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VALIDITY OF LEARNING PACKAGE FOR ENVIRONMENTAL CHANGE MATERIALS IN IMPLEMENTING STUDENT WORKSHEETS BASED ON CONTEXTUAL TEACHING AND LEARNING (CTL)

Validitas Perangkat Pembelajaran Materi Perubahan Lingkungan Untuk Implementasi LKPD Berbasis Contextual Teaching And Learning (CTL)

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Abstract

This study aims to produce learning package in the form of lesson plans and valid questions in implementing student worksheets based on Contextual Teaching and Learning (CTL) which is to complement learning package other than student worksheets in previous research. This research method uses a 4-D development model which the disseminate stage is not done, namely define, design, and develop. The research target is learning package such as lesson plans and questions. Place and time of study in September 2021 at Biology Department of Universitas Negeri Surabaya. The research parameter measured was the validity of the learning package by taking into account several aspects. The validity of the lesson plans includes aspects of syllabus identity, syllabus conformity with lesson plans, lesson plans identity, formulating indicators, formulating learning objectives, learning materials, learning methods, learning tools and resources, learning activities and outcome assessment study. Aspects of question validity include material feasibility, construction feasibility, grammatical aspects, and character aspects of measuring scientific literacy. Based on the data above, the validation of the questions obtained an average score of 90% with a very valid category and the lesson plan validation is an average score of 92.96% with a very valid category. The conclusion of this study shows that the test of the validity of the learning package in the form of lesson plans and questions obtained a score above 70%. This shows that the learning level is valid.
Keywords: Validity, Scientific Literacy, Environmental Change, Learning Package.

Abstrak

Penelitian ini bertujuan untuk menghasilkan perangkat pembelajaran berupa RPP dan butir soal yang valid dalam rangka implementasi LKPD berbasis Contextual Teaching and Learning (CTL) yang mana untuk melengkapi perangkat pembelajaran selain LKPD pada penelitian sebelumnya.. Metode penelitian ini menggunakan model pengembangan 4-D yang tahap disseminate tidak dilakukan, yaitu define, design, dan develope. Sasaran penelitian ini adalah perangkat pembelajaran berupa RPP dan butir soal. Tempat dan waktu penelitian pada bulan September 2021 di Jurusan Biologi Universitas Negeri Surabaya. Parameter penelitian yang diukur adalah validitas perangkat pembelajaran dengan memperhatikan beberapa aspek validitas. Validitas RPP meliputi aspek identitas silabus, aspek kesesuaian silabus dengan RPP, aspek indikator, aspek identitas RPP, aspek perumusan indikator, aspek perumusan tujuan pembelajaran, aspek materi pembelajaran, aspek metode pembelajaran, aspek alat dan sumber belajar, aspek kegiatan pembelajaran serta aspek penilaian hasil belajar. Aspek validitas butir soal meliputi aspek kelayakan materi, aspek kelayakan kontruksi, aspek tata bahasa serta aspek karakter soal mengukur literasi sains. Berdasarkan data di atas validasi RPP memperoleh skor rata-rata 98,75% dengan kategori sangat valid dan pada validasi butir soal memperoleh skor rata-rata 94,53% dengan kategori sangat valid. Kesimpulan dari penelitian ini menunjukkan bahwa uji validitas perangkat pembelajaran berupa RPP dan butir soal memperoleh skor diatas 70%. Hal ini menunjukkan, bahwa perangkat pembelajaran tersebut sangat valid.
Kata Kunci: *Validitas, Literasi Sains, Perubahan Lingkungan, Perangkat Pembelajaran*

A. INTRODUCTION

This research is an implementation of the student worksheets developed by Paramastri (2019) and has been tested and declared very valid with a validity score of 3.91. The implementation of the CTL-based on student worksheets, it is stated to be very practical, with an average of 90.80%. They have complete scientific literacy skills with an average of 80.00%. This shows that the student worksheets is in a good category, and the achievement of indicators which have an average of 84.13%, indicates the complete category. The CTL-based student worksheets also received a positive response from students in the very good category is 98.33%. Currently, researchers want to implement the student worksheets to students with a Contextual Teaching and Learning (CTL) strategy, which begins with the development of learning package in the form of lesson plans and questions because it has not been available in previous research. Therefore, researchers need to test the validity of the learning device.

