

# Design Didactic of Heutagogy Approach on Learning Management System

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## ABSTRACT

Heutagogy approach into learning approach in accordance with the characteristics of the field of humanities, science and vocational. Students from various disciplines need the opportunity to: (1) choose the content, (2) develop their own learning resources, and (3) utilizing the jointly developed content in learning. Features that are learning environments require the development at the Learning Management System. The ability to select, develop and utilize learning resources independently show that the approach heutagogy become a necessity in life-based learning.

**Keywords:** heutagogy approach, learning media, learning-based life

## 1. INTRODUCTION

Strengthening the concept heutagogy done by examining a variety of literacy about the ability and necessity of learners (students) to decide on their own way of life. A thorough study of building a learning environment development into the main road to develop a Learning Management System in life-based learning curriculum. Heutagogy, or as defined by the term 'self-learning' [1], The essence of heutagogy is that in some situations studied, the focus should be on what and how learners want to learn, not on what is taught.

This is a very different approach of how to 'teach' the more formal and traditional. In heutagogy educational process changed from being a process in which people (academics) pour information into the learners, to a place where learners choose what to learn and even how they can study it. This represents a change from teacher-centered learning becomes learner-centered learning. In heutagogy's approaches, people 'learn' more taking on the role as a facilitator or guide on how learning takes place, and if the formal assessment of learning is required,

Conceptual study is required to establish the needs of the learning approach. There is an additional element to this learning approach, such as questions about: (1) how learning will occur [2]; and (2) how learners should be guided in their own learning [3]. Certainty in teaching and learning is that the desired learning is the ability and maturity level learners. Learners have the feeling he was challenged, it makes no sense, no matter how much they want to learn about anything. One of the recipients of the inherent benefits of the approach that would be obtained

learners heutagogy is that their learning ability increased significantly through the use heutagogy learning approach. This is the challenge something that, conventionally, may be considered to be beyond their capabilities, it might actually develop and expand the capabilities of learners. This has particular relevance in view of the emphasis on lifelong learning and indefinitely.

## 2. METHOD

Development Method Web-Based Learning Design using the phases of development (Figure 1), among others: analysis; draft development, development systems, testing and implementation, and formative evaluation. The pattern of development is a way to describe the process. However, in the activities on the ground carried out adjustments based on context.

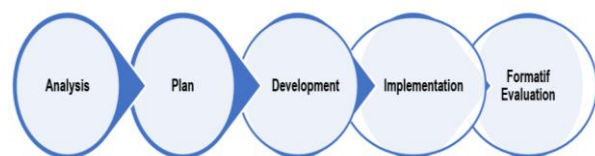


Figure 1 Development Patterns

### a. Analysis

The analysis is done by looking at the overall preparedness ranging from instructional design to technical.

### b. Plan

The design is based on the development of: (1) Pattern heutagogy learning approach at the Universitas

Negeri Malang, and (2) the pattern of audio-visual technology that can improve the learning activity.

**c. Development**

Development of the system is performed by: (1) Selection of platform, (2) initiation of hardware and software capabilities, and (3) hardware and software synchronize with LMS and MOOC Universitas Negeri Malang.

**d. Implementation**

The test is done by performing a series of activities online with audio-visual technology. Testing activities carried out in the Department of Mechanical Catering Universitas Negeri Malang. The trial was conducted to test: (1) the stability of website which has been installed in the server, and (2) speed in responding to access software. Implementation is done by doing: (1) upload learning content developed, and (2) make arrangements to approach learning patterns heutagogy.

**e. Formative evaluation**

Formative evaluation is done by seeing: (1) activity in the LMS and MOOC students, and (2) the results of student learning during the learning heutagogy approach. Formative evaluation is not final, but it leads to the improvement of learning patterns.

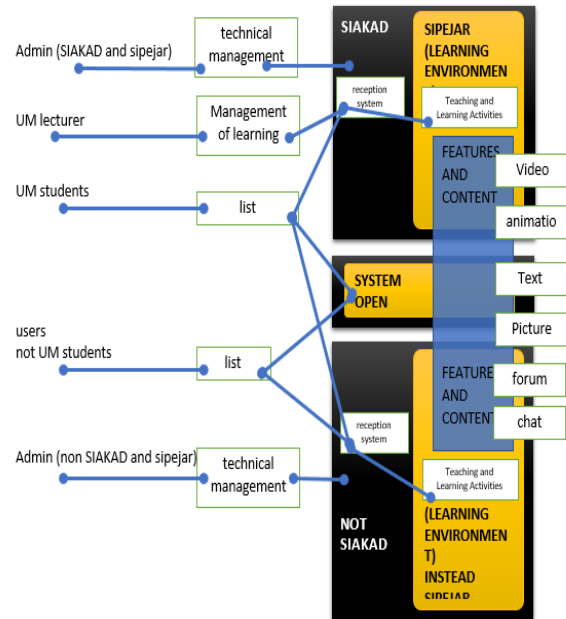
**3. RESULT**

The results of the development of the concept of elements that must be realized in the development of didactic Heutagogy. Some elements were not going to be required in situations of non-formal education.

