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THE DEVELOPMENT OF SELF REGULATED LEARNING INSTRUMENTS IN TUWEB LEARNING AT UNIVERSITAS TERBUKA

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Abstract

Self regulated learning is one of the determining factors in supporting student success during the Webinar Tutorial (Tuweb) learning process at Universitas Terbuka. It is important for each tutor to identify student learning independence by using a tested instrument. The purpose of this study was to produce a student learning independence assessment instrument that is valid, reliable and can be used widely. This type of research is descriptive qualitative, with instrument testing involving experts, validity and reliability testing. The results showed that the student learning independence assessment instrument developed for TUWEB learning at Universitas Terbuka was valid with expert judgment and statistical analysis and was reliable based on the Cronbach alpha test. The instruments produced in this study have been widely usable and allow for re-exploration by other researchers to assess students' learning independence. With this instrument, it is expected that it will also be able to help other researchers to be more motivated in conducting research, especially to assess student learning independence or increase student learning independence either in learning on a regular basis or on other online learning patterns.
Keywords: Evaluation Instruments, Self Regulated Learning, Webinar Tutorials, Online Learning, Distance Learning

1 INTRODUCTION

Today's lecture system continues to evolve and is always innovating in accordance with the development of science and technology [1]. The comparison of learning patterns in the last 10 years is quite significant and has undergone considerable changes, especially in the use of technology media as a link between lecturers and students. Many things tend to change along with the popular use of technology applications in learning [2]. The use of applications in opening the boundaries of space and lecture time makes lectures can be carried out flexibly and efficiently. The opportunity to study and learn is not only focused on face-to-face learning held in the classroom only, but further learning can also actually be done anywhere and anytime [3]. Based on this concept, distance learning is present as a solution to the barrier of learning space by the limitations of space and time that have been a problem in conventional lectures.

Universitas Terbuka (UT) as one of the campuses of distance education organizers comes with innovation and utilization of technology in optimizing the quality of learning [4]. Tuweb learning is part of the synchronous learning patterns applied at UT. Through Tuweb students and lecturers

meet in a virtual space and allow the formation of interactive communication patterns. In Tuweb, lecturers and students also make regular and regularly patterned meeting schedules and allow the formation of collaboration and student learning independence. In fact, the use of technology directs students as active learners and increasingly independent in participating in learning activities [5]. Learning independence can be formed with the increasing habit of students following patterns of self-study, extracting information independently and allowing the construction of science based on findings and learning experiences.

The concept of self regulated learning does not release students working alone, it needs the assistance of lecturers as facilitators and givers of direction in learning [6]. Students are also encouraged to be able to work collaboratively with other students so that students can directly discuss and exchange information. Some aspects that also do not go unnoticed when self-study is self-evaluation. By evaluating and self-reflection students have been able to coordinate learning independently.

Learning independence allows students to be able to control themselves, make learning planning and set learning achievement targets [7]. Learning independence also allows students to construct knowledge and understand how to establish learning flow, study time and strategies to achieve learning targets. Some things to consider related to learning independence, including: The ability to manage yourself and time, make small notes of learning, collect and use information, remember materials and work with others. Learning independence is also related to how students are motivated to follow the learning process.

Independence is one of the factors that also contribute to the success of students in learning, especially in learning with online concepts or distance learning. Distance learning allows students to learn independently, manage their own study time and control the success of learning independently as well [8]. Learning independence is also driven by the availability of facilities in learning, such as the availability of online learning references, the availability of online discussion containers and the possibility of online tutoring as well as by lecturers. Independence of learning and Tuweb is a unity and interconnectedness.

Tuweb lectures are synchronous, but in the excavation and deepening of materials students can explore independently. The role of learning independence is needed in Tuweb learning. The information presented is not only limited to the material presented by lecturers in sync in Tuweb,but allows students to explore their knowledge independently by utilizing various learning resources and references that they obtain independently. The importance of learning independence

requires every lecturer to focus on paying attention to these aspects in the implementation of learning, especially Tuweb

To know the independence of learning students, it takes a decent instrument and has been tested. A viable instrument is to have tested both validly, an ability and has passed testing by experts [9,10]. The instrument of learning independence can be developed by paying attention to the instrinsic and extrinsic aspects of the learner, the student's ability to explore the material independently and how the student reflects on what he has learned. Developing learning independence instruments requires reviewing key indicators and having to go through extensive testing. Some aspects that can improve the quality of instruments are thoroughly evaluated and tested by students, experts,and researchers themselves before being disseminated and worthy of mass use[11,12] The questions that will be answered in this study are:

Q1: How is the process of developing self regulated learning instruments?