Based on questionnaires and interviews conducted with biology subject teachers at the time of observation in September 2019, there are several problems faced by most high school biology teachers in Lamongan City. These problems are (1) teachers have not fully implemented learning strategies to empower students' scientific literacy skills, teachers use lecture and discussion methods more often, (2) there are still many teachers who rely on textbooks from the government, teachers are lacking in developing teaching materials. for various reasons, (3) the learning approach used has not been able to fully relate the learning material to the life and environmental problems around students. Students' lack of direct involvement in applying the material in real life shows the lack of students' scientific literacy skills.

The involvement of students in applying the material in real life can be started through learning activities that refer to environmental problems around them. One example of a subject that can apply the knowledge that has been learned is biology. Students can be directed by the teacher to observe environmental problems around the school environment, where students live and in other cities that are currently being affected by environmental problems. This of course requires facilities in the learning process, one of which is student worksheets and learning package that contain activity plans and also an assessment of student activities to find out to what extent students can solve and analyze environmental problems. In previous research, LKPD has not been equipped with other learning package in the form of lesson plans and questions. This causes the LKPD implementation process to be less than optimal because the learning steps and the process of assessing learning outcomes do not yet exist. RPP is a learning implementation design that can determine the success of learning by teachers because it contains teacher plans made before the teaching process, and describes learning procedures to achieve a basic competency. While the questions contain a collection of questions that refer to learning materials that aim to determine the progress and suitability of student learning outcomes with predetermined basic competency standards. Therefore, this study aims to develop learning package in the form of lesson plans and questions in the implementation of student worksheets to train students' scientific literacy skills.

Scientific literacy is learning according to the nature of science learning (Yuliati, 2017). The most important things in learning science are scientific literacy skills and higher-order thinking skills (Sukowati, 2017). Scientific literacy guides a person in obtaining information in the form of knowledge and understanding of scientific concepts and processes in making personal decisions, participating in citizenship and cultural affairs, and in economic productivity. Scientific literacy is point in modern society, especially for students, so that they can survive in the midst of modern society (Rahayu, 2017). This requires the younger generation, who are dealing directly with various real problems in their environment. Students can explore and observe environmental problems from the environment around the school to the environment in which they live. Therefore, activities in the educational curriculum play an active role in developing students' skills.

The condition of the COVID-19 pandemic has an effect on curriculum activities for students. This is related to enacting regulations from the ministry of education, namely online teaching, and learning activities. Online teaching and learning activities allow learning that takes place to be less effective, this is based on a survey conducted by Simatupang et al. (2020) stating that as many as 24% of teachers gave positive responses regarding online learning, but for some teachers, it was not enough to help transfer knowledge. And improve student learning outcomes. This happens because many teachers do not know how to use online leearning media. According to Handayani (2020), online learning can be carried out anytime and anywhere. This is also supported by Septiani et al. (2021), which state that online learning can reduce the duration of learning and require teachers to resume each learning material. The lack of learning duration and the limited involvement of students in exploration related to

environmental problems around the school cause students to only learn in one direction with the material in the book and listen to the teacher's explanation. This is not in line with the objectives emphasized in the 2013 curriculum.

The 2013 curriculum, that emphasizes learner-centered learning, requires learning activities in the form of true experience, where authentic learning in the student environment can provide meaningful learning opportunities and require students to be able to think scientifically, solve problems, think critically and be able to reflect problems in everyday life. The form of one of the lessons that can reflect in everyday life is biology lessons. One of the materials in biology lessons, namely environmental change material, involves a learning process that examines environmental phenomena and changes in real life and analyzes their impact on life. This is related to learning that is able to train students' scientific literacy skills. Therefore, this study aims to produce learning package in the form of lesson plans and questions on environmental change material and describe the results of the validation of learning package in the implementation of CTL-based student worksheets to train scientific literacy skills.

