

Heutagogy-Based Didactic Design of Indonesian Language Online Learning

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This study aims to describe the didactic design of Indonesian online learning based on a heutagogical approach. The research design used is a qualitative research design using the Design-Based Research (DBR) method. The research subjects were students, lecturers, and learning experts. The data collection methods used were observation and interview and data analysis techniques with four stages of analysis. The results showed that the didactic design consisted of the stages of preparation and implementation of learning. The learning preparation stage is carried out by providing scaffolding consisting of seven stages, namely (1) essential study analysis, (2) precondition, (3) orientation and discussion, (4) topic determination, (5) assessment discussion, (6) technical discussion, learning, and (7) reflection. Meanwhile, the stages of learning implementation consisted of four stages, namely (1) exploration, (2) connection and reflection, (3) material comprehension, and (4) final reflection of learning. The design provides support for the concepts of learning agents, efficacy and ability, metacognition and reflection, nonlinear learning, and learning how to learn.

Keywords: didactic design, heutagogy, Indonesian language, online learning

INTRODUCTION

Efforts to prepare human resources during the Industrial Revolution 4.0 and Society 5.0 faced various challenges. The challenges in the world of education are getting more arduous when the Covid-19 pandemic hit the world, including in Indonesia. Amid efforts to build education towards education 4.0, education during the Covid-19 period encountered many obstacles (Blundell et al., 2021; Tas et al., 2021; Younes & Alsharqawi, 2021). Learning activities usually carried out face-to-face in the classroom have turned online. This sudden change does not provide any opportunity for educators, students, parents, and educational leaders to make adequate preparations. As a result, many problems arise during the implementation of online learning (Coman et al., 2020; Dube, 2020; Hebebe et al., 2020; Todd, 2020). On the other hand, the Covid-19 pandemic is a catalyst for the transformation of online learning in Indonesia.

The rapid development of technology in the 21st century has brought many changes, not least in the field of learning. Information and communication technology provides many opportunities and challenges. On the one hand, this development demands quality human resources as the output of the world of education so that they can be competitive in the world of work. On the other hand, the development of technology and information provides learning design opportunities by utilizing information and communication

technology. Information and communication technology development has given rise to various learning methods, such as e-learning and blended learning models. E-learning is more familiar than blended learning. Distance education is an example of the implementation of e-learning in Indonesia. E-learning is the community's choice to gain access to education (Huda & Faiza, 2018; Phutela & Dwivedi, 2020). The e-learning method is a way in the teaching and learning process that uses electronic media and uses the internet as an intermediary in the teaching and learning process. Meanwhile, blended learning is a method of teaching and learning that combines a conventional education system with an all-digital system. This means that in blended learning, there is direct interaction in the form of discussions between educators and students (Auster, 2016; Pandit, 2018; Su, 2020).

The results of research related to blended learning with a heutagogical approach formulate 8 principles in learning design, namely (1) the curriculum is open or flexible so that it can be adapted to the characteristics of students; (2) Learners as drivers in determining learning paths, activities, and content; (3) Students' self-preparation before curriculum discussion needs to be done by sending materials before discussions related to learning activities are carried out; (4) Educators act as facilitators to assist students in increasing their self-efficacy to manage the learning process; (5) Students are involved in the design of the assessment that is applied and have flexibility of adjustment by looking at the existing situation; (6) Synchronous and asynchronous modes occur individually or collaboratively; (7) Synchronous and asynchronous modes by looking at the involvement of technology and the independence of students in learning can be divided into 6 learning designs, namely (a) face-to-face, (b) face-to-face tutorials, (c) virtual face-to-face, (d) full instruction and content, (e) semi-instruction and content, and (f) independent learning; and (8) Reflecting on learning to increase self-efficacy (Dewantara & Dibia, 2021).

Heutagogy is the development of an andragogy approach while still focusing on students' independence in very complex situations such as being controlled by technological systems and devices (Blaschke, 2012). The heutagogical approach was chosen as a learning approach because it provides broad opportunities for students to make choices regarding what to learn and how to learn it (Dewantara & Dibia, 2021; Hase & Kenyon, 2013). Furthermore, the heutagogical approach is seen as in accordance with efforts to prepare students to have the abilities as demanded by the 21st century. This also gives an answer that an alternative learning approach that is more inclusive and flexible is needed (Azionya & Nhedzi, 2021).

