commitment required. Faculty report that SL demands considerable time to properly structure learning experiences, develop appropriate outcomes, cultivate community relationships, create meaningful reflection assignments, and evaluate results (Dicks et al., 2019). Short-term commitments can strain community organisations' resources and capacity to train students effectively (Tryon et al., 2008).

Students may struggle with the gap between theory and practice, while faculty often lack structural support for implementing SL (Yusof et al., 2020). In addition to time constraints, aligning project skills with course objectives, and developing community partnerships are also significant barriers (Timmerman & Goldweber, 2022). Faculty also struggle with knowledge gaps regarding SL implementation. Roberts & Edwards (2020) identify three specific knowledge deficits: awareness, how-to knowledge, and principles knowledge. The findings of Xavier & Jones (2021) suggest that SL experiences can positively influence student perceptions by addressing and alleviating perceived obstacles, thereby promoting more engagement and appreciation of SL's value.

Faculty report difficulties with transportation to service sites, insufficient supervision due to community partner turnover or understaffing, and inadequate institutional support (Couillou et al., 2023). Faculty also find it challenging to match student skills with community needs and properly assess SL outcomes (Yusof et al., 2020). The matching of student skills with community needs represents a persistent logistical challenge. Faculty must carefully align student capabilities with appropriate service opportunities to ensure both educational objectives and community needs are met (Khatani et al., 2023; Rosenkranz, 2012). Pedagogical concerns also create obstacles. Some instructors fear that incorporating SL may cause students to lose focus on academic content or worry about diminished control over student learning during community engagement. The study of Xavier & Jones (2021) emphasises the importance of early and well-structured SL experiences, with dedicated time and reflective activities, to further reduce perceived barriers and enhance perceived benefits. These challenges are intensified in certain educational contexts. In research-intensive institutions, competing priorities create additional barriers.



Despite these obstacles, many organisations remain committed to working with service-learners (Tryon et al., 2008). To address these challenges, some institutions have implemented department-wide, multi-semester initiatives that integrate SL throughout the curriculum. This approach can help overcome time limitations, improve project-skill alignment, and distribute the responsibility of maintaining partnerships across faculty members (Timmerman & Goldweber, 2022). According to Xavier & Jones (2021) students' perceptions of barriers may initially be high but tend to decrease after participating in SL components, suggesting that initial challenges include perceived time and effort constraints, which can be mitigated through early exposure and proper planning. Such collaborative efforts show promise in providing students with meaningful community engagement opportunities while addressing common implementation barriers.

## 2.4 SL components in LIS courses

This research synthesised the findings of several key studies on the impact of SL in LIS education. Nazarova (2007), in her work at the University of Illinois, demonstrated a clear link between SL in the LIS 315/451 course and significant improvements in students' technological competence, collaborative skills, communication abilities, leadership qualities, and community engagement. More importantly, Nazarova (2007) also found that these practical experiences positively influenced students' perceptions of the LIS profession, improved their employment prospects, and fostered critical thinking and civic involvement, highlighting the interconnectedness of career development and personal/social growth.

This emphasis on practical skill development is echoed and expanded upon by Montesi, et al (2025). Their research underscored the substantial enhancement of "soft skills" in undergraduate LIS students through service-learning. By immersing students in real-world community settings, SL cultivated autonomy, adaptability, and critical thinking skills, including interpersonal communication and problem-solving, which are essential attributes for successful LIS professionals. The authors advocated for the integration of community-based learning to better align academic training with the practical demands of the profession.

Cooper (2013) reported that LIS students at Queens College overwhelmingly preferred experiential SL over traditional classroom instruction. Students valued the opportunity for practical problem-solving, mentorship, and direct community engagement. Cooper's work suggested that while classroom instruction provided the necessary theoretical foundation, SL served to solidify learning through practical application, aligning with learning theories such as contextual learning and cognitive apprenticeship. The study also revealed that SL fostered increased confidence, enhanced critical thinking and problem-solving abilities, and strengthened students' commitment to the LIS profession and civic engagement, characterising it as a transformative experience.

The work of Yontz & de la Peña McCook (2003) broadened the scope of inquiry by considering the benefits of SL for LIS faculty. They argued that SL could deepen students' understanding of core course content, facilitate collaboration among faculty members (thereby mitigating professional isolation), and promote the common good as a central tenet of higher education. This perspective highlighted the potential of SL to not only enhance student learning but also enrich the overall academic environment.

