

# Investigating Factors that Influence Faculty Learning in Service Learning

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## Abstract

Service-learning integrates community service with academic instruction, focusing on critical, reflective thinking and personal and civic responsibility. Faculty members engaged in service-learning often report significant professional and personal growth. However, understanding what specifically influences faculty learning in these settings is less explored. This research investigates the factors impacting faculty learning through service-learning, aiming to enhance educational strategies within engineering education. The study is taken up in a private university in India. The research question addressed in this study is - What are the factors that influence faculty learning in service-learning? This study aims to identify key elements that enable faculty learning. The target participants are the faculty who teach service-learning courses with community immersion experience. Qualitative study is used to collect the data. Data were collected through semi-structured interviews focusing on faculty experiences and perceptions. Thematic analysis of interviews with 20 faculty members who have participated in service-learning programs is carried out. The study identified several key factors influencing faculty learning in service-learning contexts. Service-learning contributes to faculty research opportunities, career advancement and enhanced teaching methodologies. Faculty reported that the scope of validating their experience in service-learning . This was by submitting articles in the conferences and journals of engineering education. Direct interactions with the community enhance faculty empathy towards societal issues. It was motivating them to integrate social responsibility into their teaching methods. Service-learning encourages faculty adopt various roles. They become innovators and problem solvers. They apply design thinking to real-world problems. Support from educational institutions helps faculty engagement and effectiveness in service-learning. The results indicate that service-learning influences faculty learning. The learning aspects are inculcating professional growth, enhancing empathetic understanding and encouraging innovative teaching approaches.

**Keywords:** Service Learning, Faculty Learning, Adult Learning, Engineering Education

# 1 Introduction

Service-learning (SL) is an educational strategy that connects community service with academic teaching. The focus of the service-learning is nurturing critical and reflective thinking. Inculcating personal and civic responsibilities among the learners is achieved through SL. Benefits of service-learning for students are acknowledged and well-documented. Its impact on faculty development in the discipline of engineering education needs further exploration (S. R. Bandi et al., 2023). Faculty members who engage in service-learning report benefits in both professional growth and personal satisfaction. However, the specific factors that facilitate such benefits are less studied. A comprehensive understanding of these factors is not clear. Recent studies highlight the nature of service-learning and its potential to influence faculty towards innovation in their teaching (S. R. Bandi et al., 2023). One of the most important aspects that faculty experience while facilitating service-learning is empathy (S. R. Bandi et al., 2023). For example, service-learning encourages faculty to adopt design thinking to real-world problems. It will be enhancing their teaching methodologies and advancing their own careers (Garvin & Acosta Lewis, 2022). This is relevant in engineering education as well. The integration of practical, real-world challenges can improve the academic curriculum and faculty teaching strategies (S. Bandi, 2020).

Motivations for faculty participation in service-learning are based on several factors (Surendra et al., 2024). Institutional support, personal values and the opportunity for professional advancement are few examples. The requirement for specific training to undertake service-learning courses suggests a need for continuous professional development to improve teaching effectiveness (Derreth et al., 2022). This need for training shows an institutional role in facilitating faculty engagement in service-learning. It is by providing the necessary resources, support and recognition. In the context of a private university in India, where this study is situated, these factors play a crucial role. The unique challenges and opportunities presented by the Indian higher education landscape affect how service-learning is implemented and perceived by faculty. By looking into the experiences and motivations of faculty members who facilitate service-learning courses, this research aims to identify and analyze the key factors that enhance faculty learning and development in engineering education.

This study will answer the research question: What factors influence faculty learning in service-learning? Qualitative method is used to explore the experiences of 20 faculty members involved in service-learning. The aim is to provide insights that can help educational institutions maximize the benefits of service-learning for faculty development. Through this, the study contributes to an understanding of how service-learning can be leveraged to support faculty development. We emphasized the need for a supportive institutional framework. Adequate training and recognition of faculty efforts in integrating service-learning into their teaching practices are the other needs.