**Approval**, depending on the level of autonomy given to the teachers of the institution education providers. This concerns the approval heutagogy approach to learning before they are implemented in the curriculum. Institute of education providers such as: (1) the academic council, and (2) the decision-makers such as the head of department, and (3) senior (who are considered seniors in institutions). If the training activities in the company, it may be necessary to convince the CEO or manager about the change in training. This element may not be required because heutagogy can be implemented without requiring approval.

**Facilitator**, People who will facilitate the progress of learners is described as a facilitator. Their role is to ensure that learners are provided with relevant guidance to ensure that the learning outcomes will be optimized. Interaction with students also can provide a learning facilitator. Lecturers and teachers act as facilitators in theoretic may be easy, but it is practically very difficult. Lecturers and teachers must have a philosophical interest and that the joy of learning revived when they use methods to student-centered learning becomes more

attractive. Lecturers and teachers who are fully committed to their learning and learning plans.



**Figure 2 Product Design**

**Selection**, Learners, (as expected of their own), has a range of broad or narrow in terms of learning what they want to do. Learners have different interests, some learners want to get a deep understanding of a highly complex field, while the other learners tend to learn in learning narrower field. The role of the facilitator is to help students more clearly define what they want to learn. The facilitator will consider three things: relevance, accomplishments, and level. What would be studied by the students should be relevant to the course chosen at this time, the topic should be appropriate and not only appeal to learners. The facilitator should be able to calculate how much time is available for students to make choices in their way. As well as an important facilitator to determine the level as the provisions of the scope of learning is considered as an outcome of learning or achievement defines success. To avoid the facilitator is a teacher-centered learning approach that choose the content and the learning process.

**Agreement**, Students and facilitators agreed on a few things: (1) the time frame for learning, (2) the methodology to be used, (3) the frequency of reviews of progress, and (4) the form of the final assessment (if necessary). Agreements can be verbal or documented in writing. Learners can then be reminded of their responsibilities, if the lesson plan goes off track. Explicitly needs to be stated that the agreement is not a formal and binding contract. Instead, there needs to be a high flexibility, so that if circumstances change, to adapt the learning program. For example, the findings need to be accommodated on the learning aspect by the learners

that they think are relevant or interesting to them, and they want to change the focus of their study.

**Sighting**, heutagogy's learning definition assumes that when people are given the knowledge and new skills, it is likely that students will develop new insights that are unknown to the facilitator. The process to gain an insight into the learners or learning experiences often we define as learning. Learners the possibility of having: (1) a new question, (2) challenge, and (3) the possibility of further way for them to pursue. So, it is important for the facilitator to find or review periodically about: (1) what progress has been made, and (2) what new needs of learners. Review session can involve the meeting agreed with the facilitator as individuals or groups, face to face or using the available technology. Can also perform synchronous or asynchronous activities using the Learning Management System.

**Assessment**, generally the process and assessment activities carried out at the end of the learning period specified, but may be realized assessment is carried out during the learning process agreed. Rate specifically a learner-centered approach.

**Feedback**, the problem of feedback is a way of directing the learners on a specific action based on the advice of a teacher. Feedback is optional, but may rather invite informal discussion in which learners and facilitators to exchange ideas and experiences that can provide benefits. Learners can talk about the challenges faced (and overcome) and the new capabilities of learners, while the facilitator to get useful information on how to guide the learners in the future. This can be done in groups and can replace didactic lectures or group activities are planned. Exchange of experience in general confirm the value of the lessons learned by the learners, while also offering insight into how learning in the future agreed upon by both parties.