Given the positive impacts of the SL approach on students, the components of IL needed to be embedded in LIS education to develop lifelong learners; however, there was no clear approach in this regard (Derakhshan et al., 2015). Despite the importance of IL in the LIS discipline, there seemed to be no specific guidelines for teaching or embedding IL to enhance student learning (Blumer et al., 2013; Derakhshan et al., 2015). They argued that LIS students needed a holistic understanding of IL, as it formed the foundation of lifelong learning, which was essential for the discipline's focus on user education and facilitating others' learning.

Taken together, the previous studies provided compelling evidence for the efficacy of SL in LIS education. They converged on the themes of practical skill development, professional growth, critical thinking, and civic engagement, demonstrating the multifaceted benefits of integrating community-based learning into LIS curricula.

### **3. Methodology**

This study employed a case study methodology, focusing on the events, experiences, and contextual factors of the SL project. This approach utilised diverse data sources, naturalistic settings, and non-experimental design to understand the reasons and processes underlying observed phenomena (Plano Clark et al., 2023). Specifically, within the context of SL projects, the case study method can facilitate the capture of diverse perspectives from community partners and the collection of varied data, enabling the documentation of how SL contributed to IL learning. Accordingly, the research was conducted at one of the private higher education institutions in the Philippines, Central Philippine University. This university promotes the integration of SL components within each of its academic programs. In the Department of Library and Information Science, this directive led to the incorporation of SL elements into the course LIS 3201 - Information Literacy, which is designed to equip students with the skills necessary to serve diverse communities. Thus, the course was redesigned from a SL perspective and implemented with LIS undergraduate students to evaluate the effectiveness of this approach in delivering IL instruction.

#### **3.1 Re-Designing the IL course**

##### **3.1.1 The traditional IL course**

The 18-week IL course at the University is designed to cultivate students' critical thinking, digital literacy, and ethical use of information. The course, delivered through lectures and practical exercises, focuses on information retrieval, evaluation (assessing credibility, accuracy, relevance, and bias), organisation, synthesis, and ethical citation practices. Student learning is assessed via quizzes, written assignments, and presentations, culminating in the development of a module on a selected literacy topic. Additionally, the course examines the social, political, economic, and legal dimensions of information in the digital environment. The integration of a SL component further enriches the application of these competencies, equipping students for effective academic inquiry and professional research practice.

##### **3.1.2 The IL course based on SL**

The objectives of the IL course at CPU build upon the foundational knowledge of Library and Information Science, offering three contact hours per week. It incorporates a SL component that bridges theoretical classroom instruction with practical community service, thereby promoting both civic engagement and personal development.



The SL element is designed to enhance student learning by fostering real-world application of LIS principles. It begins with a community needs assessment, during which students identify a local partner organisation aligned with LIS values. They then collaboratively develop a service project that addresses a genuine community need, emphasising mutual benefit and sustained engagement. This phase of the course encourages the development of essential professional attributes such as adaptability, collaboration, and problem-solving.

Following the planning stage, students engage in direct service within their chosen communities, applying LIS knowledge while also strengthening their competencies in areas such as technology use, teamwork, communication, and leadership. The opportunity to interact with professionals in the field through mentorship further enhances their understanding of LIS practice in a real-world context. Throughout the course, structured reflection activities are integrated to encourage students to think critically about their experiences, connect them to course content, and evaluate their personal growth and civic involvement. These reflective practices are key to deepening their understanding of LIS theories and the broader social impact of the profession.

The updated student learning outcomes (Appendix 1) are assessed through various methods, including evaluations of service projects, individual reflections, group reports, and presentations. The course not only evaluates individual learning and growth but also considers the effectiveness of the service project from the community partner's perspective. This holistic approach to assessment reinforces the reciprocal nature of SL and underscores the broader societal contributions of student work. Table 2 provides a comparative overview of the traditional IL course and the service-learning-enhanced version.