## 2 Literature Review

### 2.1 History of Service-Learning

Service-learning (SL) combines academic learning with community service. SL provides benefits to both students and the community (Delaine et al., 2023). The roots of service-learning can be traced back to the early 20th century. It was also used in the education during the late 20th century. The evolution of service-learning is marked by several key developments. Initially conceptualized as a method to improve student learning and civic engagement, service-learning was shaped by the experiential education movement (Bringle & Hatcher, 1996). This movement emphasized the importance of learning through direct engagement with real-world problems. The seminal work "Service Learning: A Movement's Pioneers Reflect on Its Origins, Practice, and Future" by Stanton, Giles, and Cruz (1999) gives a review of the origins and theory of service-learning. The authors discuss how early adopters of service-learning

understood to address social issues through integrated academics. They were aiming to educate students who were academically proficient and civically responsible (Kandakatla et al., 2023). Academic research into service-learning expanded during this period. The scholars like Barbara Jacoby (2014) and her associates contributed extensive literature on the practice. Their book, "Service-Learning Essentials: Questions, Answers, and Lessons Learned", is notable for details about effective practices in service-learning. The review by Furco and Norvell (2019) synthesizes research, highlighting the sustained impact of service-learning on student learning. This work highlights the ability of service-learning for students, faculty and educational institutions.

The history of service-learning gives its evolution from an educational idea to an established teaching practice. It has proven to be an effective method for enhancing educational experiences with a commitment to civic and social responsibilities(Oakes et al., 2025)

## 2.2 Faculty Roles in Service-Learning

Service-learning needs faculty involvement to link academic content with community engagement. The roles of faculty in service-learning include course design, facilitating partnership with community and assessment of learning outcomes. Faculty are responsible for designing and implementing service-learning courses. These courses integrate academic learning objectives with community needs. Jacoby (2014) emphasize that service-learning requires faculty to develop curriculum that meet educational standards and engage students in meaningful community service activities. This involves creating projects that are beneficial for both students and the community. We need to ensure a reciprocal relationship that helps student learning while addressing community issues. Building and maintaining partnerships with community organizations are crucial for the sustaining of service-learning programs. O'Meara & Niehaus (2009) discuss the importance of faculty acting as liaisons between their institutions and the community.

Assessment of student learning and the impact of service-learning projects on the community are important to faculty responsibilities in service-learning. Bringle and Hatcher(2009) outline that faculty must develop appropriate assessment tools to measure the educational outcomes and community impact of service-learning initiatives. This includes creating reflective assignments that help students connect their service experiences with academic content and personal growth (Dustker et al., 2021). Faculty involved in service-learning find advocate for the value of integrating community engagement into the academic curriculum. Zlotkowski (1998) highlights the role of faculty as advocates within their institutions for the expansion and support of service-learning programs.

## 2.3 Existing Research on Faculty Learning through Service-Learning

Research indicates that faculty who engage in service-learning understand connections with both their academic subject matter and the communities. Eyler and Giles (2001)note that this engagement enhances faculty's teaching skills and improves their understanding of the practical applications of their academic expertise. This focus improves faculty teaching methods. It also helps providing real-world contexts for research and publication. Faculty participation in service-learning has been linked to professional development opportunities. Antoniou and Kyriakides (2013) highlight that through service-learning, faculty members encounter diverse teaching scenarios. That challenges them to innovate and adapt their pedagogical strategies. This leads to the development of new teaching materials and methods. Those can be shared across the academic community, enhancing the overall quality of educational offerings.

Service-learning also impacts faculty attitudes. This happens towards students and the educational process. Bennett (2012) discusses how people involved in service-learning tend to adopt more people-centered approaches. Those prioritize the learning needs and experiences of students over traditional lecture-based methods. This shift affects how faculty teach. It also changes how they perceive their

role in the educational system. This will be leading to a empathetic and responsive educational practice. Abes, Jackson and Jones (2002) identify some barriers too. Examples are time constraints, lack of institutional support and difficulty in aligning service projects with academic content. This can deter faculty from fully embracing service-learning methodologies. Addressing these challenges is important for adoption and deeper impact of service-learning in higher education.

## 2.4 Gaps in the Literature and Justification for the Current Study

The past research studies explored the impacts of service-learning on students and communities. Very less studies focused on the faculty experience. Furco (2019) points out that the faculty perspective is required when designing service-learning programs. Vogelgesang and Astin(2000) suggest that more research is needed to explore the factors behind faculty participation in service-learning. Understanding what drives faculty to engage in these programs can help institutions support and encourage faculty involvement. Strait and Lima (2023) propose that future research should also explore how service-learning affects faculty in different disciplines and career stages. This could lead to approaches that maximize the benefits of service-learning across diverse academic contexts.

The gaps identified in the current literature justify the need for further research into the factors influencing faculty engagement in service-learning.