So far, online learning that has taken place, especially in learning Indonesian in universities, has focused more on learning materials to the exclusion of the presence of students with all their characteristics. In the online learning process, students are the source of determining whether or not a learning process is running. This notion is similar to previous findings that place students as determinants of the learning path, and lecturers act as holders of the learning compass (Dewantara & Dibia, 2021). Fully online learning with characteristics without direct face-to-face, network-controlled, and utilizing technology demands student independence in the learning process (Nogales et al., 2020; Song & Hill, 2007). Therefore, it is necessary to formulate a didactic design prototype for online learning to achieve learning objectives optimally. The prototype of the didactic design is the design of the learning environment and the teaching sequence to achieve the expected learning objectives.

Online learning in Indonesian courses at Ganesha University of Education is carried out through the Moodle e-Ganesha platform. The learning design is adjusted to each lecturer's learning style and approach. From the results of interviews with eight lecturers, it can be seen that so far, the dominance of lecturers in determining the direction of learning is enormous. There is rarely a discussion about what will be learned, how the learning will be carried out, and how learning outcomes will be measured. Reflection in online learning is also rarely done. Seeing the existing situation and the demands of 21st century learning, it is necessary to formulate a didactic design prototype that provides opportunities for students to play a more active role in determining their learning path. The approach that is deemed appropriate to the existing situation and demands is the heutagogical approach.

Many studies on online learning in universities before and during the Covid-19 pandemic, have been carried out (e.g., Aji, 2020; Fitriyani et al., 2020; Kuntarto, 2017; Sadikin & Hamidah, 2019; Yudiawan, 2020). Studies related to the heutagogical approach in Indonesia, so far, are rarely carried out, such as studies on strengthening character education through fairy tales with a heutagogical approach (Salamah &

Sumarsilah, 2021); M-learning for lifelong education (Kamrozzaman et al., 2019); the study of heutagogy as an approach to teacher training (Sulistya, 2019). The results of this theoretical study suggest the need for a heutagogical approach to be considered as a training approach in the era of the industrial revolution 4.0; a literature study that tries to provide an overview of the heutagogical approach in the era of Society 5.0 (Hotimah et al., 2020).

So far, studies related to online learning have mostly looked at online learning in terms of the readiness and motivation of students, facilities, and lecturers. However, how the didactic design prototype in online learning remains unclear as previous studies did not treat this issue in details. In other words, previous studies only focused on the existing conditions of various variables supporting online learning. Studies related to how the stages of learning should be carried out by looking at existing conditions to produce students who are able to learn for life have never been done. This study is important to get attention to find a learning design that is in accordance with the characteristics and learning objectives. This research will provide a complete picture of the didactic design of online learning, the constraints, and opportunities or challenges of online learning in universities to prepare students who can compete in the era of the industrial revolution 4.0 and the era of Society 5.0.

Meanwhile, research on the heutagogical approach has not yet examined the heutagogical approach as the basis for designing online learning sequences. Therefore, looking at the demands of 21st-century learning and the existing learning situation, it is necessary to study the didactic design prototype for Indonesian online learning based on a heutagogical approach. This design provides a systematic description that can be used as a basic reference for developing the use of the heutagogical approach in both Indonesian and other subjects.

METHOD

This study aims to design a didactic design for online learning based on a heutagogical approach in learning Indonesian. To be able to achieve this goal, the research design chosen was a qualitative research design using the Design-Based Research (DBR) method. Design-Based Research (DBR) is divided into four stages: problem identification and analysis, program prototype development, implementation trials, and reflection (Amiel & Reeves, 2008).

Participants

This research data were in the form of the condition of natural objects in the form of online learning conditions during the Covid-19 pandemic and the demands of 21st-century learning. The field study data and literature study are used as the basis for the formulation of learning design principles. Therefore, it can be said that the object of this research was the condition of online learning during the Covid-19 pandemic and the demands of 21st-century learning which were designed in the form of didactic learning designs.