**Table 2:** Comparison of the traditional vs. service-learning approaches to the IL course

| Information Literacy Course Components | Traditional Approach                      | Service-Learning Approach                                                      |
|----------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------|
| Learning Methodology                   | Primarily lecture-based and theoretical   | Experiential learning, hands-on projects, and community engagement             |
| Assessment Methods                     | Written exams, quizzes, and presentations | Reflective journals, project reports, presentations, and community evaluations |
| Student Engagement                     | Passive learning, limited interaction     | Active learning, problem-solving, and critical thinking                        |
| Skill Development                      | Theoretical knowledge and basic skills    | Practical application, problem-solving, teamwork, and communication skills     |
| Community Impact                       | Limited direct impact                     | Direct impact on the community through service projects                        |
| Student Learning                       | Knowledge-based learning                  | Experiential learning, deeper understanding, and skill development             |

### 3.1.3 Assessment

The assessment strategy for this service-learning-based IL course is designed to evaluate student learning across the entire project lifecycle, emphasising both collaborative effort and individual reflection, as follows:

- Students are assessed on their ability to conduct thorough community research and information gathering, culminating in a group report detailing the community profile and literacy situation, demonstrating their foundational understanding and research skills.
- The development of a comprehensive service-learning (SL) project plan is evaluated, emphasising the application of course knowledge and consultation with experts, ensuring students can translate theoretical understanding into actionable strategies.
- The submission of SL materials used during project implementation serves as tangible evidence of practical application and community engagement.
- Individual student reflections on their SL experience provide insight into personal growth and critical self-assessment, highlighting the impact of the project on their understanding and perspectives.
- The group evaluation of the SL project and proposal of a sustainable program assesses students' ability to analyse project effectiveness and contribute to long-term community impact, thereby demonstrating a holistic understanding of SL principles and their application.

## 3.2 Implementing the Redesigned Information Literacy Course

The redesigned IL course based on the SL approach consists of three separate stages: pre-service training, the service activity, and post-service evaluation, collectively forming a comprehensive and cohesive SL framework.

First, the pre-service phase of SL is a critical preparatory stage, providing students with an orientation to SL concepts, essential skills training, and preliminary reflection activities. This also includes context-specific training on populations, communication, care, and community resources (Liu et al., 2015). This approach ensures that students enter their service experiences with clear goals, appropriate skills, and thoughtful consideration of how their work will benefit both their learning and the communities they serve.

The second phase is the service stage. A critical element of this phase is the application of academic knowledge to real-world contexts. Students carry out service projects that directly address societal issues they have studied, providing opportunities to put their classroom learning into practice (Fu et al., 2023). This service phase is the implementation part which often involves meaningful interaction with service recipients, such as working with elderly populations or other community members, allowing students to develop interpersonal skills while providing valuable service (Liu et al., 2015). The implementation phase thus serves as the experiential bridge that connects preparatory learning with subsequent reflective analysis, allowing students to develop practical skills while addressing genuine community needs.

Finally, the post-service phase marks the culmination of the SL experience, offering structured opportunities for students to deeply reflect on their activities and demonstrate their acquired knowledge (Lin, 2021). This phase is crucial for integrating practical experiences with academic concepts, allowing students to derive meaningful insights from their community engagement. Unlike pre-service reflection, which focuses on expectations, or in-service reflection, which

addresses ongoing adjustments, post-service reflection emphasises a critical analysis of the entire service process and guides students toward future service endeavours (Lin, 2021). The post-service evaluation allows students to articulate how their service activities connected to course learning objectives while also assessing their personal growth and development throughout the SL experience.

## **4. Findings and discussions**

This section addresses the results of how the SL components have been applied in redesigning the Library and Information Science IL course (RQ1) and of the impact of the SL approach on IL instruction (RQ2).

### **4.1 Stages of the Information Literacy Course based on SL (RQ1)**

Based on the SL approach, the IL course implementation consists of three separate stages: pre-service training, the service activity, and post-service evaluation, collectively forming a comprehensive and cohesive SL framework. From the 18-week semester, weeks 3 to 9 were allocated for the pre-service phase, weeks 10 to 15 for the service phase, and weeks 16 to 18 for the post-service phase. The following are the detailed descriptions of the activities and instructions conducted in each phase of the IL course.

#### **4.1.1 The pre-service phase**

The pre-service phase encompassed several key activities. First, community partners were selected by the College, in coordination with the University's Center for Community Engagement and Student Learning (CESL). This phase also involved answering a risk assessment checklist that the University required to have for outside the campus activities.

Additionally, necessary information and skills are provided to students for their service activities. Classroom lectures, workshops, and instruction, aligned with the curriculum, prepared students to design learning materials and develop modules. For example, workshops in the classroom provided hands-on training for students in utilising reference citation management tools, such as those covered in a "citation clinic," and in conducting effective digital literacy training sessions. Classroom instruction focused on cultivating practical skills, including classroom management techniques specifically adapted for instructing diverse library users, ranging from elementary students to adults. This preparation aimed to ensure students were adequately equipped for the challenges and opportunities inherent in their service engagements.

