



Global Trends in E-Service-Learning Framework: A Systematic Literature Review

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Abstract

The e-Service-Learning (e-SL) model is an option in implementing quality learning even in online learning situations. The problem that still often arises regarding the implementation of e-SL is related to how to implement e-SL in learning. This study aims to find out the design framework of the e-SL model in various parts of the world, so that it is hoped that it can become an inspiration for universities that want to implement this model. The method of this research uses a systematic literature review with the help of publish or perish (PoP) in the data search process. The selection process used PRISMA in 2020. There were 18 articles that were successfully reviewed to answer the problem on how does the framework (O) e-Service-Learning (I) compared to universities (P) globally (C) during the COVID-19 pandemic (T)? Result of this research describe that the e-SL framework for the Asian region, partner cultural conditions need to be given more attention. The Americas region the framework prioritizes communication with partners and then student training. And the e-SL framework in the European region shows more importance in the reflection aspect of this e-SL process. The implication for the practitioners and researchers, they can use these insights to customize e-SL models and examine regional influences on student learning outcomes.

Kata Kunci

E-Service-Learning, higher education, pedagogical model

Abstrak

Model e-Service-Learning (e-SL) menjadi salah satu pilihan dalam mengimplementasikan pembelajaran yang berkualitas meskipun dalam situasi pembelajaran online. Permasalahan yang masih sering muncul terkait implementasi e-SL adalah terkait bagaimana mengimplementasikan e-SL dalam pembelajaran. Penelitian ini bertujuan untuk mengetahui kerangka kerja model e-SL di berbagai belahan dunia, sehingga diharapkan dapat menjadi inspirasi bagi perguruan tinggi yang ingin mengimplementasikan model ini. Metode penelitian ini menggunakan tinjauan literatur yang sistematis dengan bantuan publish or perish (PoP) dalam proses pencarian data. Proses seleksi menggunakan PRISMA pada tahun 2020. Terdapat 18 artikel yang berhasil direview untuk menjawab permasalahan bagaimana kerangka kerja (O) e-Service-Learning (I) dibandingkan dengan universitas (P) secara global (C) pada masa pandemi COVID-19 (T)? Hasil dari penelitian ini menggambarkan bahwa sintaks e-SL untuk wilayah Asia, kondisi budaya mitra perlu lebih diperhatikan. Wilayah Amerika kerangka kerjanya lebih mengutamakan komunikasi dengan mitra dan kemudian pelatihan siswa. Dan sintaks e-SL di wilayah Eropa menunjukkan lebih mementingkan aspek refleksi dari proses e-SL ini.

Keywords

e-Service-Learning, pendidikan tinggi, kajian literatur sistematis

Introduction

Education at the university level currently requires student-centered pedagogical reform to educate them to become competent graduates and create professionals who can work effectively as well as educate them as citizens, committed to the values of citizenship and democracy. To encourage the development of this competency, service learning in tertiary institutions is considered the most relevant for use (García-Rico et al., 2021).

Service learning is a research topic that has attracted a lot of attention from researchers from various disciplines (Rama et al., 2000). However, it turns out that research related to service learning at the tertiary level is still lacking (Coelho & Menezes, 2021; Porto, 2023). Thus, there are still many areas on this topic that are interesting to explore and to see the impact of it on higher education.

The application of service learning has been adopted by universities as a learning strategy in modern education (Hoshang et al., 2021). There are three elements of successful experience in implementing it, namely reality, reflection, and reciprocity (Celio et al., 2011; Hikamudin et al., 2023). Service learning is a type of experience-based learning that opens opportunities for students to improve their conceptual understanding and practice the theory learned in class into real life. The significant difference between service learning and other experience-based learning such as volunteering or internships lies in the interrelationships in the context of strong academic content and also the reciprocal relationships between students and partners (Salam et al., 2019).