## 3 Methodology

### 3.1 Study Context and Participants

This study is on faculty learning experiences in service-learning. The context is through the facilitation of a Design Thinking and Social Innovation (DTSI) course at a private engineering institution in southern India. DTSI is an experiential learning course offered to first-year undergraduate engineering students. They work on real-world social challenges using a design thinking framework. Faculty members guide students through community-based problem-solving. This enabled co-learning between students, faculty and community. DTSI follows a service-learning model where academic coursework integrates with meaningful community engagement and faculty members play the role of facilitators rather than just being traditional instructors. A purposive sampling approach was used to select 20 faculty members from various disciplines. Participants had diverse teaching backgrounds, ranging from three to 21 years of experience and they have varied perspectives on service-learning facilitation.

### 3.2 Research Design and Data Collection

The case study approach was selected for its strength in offering contextualized, in-depth understanding of the details of faculty learning processes. The research was conducted at a private technological university in South India that has integrated service-learning into its undergraduate curriculum over the past six years. This setting was chosen due to its institutional commitment to experiential education. Accessibility of faculty participants with varying levels of involvement in SL was also another plus point. Data were collected through semi-structured interviews with 20 faculty members across various engineering disciplines. Participants were selected using purposive sampling, targeting those who had facilitated service-learning courses for at least two consecutive semesters. This criterion ensured that participants had exposure to SL practice and could reflect meaningfully on their learning experiences.

An interview protocol was developed. The protocol was pilot-tested with three faculty members outside the final sample to refine question clarity and flow. Each interview lasted between 45–60 minutes. Few interviews were conducted in-person or few others were via video conferencing. The data were analyzed using thematic analysis following guidelines in a standard book of research methods (John W. Creswell & J. David Creswell, 2018). Two researchers independently coded a representative subset of transcripts to ensure reliability. Codes were then compared and discussed

and a final coding framework was developed collaboratively. The themes were derived inductively, capturing recurring patterns across faculty narratives.

### **3.3 Validity and Researcher Reflexivity**

Triangulation of perspectives was ensured by interviewing faculty from diverse departments. The participants were with varied teaching experience (ranging from 3 to 25 years) and different levels of engagement with SL. Member checking was conducted with a few participants. It is to validate the authenticity of interpreted themes and some selected quotes supporting the claims.

The coding process was cross verified by two researchers. This is to ensure consistency in theme generation. Disagreements were resolved through discussions. The lead researcher has experience in service-learning facilitation and faculty development in engineering education. A reflexive journal was maintained throughout the research process to capture observations. This helped minimize researcher bias and ensured self-awareness in the analysis. The co-authors have expertise in engineering education. Their contributions were there in refining the analysis, interpreting results and aligning the findings faculty development and social impact education.

## **4 Results**

Themes and analysis of faculty interviews is presented in this chapter. We will be exploring the factors that influence faculty learning during the facilitation of service-learning (SL) courses in Indian engineering education.

The results are organized into three themes crisply.

1. Institutional Ecosystem for Faculty Engagement and Growth
2. Teaching Practices Through Service-Learning
3. Empathetic Awareness as a Catalyst for Faculty Learning

Each theme is discussed with sub-themes with some participant quotes.

### **Theme 1: Institutional Ecosystem for Faculty Engagement and Growth**

This theme highlights the role of institutional aspects. It includes policies, structures and culture in shaping faculty engagement and learning in SL. Some faculty joined initially through formal deputation or departmental assignment. Through their sustained participation and growth they were influenced by institutional encouragement, resources and recognition systems.

#### **Sub-theme 1.1: Institutional Mandate and Departmental Encouragement**

Many faculty members began their SL journey through institutional deputation, reflecting an early-stage compliance. However, support from colleagues and institutional culture helped transition them from reluctant participants to active facilitators.

“Initially it was not a choice, but as part of the teaching-learning process. I gained interest as I engaged more deeply with the course.” (Participant H1)

“I was deputed by the department, but as I got trained and understood its societal angle, I started enjoying it.” (Participant B9)

#### **Sub-theme 1.2: Recognition in Appraisal and Career Advancement**

Service-learning became a professional opportunity, It is through its inclusion in appraisal systems and institutional visibility. Faculty appreciated the tangible rewards that followed their involvement.

“Our appraisal system includes questions on developing new courses or methodologies. Service-learning definitely helps here.” (Participant H1)

“It has helped me in my career also—community engagement, soft skills, reflection, and complexity—all these added value.” (Participant B12)

### **Sub-theme 1.3: Resource and Logistical Support**

Faculty emphasized the role of logistical assistance—transportation, schedules, team support—which allowed them to focus on facilitation and reflection.