#### **4.1.2 The service phase**

Following the pre-service phase, the service phase began, immersing students in diverse SL activities and structured reflections. Their community engagements varied widely. Seven students acted as IL instructors for high school students, guiding them in developing research skills through "citation clinics." These clinics combined lectures and workshops on effective database utilisation and proper citation techniques and notably included reviewing nearly 100 research papers for citation adherence.

Students also extended their outreach off campus, conducting a #Digitalino workshop—a digital literacy program organised by the ASEAN Foundation and Google.org in the Philippines—to promote digital literacy to a broader audience. Similarly, other students led IL workshops for

elementary school students, teaching them how to use library catalogues, locate resources, and practice appropriate digital and library etiquette.

During the service phase, a structured reflection component was implemented through journaling, facilitated via Google Docs and Drive to ensure efficient submission and monitoring. Students were required to produce a 1,000–1,500-word reflection, supplemented with photographic documentation, in response to prompts aligned with the DEAL model (see Appendix 2). This standardised reflection template guided students in articulating their insights and effectively bridged practical experiences with theoretical frameworks. The reflective process was conducted iteratively, focusing on learning growth and civic engagement, with faculty providing written feedback for each submission. At the end of the semester, students submitted a final integrative paper that synthesised their revised reflections on community engagement, academic learning, and personal development.

#### **4.1.3 The post-service phase**

Finally, the post-service phase concluded the SL component with structured debriefing sessions and small group discussions. The purpose of this phase was to help students reflect on their experiences, connect their learning to future applications, and consider the practical use of their newly acquired skills. It also aimed to develop teamwork and communication skills as students discussed how their activities had impacted the community.

Small group discussions were held in semi-structured, 30–45-minute audio-recorded sessions with groups of three students. During these discussions, students referred to their journal entries from the service phase to elaborate on their experiences and insights. To ensure effective documentation, each group appointed a recorder to capture key points and assigned one member to synthesise and present the group's findings to the entire class. For the debriefing sessions, faculty prepared questions based on the students' journal reflections and provided feedback to guide deeper analysis. Following the discussions, each group produced a written report summarising their insights, which was both presented in class and submitted as a final output. Table 3 summarises the specific activities of each phase in the entire instruction.

**Table 3:** Summary of activities in the information literacy course based on service-learning

| Phase               | Activity                                                           | Description                                                                                                                                                                                                        |
|---------------------|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Pre-service</b>  | Community selection                                                | Community partners selected by the College in coordination with the University's Center for Community Engagement and Student Learning (CESL)                                                                       |
|                     | Risk assessment and activity evaluation                            | A university-wide form required to be filled out for identifying potential hazards according to impact and probability, with appropriate response strategies and control measures                                  |
|                     | Instructional preparation                                          | Teaching students based on the course's learning outcomes through classroom lectures, workshops, and instructional sessions                                                                                        |
| <b>Service</b>      | IL instruction for high school students - Citation Clinic Workshop | Providing workshops about citations for high school students                                                                                                                                                       |
|                     | Digital literacy workshop - #Digitalino Workshop                   | Providing a digital literacy program organised by the ASEAN Foundation and Google.org was implemented in the Philippines, focusing on discussions about combating misinformation and disinformation in the country |
|                     | IL workshop for elementary students                                | Teaching elementary school students how to use library catalogues, locate resources, and practice appropriate digital and library etiquette                                                                        |
|                     | Reflection activities                                              | Journaling using the DEAL model-based template to guide students in connecting their SL experiences with course concepts and personal growth                                                                       |
| <b>Post-service</b> | Small group discussions                                            | Collaborative reflections in small groups to summarise insights                                                                                                                                                    |
|                     | Debriefing sessions                                                | Faculty facilitated sessions to assess project impact and help students connect their experiences to future applications                                                                                           |

## 4.2 Impact of SL to Information Literacy Instruction (RQ2)

This section answered RQ2, how the SL approach improves teaching and learning in the IL course in LIS.

