

Open Learning Environment Based Service Learning(SI) (Study Theory, Model And Learning Strategy

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Abstrct

Learning innovations continue to be carried out in order to fulfill the learning curve. These innovations have spawned a variety of models, approaches, strategies and learning methods. From teacher-dominated learning to actively engaging learners. This paper systematically reviews and discusses several scientific works. The results revealed that the service learning environment is a product of learning innovation, namely the acquisition of knowledge based on critical thinking, personal experience and ability and active involvement in addressing problems in the community or community. This model and strategy was born from the theory of association learning, namely open learning that focuses on self-inquiry, divergent thinking and heuristics-based learning).

Keywords: Open learning environment, Service Learning

A. INTRODUCTION

Currently, various efforts have been made by the government and private parties to develop a more quality national education, among others through the creation and improvement of curriculum and assessment processes, improvement of educational facilities, production and procurement of teaching equipment, as well as increasing the

resources of educators and education personnel. National education is intended to increase the capacity of learners to be able to face and overcome life's challenges. One of the government's efforts to improve the ability of learners is to publish the National Standards of Education (SNP) with Government Regulation No. 19 of 2005 which resulted in the issuance of the 2006 curriculum known as the Education Unit Level Curriculum (KTSP). Not only that, in 2013 the government has issued a policy on character-based curriculum. This policy, also has an effect on changing the higher education curriculum with the issuance of the national qualification framework in Indonesia (KKNI).

Universities, as higher education institutions, have a very significant role in driving national growth. Therefore, the implementation of Higher Education must refer to tridarma higher education.. This has been stipulated in Higher Education Law No. 12 of 2012. Various policies on the implementation of higher education mandate to every university in Indonesia to implement tridarma in an integrated manner, by combining education and teaching, research and community service. Fikri Mahzumi (2016; 304) stated that the learning experience for learners can be more meaningful when applied integratedly between tridarma (education, research and service) in accordance with the application of good learning standards and procedures and the availability of services.

The learning system, which was previously conventional, must now be transformed into student centre learning. There are three learning principles centered on learning including: 1) knowledge as incomplete; 2) learning process as a process to reconstruct and find knowledge to be learned; 3) The learning process is not a teaching process that can be done classically and is not a process to carry out a standard instruction that has been designed.

This article focuses on efforts to study theories about student-centered learning models and strategies. A learning model and strategy that integrates academic activities with community services by prioritizing the development of creativity, capacity, personality, and the needs of learners and developing self-reliance in finding and finding knowledge and providing services to the community. The model is known as open learning environment (OLE) based service learning (SL). This model was chosen because it integrates academic learning and service or community service.

Open Learning Environment (OLE)

Ole theory was born from the thoughts of early education experts such as Paulo Freire with his popular education based on social transformation. John Dewey (Rahmat, 2013: 43) with his opinion that experience is a very important value to be used as a paradigm to build education. According to Dewey the curriculum in schools must

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respond to social and cultural developments. In addition Piaget (Billett, 2004), also introduces the idea that abstraction develops on the basis of interaction with the environment through the process of assimilation and accommodation. The process of assimilation is done by connecting the material studied with what has been experienced while the accommodation process affects the category of new knowledge of the experience.

This opinion is in line with Hubermas's view (Arif, et al, 2014) related to the formation of knowledge, including: 1) being cooperative and collaborative; 2) the need for activities based on discussions; 3) the need to learn independently through experience and flexibility; 4) the need for community-related learning processes; 5) the need for troubleshooting activities; 6) the need to enlarge the right of students to speak; 7) the need for teachers to act as transformative intellectuals. There are still many opinions of other education experts such as Ausubel, Bruner, Gagne who are famous for their thoughts on learning theories that support science learning.