#### 4. DISCUSSION

Heutagogy approach has an important role in the empowerment of individuals. Heutagogy approach is not a new approach to learning. Note various suggested that heutagogy approach even been recorded on a napkin in a restaurant in 2000[1], [4]–[6], Heutagogy for vocational approach is not the most good idea to be implemented in vocational learning at the Universitas Negeri Malang. However, the discussions held at the beginning of the lecture lecturer, appearing general dissatisfaction with the way education accomplished. Heutagogy approach intended to foster the ability of learners in expanding frontiers of knowledge, attitudes and skills. During this time, pedagogic only oriented to teachers alone. Learning requires the development towards more aspirational.

Universitas Negeri Malang have diverse learning characteristics. Learning in the field of: (1) the humanities, (2) science, and (3) vocational, requires the

empowerment of learners. Learning should be student centered learning. Rogers and Freiberg (1994) explain the strength to learn really is in the hands of learners and not just the professors. Rogers and Freiberg (1994) also be aware that a person grows from early childhood really has potential but is not anticipated by the education system. Learning is done only to meet the target users of graduates, even confusing in learning activities [8], [9], Learning system that became autonomous faculty can interfere with the natural ability of students majoring in vocational education at the Universitas Negeri Malang to: (1) explore, (2) ask questions, and (3) make connections, and to learn. Heutagogy approach implemented is the continuity of the humanistic views about how people learn in student centered learning [10] and also some research newest student centered learning environment as opposed to teacher centered learning [11]–[13].

UM student's department of humanities, science and vocational education, has been familiar with the new technology. The technology used makes the new behavior and culture. Media and technology are full of creative potential and at the same time to also have the potential for misuse and even "abuse"[14], [15], Some of the reality experienced by students is the presence of technology in learning is not always benefit the majority of learners and constantly improve learning[16], There is no guarantee that learning will take place properly only with digital learning resources. Students who are active in social media technology (Figure 3) Does not necessarily improve digital literacy.



Figure 3 Education Through Social Media [17]

Heutagogy approach should be applied thoroughly to students of humanities, science and vocational Universitas Negeri Malang. Heutagogy approach is the use of digital learning resources developed by the learners themselves, used as a medium of learning. Digital learning resources developed by the students themselves should not only be used in additional sessions in teaching and learning process. Users of digital learning resources developed learners themselves are able to explore the power and potential of digital learning resources and learning so that the learning process becomes very valuable as in Figure 2 [18], [19].

The use of digital learning resources in digital form should be a major factor in the current era of learning quality (Ramani et al., 2018), Besides the main thing is the use of media and learning technologies effectively and efficiently. Learning resources that are delivered via digital learning resources is a challenge and an opportunity for educators and teachers. If the effectiveness and efficiency is not addressed, then the basic laws that apply to the application of media and technology for teaching and learning that is media and learning technologies do not reduce development costs and improve learning outcomes [21].

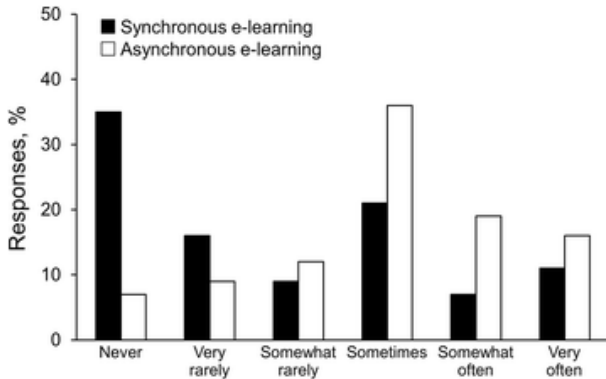


Figure 4 The Use of E-learning [22]

The study developed a learning management system (Learning Management System) with heutagogy approach. Vocational student Universitas Negeri Malang in general have been using LMS Learning Management System (Figure 3) developed by the research team Educational Technology Universitas Negeri Malang. Vocational college students have been able to take advantage of learning content. In addition to the LMS that has been exploited vocational student, has also been introduced MOOC built by researchers in Education Technology Universitas Negeri Malang like Figure 4. So that vehicle-based online learning is the Universitas Negeri Malang effort to offer more learning and online content, to the students.

Digital learning environment condition, according to some studies digital learning environment [23]–[26]. Online learning with the open nature as well as MOOC (figure 4), offers a means of linking vocational student Universitas Negeri Malang from: (1) a variety of locations, (2) background, and (3) the culture of different topics and interests. Various online-based learning research shows that learners take advantage of online learning resources in education and learning [27]–[30].