“All sorts of support were given. Community visits were arranged with institutional vehicles. That made it easier for us.” (Participant B10)

These insights emphasize that institutional structures—such as departmental mandates, appraisal systems and logistical support—serve as powerful enablers of faculty learning in service-learning contexts.

## **Theme 2: Teaching Practices Through Service-Learning**

Faculty described pedagogical learning as they navigated the demands of SL. The shift from traditional lecture-based instruction to facilitation in dynamic, real-world settings. It required adaptability, student-centered methods and interdisciplinary approaches.

### **Sub-theme 2.1: Shifting from Expert to Facilitator**

Faculty learned to let go of control and co-create learning environments with students, becoming flexible and adaptive in their teaching roles.

“Before, we taught fixed content. Now we tailor based on students’ capacity and community needs.” (Participant B4)

“I had to manage the students, interact with stakeholders, and find new ways to explain complex concepts. It helped me a lot.” (Participant B8)

### **Sub-theme 2.2: Reflection, Feedback and Iterative Learning**

Faculty gained insights by iterating their course delivery, refining their facilitation style and reflecting on what worked.

“With each batch, I improved. Accumulated learning helped me better support students later.” (Participant H2)

“It made me a better person personally and professionally. I teach service-learning now much better than before.” (Participant B10)

### **Sub-theme 2.3: Integration of Interdisciplinary Perspectives**

Teaching in SL required crossing disciplinary boundaries, prompting faculty to explore concepts outside their expertise and support peer learning.

“I’m from CS, but we had to deal with mechanical and electronics content. We learned, then we were able to teach better.” (Participant HP2)

“It pushed us to think in multidisciplinary ways. It helped in our professional growth too.” (Participant B9)

This theme reveals that service-learning catalyzes pedagogical innovation. This compels faculty to move beyond conventional teaching methods and embrace dynamic, reflective and student-centered approaches.

### Theme 3: Empathetic Awareness as a Catalyst for Faculty Learning

Interacting with communities exposed faculty to social realities. These are absent in traditional academic settings. This led to the development of empathy and faculty identity.

#### Sub-theme 3.1: Learning Through Community Immersion

Faculty reported significant learning by listening to community voices and witnessing local challenges firsthand.

“When we go to the community, we understand things, observe better, and learn how to define problems from multiple perspectives.” (Participant HP2)

“We visit schools, NGOs, and localities. Every visit is a warm welcome and a learning experience.” (Participant B4)

#### Sub-theme 3.2: Building Empathy and Social Responsibility

Exposure to societal issues led to increased sensitivity, compassion, and ethical awareness.

“We learn empathy in SL. I try to understand people’s problems deeply now.” (Participant HP2)

“Even highly qualified people don’t know the pain of others. SL helped me see that.” (Participant B12)

“I started using empathy in my department too, especially in automation and robotics design thinking.” (Participant HP1)

#### Sub-theme 3.3: Reimagining the Role of the Educator

Faculty reflected on their evolving roles—from subject experts to socially responsible facilitators and mentors.

“It helped me see how engineering connects to society. We’re creators—we must help.” (Participant H2)

“This course changed how I teach and how I think about my responsibility as an educator.” (Participant B7)

Faculty engagement with real communities improves their understanding of societal challenges. It also helps with emotional intelligence, empathy and ethical responsibility.

The three themes reflect the multiple aspects through which faculty learn in SL contexts through institutional frameworks. It evolves pedagogical practices and meaningful community engagement. These findings show that faculty learning in SL is not incidental. It is influenced by support of institutions, reflective practice and experiences in real-world settings.

## 5 Discussion

The factors influence faculty learning in service-learning (SL) are studied in this study. The focus is on how engineering faculty in India experience changes in their engagement in SL courses. Herbert Kelman’s (1958) Social Influence Theory is used as a conceptual lens. The results show how faculty learning happens through the stages of compliance, identification and internalization. These are the

three processes through which individuals adopt new behaviors and attitudes in response to social influence. The discussion analyses and synthesizes insights across three major themes.

### 5.1 Navigating Institutional Structures and Expectations

Institutional mandates and regulations influence initial faculty engagement in SL. It is through deputation or top-down directives. This coincides with Kelman's concept of compliance. Faculty adopt service-learning due to formal expectations, appraisal benefits or workload allocation. Faculty described how their institutions assigned them to SL courses as part of their teaching responsibilities, prompting initial engagement without prior interest. This form of compliance may appear passive. It was a critical starting point for deeper learning to occur.