The thinking of the education expert can be found as the basis for designing learning. Learning activities must be able to develop things that are more than just knowledge, but also include processes, creativity, attitudes or behaviors and applied. McCormack and Yager (Veal & MaKinster, 1999:18) state that current learning should focus on developing educational taxonomy, i.e. developing domain knowledge, domain processes, domain creativity, domain attitudes, domain applications and connections. This is in line with Johnson's opinion (2008: 18-19), that there are three learning principles that must be considered, namely: (1) learning to produce changes in the behavior of relatively permanent learners, (2) students have the potential, gandrung and ability that is the seed of kodrati to grow endlessly, (3) changes or achievements of ideal qualities that do not grow natural linearly in line with the process of life, meaning that the learning process is indeed part of life.

The Open Learning Environment (OLE) provides a variety of resources for self-learning. Learning in an open environment is done by integrating the material with prior knowledge and is contextual. An open learning environment aims to encourage critical thinking and learning centered on learners through inquiry and heuristic nature (Reigeluth, 1999). Heuristik is a method of problem solving or a common step that guides problem solving in finding solutions to problems (Widmer & Hertz, 1989). An open learning environment supports the efforts of learners in understanding the material based on their awareness related to the benefits of the material it learns in everyday life. According to Abele, Flum, & Strobel, (2017) actions centered on an open learning environment can facilitate the process of self-learning. The quality of teaching and learning will be better if the learning environment can facilitate self-learning. Knowles (Schwartz, Stiefel, & Wiswall, 2016) points out that the broad meaning of self-learning

is a process by which individuals take the initiative, with or without the help of others. This defenisi also includes determining learning needs of learners, achieving learning objectives, identifying resources and materials for learning, choosing and implementing the right strategies and assessment is part of the self-learning process. According to Shireen Haron in (Schwartz et al., 2016) learning environments such as self-learning are able to improve a person's life. Therefore, there needs to be good and careful steps to design a self-learning environment ranging from planning, control, action nd evaluation for long-term applications (Din, Haron, & Rashid, 2016). Another thing to note is that the arrangement of the learning environment must be flexible, namely from a static learning environment consisting of tables, chairs to an active but also efficient learning environment to achieve future learning goals (Yajma, Hayakawa, Kashiwaba, Takahshi, & Oiguchi, 2016). Learning with an open learning environment is different from Direct learning. The difference can be described as follows:

| Open Learning Environment | Directed learning Environment |
|---|--|
| <ol style="list-style-type: none"> 1. Learners simulate, interpret, experiment etc. 2. heuristic shorts (exploration, flexible, understanding & multiple perspectives) 3. Developing Individual Understanding (identifying learning needs, making decisions, modifying, testing, and refising the knowledge they acquire) 4. The relationship between cognition and context 5. Reduce errors by mediating deeply | <ol style="list-style-type: none"> 1. Deciphering content, teaching gradually 2. Simplifies the findings and mastery of key concepts by isolating and instructing knowledge and skills 3. Mediating external learning through explicit activities and practices 4. Enable internal conditions of learning carefully for external condition engineering 5. Focusing on products & reducing/crossing errors |

B. METHODS

This article is intended to examine the theories about SL-based OLE as a first step towards further research, namely how to develop a research model to test or develop a learning model that integrates academic learning with community service in an open environment (SL-based OLE). Review literature is used as a method in writing

this article. Several scientific works are analyzed to define and expose important elements of service learning-based open learning models and strategies.

C. RESULTS

According to Hannafin et. al(Reigeluth, 1999) there are four components that must be considered in learning by utilizing an open environment, including: 1) context; 2) resources; 3) tools; 4) teacher. Context and experience are very important to understand as a first step in designing learning with an open environment. According to Hanafian, learning is most effective when evolving from real and concrete experiences where learners face, shape and revise the theories found (Hannafin, Hall, Land, & Hill, 1994). Learning will run effectively and efficiently if it has been designed in the first place. Learning design is structured by providing a realistic framework. The context provided is a problem that can be solved, contextual, coherent, and based on previous experience and knowledge. Open space learning emphasizes on meeting the needs of learning, achievement of learning objectives and involvement of learners in the learning process (Hannafin, Hall, Land & Hill, 1994). The openness refers to the objectives of learning, facilities and infrastructure or both (Hannafin, Land, and Oliver, 1999). Open space learning is not derived from abstract descriptions of phenomena but rather from practical experience in understanding and solving problems through metacognition with the help of tools and learning resources.

