

Development of a Learning Model Integrating Service-Learning and Experiential Learning in the Educational Communication Technology Curriculum

Punsa Ekpornprasit, King Mongkut's University of Technology Thonburi, Thailand

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Abstract

The purpose of this research was to develop the Service-Learning and Experiential Learning model, Implement the LMISEL model and Study the satisfaction of students with the LMISEL model in the Communication Technology in Education Curriculum. The experimental research samples were 100 Students, Simple Random Sampling. The instruments used in this study were LMISEL model and Satisfaction Assessment of students with the LMISEL model. The research findings were as follow: 1.The LMISEL process typically involves the following steps; Preparation, Service-Learning Experience, Analysis, Application, and Assessment, 2. Implement the LMISEL model into curriculum design for the Knowledge Management course for 4th year students in the Educational Communication and Technology program, King Mongkut's University Technology of Thonburi. Students undertake knowledge management by creating an Electronic book for the Royal Thai Police Office. Learning Outcomes: Apply concepts and principles of knowledge management to develop easily understandable and informative learning materials. Teaching and Learning Activities were as follow: Theoretical Instruction, Collaboration with Office of Police Forensic Science, Student Project Development, Project Presentations and Implementation. and 3. The LMISEL model satisfaction assessment was overall at the highest level. The feedback from students found that it was a very good experience to have the opportunity to work with large organizations and learn the work processes, gaining more understanding of the work of CSI Thailand and inspiring future careers. This project greatly developed their learning.

Keywords: Service-Learning, Experiential Learning, LMISEL

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Introduction

Thai society currently faces numerous challenges, one of which is educational inequality. A significant portion of the population lacks access to quality education, hindering their potential for self-development and career advancement. The Communication Technology in Education Curriculum aims to produce graduates equipped with the knowledge, skills, and competencies necessary to design, develop, and apply communication technology for educational purposes. However, traditional teaching methods that emphasize lectures and rote memorization may not adequately meet the needs of contemporary learners.

Experiential Learning (EL) is a pedagogical approach where students learn by actively engaging in hands-on experiences and reflecting on their learning process. This method enhances comprehension and enables students to apply their knowledge in real-world settings. Service-Learning (SL) is a learning process where students utilize their academic knowledge and skills to serve and assist the community. It not only fosters academic development but also cultivates life skills, social responsibility, and teamwork. The integration of Service-Learning (SL) and Experiential Learning (EL) is a popular contemporary learning model. These approaches emphasize active student engagement, exposure to real-world problems and situations, and the development of critical thinking, problem-solving, teamwork, and communication skills. Students learn through practical application in community-based projects, enhancing their communication, problem-solving, and teamwork abilities while fostering a sense of community and social responsibility.

Therefore the research on "Developing a Learning Model Incorporating Service-Learning and Experiential Learning in the Communication Technology in Education Curriculum" holds significant value in studying and developing learning models that effectively prepare students to navigate the challenges of the modern world. This approach enables students to learn from real-world experiences, promoting sustainable learning and the application of knowledge in real-world settings. It cultivates essential life skills such as critical thinking, problem-solving, teamwork, and communication. Students gain awareness of societal issues and develop a sense of social responsibility. Graduates of the Communication Technology in Education Curriculum, equipped with the skills developed through Service-Learning and Experiential Learning, will serve as crucial assets in national development in the future.

Purpose of Study

1. To develop the Service-Learning and Experiential Learning model in the Communication Technology in Education Curriculum.
2. To implement the Service-Learning and Experiential Learning model in the Communication Technology in Education Curriculum.
3. To study the satisfaction of students with the Service-Learning and Experiential Learning model in the Communication Technology in Education Curriculum

Population

450 students from the Faculty of Industrial Education and Technology, King Mongkut's University of Technology Thonburi. 1st Class of the academic year 2022.

Sample Groups

100 students from the Department of Educational Communications and Technology, Faculty of Industrial Education and Technology, King Mongkut's University of Technology Thonburi, 1st Class of the academic year 2022, Simple Random Sampling, Using lottery selection.

Research Methodology

Review of Related Theories and Research

- I. Review of Service-Learning: This will involve examining literature on the theoretical underpinnings, principles, and implementation strategies of Service-Learning as a pedagogical approach.
- II. Review of Experiential Learning: This will entail exploring the theoretical foundations, principles, and instructional methods of Experiential Learning as a teaching and learning strategy.
- III. Review of the Communication Technology in Education Curriculum: This will involve analyzing the curriculum's objectives, structure, content, and teaching methodologies to understand its context for integrating Service-Learning and Experiential Learning.
- IV. Review of Research on Learning Models: This will involve examining relevant research studies that have investigated the development, implementation, and evaluation of various learning models.
- V. Review of Research on Satisfaction: This will entail reviewing research literature on the measurement and assessment of student satisfaction in various educational contexts.