Some of the researchers who has presented new opportunities and new challenges in the MOOC [31]–[34], but for the record, vocational students in pedagogy has not been given the opportunity to: (1) choose the content, (2) develop their own learning resources and (3) utilizing the jointly developed content in learning is still not in the vocational department, Universitas Negeri

Malang. So, it needs revitalization approach to the LMS and MOOC heutagogy Universitas Negeri Malang with heutagogy approach.

Heutagogy approach in the LMS and MOOC for vocational students has a very important meaning. Web development is the most effective means of learning as a form of service learning at the Universitas Negeri Malang. Increased use of effective online learning with a limited number of students at the Universitas Negeri Malang has been developed [35]–[37], At the level of broader learning effective study of web-based learning services have also been carried out [38], [39], Thus, in a broad sense MOOC used only to meet all the needs of learners [40], [41], This research is an attempt to approach the learning content development heutagogy, i.e. learner-centered pedagogy, by constructing learning resources independently.

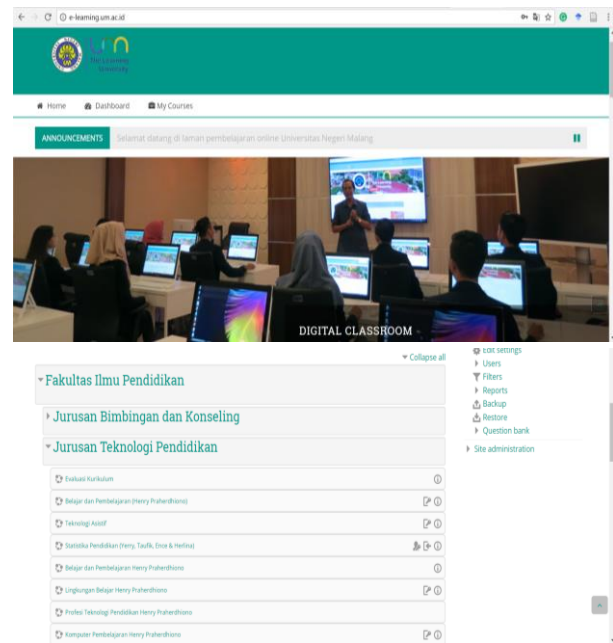


Figure 5 LMS Learning Management System

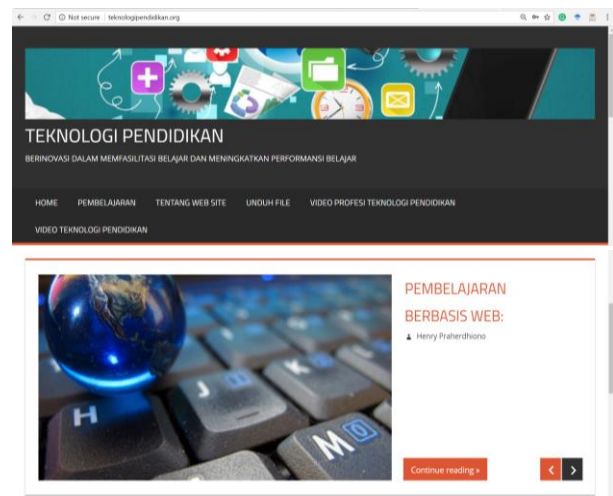


Figure 6 MOOC Educational Technology Universitas Negeri Malang

Learning Management System is a key pillar of learning management that is integrated with other support systems. Learning management and the implementation of learning is not always mechanistic based rules [42]. Required a learning environment that is characterized by: (1) easy to use, (2) open, and (3) dynamic and allows for offers the chance to collaborate [43], Synergy learning with the learning environment through heutagogy approach provides support to learners optimally to be able to give a decision. The condition requires support learning systems such as Learning Management System that Malang State University student is able to build up a decision for the selection of her own way in life-based learning curriculum.

## 5. CONCLUSION

Plan for the next stage is the stage of implementation activities heutagogy 1 according to the stages in 2019. 1) Implementation Explores is how to facilitate non-linear search (unstructured) by learners (students) about how, or any new method, how to develop the teaching and learning process in order to effective and efficient. 2) Creative (Creativity) is how the development of new content that builds on what has been learned or implemented during the learning process at this time.

In Figure 6.1 is a map-Based Learning Online Class Program organized by the Department of Educational Technology, State University of Malang. Map Program is a referral lesson activity of lecturers to students as a technical activity tailored to the implementation to build brainstorming, enrichment and strengthening of the portfolio.