### 4.2.1 Course participants

The study involved twelve LIS students from the CPU, participating in the re-designed Information Literacy course (LIS 3201). The 2nd and 3rd year students constituted the participation group for a newly established SL program incorporated into the course curriculum. The limited cohort size facilitated the analysis of student experiences within the SL context. The

participants, enrolled in the LIS program and completed the first-year prerequisite coursework, possessed foundational knowledge of information principles and practices. Their background provided a valuable perspective for examining how SL augmented their existing competencies and contributed to their professional development. Table 4 presents the summary of the participants' background information.

**Table 4:** Summary of participant background

| Year level   | Number of participants |
|--------------|------------------------|
| 2nd year     | 8                      |
| 3rd year     | 4                      |
| <b>Total</b> | <b>12</b>              |

#### 4.2.2 Personal Growth

Based on the small group discussions and journaling of the students, the following themes emerged as the results that connect to their personal growth after taking the course with SL component.

##### Deeper Understanding of IL

Critical reflection on activities in SL encouraged students to examine their own IL practices and biases. Reflection prompts helped students connect their service experiences to course concepts. During small group discussions, students expressed appreciation for the experiential nature of service-learning, which complemented traditional classroom instruction. This approach fostered critical thinking and empathy for marginalised communities while developing practical skills like project management and teamwork. Student 6 shared:

*"Through service-learning, I gained a deeper understanding of the challenges faced by marginalised communities. By directly interacting with individuals from different backgrounds, I developed empathy and a sense of social responsibility..."*

##### Empathy and Social Responsibility

Additionally, SL exposed students to diverse perspectives and information needs within the community, fostering a deeper understanding of the social, ethical, and cultural contexts of IL. Students engaged in reflective learning, considering their experiences and drawing meaningful insights. As student 7 noted:

*"The SL component of our IL class encouraged me to reflect on my own values and beliefs...I realised the importance of respecting the individuality of the community we worked with...I learned to appreciate what I have, as I saw that many in the community were naïve, uneducated, or undereducated and lacked self-confidence.... This process of self-assessment was invaluable in my personal and academic journey."*

The integration of practical experience and reflection fostered deeper and more significant learning than conventional methods, resulting in better retention and implementation of IL concepts. The 3rd student stated:

*"Doing SL actually made me understand the material that we learned in class better, and it made me realise all the struggles that marginalised groups go through. When we're teaching in*



*the community, it's like we remember all that class discussion and we actually apply it out there. This whole experience opened my mind and made me realise how much it's important to be involved in the community."*

The findings of Molee et al. (2011) suggested that during the repeated rewrites with feedback, peer-led reflection sessions, students improved their learning and critical reflection skills in SL courses. However, teachers should have reconsidered course objectives and evaluation methods, as one semester might not have been enough for students to completely acquire these abilities while still engaging with academic topics and community service.

### **Self-Confidence and Efficacy**

Improved learning outcomes in LIS 3201 were measured using the SL framework that were made to evaluate how well students learned and used IL skills that were in line with the course's learning objectives. Eyler's (2000) research emphasised the importance of reflection, the link between coursework and service, and the experience of diversity, all of which were incorporated into the design of LIS 3201. Although there were few longitudinal studies on ongoing civic engagement, the literature on youth development indicated a positive relationship between volunteer service and community involvement, with civic identity acting as a mediating factor.

For instance, students working together with the primary school library enhanced their skills in recognising information needs by designing initiatives that resonate with the interests of young learners. As students one and three said:

*"When we got to work with the primary school library, it wasn't just about putting books back on shelves. We had to figure out what would make those young kids excited about reading. What kinds of stories we are to read? What activities would draw them in? It forced me to think beyond just the task at hand and consider the actual information needs of a real group of people. It made the abstract idea of "community involvement" feel surreal"*

*"...before, I just saw myself as a student. Now, I feel like I'm actually a part of the community, helping to make a real experience for these kids..."*

Creating and carrying out digital literacy modules for the community centre enabled students to utilise an efficient information search approach and gather data from various sources. A significant citation clinic focused on the skill of making citations, and the creation of training resources for these clinics improved the ability to structure information efficiently.

Evaluating resources for the elementary school library developed the skill to analyse information sources, while reflective activities connected service experiences to broader social contexts, deepening understanding of social, political, economic, and legal matters in the information era. A reflection from the fifth student was recorded:

*"The SL part of our IL class made me think about my own experiences as a student and how I can improve my learning in this course. The course has really equipped us to handle the tasks we're expected to tackle, especially when it comes to running citation clinic and basic library activities."*

The qualitative data from the focus group discussion and student reflections aimed to evaluate the impact of SL on student learning and enhance the existing body of research. The activities undertaken sought to promote a commitment to lifelong learning and community engagement; yet, quantifying these long-term effects at that time proved difficult. Eyler (2000) underscored the necessity for more stringent evaluation of cognitive outcomes, especially considering the intrinsic difficulties in measuring the enduring effects of service-learning.