Implementation of the Service-Learning and Experiential Learning Model

The developed Service-Learning and Experiential Learning model will be implemented in the Communication Technology in Education Curriculum. This will involve:

- I. Curriculum Integration: Incorporating Service-Learning and Experiential Learning activities into the curriculum's content, teaching methodologies, and assessments.
- II. Instructor Training: Providing training and workshops for instructors to enhance their understanding and implementation of the model.
- III. Student Support: Establishing support systems to assist students in their Service-Learning and Experiential Learning experiences.

Evaluation of Student Satisfaction

Student satisfaction with the Service-Learning and Experiential Learning model will be evaluated using a mixed-methods approach.

- I. Surveys: Administering structured questionnaires to gather quantitative data on students' perceptions of the model's effectiveness, engagement, and overall learning experience.
- II. Focus Groups: Conducting focus group discussions to collect qualitative data on students' in-depth experiences, challenges, and suggestions for improvement.
- III. Interviews: Conducting individual interviews with selected students to gain deeper insights into their individual perspectives and experiences.

The collected data will be analyzed using appropriate statistical and qualitative analysis techniques to identify key themes, patterns, and areas for improvement. The findings will be used to refine and enhance the Service-Learning and Experiential Learning model for future implementation.

Results

Service-Learning and Experiential Learning Model in the Communication Technology in Education Curriculum

The Learning Model Integrating Service-Learning and Experiential Learning (LMISEL) is an educational approach that combines two powerful learning methods: Service-Learning and Experiential Learning. This model aims to enhance students' learning experience by providing them with opportunities to engage in hands-on activities that address real-world problems while also contributing to the community. The LMISEL process typically involves the following steps:

- I. Preparation: Students are introduced to the theoretical foundations and concepts related to the course or subject matter. They learn about the community or organization they will be working with and the specific challenges or needs that need to be addressed. Students develop a plan for their service-learning project, including goals, objectives, and expected outcomes.
- II. Service-Learning Experience: Students engage in hands-on service activities within the community or organization. These activities are designed to address real-world problems or challenges, allowing students to apply their theoretical knowledge to practical situations. Students work collaboratively with community partners, gaining valuable experience in teamwork, communication, and problem-solving.
- III. Reflection and Analysis: Throughout the service-learning experience, students are encouraged to reflect on their experiences, observations, and the impact of their actions. They analyze the connections between the theoretical concepts learned in the classroom and the practical applications encountered during their service activities. Reflection activities may include journaling, group discussions, presentations, or other forms of critical analysis.
- IV. Integration and Application: Students integrate the knowledge and skills acquired through the service-learning experience with the theoretical concepts covered in the course. They apply their newfound understanding to solve real-world problems, develop new ideas, or propose solutions to the challenges they encountered during their service activities. This integration process reinforces the connection between theory and practice, enhancing students' learning and understanding.
- V. Evaluation and Assessment: Students' learning outcomes and the impact of their service activities are evaluated and assessed. This evaluation may involve self-assessment, peer assessment, and assessment by instructors or community partners.

The evaluation process helps to determine the effectiveness of the LMISEL approach and identify areas for improvement.

The LMISEL model provides students with a holistic learning experience that combines academic knowledge, practical skills, and community engagement. By integrating Service-Learning and Experiential Learning, students not only deepen their understanding of course content but also develop valuable life skills, such as critical thinking, problem-solving, teamwork, and social responsibility.

The learning model incorporating Service-Learning and Experiential Learning in the Communication Technology in Education Curriculum commences with theoretical instruction to equip students with a comprehensive understanding of the course content and knowledge. Subsequently, students receive real-world projects from partnering organizations to gain practical experience. Throughout the process, they are guided and supported by faculty instructors and mentors from the respective organizations. Upon completion of their projects, students present their work for the first round to receive feedback for improvement. Finally, they present their refined projects in the final round before implementing them in real-world settings and engaging in reflective debriefing.

The debriefing process involves key questions that encourage students to contemplate their take aways from the Service-Learning project: What did they learn about the project itself? What did they learn about themselves? What differences did they observe upon project completion?

This reflective exercise fosters critical thinking skills and enables students to synthesize their experiences for future career applications.