METHOD

This research was carried out at the Biology Department, Faculty of Mathematic and Natural Sciences, Universitas Negeri Surabaya through two stages of activity, namely the development and validation stages, which were carried out in September 2021. The target of this research was learning package in the form of lesson plans and questions. This research includes follow-up research from research that has been carried out by Paramastri (2019) with the development model of the Four D Models method, namely define, design, develop, and disseminate, but the implementation of this research is limited to the develop stage and does not proceed to the disseminate stage. The 4-D development model (Four D) is a learning device development model (Menrisal and Putri, 2018). This model was developed by S. Thagarajan, Dorothy S. Semmel, and Melvyn I. Semmel (Noprinda and Soleh, 2019).

The define stage carry through curriculum analysis by outlining the indicators and objectives to be achieved in the material for environmental change.

The next stage, namely design, is carried out through the stages of designing learning package, including lesson plans and a grid of CTL-based questions by consulting the supervisor. The lesson plan design contains aspects of the lesson plan's identity, learning materials, formulation of indicators, learning resources, learning methods, learning activities, and assessment of learning outcomes in the form of pretest and posttest.

The next step is to determine the question grid that contains aspects of the material, construction, language, and character of measuring scientific literacy. The question grid consists of 8 questions. Each question refers to 4 aspects of scientific literacy skills. The eight questions are describing as follows; The first question contains aspects of contextual level scientific literacy skills; The second question contains aspects of scientific literacy skills; The third question contains aspects of competency science literacy skills; The fourth question contains scientific literacy skills at the level of knowledge; The fifth question contains aspects of competency level scientific literacy skills; The sixth question contains aspects of competency level scientific literacy skills; The seventh question contains aspects of scientific literacy skills at the level of knowledge; and in the eighth question, it contains aspects of scientific literacy skills at the level of competence.

The development stage produces learning package in the form of lesson plans and lattice questions as supporters of CTL-based student worksheets as learning for 10 grade in Senior High School students to practice scientific literacy skills. CTL is also closely related to the real experience of students (Yuliana et al., 2017). This stage aims to produce a learning device in the form of lesson plans, syllabus and questions that have received input and revision from experts. Validation comes from two validators, namely material experts and education experts. Validation comes from two validators, namely material experts by a biology lecturer at the State University of Surabaya, namely Dra. Winarsih, M.Kes and education experts by a biology lecturer at the State University of Surabaya, namely Mrs. Dra. Isnawati, M.Si.

The data analysis technique carry with a quantitative descriptive approach that included an analysis of the validity of learning package.

The analysis of the validity of the learning device was assessed by the validator with the data obtained in the form of a score and explained with a description of the assessment category using the Riduwan 2018 rating scale as follows.

Table 1. Assessment Scale of lesson plan learning package and lattice questions

Scale	Category
1	Poor
2	Average
3	Valid
4	Very valid

The score of the validator is calculated for each aspect of the validation using a formula.

$$\textit{Validity score} = \frac{\Sigma \textit{ Score earned}}{\Sigma \textit{ Maximal score}} \; X\ 100\ \%$$

RESULTS AND DISCUSSION

This study uses a learning device development procedure using a 4-D model (Four D model) carried out only up to the stage I only, stage II is carried out the following year because it takes a long time and is quite expensive. Another reason is the COVID-19 pandemic, so practicum activities at the design stage are limited to learning device validation activities. This is because, at the design stage, students are expected to carry out practical activities that should do face-to-face, as well as the limitations of practical tools if carried out online.

The define stage of this research is used as consideration for implementing LKPD which will be applied in learning activities by analyzing the curriculum that outlines the indicators and objectives to be achieved. Researchers describe indicators and learning objectives that are in accordance with the material of environmental change.

In the design stage of lesson plans for learning materials on environmental change, the researcher uses learning methods in the form of group discussions, scientific investigations, questions and answers, and presentation of results using the CTL model by paying attention to the 4 components of scientific literacy, namely (context, knowledge, competence, attitude) which are arranged in 2 meeting times. Furthermore, in the questions design, the pretest and posttest questions contain 8 questions and refer to 4 aspects of scientific literacy skills.

In the development stage, the development of learning package in the form of lesson plans and questions has received input and revisions from validators, material experts and education experts.