When the world was hit by the COVID-19 pandemic, online education was massively implemented throughout the whole world. The service learning, method has also experienced variations, namely applying more electronic service learning or what is known as e-SL to adapt to conditions that require humans to maintain direct interaction. The emergence of e-SL is supported by a paradigm shift towards online learning and technology-assisted learning (Afriansyah & Matondang, 2024; Marcus, Atan, Yusof, et al., 2021). Data shows that until 2020, research related to service learning, especially e-SL, is still very rarely carried out, even though the opportunities for its application are increasing and strengthened by distance learning policies globally (Figuccio, 2020). From these data, this research tries to identify framework trends that are applied in e-Service-Learning globally, especially during the COVID-19 pandemic. From this process, various learning media can be seen which can be used as input when educators want to implement e-Service-Learning.

The evolution of e-Service-Learning (e-SL) has been shaped by the rapid digital transformation in education, spurred by the pandemic's restrictions on face-to-face interactions. Initially, service-learning required physical presence to foster community involvement and experiential learning, but e-SL emerged as a response to maintain these values within a digital landscape. This shift saw the integration of virtual tools that facilitated collaboration and communication, enabling students to continue meaningful community engagement remotely (Aramburuzabala et al., 2024). Additionally, educators began exploring asynchronous and synchronous platforms to create reflective spaces that allowed students to process and discuss their learning experiences in new, innovative ways (Guthrie & McCracken, 2014). The progression of e-SL has demonstrated that, with the right frameworks and tools, the benefits of



traditional service learning—such as community impact and personal growth—can be effectively realized online, broadening access and inclusivity in service learning.

The state of the art from this research can be seen through the application of service learning (SL) in higher education has gained increasing attention as a pedagogical reform aimed at developing competent graduates and professionals committed to citizenship and democratic values (García-Rico et al., 2021). Despite its recognition as a valuable tool for experiential learning, research on SL in tertiary institutions remains underexplored, especially when compared to other educational methodologies (Coelho & Menezes, 2021). While the concept has been adopted in modern education as a learning strategy (Hoshang et al., 2021), its implementation has been limited by the lack of comprehensive studies, particularly at the higher education level.

The core elements of SL—reality, reflection, and reciprocity (Celio et al., 2011)—distinguish it from other experiential learning approaches, such as volunteering and internships. This reciprocal relationship between students and community partners provides a unique framework for applying academic content to real-world contexts, which is central to the SL experience (Salam et al., 2019). However, the potential of SL remains underutilized, with many aspects still requiring further exploration, particularly in terms of its impact on higher education (Rama et al., 2000).

The COVID-19 pandemic, which led to a global shift towards online learning, created an opportunity to adapt SL into electronic formats (e-Service Learning or e-SL). The emergence of e-SL, driven by the need for remote interaction, brought about a paradigm shift towards technology-assisted education (Ardi Afriansyah et al., 2024; Marcus, Atan, Salleh, et al., 2021). However, research on e-SL, particularly during the pandemic, has been limited, despite the growing relevance of distance learning policies (Figuccio, 2021). The scarcity of research presents a gap that this study seeks to fill by analyzing global trends in e-SL during the pandemic. It will identify various learning media that educators can use to effectively implement e-SL, offering valuable insights into how this methodology can be adapted for future use in higher education contexts.

Method

This systematic literature study follows eight stages, including: purpose of the literature review, protocol and training, searching for the literature, practical screening, quality appraisal, data extraction (the reviewers systematically extract applicable information from each study), synthesis of studies analysis and writing the review (Chlomoudis et al., 2022). The research questions in this literature review include.

Table 1
 Research Question and Purpose

Research Questions	Framework for The Formulation of Research Questions	Purpose
RQ1 How does the framework (O) e-Service-Learning (I) compare to universities (P)	PICO (Population, intervention,	Time Knowing the comparison of framework in e-Service-Learning globally.

globally (C) during the comparison, outcome, COVID-19 pandemic (T)? time)

After the objectives and limitations have been determined in this study, it is continued with the literature search stage. Literature search is assisted by using the Publish or Perish (PoP) application. In the PoP, the researcher defines Scopus as a literature search platform with the keywords used namely "e-Service-Learning", "electronic service learning", "electronic service-learning". Articles are limited from 2020 to 2022, because the limitation of the problem in this study is e-Service-Learning during the COVID-19 pandemic. From the use of the word "e-service-learning" 120 articles were obtained, as shown in the figure below