Q2: What are the characteristics of self regulated learning instruments that are worth disseminating?

2 METHODOLOGY

This type of research is qualitative descriptive. This study aims to test validity based on expert assessment and validity; reliability based on tests of instruments by students. The data collection instrument in this study is in the form of aquestionnaire. Data analysis uses statistical techniques, among others: Validity using multivariate tests, Reliability using Cronbach Alpha tests. This study involved respondents as many as 1,947 UT students spread from Sabang to Merauke in Indonesia. The process of developing an instrument begins with formulating an instrument indicator, with reference to the expert theory [13,14]. Based on the selected indicators, continued the development of sub-indicators and question items that will be used to assess student learning independence. The initial instrument developed is first validated by the expert,and revised based on expert input advice. After the instrument is declared valid by the expert, continue the test of the instrument by implementing the instrument to all respondents. The results of instrument trials by students are analyzed to find out the level of validity and reliability. After valid and reliable instruments, the instrument is worth using in assessing the independence of students' learning widely when tuweb learning is carried out.

3 FINDINGS AND DISCUSSION

3.1 The Development of the Self Regulated Learning Instrument

The student's developed learning independence evaluation instrument has 38 question items incorporated into an instrument. The learning independence instrument is developed from 3 main

aspects, then formulated into 6 indicators. From the 6 existing indicators, the question item item was further developed to 38. Once the instrument is structured and designed, the initial form of the instrument is presented in Table 1.

Table 1. Criteria and Indicators for Developing Valid and Reliable Student Self Regulated Learning Instrument

No	Aspect	Indicator	Sub-Indicator
1	Motivation	Intrinsic and extrinsic	
		Self-efficacy	
2	Learning strategies	Metacognitif self-regulation	Goal setting
			Achievement of goals
			Achievement of science goals and science learning
			Monitoring
		Managing time and learning environment	
		Source management	Regulatory *efforts*
3	Self-Reflection	Self-Evaluation	Self-reaction

The development of student learning independence instruments is focused on the development of key indicators, namely by paying attention to aspects of motivation, learning strategies and self-reflection. For the development of indicator aspects, researchers design indicators that focus on self-concept and intrinsic and extrinsic elements. Students who have been independent in learning, have high motivation in learning, have good learning strategies and are able to do self-reflection. Independent means students can make self-regulations while studying, can control the slow pace of understanding of materials individually and can manage time and learning environment well. Based on the aspects and importance of this element, eating is designed a learning independence instrument consisting of 38 item questions. Furthermore, this instrument will be tested for validity by experts.

3.2 Expert Review

Once the instrument is designed, it is validated by an expert. The study involved two experts as instrument validators, with assessments including an assessment of the content and language of the instrument, as well as an assessment of the accuracy of indicators developed in the instrument grid. Based on the results of expert assessment of the development of instrument indicators, of the 38 question items formulated in the instrument, there are several question items on some indicators must be revised and re-corrected. Some items that need to be improved include intrinsic and extrinsic indicators, metacognitive self-regulation, time and learning resources management, resource management and self-evasion. For self-concept, the entire item of question items

developed is valid, and can be used without revision. Here is the distribution of the results of expert assessment of the grid of instruments that can be observed in Table 2.

Table 2. Assessment Results of the Independent Learning Instrument

N	Indicator	Accept (%)	Revision (%)	Reject (%)
1	Instrinsic and Extrinsic	83.3	16.7	-
2	Self-Concept	100	0	-
3	Metacognitive Self-Regulation	88.9	11.1	-
4	Managing Time and Learning Resources	80	20	-
5	Source Management	50	50	-

Based on the results of the experts' assessment, the average acceptance of indicators and questions designed is 78.15%. This means that instruments designed and represented in grids are valid by experts. The results of the instrument assessment are also strengthened by expert assessment of content and language. Assessment and results of the instrument's content and language analysis are presented in Figure 1.