The next activity is a test of learning activities in the first semester. Activities carried out is testing the application of heutagogy which now runs on subjects Based Learning Online (PBO). PBO is a subject that must be taken by students of Educational Technology, State University of Malang. In the course students will gain learning experience in developing online-based instructional in their own chosen field by students.

## REFERENCES

- [1] S. Hase and C. Kenyon, "Heutagogy: A child of complexity theory," *Complicity Int. J. Complex. Educ.*, vol. 4, no. 1, 2007.
- [2] S. Brookfield, "Adult learning: An overview," *Int. Encycl. Educ.*, vol. 10, pp. 375–380, 1995.
- [3] A. A. M. Salem, "Learning in a sheltered online scaffolding environment (SOSE)," *Educ. Inf. Technol.*, pp. 1–19, 2019.
- [4] S. Hase, "Heutagogy and e-learning in the workplace: Some challenges and opportunities," *Impact J. Appl. Res. Workplace E-Learn.*, vol. 1, no. 1, pp. 43–52, 2009.
- [5] S. Hase and C. Kenyon, "From andragogy to heutagogy," *Ulti-BASE -Site*, 2000.
- [6] S. Hase and C. Kenyon, *Self-determined learning: Heutagogy in action*. A&C Black, 2013.
- [7] C. R. Rogers and H. J. Freiberg, *Freedom to learn*. Prentice Hall, 1994.
- [8] R. L. Ackoff and D. Greenberg, *Turning Learning Right Side Up: Putting Education Back on Track* (paperback). Pearson Prentice Hall, 2008.
- [9] D. Greenberg and R. L. Ackoff, "Ethics and morality—a dialogue," *Syst. Res. Behav. Sci.*, vol. 28, no. 1, pp. 3–14, 2011.
- [10] C. R. Rogers and H. J. Freiberg, "Freedom to learn, Charles E.," Merrill Columb. OH, 1969.
- [11] S. Tharayil et al., "Strategies to mitigate student resistance to active learning," *Int. J. STEM Educ.*, vol. 5, no. 1, p. 7, 2018.
- [12] A. B. Wilson et al., "Breaking with tradition: A scoping meta-analysis analyzing the effects of student-centered learning and computer-aided instruction on student performance in anatomy," *Anat. Sci. Educ.*, 2018.
- [13] M. Y. Zarouk, F. Restivo, and M. Khaldi, "Student-Centered Learning Environment for Self-Regulated Project-Based Learning in Higher Education: A Qualification/Selection Study," *Learn. Inq. High. Educ. Curr. Res. Future Chall. INHERE* 2018, 2018.
- [14] A. K. Goodboy, S. Bolkan, and J. P. Baker, "Instructor misbehaviors impede students' cognitive learning: testing the causal assumption," *Commun. Educ.*, pp. 1–22, 2018.
- [15] Y. N. Padrón, E. Barohona, and H. C. Waxman, "Digital Citizenship," *TESOL Encycl. Engl. Lang. Teach.*, pp. 1–6, 2018.
- [16] J. Mayer, P. V. Borges, and S. J. Simske, "Introduction," in *Fundamentals and Applications of Hardcopy Communication*, Springer, 2018, pp. 1–5.
- [17] "Social Media Education - Build Social Marketing Channels That Make Sense," *The Tec Exec - Computer Training and Professional Development*, Mar. 25, 2017. <http://www.thetecexec.com.au/education/marketing-channels/> (accessed Jul. 31, 2018).
- [18] J. Kormos and K. Csizer, "The interaction of motivation, self-regulatory strategies, and autonomous learning behavior in different learner groups," *Tesol Q.*, vol. 48, no. 2, pp. 275–299, 2014.
- [19] P. Libbrecht, "Adaptations to a Learning Resource.," *Acta Didact. Napoc.*, vol. 8, no. 1, pp. 67–74, 2015.
- [20] A. KewalRamani et al., "Student Access to Digital Learning Resources outside of the Classroom. NCES 2017-098.," *Natl. Cent. Educ. Stat.*, 2018.
- [21] R. Shadiev, W.-Y. Hwang, and T.-Y. Liu, "Investigating the effectiveness of a learning activity supported by a mobile multimedia learning system to enhance