This research was conducted at Ganesha University of Education. The subjects in this study were students, lecturers, and learning experts. There were 153 students involved in this research. From the subject of this study, an overview of the online learning didactic design with a heutagogical approach in learning Indonesian will be obtained, which will be tested repeatedly and revised until it finds a didactic design that meets the expectation.

Data Collection and Analysis

The type of data obtained in this study was qualitative data. The methods used were interviews and observation. The interview method was used to collect learning expert data related to the didactic design of online learning with a heutagogical approach. The observation method was used to see the state of learning and the demands of 21st century learning. The observation method was also used to observe the implementation of the online learning didactic design prototype that had been compiled. Discussions were then carried out with experts based on the observations of the implementation of the didactic design prototype. The research instrument used was an observation sheet and an interview sheet related to the didactic design of online learning based on the heutagogy approach.

The stages of qualitative data analysis in this study followed four stages of analysis: data collection, data reduction, data presentation, and drawing conclusions (Huberman, 2003; Miles & Huberman, 1994). The following describes the four stages of data analysis in this study.

- a. Data collection. At this stage, the researchers collected data through observation and interviews. The data collected in this research was iterative until the expected final design principles were found.
- b. Data reduction. Data reduction is a form of analysis that sharpens, categorizes, directs, discards unnecessary data, and organizes data so that final conclusions can be drawn and verified. At this stage, the data obtained were analyzed, and the analysis was sharpened through results reflection activities.
- c. Data Presentation. The data presented in this study were in the form of descriptions of conditions and descriptions of ideal conditions for the application of online learning didactic designs based on a heutagogy approach. The data in the study were presented in stages in accordance with existing research procedures.
- d. Withdrawal/Verification. Activities at this stage include: (1) testing the conclusions drawn by comparing the theories found by experts, especially relevant theories; (2) carrying out a re-checking process starting from the implementation of data analysis and documentation; (3) drawing conclusions to be reported as a result of the research conducted. The final conclusion of this study was a prototype of a didactic design for online learning based on a heutagogical approach in learning Indonesian language.

FINDINGS

The results of the development and trial show that the stages of online learning based on the heutagogical approach in learning Indonesian contain two main procedures: preparation and implementation of learning. Reflection was then done to improve the design being piloted.

Preparation Stage

This stage consists of seven steps, namely:

- (1) Essential study analysis. The fundamental study analysis was carried out by looking at the competencies expected of Indonesian language courses in terms of the applicable rules, namely the Decree of the Director-General of Higher Education Number 43/DIKTI/Kep/2006, which was updated with the Decree of the Director-General of Higher Education Number 84/E/KPT/2020 concerning guidelines for implementing the subject of compulsory courses in the higher education curriculum. The essential study analysis became material for discussion with students on their learning needs. This analysis helped students map the final competencies that are expected to be achieved according to the applicable rules. This step was a form of scaffolding mapping the outlines of the learning direction. The previous year's research results revealed that this scaffolding is important, considering that students do not yet understand the direction of their learning (Dewantara & Dibia, 2021). The results of the current study also showed the same thing.
- (2) Precondition. At this stage, the activity of forming a WhatsApp group was carried out to facilitate communication and share essential study analysis for students to observe and assign students to determine what they needed referring to the essential study analysis.
- (3) Orientation and discussion. Orientation and discussions were conducted through video conferences. At this stage, the class began with a general orientation from the lecturer regarding the course objectives and essential study analysis that must be achieved. This orientation was intended to provide clarity from the essential study analysis that had been submitted previously. The results showed that not all students observed the results of the essential study analysis. The lecturer then gave guidance and invited students to discuss what they needed. It was necessary to do several provocations to provide a stimulus so that students understood and were more

enthusiastic about giving their opinion regarding the importance of the process of mapping their needs.