### 4.3 Academic Learning

To measure the learning outcomes related to academic learning in SL component, this theme emerged from the group discussions and journal reflections: enhanced comprehension of information through the connection of personal experiences with academic theories, which fostered critical thinking and reflective practice, as evidenced by the development of practical skills.

#### Development of Practical and Critical Thinking Skills

The service-learning-driven course component allowed students to translate knowledge and theories learned in the classroom into practical applications related to IL. Theories discussed in class, particularly on proper referencing and citation, digital literacy, and library etiquette, formed the basis for their applications in the field. Through lessons on citation and referencing, students learned to use citation management tools such as Mendeley, Zotero, and MyBib. They also familiarised themselves with different referencing formats, including APA, MLA, Chicago and IEEE. In the digital literacy component, students developed skills in locating, evaluating, and presenting information using digital media. Digital literacy combined both technical and cognitive skills, involving the use of information and communication technologies to create, evaluate, and share information. The classroom discussions led students to choose the #Digitalino program as their SL initiative, as it aligned with the community's current informational needs. Through this experience, students gained opportunities for hands-on practice, skill refinement, and improvement through applications and feedback.

Challenges during SL implementation, such as last-minute plan changes, equipment unavailability during the #Digitalino activity, and limited space for participants during the citation clinic, required students to think critically and improvise solutions to ensure the workshops continued. A faculty member observed students' responses in these situations, some took charge, others quickly adapted to problems, while some voluntarily assisted. The observations were documented and later discussed in small group discussions to encourage reflection and learning. During the discussion, Student 3 said:

*"The #Digitalino activity was definitely a learning experience, especially when we faced issues with the equipment. I remember experiencing such panic when the projector wouldn't connect! We had to adapt quickly and change the room setup at the last minute, plus modify our presentation.... but it pushed us to be more flexible and creative in how we presented the information. I found out that even with careful planning, things can still go wrong, and it's crucial to be able to think quickly and come up with solutions... it is important to be flexible in the real world, which is something you don't always learn in class..."*

The disappointments intensified the apprehension experienced by students due to the last-minute changes within the community, particularly during the initial stages. This sense of unease was evident in the students' journal entries, where, in the early reflections, they

conveyed how their disappointments led them to contemplate what actions should have been taken and what could have been done differently. Student 4 shared:

*"I was surprised at how I handled it when the equipment broke down during the #Digitalino activity...I actually kept my cool and helped troubleshoot the problem... It made me realise that I'm more flexible and resilient than I thought...This whole SL experience has been a process of self-discovery....but also about my own strengths and weaknesses... making me grow in ways I didn't expect."*

SL helps to cultivate transferable skills, including communication, teamwork, problem-solving, and project management, which enhance students' academic and career outcomes. Students encountered difficulties, articulated recommendations, and formed contingency plans under stringent time limitations to maintain the program's continuity. Collaboration was essential in the execution, as each team had assigned duties and needed to devise strategies to accomplish their goals. A faculty member evaluated the preparation of teams, observing disparities between those exhibiting effective communication and coordination and those encountering difficulties. The discussion questions in small group sessions facilitated student reflection on their experiences and the identification of areas for improvement.

These findings corresponded with Sweet (2013), who emphasised the significance of linking IL to real-world issues and delivering pragmatic teaching. Furthermore, the heightened enrolment in SL courses and favourable testimonials from former students as mentioned in the study of Mehra (2004) further emphasised the attractiveness and efficacy of this method. Moreover, Montesie et al. (2025) also highlighted that SL projects improved students' practical abilities by necessitating their negotiation of roles in real-world settings, while also offering emotional experiences that facilitated reflection and adaptability within communities. The results of these studies underscore the significance of SL in Library and Information Science (LIS) education for cultivating critical thinking and information competencies.

#### **4.4 Civic Engagement**

Group discussions and journaling facilitated the development of civic engagement outcomes, categorised into two areas: Learning on Community Engagement and Enhanced Civic Engagement and Social Responsibility.