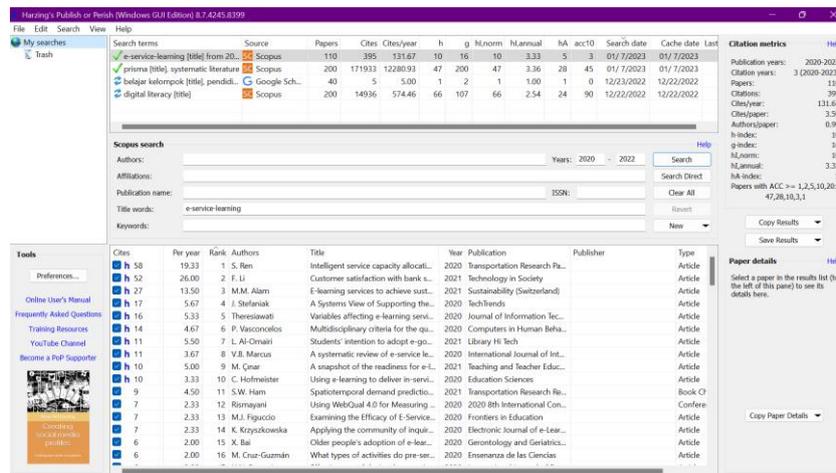


Figure 1. Article Searching Process Using Publish or Perish (PoP).

Source of figure: Publish or Perish 8th version (<https://harzing.com/resources/publish-or-perish/windows>)

By using the keyword "electronic service-learning" found 10 articles, as shown in the image below

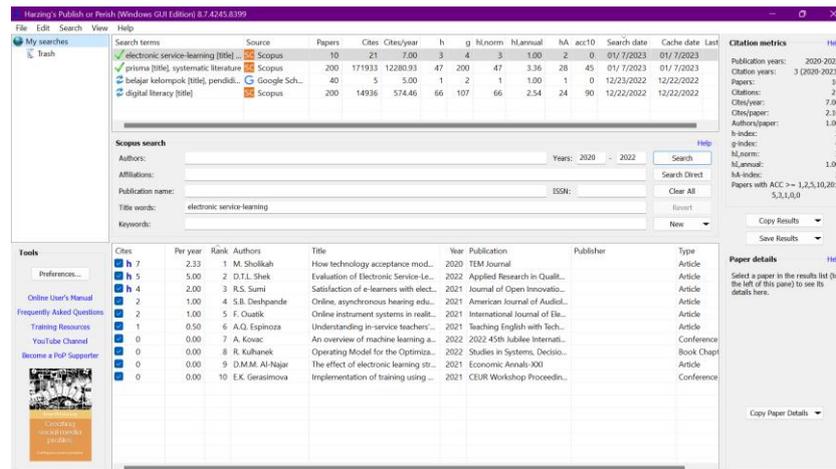


Figure 2. Using Publish or Perish (PoP) to Sort The 10 Articles with “Electronic Service-Learning” as The Keywords

Source of Figure: (<https://harzing.com/resources/publish-or-perish/windows>)

After searching for articles, then proceed to the practical screening stage. At this stage, the PRISMA model (Preferred Reporting Items for Systematic Reviews and Meta-analyses) with the flow as shown below (Micheal Cross, 2011).