From the explanation above, it can be concluded that the principles of an open learning environment include: 1) medium of promotion of thought from different perspectives; 2) self-learning and autonomy with metacognitive support; 3) real experience with authentic problems; 4) mediate learning through individual experience and personal theory; 5) provide tools and resources to help the learning process (Reigeluth, 1999).

Benefits of an Open Learning Environment

An open learning environment is essential in supporting divergent thinking and respecting a wide range of perspectives. An open learning environment greatly appreciates heuristic-based learning processes and provides learners with the opportunity to learn concepts and interpret problems based on lamation. An open learning environment also provides learning opportunities to discover unclear and unstructured problems. Through inquiry activities and manipulation of beliefs and underlying structures rather than imposing certain beliefs. OLEs also provides autonomous opportunities to learners and encourages learners to formulate problems and needs, select a variety of available sources of information and self-evaluation. OLEs

is a learning system that reflects the harmony of various branches of science such as: Psychological, pedagogical, technological, cultural, and pragmatic.

D. DISCUSSION

This The philosophy of open learning environment and service learning or SL is based on education obtained through learning experience as described above. SL is an academic activity conducted collaboratively and structured by involving practical experience, academic learning and community engagement (Godfrey, Grasso, & American Association for Higher Education, 2000; Jacoby, 2003; Cipolle, 2010; Rusu, Copaci, & Soos, 2015). SL focuses on developing potential learners who not only focus on learning outcomes but also to achieve a deeper goal of meeting the needs of local communities where learners take part as citizens who have social care (Rusu et al., 2015). Maurice (Irene Nusanti, 2014: 252) stated that Service learning is a way of teaching and learning that connects positive and meaningful actions in the community with academic learning, personal development and responsibility as citizens. SL deals with the learning process through authentic and meaningful application of knowledge (Bodzin, Shiner Klein, & Weaver, 2010). SL is a form of teaching experience consisting of planning, action and reflection. SL is different from community service (Bodzin et al., 2010; Cipolle, 2010).

In community service activities learners are fully involved in community service activities such as cleaning the riverbank, or visiting orphanages to make donations and so on. As for service learning activities learners conduct academic activities in a structured, systematic manner through discussions, inquiry, discovery by connecting their experiences to learn and conduct community service activities. For example, learners learn about environmental pollution through the process of reading books, journals, articles on the Web, discussions, then conduct observation activities, take water samples, observe under a microscope, document results and present scientific information to the bodies or agencies that finance, make public service advertisements to raise awareness of preserving and preserving the environment and maintaining the quality of river water. In addition, there are three important criteria that must be considered in SL, namely: 1) services must be as needed and members benefit the community; 2) improving the quality of academic learning; 3) preparing students to participate in the community.

SL Components

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According to Eyler & Giles (Flecky & Gitlow, 2011) SL components include: 1) curriculum and ongoing projects; 2) developed in partnership with the community; 3) meaningful activities for learners and the community; 4) the need for clear and relevant relationships of community activities for the purposes of teaching programs; 5) challenge learners to solve problems and social and environmental issues in everyday life.

Wilczenski & Coomey, (2007) divides the SL component into three parts namely: 1) learning activities; 2) service activities and 3) reflection activities. Learning activities are carried out by accessing various information, utilizing knowledge, experience and skills, connecting with the real world and reviewing issues related to material content and community services. Service activities are carried out using the skills and skills of learners to meet the needs of the community while reflections are carried out as an effort to reflect knowledge from the experience before, during, and after the SL process. Reflection can be done in collaboration between learners, lecturers, institutions and the community.

From the explanation above, it can be concluded that the components of SL are grouped into several parts: 1) academic (academic); 2) engagement (partnership); 3) Public Relations or Reciprocity; 4) Reflection; 5) Public Dissemination).