Evaluation of the Service-Learning experience involves a multifaceted approach, engaging all stakeholders: Self-Assessment by Students: Students reflect on their personal benefits throughout the project, from ideation and design to implementation and completion. Project Evaluation by Community Members/Organizations: Individuals or communities that have directly benefited from the project's activities provide feedback, offering both formative and summative assessment insights. Instructor Evaluation: Faculty instructors evaluate various aspects of the project, including the written proposal, project content (course activities, PR materials, learning materials), and oral presentations.

This comprehensive assessment approach ensures a holistic evaluation of the Service-Learning experience, fostering student growth and project effectiveness.

Implementation of Service-Learning and Experiential Learning in the Knowledge Management Course

Course: Curriculum Design and Instruction (ETM363) Knowledge Management

Target Students: Fourth-year undergraduate students majoring in Technology and Communication Education at the Faculty of Industrial Education and Technology, King Mongkut University of Technology Thonburi.

Learning Outcomes: Apply concepts and principles of knowledge management to develop easily understandable and informative learning materials.

Collaboration: Office of Police Forensic Science Division, Royal Thai Police

Project Objectives: Manage existing knowledge in both document and individual forms. Organize and present this knowledge in an accessible, user-friendly, and durable format. Develop various learning materials such as online courses, E-books, and Videos.

Teaching and Learning Activities

1. Theoretical Instruction: Provide lectures on knowledge management concepts and principles.
2. Collaboration with Police Scientific Evidence and Identification Division:
 - I. Discuss project details, including challenges, needs, and objectives.
 - II. Facilitate student interactions with police officers to gather information.
3. Student Project Development:
 - I. Divide students into groups to develop knowledge management materials (e-books or other learning media).
 - II. Provide ongoing guidance and consultation from instructors and police officers.
 - III. Encourage students to utilize questioning techniques to extract knowledge from individuals.
 - IV. Guide students in recording demonstrations or interviews to capture knowledge.
4. Project Presentations:
 - I. Preliminary presentation: Students present their project drafts for feedback and improvement.
 - II. Final presentation: Students present their refined projects to the class and police officers.
5. Real-World Implementation:
 - I. Selected student projects are implemented within the Police Scientific Evidence and Identification Division.
 - II. Due to the practical nature and partial confidentiality of the knowledge, some projects cannot be publicly disseminated.
 - III. Examples of implemented projects include electronic manuals for police officers on firearm examination, crime scene investigation, fingerprint analysis, DNA testing, and blood examination.

Lessons Learned

The project effectively addresses the challenge of knowledge loss upon police officers' retirement. Student-developed knowledge management materials enhance the organization's efficiency and reduce training costs. The modern, user-friendly, and engaging nature of the materials is highly appreciated by the police division.

Conclusion

The implementation of the Service-Learning and Experiential Learning model in the Knowledge Management course has proven to be a valuable learning experience for students and a beneficial contribution to the Police Scientific Evidence and Identification Division. The model has successfully addressed the organization's knowledge management challenges and provided students with real-world problem-solving opportunities.

The Results of the Students' Satisfaction Assessment Towards the Learning Model of Social Service Combined With Experiential Learning in the Educational Technology Program

Table 1: Summary Table of Student Satisfaction Assessment of LMISEL Model

Satisfaction Areas Level	Mean	Percentage	Satisfaction
Service or Coordination			
1. Able to request information within responsibilities	4.56	91.78	Highest
2. Staff had knowledge and could explain well	4.54	90.71	Highest
3. Overall satisfaction with activity	4.56	91.18	Highest
Total	4.55	90.71	Highest
Consulting and Advising			
1. Project team provided good consulting and guidance	4.55	90.71	Highest
2. Course instructors provided good consulting and guidance	4.58	91.65	Highest
Total	4.57	91.02	Highest
Working			
1. Media production equipment suitable	4.58	91.34	Highest
2. Obstacles in media production	4.43	87.56	Highest
3. Filming/production location suitable	4.57	91.02	Highest
4. Everyone worked fully as assigned	4.57	91.02	Highest
Total	4.54	90.55	Highest
Submission			
1. Production time period suitable	4.63	92.60	Highest
2. Submission channel suitable	4.54	90.55	Highest
Total	4.59	91.80	Highest
Benefits Received			
1. Applied for self-development	4.61	91.97	Highest
2. Applied for career choice	4.56	90.87	Highest
3. Applied knowledge correctly	4.61	91.81	Highest
4. Able to explain to others	4.60	91.81	Highest
5. Produced beneficial media for community	4.61	92.13	Highest
Total	4.60	91.81	Highest
Overall Satisfaction Score			
Total	4.57	91.02	Highest