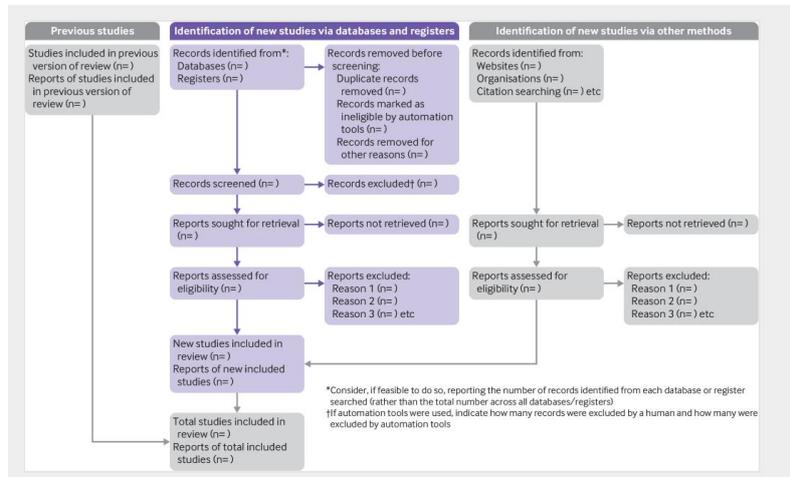


Figure 3. PRISMA diagram according to The PRISMA 2020 statement: an updated guideline for reporting systematic reviews (Micheal Cross, 2011)

In simple terms, researchers used the model above and found findings as shown in the image below.

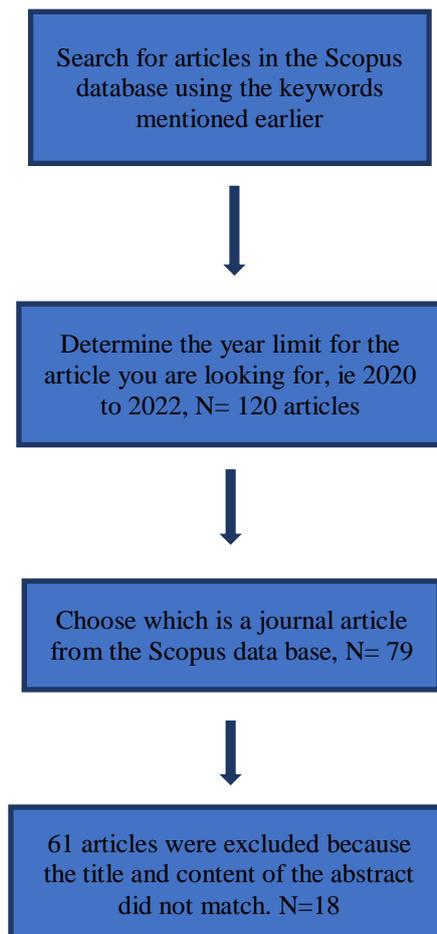


Figure 4. The Coding Scheme that Used in This Article According to PRISMA Procedure (Micheal Cross, 2011)

In this study the categories of analysis are associated with global conditions, so the researchers classify 18 articles that will be studied into geographic areas of research locations, namely Asia (A), Europe (B), America (C) and Africa (D, researchers in Asia, but one of the e-SL partners is in Africa), as shown in the table below.

Table 2
 Coding Article Based on The Region Where The e-SL was Implemented, Which Were America, Asian, Europe and Asia.

Author	Location
(Adkins-Jablonsky et al., 2021)	America (C1)
(Bardus et al., 2022)	Asian (A1)
(Baumgartner et al., 2020)	America (C2)
(Culcasi et al., 2022)	Europe (B1)
(Dapena et al., 2022)	Europe (B2)
(Figuccio, 2020)	America (C3)
(Huang, 2022)	Asian (A2)
(D. W. Johnson & Johnson, 2021)	America (C4)
(Leary et al., 2022)	America (C5)
(Marcus, Atan, Salleh, et al., 2021)	Asian (A3)
(Marcus, Atan, Yusof, et al., 2021)	Asian (A4)
(Marcus et al., 2020)	Asian (A5)
(Parwati & Suharta, 2020)	Asian (A6)
(Reames et al., 2020)	America (C6)
(Schmidt, 2021)	Asian (A7)
(Leung et al., 2021)	Asian (A8, D1)
(Stefaniak, 2020)	America (C7)
(Torres et al., 2022)	Europe (B3)

Result and Discussion

Result

The applied e-SL framework is described in the table below.