Principles Service Learning

SL is an academic program and community service that is carried out effectively and sustainably. The principles of SL are as follows::

- 1) The involvement of learners in responsible and challenging actions for the common good
- 2) Provide structured activities for learners to reflect on their experience services
- 3) Articulate services and clear learning
- 4) Compatibility between service providers and services in the process of successful service success
- 5) Expect active and continuous organizational commitment Including monitoring, monitoring, support, recognition and evaluation training to meet the attainment of services and learning
- 6) Ensure that flexible time and learning commitments are appropriate and in the best interests of all involved.

Benefits of Service Learning

The benefits of SL according to Kielsmeier et al., namely for academic achievement and social development, citizenship and school relations with the

community. The National and community service act outlines the benefits of SL as follows::

- 1) Increasing the active participation of learners in services to meet the needs of the community
- 2) SL is coordinated collaboratively between schools and communities
- 3) Helping promote a sense of responsibility and concern for others
- 4) Providing structured time for learners to reflect on experiences
- 5) Provides opportunities to use newly acquired skills and knowledge in real life and situations.

If implemented properly, SL will enable learners to be creative outside the classroom and have a direct impact on the sustainable future. As for some research on service learning that has positive benefits for learners and society. Among others, research conducted by (Berasategi, Alonso, & Roman, 2016) stated that Service Learning encourages learners to have reflective attitudes and learners feel interested in the learning process. Astin (2000) at the Higher Education Research Institute shows that service learning has a positive impact on the progress of learners in academic fields, values, leadership, careers, and plans to continue to serve the community. Research conducted by Lenore P. Tedesco & Kara A. Salazar, with the title Using Environmental Service Learning in an Urban Environment to Address Water Quality Issues, the results showed that, environmentally based service learning can provide opportunities for learners to be able to apply learning materials related to environmental problems and contribute to improving the quality of clean water (Tedesco & Salazar, 2006). The results also showed that students have participated actively in learning and community service so as to change their perception and role in preserving the environment. Learners also have awareness and are able to overcome problems in the future.

Service Learning model in an open environment

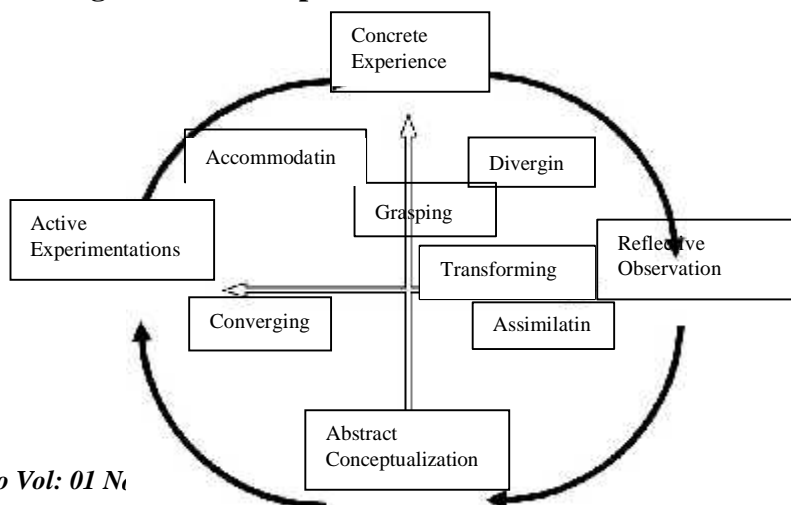


Figure 1. Learning Cycle Models and Learning Styles

Experiential learning is a process of building knowledge that involves the creative thinking depicted in the learning cycle model in figure 1. The above cycle shows that learners undergo four stages of learning, namely concrete experience (experiencing), reflective observation (observing), abstract conceptualization (thinking), and active experimentation (acting). The four stages occur continuously starting from the concrete experience owned by a person and then followed by reflective observations to observe the effects and understand their actions in the situation (Kolb & Kolb, 2009a, 2009b).