- autonomous EFL learning in authentic contexts,” *Educ. Technol. Res. Dev.*, vol. 66, no. 4, pp. 893–912, 2018.
- [22] C. M. Wittich et al., “E-learning in graduate medical education: survey of residency program directors,” *BMC Med. Educ.*, vol. 17, no. 1, p. 114, Dec. 2017, doi: 10.1186/s12909-017-0953-9.
- [23] A. Bralić and B. Divjak, “Use of moocs in traditional classroom: blended learning approach,” *Eur. J. Open Distance E-Learn.*, vol. 21, no. 1, 2018.
- [24] R. Jenkins, “Who is driving the online locomotive,” *Chron. High. Educ.*, pp. 1–6, 2013.
- [25] M. M. Lombardi, “The inside story: Campus decision making in the wake of the latest MOOC tsunami,” *J. Online Learn. Teach.*, vol. 9, no. 2, p. 239, 2013.
- [26] L. Pappano, “The Year of the MOOC-The New York Times,” Retrieved [Httpwww Nytimes Com20121104educationlifemassive-Open-Online-Courses-Are-Mult---Rapid-Pace Html](http://www.nytimes.com/2012/11/04/education/life-massive-open-online-courses-are-mult-rapid-pace.html), 2012.
- [27] A. Alahmari and L. Kyei-Blankson, “Comparing Teacher Experiences Using a Learning Management System in K-12 Schools in Saudi Arabia,” in *Handbook of Research on Pedagogical Models for Next-Generation Teaching and Learning*, IGI Global, 2018, pp. 345–360.
- [28] C. Boggs and M. Van Baalen-Wood, “Diffusing Change: Implementing a University-Wide Learning Management System Transition at a Public University,” in *Leading and Managing e-Learning*, Springer, 2018, pp. 115–128.
- [29] P. Mehta and K. Saroha, “Recommendation System for Learning Management System,” in *Information and Communication Technology for Sustainable Development*, Springer, 2018, pp. 365–374.
- [30] Z. Nurakun Kyzy, R. Ismailova, and H. DüNDAR, “Learning management system implementation: a case study in the Kyrgyz Republic,” *Interact. Learn. Environ.*, pp. 1–13, 2018.
- [31] M. J. Dennis, “The impact of technology on US and worldwide higher education,” *Enroll. Manag. Rep.*, vol. 21, no. 10, pp. 1–3, 2018.
- [32] W. W. Goh, S. Y. Wong, and E. Ayub, “The Effectiveness of MOOC Among Learners Based on Kirkpatrick’s Model,” in *Redesigning Learning for Greater Social Impact*, Springer, 2018, pp. 313–323.
- [33] J. Reich, “Are MOOC Forums Echo Chambers or Bridging Spaces?,” *Educ. Week*, 2018.
- [34] Q. Zheng, L. Chen, and D. Burgos, “The International Comparison and Trend Analysis of the Development of MOOCs in Higher Education,” in *The Development of MOOCs in China*, Springer, 2018, pp. 1–9.
- [35] H. Praherdhiono, “Openportfolio as moocs in blededsystems,” *j. TekpeN*, vol. 1, no. 3, 2016.
- [36] H. Praherdhiono, “Convenience of Learning Environment for Student Special Education With Cyberwellness Concept. Proceeding International postgraduate University Kebangsaan Malaysia,” SEAMOLEN, 2014.
- [37] Y. Soepriyanto, H. Praherdhiono, and E. P. Adi, “Pengembangan Model Pengelolaan Kuliah Bersama Rumpun Mata Kuliah Sama Pada Karakteristik Lembaga Penyelenggara Berbeda,” *Edcomtech J. Kaji. Teknol. Pendidik.*, vol. 1, no. 1, 2017.
- [38] D. R. Garrison, T. Anderson, and W. Archer, “The first decade of the community of inquiry framework: A retrospective,” *Internet High. Educ.*, vol. 13, no. 1–2, pp. 5–9, 2010.
- [39] J. Richardson and K. Swan, “Examining social presence in online courses in relation to students’ perceived learning and satisfaction,” 2003.
- [40] M. Fredette, “How to convert a classroom course into a MOOC,” *Campus Technol.*, vol. 8, no. 28, p. 13, 2013.
- [41] P. McAndrew and E. Scanlon, “Open learning at a distance: lessons for struggling MOOCs,” *Science*, vol. 342, no. 6165, pp. 1450–1451, 2013.
- [42] H. Praherdhiono, “Standar Program Pengukuran Kenyamanan Lingkungan Belajar Berbasis Ergonomi,” *Disertasi Dan Tesis Program Pascasarj. UM*, 2016.
- [43] R. Haworth, “Personal Learning Environments: A solution for self-directed learners,” *TechTrends*, vol. 60, no. 4, pp. 359–364, 2016.