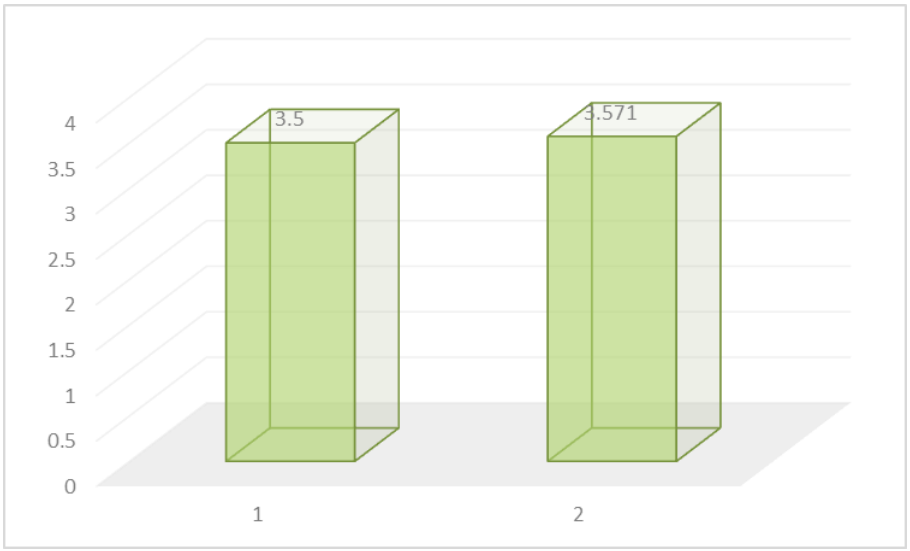

Figure 1. Validation Results of SRL Instruments for Use in Tuweb

Information:

1 = Assessment of Language Aspects

2 = Assessment of Content Aspects

Some suggestions and input from experts include improvements to the quality and governance of sentences in instruments. There are several revisions that have been done in accordance with expert advice so that instruments that are considered not valid become suitable for use. The meaning of sentences becomes the main focus in the improvement and revision of instruments. In

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addition, based on advice and input to the instrument, improvements are also made to the variety of instruments.

3.3 Revision I

Revisions made to the instrument include revisions to several question items in 5 indicators, including instrinsic and extrinsic indicators, metacognitive self-regulation, time management and learning resources, resource management and self-evaluation. After the instrument is revised based on advice and input from experts, then the instrument trial phase continues the student trial. The instrument trial involved 1,947 students spread from sabang to merauke in Indonesia.

3.4 Try Out

The test stage that will be tested is a test of the validity and reliability of the instrument. The validity of the instrument is tested by multivariate techniques. All items on the instrument were tested on randomly selected students, and the results of the validity test calculation showed that all instrument items were in a valid category. This is evidenced by 38 items of instruments after a validity test showing the same Sig 2 Tailed number, which is 0.000. This indicates that the Sig 2 tailed number obtained is smaller than the alpha value (0.05). So, it can be concluded that the results of the analysis of the validity of the student's learning independence instrument developed as a whole have valid points. Instrument testing can be continued on the instrument reliability test. The instrument reliability test was conducted using the Alpha Cronbach technique. All the details contained in the instrument are tested for reliability. Each test result shows that all the details contained in the instrument are reliable.

For the 38 items of student attachment instruments tested, the results of the analysis showed the total R value was 0.918. It can be concluded that the evaluation instrument to assess student involvement is already reliable. Reliability tests of each instrument item show a Sig 2 value. Tailed is 0.000, and smaller than the alpha value (0.05), so it can be concluded that all instrument items are reliable.

3.5 Final Instrument

Based on the test results, all item question items used in the instrument are valid and reliable. This indicates that all items contained in the instrument have been piloted and the student's learning independence instrument is worth using. The entire question item meets valid and relibel criteria so that the learning independence instrument is worth using and disseminating.

Distance learning by utilizing technology applications in supporting the learning process is a step in succeeding the equalization of educational programs. In distance education such as the use of the concept of online learning is a must to pay attention to the independence of student learning [15,16]. Independence can be one of the determinants of learning success when implementing distance learning. The role of lecturers will be reduced as distance learning programs spread. With the existence of student learning independence assessment instruments that have passed expert tests, validity and reliability can be a solution in assessing student learning independence.

4 CONCLUSION

Independence of learning is an important aspect in supporting student success in learning tuweb. For that, it takes a valid and reliable instrument and worth using to measure student learning independence. SRL instruments developed in research have gone through three stages of testing, namely expert assessment, validity testing and reliability with respondents are students. Based on the results of the data analysis that has been conducted, the student learning independence assessment instrument that has been developed has been valid according to experts, valid and reliable based on the results of the instrument trial applied to UT student respondents. In the future, it is expected that there will be continued research and development of learning independence instruments so that learning independence can be one of the focus of attention in carrying out learning on a Tuweb basis or online learning.

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