Table 3
 e-SL framework in all various areas based on the result of each article

Implemented e-SL type	Framework
e-SL type II research in the Asian region	<ol style="list-style-type: none"> Lecturers prepare by making material recordings Some students attend onsite and some partly through the zoom platform, lectures are recorded and uploaded to YouTube, so students can watch them again Students design service activities in the area around campus on site, by providing education to the community regarding the knowledge they have learned in class (Bardus et al., 2022)
Extreme e-SL research in the Asian region	<ol style="list-style-type: none"> Lecturers distribute learning materials online Students are divided into groups Build relationships with partners online Students design service programs for partners Application of online services Doing reflection and evaluation (Leung et al., 2021)
Extreme e-SL in the Americas	<ol style="list-style-type: none"> Communication with partners Material from lecturers utilizes LMS



- e-SL in the European region
3. Preparation of teaching materials and service products by students using teleconference media
 4. Implementation by teleconference
 5. Feedback from partners (Figuccio, 2020)
 1. Service-learning technical training
 2. Reflection to generate motivation
 3. Communication with partners
 4. Service planning to partners
 5. Implementation
 6. Celebration (Culcasi, 2022)

Discussion

Basically, the framework in e-SL in various regions is similar to one another. Several differences can be seen, for example, in the implementation of e-SL in the Asia and Africa regions, it pays close attention to cultural conditions in partner locations, because culture plays a strong role in these two regions (Faulconer, 2021). The type of e-SL chosen tends to be type II e-SL and type IV e-SL. In type II e-SL in the Asian region, lecturers tend to be active in the early part, to prepare debriefing materials for students before conducting services to the community or selected partners.

In the Americas, generally, students are directly confronted with partners. Students will identify problems at partner locations and design service activities for partners after receiving debriefing. Several studies conducted in America also show the role of alumni as e-SL actors, this indicates that there is an element of laxity in the planning section (J. E. Johnson, 2020; Leary et al., 2022).

In the European region, the reflection aspect is more emphasized, with the aim of generating student motivation before implementing e-SL. Almost similar to the Asian region, research in Europe also shows a preference for type II e-SL and is considered the best and most suitable for e-SL by utilizing digital libraries containing videos to deliver services online (Torres et al., 2022).

From a global perspective, the framework of e-SL is tailored to the socio-economic and technological contexts of each region. In more technologically advanced regions, e-SL emphasizes global citizenship, intercultural communication, and the use of sophisticated digital platforms. In contrast, regions with limited infrastructure focus on practical, accessible digital tools and more localized problem-solving approaches. Each implementation, however, retains the core principles of service learning—action, reflection, and reciprocity—while adapting these to the unique challenges and opportunities of the respective geographical area.

This systematic literature review aims to capture these diverse trends in e-SL and analyse how different educational environments influence the framework and pedagogy of service learning in a virtual setting. In Asia-Pacific Region, e-SL is often designed around the concept of global partnerships, leveraging computer-mediated communication to engage students remotely. This method is particularly useful in cross-cultural settings where students work on projects with communities in different countries. The framework consists of:

- 1) Identification of global challenges and fostering intercultural communication skills.
- 2) Remote engagement with community partners using digital platforms.

- 3) Critical reflection on the experience through online discussions.
- 4) Evaluation of the project based on global contribution and social impact.

In Europe and America, according to various articles from these regions, e-SL is predominantly framed around collaboration with local or international non-governmental organizations (NGOs), with an emphasis on critical reflection and social action. The academic content is tightly integrated with service activities to ensure students develop both theoretical and practical skills. The framework consists of:

- 1) Establishing collaboration with local or global partners.
- 2) Implementation of service projects with virtual community engagement.
- 3) Structured reflective discussions on ethical and social implications.
- 4) Assessment focused on the outcomes of the social action and student learning.

Conclusion

From the summary of various studies related to the framework used in e-SL globally, it can be concluded that the core composition, namely planning, implementation and evaluation in various research areas tends to be similar. The difference is shown in the way students build relationships with partners and the type of e-SL which is believed to be more effective during the COVID-19 pandemic. The implication for the practitioners and researchers, they can use these insights to customize e-SL models and examine regional influences on student learning outcomes. Future researchers or lecturers who are interested in implementing e-SL in their courses can see some of the framework summarized in this study. Suggestions for future researchers are that it would be better if there were more research representatives for the African region as well as Australia, so that new ideas for implementing e-SL could be richer.

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