- (4) Determination of topic/study material. The final stage of the discussion of learning needs was the determination of the topic/study material. Students and lecturers jointly agreed on a learning contract.
- (5) Assessment design discussion. After the study material was determined according to the existing needs, the next step was a discussion of the assessment design. Negotiations at this stage did not occur much because students did not really understand the assessment.
- (6) Learning technical discussion. Learning technical discussions were conducted to determine the online support facilities used in learning. Other applications that were used were WhatsApp, google meet, or zoom. The learning flow was determined based on the characteristics of the objectives and learning materials. The results of the discussion showed that there were times when the class started with a video conference, and sometimes the video conference was only used to provide reinforcement.
- (7) Reflection. Reflection was an important part of learning. Students admitted that they were interested in this way of learning where they could determine study materials according to their needs and designed assignments accordingly. In addition, the existing steps seemed to be able to increase student self-efficacy.

Learning Implementation

At the implementation stage, learning began with independent study (topic exploration). At this stage, students explored agreed to learn topics from various sources. They used the web as their primary way of finding information. After self-study, students made connections and reflections. Connections and reflections were carried out by answering questions. After that, it was continued with the material comprehension stage. The distribution of materials and learning modes can be seen in Table 1 below.

TABLE 1
MATERIALS, ACTIVITIES, AND LEARNING MODES

No	Materials	Activities	Learning mode
1.	The goals and directions of learning that characterize the heutagogical approach	Orientation & Discussion	Synchronous
2.	History, Position, and Functions of Language	Assignment Discussion	Asynchronous Synchronous
3.	Language Variety	Group discussion Presentation	Asynchronous Synchronous
4.	Indonesian Spelling	Quiz Discussion	Asynchronous Synchronous
5.	Good and Correct Indonesian	Discussion	Synchronous
	Language Analysis Practice	Group discussion	Asynchronous
	Language Errors in Daily Life	Group project Presentation	Asynchronous Synchronous
6.	Citing and Writing Bibliography	Tutorial	Synchronous
	Exploring Exercises for Quoting and Making Bibliography	Assignment	Asynchronous
7.	Write a report	Discussion	Synchronous
	Project	Group project	Asynchronous
8	Speaking at the Scientific Forum	Modeling	Synchronous
	Speaking Practice in Scientific Forum	Independent Project	Asynchronous

Each learning session began with exploration and connection. What is different was the order in which the video conference sessions were held based on consideration of the characteristics of the material. The lesson materials that began with the video conference session were 'Good and True Indonesian', 'Citing and Writing Bibliography', 'Writing Reports', and 'Public Speaking', while the material was 'History, Position, and Functions', 'Language', 'Indonesian Spelling', and 'Good and Correct Indonesian Sub-materials, namely Language Mistakes in Daily Life' began with asynchronous sessions.

Reflection was then carried out to determine the effectiveness of learning implementation. The results of the reflection can be seen as follows.

- (1) The learning preparation stage by doing essential study analysis and sending it earlier before the class discussion began helped students to better prepare themselves in the discussion. This step was a form of scaffolding for students whose characteristics did not yet have prior knowledge of the subject.
- (2) Students enthusiastically discussed learning needs according to their views regarding their work after graduation.
- (3) Students were also eager to discuss assessments related to what they learned.
- (4) Different arrangements, especially in synchronous and asynchronous sessions according to the characteristics of the material, were considered good. In fact, students said that the video tutorial and modeling sessions really helped students understand the skills being trained.
- (5) Reflection activities helped lecturers know the achievements and obstacles faced by students and the efforts made by students.

DISCUSSIONS AND CONCLUSION

The following is a prototype of an online learning didactic design based on a heutagogical approach that has gone through repeated trial stages.

Learning Preparation

This stage is the negotiation stage regarding what is learned, how learning will occur, and how learning is assessed. This stage is in line with the heutagogical theory related to student-centered learning (Hase & Kenyon, 2003). This stage consists of seven activities, namely (1) essential study analysis, (2) preconditions, (3) orientation and discussion, (4) determination of study topics/materials, (5) assessment design discussions, (6) implementation of technical discussions, and (7) reflection. These steps are in line with the emphasis on creating negotiated learning conditions on learning needs and the assessment of learning (Hase & Blaschke, 2021). This stage also provides confirmation regarding providing opportunities for students to become active learners who are free from the stigma that schools make students passive (Hase, 2016). This finding provides further support for the argument that students can become independent learners when given the opportunity and can actually transition faster (Andrews, 2014; Glassner & Back, 2020). Phenomenal information also stimulates students' curiosity to learn (Dewantara et al., 2019).