Institutional ecosystems that provided curricular flexibility, training and supportive leadership became crucial enablers of learning. This reinforces existing scholarship. This emphasizes the role of organizational support in educational innovation (Lewing & York, 2024). Faculty who received administrative backing and participated in orientation or Faculty Development Programs (FDPs) found it easier to adapt community-based projects. These institutional factors functioned to support SL as a valid and recognized academic integrated activity.

### 5.2 Developing Pedagogical and Professional Identities

Faculty engaged more actively with SL. Their professional identities shifted. They were demonstrating Kelman's process of identification. Individuals adopt behaviors because they align with meaningful social roles. Through iterative course facilitation, collaboration with students and real-time decision-making, faculty redefined their pedagogical roles. They moved from being content deliverers to facilitators. They started using experiential, interdisciplinary and problem-based learning.

Faculty reported acquiring new mentoring capabilities, adaptability and assessment techniques. These reflect findings from Dewey (1986) and Kolb (2013). This confirms experiential learning helps deeper teaching competence. They recognized that SL demanded integrating real-world complexity, local knowledge systems and collaborative learning with students. These changes show how SL acts as a professional learning context. It influences both teaching strategies and career trajectories (Kawai, 2021) (Camus et al., 2022).

SL created avenues for research innovation and recognition. It was also providing opportunities to publish, present and network within interdisciplinary domains. Faculty began to see themselves as engaged scholars, professionals whose work bridged education and societal relevance. This identification with SL as a unique and meaningful was critical in sustaining long-term faculty learning.

### 5.3 Internalizing Empathy and Community-Centered Values

Learning occurred when faculty internalized the values and principles of service-learning. This marks transition from professional engagement to personal transformation. This phase relates to Kelman's internalization. Individuals adopt behaviors that align with their belief systems. Through immersion in community contexts, faculty gained emotional insight into social issues. It began reflecting on their own positionality and ethical responsibilities.

Faculty narratives demonstrated heightened empathy. It shows growing sensitivity to inequality and a shift toward socially conscious teaching. These findings links with transformative learning theory (Mezirow, 2000) and the role of critical reflection in faculty growth. SL offered a reflective mirror. Through this faculty could assess what they teach. It also covers why and how they teach. The integration of empathy into classroom practices suggests a shift towards human-centered education. It bridges the gap between technical knowledge and societal need (Resch & Schrittmesser, 2023).



Faculty described a sense of purpose and satisfaction. They were highlighting that their involvement in SL aligned with intrinsic values of giving back to society. Educational equity and ethical engagement was also equally mentioned. This form of internalization confirms authentic learning in SL. This reinforces Paulo Freire's (1970) view of education as a space for critical consciousness.

### **Implications for Faculty Development and Institutional Strategy**

Findings of the study indicate that faculty learning in SL evolves through multiple stages. It is influenced by institutional structures. Pedagogical engagement and value-driven reflection are also other factors. These stages can be supported by institutions as explained below:

Introducing SL through policy. Following up with mentorship, peer communities and reflection spaces to support engagement.

Offering training that combines technical guidance (stakeholder interviews, project design) with emotional and ethical dimensions of SL pedagogy.

Including SL contributions in promotion and appraisal systems. Reinforcing the academic value of engaged teaching and scholarship.

Establishing cross-functional support structures (service-learning centers, interdisciplinary forums) to foster institutional learning cultures.

By recognizing and supporting these influence mechanisms, higher education institutions can improve faculty learning outcomes. It will scale service-learning as a transformative force within engineering education.

## **6 Conclusion**

Factors that influence faculty learning in service-learning (SL) were explored in this study. It is within Indian engineering institutions. The findings show that faculty learning is not a one-time event, but a layered one. It is an evolving process shaped by institutional settings, teaching experiences and community immersion.

Faculty begin their journey through compliance. The tasks were assigned or encouraged to participate in SL. They gradually identify with the educator role in socially engaged learning. With time, many internalize the values of empathy, reflection and social responsibility. These are integrated into their professional identity. These stages are as per Herbert Kelman's Social Influence Theory. This followed the sequence of framing faculty learning as a transition from compliance to identification and eventually to internalization.

Three major themes explain the process:

- A Supportive Institutional Ecosystem. This enables faculty initial participation in SL. Followed by long-term engagement through curriculum flexibility and trainings.
- Pedagogical Adaptation and Growth. This occurs as faculty work on real-world challenges.
- Ethical Commitment through Community Immersion. This supports reflective practice and change faculty perspectives.

Faculty learning in SL is socially influenced. Institutions that recognize this complexity by supporting reflection, valuing community work and aligning incentives. This can help better educators and socially responsive engineers.

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