##### **Community Engagement**

SL activities encompassed a diverse type of community engagement. These activities in various community contexts increased their ability to interact with the community. Student one's reflection on this indicated that:

*"Doing the presentation to the elementary school kids was a difficult but fun experience. We had to simplify information about library catalogues and databases and break it down so that they could understand it. We had a lot of pictures, told stories, and did some interactive stuff with them to keep their attention. It taught me a great deal about how important it is to be able to classify information in a logical way and share it effectively, especially when you are presenting to an audience with a short attention span."*

Yontz and de la Peña McCook's (2003) emphasised this finding by stating that students related classroom material to real-world applications through community initiatives, promoting active

engagement and meaningful learning. SL enhanced motivation and retention while fostering interdisciplinary collaboration, thereby mitigating the trend of specialisation within academia. By synthesising information from multiple fields, students proficiently contributed to their communities while deepening their comprehension of the subject matter.

This also aligned with Overall's (2010) findings, which further underscored the role of SL in deepening students' understanding of course material while fostering social awareness, particularly regarding equity of access to information and technology. Most students felt they contributed positively to the social capital of their library and community, supporting the benefits of SL as highlighted in existing literature.

### **Enhanced Civic Engagement and Social Responsibility**

The integration of SL in the LIS 3201 course cultivated a deeper sense of civic engagement and social responsibility through the establishment of connections with the community. By collaborating with community centres run by local government units, elementary schools, and senior high students from the university, students actively connect with various parts of their community. For example, creating and implementing digital literacy training initiatives at community centres linked students with those who might not have access to technology or digital skills, providing opportunities to promote positive change by bridging the digital divide. In the same manner, organising citation clinics for high school students enhanced their academic writing skills while promoting a more knowledgeable and ethically aware student community. These activities connected theoretical ideas of IL to real community needs, promoting a sense of responsibility.

Furthermore, SL raised students' awareness of social issues and inequalities related to information access and digital literacy. As student 2 shared:

*"The SL highlighted how crucial it is to tackle misinformation and help critical thinking skills starting from a young age... the learnings we had imparted through SL pointed out the significant impact that misinformation can have on how people think and act... this initiative really boosted our personal skills and helped us as students to learn and teach about the digital world..."*

The specific program focused on countering misinformation in the digital age and fostering social awareness among students. As part of this initiative, students developed digital literacy modules designed to teach children and other community participants how to evaluate online sources for credibility, thereby empowering them to become informed Filipinos.

In addition, the SL experience helped students learn important social skills. Students improved their communication, teamwork, and advocacy skills by working with community partners, creating and running training programs, and talking to a different group of people. By using these skills in real life, students were able to become active and involved individuals who could make a real difference in their communities and help to alleviate information-related social problems. This outcome parallels the study conducted by Montesie et al. (2025), which demonstrated that SL enhanced students' understanding of elderly individuals and their societal roles. It promoted social responsibility and inclusivity by incorporating all older individuals, regardless of their perspectives, into the educational process.

## 5. Conclusion

This study investigated the integration of SL within an IL course in the Bachelor of Library and Information Science (BLIS) program in the Philippines to address two primary questions: the design of SL components for an LIS IL course and the enhancement of student learning through this pedagogical approach. Findings indicated that the strategic design of SL components was crucial for effective knowledge acquisition and the development of civic responsibility.

The findings suggested that integrating SL within the LIS IL course enhanced students' academic learning by contextualising theoretical knowledge within authentic community settings. This experiential approach promoted active learning, as students applied IL skills in practical scenarios, such as teaching digital literacy to underserved populations and conducting citation clinics for high school students. By engaging with diverse audiences, students developed cultural sensitivity, communication skills, and adaptive problem-solving abilities and skills which are crucial for future LIS professionals navigating complex information environments and serving diverse communities. The paradigm's emphasis on reciprocity and mutual benefit was evident, as community partners also gained valuable resources and knowledge from student-led initiatives, reinforcing the ethical principle of community reciprocity central to Ash and Clayton's (2009) model.

This study provided preliminary evidence that SL could enhance IL education in LIS programs. The results indeed support the claim made by higher education institutions (HEIs) in the Philippines that the curriculum structure disproportionately emphasises general education courses while providing limited hands-on and internship opportunities. Within this context, SL presents a viable approach to offering students practical, experiential learning opportunities that effectively complement their academic training. However, the small sample size and specific pilot program context limited the generalisability of the findings. Further research was needed to explore the long-term impact of SL on LIS students' professional development and community engagement, as well as to identify potential challenges and strategies for successful implementation.