The model also includes four different learning styles: divergent, assimilation, convergence and accommodating. According to Kolb, effective learning requires four different styles. Each learning style fits two stages of the learning cycle, as shown in the image above. Ideally balanced in such a learning style model. But many individuals become stronger in one area than others. Divergents are related to the experience of concrete experience and reflective observation. These people have a strong imagination and the ability to see from different perspectives. Assimilators are associated with reflective observation and abstract conceptualization. Assimilators are more skilled with inductive reasoning, theoretical models, and abstract concepts.

Convergence associated with abstract conceptualization and active experimentation. They are strong in the field of practical application and deductive reasoning. The property is related to active experimentation and concrete experience. In this area the power includes intuitive problem solving and high performance in task completion and responding to critical situations.

Kolb's model emphasizes on natural cycles, reflecting thinking and acting. The process of contemplating experience allows learners to change their experience in problem solving actively in the same situation but a new approach. In short the learning experience is learning through doing and by learning from the real experience of the subject, through reflection on the process and knowledge gained, then can use the skills to solve other problems.

Media needed in SL-based OLEs Learning

Electronic media (Internet, Database, computer tutorials, videos etc), print media (textbooks, articles, journals, newspapers etc.), or humans (experts, parents, teachers, peers, communities), natural environment (rivers, seas, forests, etc.), community environment (markets, hospitals, communities, etc.) (Reigeluth, 1999).

The Role of SL-Based OLEs Facilitators

Facilitators can be electronic media (e.g. databases, computer tutorials, videos etc),printed media (textbooks, journal articles), or humans (experts, parents, teachers, peers). Facilitators should support existing learning contexts, provide the right resources and tools, and cognitive processes of learning designer learners such as conceptual, metacognitive, procedural, str learning strategies.

OLEs Based Learning Strategies SL

1. Consider courses or subjects even materials taught with SL-based OLEs
2. Formulating goals for both individual, internal, and external objectives
3. Resources to provide available information sources (static and/or dynamic);
4. Tools or media as a medium for digging information (processing, manipulation, and / or communication tools);
5. Teachers or companions to guide and support learning efforts (concept formulation, metacognitive, procedural, and/or strategy)

OLEs Based Assessment Methods SL

Authentic Assessment and Self-evaluation through tests, observations, interviews and documentation. Tests are carried out to test cognitive abilities. Observations and interviews are used to assess the processes and documentation used to analyze products.

E. CONCLUSION

The main focus of this article is on literature studies of learning innovations that integrate learning activities with community services. Learning that utilizes the open environment as a large laboratory for students to learn as well as serve the community or community. The results of the analysis showed that open space learning combined with service activities can contribute to students' abilities such as caring attitudes and social responsibility. OLE learning also benefits certain communities or communities that are partners. The success of open learning environment lies in the role of learners and learners as well as the support of learning facilities or media used. In addition, the support of partnerships that connect the community and learners is also urgently needed.