The preconditions carried out by the lecturer from the results of the essential study analysis are also in line with one of the principles of the heutagogical approach related to the provision of scaffolding when needed (Narayan & Herrington, 2014). Scaffolding was given because of the result of a research which showed that of 153 students, only 3.3% admitted that they were able to determine their learning independently (having high self-determination), and most of the students felt they were unable to determine their learning independently. A total of 33.3% stated that they needed sufficient guidance to be able to determine the direction of their learning, and 63.4% stated that they really needed a lot of help in determining the learning path. Scaffolding seems to increase students' self-efficacy in learning Indonesian. Self-efficacy plays an important role in influencing behavior and learning development to keep pace with new technologies (Blaschke & Hase, 2019; Marcut & Chiuu, 2018).

The results of this study also provide support for the concepts of learning agents, efficacy and ability, metacognition and reflection, nonlinear learning, and the concept of learning how to learn (Blaschke & Hase, 2019; Hase, 2016; McAuliffe et al., 2009). Learning agent is a basic principle in heutagogy. Students

are the main agents of learning who determine what is learned, how to learn, and how to measure learning outcomes (Blaschke et al., 2021; Hase & Blaschke, 2021). The results show that self-efficacy is an important basis for learners who are able to determine their learning independently (self-determined/learner agency) (Xiao, 2014). When students realize their ability to learn a language, they become confident and increase their self-efficacy in a stronger direction. Self-confidence and self-efficacy are pillars of ability development. The results of this study also strengthen the results of research showing that the clarity of one's knowledge about oneself plays a very important role (Agonács & Matos, 2012).

Seeing students as active agents in learning causes learning to occur non-linearly. As a result, these pathways are often chaotic and disparate, as is the case with learning in connectivist and rhizomatic learning environments. Connectivism is another theory of online learning (Anderson, 2010; Siemens, 2004) that believes that learning occurs from creating environments, such as mass open online courses (MOOCs), where connections can be made to form knowledge communities. In a connectivist environment, learning is seen as a process of finding meaning and creating connections across networks (Siemens, 2004). Meanwhile, rhizomatic learning is defined as nonlinear learning in which the learner himself determines the learning path. Rhizomatic learning is seen as an organic process of negotiation (Cormier, 2008).

Learners need to reflect on the learning experience continuously. Reflecting and thinking critically about what has been learned and the learning process, in the form of double-loop learning (metacognition), is another principle of heutagogy (Blaschke, 2012; Dewantara & Dibia, 2021). Learners must be able to clearly understand their progress and know which areas need to be strengthened. If the reflective process cannot provide clues regarding progress and weaknesses that need to be strengthened, the reflective process will not be able to have a significant impact on their readiness to learn independently.

Implementation of Learning

In the implementation stage of learning, the discussion of teaching materials is carried out after the learning preparation stage. The results showed two didactic design prototypes that could be distinguished from the order of setting synchronous and asynchronous sessions in terms of the characteristics of the teaching materials. The following is a test result of the didactic design prototype.

Exploration

At this stage, armed with a learning contract, students independently explore. This stage is the stage of conditioning the situation so that students can explore various sources to find teaching materials that match their specifications. This theory reinforces the statement that an important element in heutagogy is exploration (Blaschke & Hase, 2016). This step also provides proof of the principle of nonlinear learning (McAuliffe et al., 2009). In this case, the learning path is student-directed and is not predetermined or sequential because the learner is responsible for identifying what is to be learned and how. Learning is nonlinear and contextual, which implies learning is a continuous process (Blaschke et al., 2021). Learning authority is determined by the online ecology itself.

Connection and Reflection

The second stage is connection and reflection. Seeing the provision of broad opportunities for students to explore, then to see what they have learned and the achievement of exploration, connection, and reflection are carried out. This connection and reflection is done by answering guiding questions related to the material being studied by students. These questions relate to experience, review, and related learning materials. These questions also reflect what they have been through, what they understand, and what they have not understood so that they can know their own strengths and weaknesses. This step is a step in the activation of students as learning agents (Blaschke & Hase, 2019).