From the analysis of the satisfaction assessment summary table for the media production project to raise awareness for CSI Thailand, it was found that all assessed items across the 5 areas of 1) Service or Coordination e.g. able to request information, knowledgeable staff, overall satisfaction 2) Consulting and Advising e.g. good guidance from project team and instructors 3) Working e.g. suitable equipment, obstacles, location, everyone worked fully 4)

Submission e.g. suitable time period, channel and 5) Benefits Received e.g. applied for self-development, career, knowledge, able to explain, produced beneficial media, had an overall mean satisfaction score of 4.57 at the highest level. 1) Service or Coordination had a mean satisfaction of 4.55 at the highest level. Section 2) Consulting and Advising had a mean satisfaction of 4.57 at the highest level. Section 3) Working had a mean satisfaction of 4.54 at the highest level. Section 4) Submission had a mean satisfaction of 4.59 at the highest level. Section 5) Benefits Received had a mean satisfaction of 4.60 at the highest level.

The summary of reflecting on the learning outcomes found that the benefits occurred not only for the students who could apply it for self-development in their future careers or further studies. The feedback from students found that it was a very good experience to have the opportunity to work with large organizations and learn the work processes, gaining more understanding of the work of forensic police officers and inspiring future careers. The work was fun and informal. They had new experiences such as learning the DNA testing process step-by-step and gained more understanding about personal and property safety. They felt more engaged and understood the lessons better by having to learn from information not commonly available, requiring a deep understanding of the rare and unfamiliar content, so this project greatly developed their learning. They got to work with others, learn real work experience, learn formal working methods, and work together with police officers, exchanging knowledge - an invaluable experience. They felt very fortunate to learn from the police officers, never thinking they would get to see and do things like this. It was fun and challenging their abilities.

The benefits for external organizations were receiving promotional media or educational media for communicating with the public or between agencies that matched the problems and needs of the organizations, and were modern and economical without incurring costs and budgets for knowledge management.

The benefits for the instructors were providing academic services to society, communities, and external agencies, and learning teaching methods by working together with students and staff teams from various agencies to improve and make the teaching most effective. There was another target group that benefited from this teaching model, which were the service recipients, meaning the general public, communities, and society who watched the promotional media or educational media to understand and access quality and modern state services.

Discussion

Creating a Learning Model Through Social Service Combined With Experiential Learning in the Educational Communication Technology Program: Service Learning

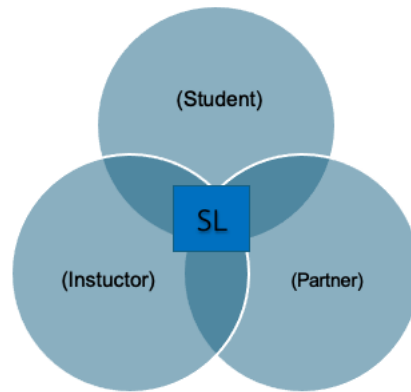


Figure 1: The Elements of Service-Learning (The Science Education Resource Center, 2018)

Service-Learning is a form of learning that integrates classroom education with community service activities. The objective is for students to apply the knowledge and skills they have learned to solve real problems in the community or for community development. At the same time, they gain additional experiences and knowledge from practical implementation. This type of learning usually emphasizes student participation, development of social skills, and fostering a sense of social responsibility. The key elements of Service-Learning include meaningful community service, linking to education, reflection, and evaluation. Service-Learning is considered an effective way of learning because students learn from practical experience, develop social skills, and cultivate a sense of participation and responsibility towards society.

The Experiential Learning model means learning occurs through the work cycle of students collaborating with others, and the reflective outcome is that students gain deeper skills and understanding about the real needs of the community. Service-learning instruction is a flexible form of teaching that can be used in both classrooms and diverse communities. The main drivers are the students, the community where students implement their projects, and the instructors, working together to develop effective learning projects and service activities. Learning is linked to the course content, with clearly defined learning goals. Service activities with meaning that respond to the needs identified by the community help students learn from real experiences. In organizing projects, students enjoy working in teams and dedicate time fully to learning the course lessons, as they recognize technology's important role in the work. Service-learning allows students to develop connections between theoretical education, research, and actual practice in the community - a broader perspective than just classroom learning. Aligning with Mehra's (2004) research, service-learning helps empower students, leading to calls for schools to incorporate it into curricula to instill consciousness in students for participating in participatory action research (PAR), service learning, and community informatics monitoring (CI). Clearly and tangibly linking PAR, CI and information and communication technologies (ICTs) in the networked information society will enhance community empowerment and social equity. In library and information science education in the US, there have been joint efforts by department instructors and universities to support PAR and create CI curricula at the graduate level to facilitate and model connecting students

with community stakeholders through service learning. This approach leads to 1) establishing social justice, 2) systematic library and information science education coupled with community development research, 3) raising awareness and credibility of the library/information profession as a community representative, and 4) learning about equity and empowering people to coexist through mutual learning projects (Gurstein, 2000).