REFERENCES

- Abele, E., Flum, D., & Strobel, N. (2017). A Systematic Approach for Designing Learning Environments for Energy Efficiency in Industrial Production. *Procedia Manufacturing*, 9, 9–16. <https://doi.org/10.1016/j.promfg.2017.04.001>
- Astin W, Alexander, Vogelgesang Lori J, Ikeda, Elaine K, Yee, Jeninifer A. 2000. Executive Summary: Higher Education Research Institute. Los Angeles: University of California
- Berasategi, N., Alonso, I., & Roman, G. (2016). Service-learning and Higher Education: Evaluating Students Learning Process form their Own Perspective. *Procedia - Social and Behavioral Sciences*, 228, 424–429. <https://doi.org/10.1016/j.sbspro.2016.07.065>
- Bodzin, A. M., Shiner Klein, B., & Weaver, S. (Eds.). (2010). *The Inclusion of Environmental Education in Science Teacher Education*. Dordrecht: Springer Netherlands. <https://doi.org/10.1007/978-90-481-9222-9>
- Cipolle, S. B. (2010). *Service-learning and social justice: engaging students in social change*. Lanham, Md: Rowman & Littlefield Publishers.
- Din, N., Haron, S., & Rashid, R. M. (2016). Can Self-directed Learning Environment Improve Quality of Life? *Procedia - Social and Behavioral Sciences*, 222, 219–227. <https://doi.org/10.1016/j.sbspro.2016.05.150>
- Flecky, K., & Gitlow, L. (Eds.). (2011). *Service-learning in occupational therapy education: philosophy and practice*. Sudbury, Mass: Jones and Bartlett Publishers.
- Fikri Mahzumi, (2016) Imtihan amali, Service Learning ala Pesantren Mambaus Sholihin Gresik; Paradigma Kemanfaatan Bagi Individu Lain, *Proceedings of The International Conference on University-Community Engagement*. Surabaya: Icon Uce 2016
- Godfrey, P. C., Grasso, E. T., & American Association for Higher Education (Eds.). (2000). *Working for the common good: concepts and models for service-learning in management*. Washington, DC: American Association for Higher Education.
- Irene Nusanti, (2014) *Strategi Service Learning Sebuah Kajian untuk Mengembangkan Kegiatan Pembelajaran*, Yogyakarta: PPPPTK Seni dan Budaya
- Jacoby, B. (2003). *Building partnerships for service-learning* (1st ed). San Francisco, CA: Jossey-Bass.

- Kolb, A. Y., & Kolb, D. A. (2009a). Experiential learning theory: A dynamic, holistic approach to management learning, education and development. *The SAGE Handbook of Management Learning, Education and Development*, 42–68.
- Kolb, A. Y., & Kolb, D. A. (2009b). The Learning Way: Meta-cognitive Aspects of Experiential Learning. *Simulation & Gaming*, 40(3), 297–327. <https://doi.org/10.1177/1046878108325713>
- Lenore P. Tedesco & Kara A. Salazar, (2006), Using Environmental Service Learning in an Urban Environment to Address Water Quality Issues, *Journal of Geoscience Education*, v. 54, n. 2, March, 2006, p. 123
- Rama, D.V., (2007) *Learning By Doing Concepts and Models for Service-Learning in Accounting*. United states of America: Stylus Publishing, LLC. p.3
- Rusu, A. S., Copaci, I. A., & Soos, A. (2015). The Impact of Service-Learning on Improving Students' Teacher Training: Testing the Efficiency of a Tutoring Program in Increasing Future Teachers' Civic Attitudes, Skills and Self-Efficacy. *Procedia - Social and Behavioral Sciences*, 203, 75–83. <https://doi.org/10.1016/j.sbspro.2015.08.262>
- Schwartz, A. E., Stiefel, L., & Wiswall, M. (2016). Are all schools created equal? Learning environments in small and large public high schools in New York City. *Economics of Education Review*, 52, 272–290. <https://doi.org/10.1016/j.econedurev.2016.03.007>
- Tedesco, L. P., & Salazar, K. A. (2006). Using environmental service learning in an urban environment to address water quality issues. *Journal of Geoscience Education*, 54(2), 123–132.
- Widmer, M., & Hertz, A. (1989). A new heuristic method for the flow shop sequencing problem. *European Journal of Operational Research*, 41(2), 186–193.
- Wilczenski, F. L., & Coomey, S. M. (2007). *A practical guide to service learning: strategies for positive development in schools*. New York: Springer.
- Yajma, K., Hayakawa, Y., Kashiwaba, Y., Takahshi, A., & Oiguchi, S. (2016). Construction of Active Learning Environment by the Student Project. *Procedia Computer Science*, 96, 1489–1496. <https://doi.org/10.1016/j.procs.2016.08.195>
- Tim Kurikulum dan pembelajaran (2014), *Kurikulum Pendidikan Tinggi*, Jakarta: direktorat pembelajaran dan kemahapebelajaran Direktorat jenderal pendidikan tinggi Kementerian pendidikan dan kebudayaan. p.54