Comprehension (Synchronous-Asynchronous/Asynchronous-Synchronous)

Teaching materials related to language skills, such as writing and speaking, are carried out in a sequence of synchronous sessions before asynchronous sessions. The synchronous sessions provided are synchronous tutorials for writing skills and synchronous modeling for speaking skills. These materials are considered

more complex than other materials, so they require scaffolding in the form of giving demands that are adjusted to the development of students' understanding of the Indonesian language material being studied. For language learning material that can be done without providing modeling or tutorials, it is done with asynchronous sessions first. Synchronous and asynchronous sessions are forms of connection and sharing to provide opportunities for learners to connect with one another through various ICT-based channels. Connection in this stage is the act of communicating with friends to explore the subject matter. In connection, they can share experiences related to what they are learning and, at the same time, can plan their projects from the input of other friends.

Reflection and Follow-Up Plan

Reflection at the end of the lesson is an important part of the didactic design of Indonesian online learning based on the heutagogy approach. Reflection after the learning process is often ignored (Marcut & Chiu, 2018). In fact, this activity is important for students to have the opportunity to reflect on the new knowledge gained, abilities, and on the overall learning process. At the end of the lesson, students share their opinions about the experiences and discoveries made during the learning process, which they will be able to apply in their future work or in other lessons. And can develop follow-up plans for future learning.

From the description of the results of research and discussion of Indonesian online learning with a heutagogical approach, the didactic design of learning can be described as follows.

**FIGURE 1
PROTOTYPE OF INDONESIAN ONLINE LEARNING DIDACTIC DESIGN BASED ON
HEUTAGOGY APPROACH**

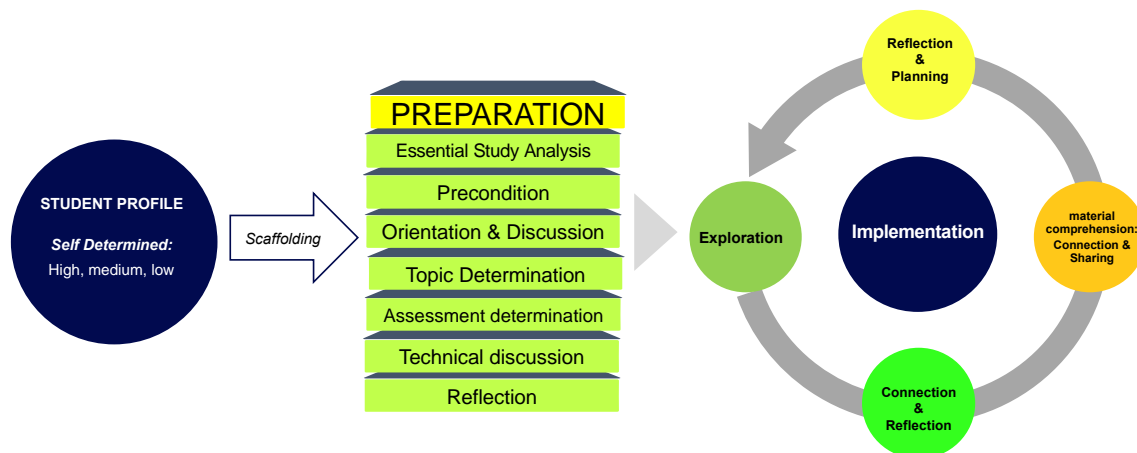


Figure 1. provides an explanation regarding the stages of Indonesian online learning based on the heutagogy approach which is carried out with the help of the e-Ganesha learning management system. It can be seen that the results of this study provide a more detailed description of the didactic design of the heutagogical approach in the conditions of the diversity of self-determination that students have and place an important position in the provision of scaffolding.

The results of this study indicate the need for student profile analysis to determine the scaffolding so that the learning can be prepared well. The condition of only a few students who are able to determine their own learning path shows how important the scaffolding is. The role of lecturers as facilitators and learning compass is very necessary in the characteristics of self-determined students, most of whom are in the low classification. Reflection is also needed to be repeated to assess the learning achievement.

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