Service-learning combined with Experiential Learning sets clear goals for learning and community engagement. The learning management process is as follows:



Figure 2: The Learning Process of LMISEL Model

This aligns with Furco (1996), who stated that purposeful Experiential Learning uses an academic context to design service projects, learning through service activities. Such learning occurs when both the service provider and recipient benefit from the activities. Eyler & Giles (1999, p.5) stated that in the experiential education model, learning takes place through the work cycle of students collaborating with others, and the reflective outcome is that students gain deeper skills and understanding about the real needs of the community. Osman & Petersen (2013, pp. 4-7) stated that student-centered teaching, participatory teamwork, hands-on practice, communication dialogues, finding suitable spaces for engaging with diverse communities allow students to see different perspectives and use independent reasoning in decision-making. This teaching approach enhances student effectiveness, producing quality graduates and good global citizens.

Service-learning instruction is a flexible form of teaching that can be used in both classrooms and diverse communities. The main drivers are the students, the community where students implement their projects, and the instructors, working together to develop effective learning projects and service activities. Learning is linked to the course content with clearly defined learning goals. Service activities with meaning that respond to the needs identified by the community help students learn from real experiences in organizing projects.

The Science Education Resource Center (SERC) at Carleton College (2018) summarizes that service-learning is purposeful, real Experiential Learning that designs service projects linked

to the course content being studied. The projects are evaluated periodically, and students, community, instructors and those involved all learn and benefit from the community service projects.

Summary

Importance of Community Service and Experiential Learning

- I. Integrating community service and Experiential Learning allows students not only to learn theory, but also to practice, providing beneficial experiences that can be applied to their future work life and daily life.
- II. Community service helps foster social responsibility and makes students feel more connected to the community.
- III. Impact on Future Teaching and Learning
- IV. This learning model can serve as a model for other curricula to adopt and enhance the effectiveness of teaching and learning.
- V. It can help reduce rote learning problems and increase hands-on learning, equipping students with comprehensive skills to take on future challenges.

Recommendation for Future Research

- I. Further research should evaluate the long-term impacts of this learning model on student skill development.
- II. This learning model should be continuously improved and developed to align with changing technologies and societal needs.

References

- Ekpornprasit, P. (2016). Elements of volunteerism for students. In *Proceedings of the International Conference on Learning Innovation in Science and Technology (ICLIST2016)* (pp. 117-125). Pattaya, Thailand.
- Ekpornprasit, P. (2016). Results of using an activity model to promote volunteerism among students at King Mongkut's University of Technology Thonburi. *Research and Intellectual Productivity Journal*, 14(1), 87-99.
- Ekpornprasit, P. (2024). The results of coaching activities to promote self-knowledge among first-year students, Department of Educational Communications and Technology. In *Proceedings of the 7th International Conference on Learning Innovation in Science and Technology (ICLIST 2024)* (pp. 132-135). Pattaya, Thailand.
- Eyler, J., & Giles, D. E. Jr. (1999). *Where's the learning in service-learning?* San Francisco, CA: Jossey-Bass Publishers.
- Furco, A. (1996). Service-learning: A balanced approach to experiential education. In B. Taylor (Ed.), *Expanding boundaries: Serving and learning* (pp. 2-6). Corporation for National Service.
- Gurstein, M. (2000). *Community informatics: Enabling communities with information and communications technologies*. Hershey, PA: Idea Group Publishing.
- Mehra, B. (2004). Service-Learning in library and information science (LIS) education: Connecting research and practice to community. *Interfaces: UCLA Journal of Education and Information Studies*, 1(1), Article 3.
<https://doi.org/10.5070/D411000534>
- Osman, R., & Petersen, N. (Eds.). (2013). *Service-Learning in South Africa*. Cape Town: Oxford University Press Southern Africa.
- The Science Education Resource Center. (2018). What is service-learning? Retrieved from <https://serc.carleton.edu/introgeo/service/what.html>
- Ussawapitakul, P. (2019). Service-learning instruction in library and information science curricula. *SWU Library Journal*, 12(1), 1-15.
- Wlodkowski, R. J. (2008). *Enhancing adult motivation to learn: A comprehensive guide for teaching all adults* (3rd ed.). San Francisco, CA: Jossey-Bass.

Contact email: punsa.ekp@kmutt.ac.th