Nevertheless, this study played an important role in demonstrating the effectiveness of the SL paradigm in enhancing IL competencies and suggested its broader applicability within LIS curricula. Also, it contributed to the growing body of research on SL in LIS education, providing empirical evidence of its effectiveness in fostering academic learning, civic engagement, and personal growth. Future research should have investigated the long-term impacts of SL on professional identity formation and explored scalable models for broader application within LIS curricula, including the development of best practices for assessment and evaluation of SL outcomes.

## Declarations

### Ethics approval

Ethical approval was not considered necessary in alignment with the Kyungpook National University's guidance on the conduct of ethical research.

### Funding

Not applicable.

### AI-generated content

AI tools were used for grammar checking, clarity, and tone adjustments.

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## Appendix 1

### Learning outcomes

**There are 8 learning outcomes developed for the updated IL course, as follows:**

- Identify Information Needs focuses on the fundamental ability to recognise the value, nature, and characteristics of information, crucial for students to understand the purpose and scope of their information seeking, laying the groundwork for effective research and problem-solving within the SL context.
- Apply Effective Search Strategies instructs students to integrate the complex and dynamic process of information seeking, emphasising the iterative and adaptive nature of research, vital for navigating diverse information landscapes and addressing real-world challenges encountered during SL projects.
- Retrieve Information focuses on the practical application of various information retrieval tools, including traditional and digital resources, equipping students with the skills necessary to access and utilise relevant information for their academic work and SL initiatives.
- Examine Information Resources develops critical evaluation skills to identify the most appropriate resources for specific information needs, ensuring students can discern credible and relevant sources, fostering informed decision-making in both academic and service-based projects.
- Prepare Citations addresses the academic requirement of proper citation using standard bibliographic formats, reinforcing academic integrity and providing students with the tools to acknowledge sources effectively, a crucial skill for both academic and professional communication.
- Organise Information teaches students effective organisation techniques and presentation strategies, emphasising clear and coherent communication of information, essential for conveying findings and insights derived from both research and SL experiences.
- Identify Socio-Political-Economic-Legal Issues broadens the scope to encompass the broader context of the Information Age, encouraging students to critically analyse the social, political, economic, and legal implications of information, fostering a deeper understanding of the societal impact of their SL work.
- Apply Service-Learning explicitly integrates SL to enhance academic learning, civic learning, and personal growth, emphasising the transformative potential of experiential learning, allowing students to apply theoretical knowledge to address community needs and develop a sense of social responsibility.

## Appendix 2

**Figure 2:** Journaling template based on the DEAL model

|                      |                    |
|----------------------|--------------------|
| NAME: _____          | DATE: _____        |
| COURSE & YEAR: _____ | ACTIVITY NO. _____ |

*Directions: Write your reflections adhering to the following guidelines: double-spaced, Times New Roman font, 11-point size, and standard margins. The essay must follow the structure specified below, with every part properly marked by proper headings. Electronically submit the completed reflection to the specified Google Drive folder by 11:00 PM on March 18, before the discussion group session begins.*

1. Describe the Experience
  - What was your service-learning project, and what were your main responsibilities?
  - Who were the individuals or groups you served, and what were their needs?
  - What problems arose, and how did you resolve them?
  - What was included in this activity? What specific workshop/activity did you do?
2. Reflect on the Experience
  - Academic Learning
    - How did this experience of teaching digital literacy connect to course content?
    - What understanding or abilities did you acquire through this service-learning project?
    - Which, if any of your assumptions about the topic were challenged or changed as a result of the experience?
    - How did you improve in performing application of digital literacy information within the project?
  - Civic Growth
    - What was the specific impact of the service-learning digital literacy service on the community?
    - What were some social problems you were made aware of because of this digital literacy service?
    - In what ways has this experience shaped your view of your civic responsibility?
    - How do you think digital literacy contributes to solving community needs?
  - Personal Growth
    - What personal strengths have you identified or developed as a result of this experience?
    - How has this experience influenced your confidence to work with others or in real-world settings?
    - What was difficult for you to conduct digital literacy, and how did you overcome the challenges?
    - How has this digital literacy activity influenced your future career or personal goals?
3. Articulate Learning
  - What are three key things that you learned from the experience?
  - How will you apply what you learned in future academic, professional, or personal settings?
  - If you had to do this service-learning project again, what would you do differently?
  - What advice would you give to future students about this service-learning activity?