The results of the lesson plans are declared valid based on the data in table 1 and table 2 as follows:

Table 2. Results of the validity of the syllabus and lesson plans.

No.	Rated aspect	Score		Score (%)	Category
		V1	V2		
A. Syllabus Identity					
1.	Education units.	4	4	100	Very valid
2.	Subjects.				
3.	Time Allocation.				
Validity Score				**100**	**Very valid**
B. Syllabus compatibility with a lesson plan					
1.	There are core competencies.	4	4	100	Very valid
2.	There are basic competencies.				
3.	There is a subject matter.				
4.	There are indicators.				
5	There is an assessment in techniques, forms, and instruments used.				
6	There is a time allocation.				
7	There are learning resources.				
Validity Score				**100**	**Very valid**
C. Lesson plan Identity					
1.	There is an education unit identity.	4	4	100	Very valid
2.	There is the identity of the subject and the subject matter.				
3.	There is a class and semester identity				
4.	There are subject matter and time allocations.				
Validity Score				**100**	**Very valid**
D. Indicator Formulation					
1.	The formulation of indicators can represent/be representative of Basic Competencies.	4	3	87,5	Very valid
2.	The indicator formulation uses verbs that can be measured.				
3.	The indicator formulation contains material words that may be measured.				
Validity Score				**87,5**	**Very valid**
E. Formulation of Learning Objectives					
1.	Conformity of learning objectives with indicators.	4	4	100	Very valid
2.	Completeness of learning objectives.				
3.	The learning objectives include student activities ~~in~~ fulfilling scientific literacy skills, namely				

No.	Rated aspect	Score V1	Score V2	Score (%)	Category
	constructivism, forming study groups, questioning, modeling, inquiry, reflection, and authentic assessment.				
Validity Score				**100**	**Very valid**
F. Subject matter					
1.	The material is arranged according to the indicators of knowledge and skills.	4	4	100	Very valid
2.	Consistent and systematic material.				
3.	Core activities.				
4.	The suitability of the material with the time allocation.				
Validity Score				**100**	**Very valid**
G. Learning methods					
1.	The suitability of the learning method with the learning objectives.	4	4	100	Very valid
2.	The suitability of the learning method with the student worksheets.				
Validity Score				**100**	**Very valid**
H. Learning Tools and Resources					
1.	The suitability of learning tools/materials and resources with indicators.	4	4	100	Very valid
2.	Suitability of tools/materials, learning resources with learning materials.				
Validity Score				**100**	**Very valid**
I. Learning Activities					
1.	Preliminary activities include opening and apperception.	4	4	100	Very valid
2.	The core activities cover learning methods (tutorials and group discussions) and demonstrate the activities of the teacher as a facilitator.				
3.	Core activities include b. information submission c. organizing classes d. working on student worksheets e. doing the questions in article 1 f. formulate a problem g. give an example of an investigation h. read article 2 i. combining ideas in groups j. communicating research results				
4.	Closing activities include summarizing and concluding activities.				
5.	The allocation of time provided is sufficient for learning activities.				
Validity Score				**100**	**Very valid**
J. Assessment of Learning Results					
1.	Assessment of learning outcomes is relevant to the question indicators.	4	4	100	Very valid
2.	Questions are clear.				
3.	The time allocation provided is sufficient for the assessment of learning outcomes.				
Validity Score				**100**	**Very valid**
Average validity score				**98,75**	**Very valid**

Information:

V1 : validator (Lecturer of Education Expert)

V2 : validator (Material Expert Lecturer)

Validity Score Interpretation Criteriaurer

0-20 % : Not Valid
21-40% : Poor
41-60% : Average
61-80% : Valid
81-100% : Very Valid

Based on the validity of the learning package above, it is stated that every aspect that is assessed in the lesson plans produces the same validity score, namely getting a score of 100% with a very valid category.

The difference in the results of the validity scores of learning devices is only found in the aspect of indicator formulation which includes the formulation of indicators that can represent/representative of Basic Competence (KD), the formulation using verbs that can be measured, and the formulation of indicators containing material words that get a score of 87.5%, will but the third category of aspects remains the same that is very valid.

Table 3. Results of Question Validity Pretest and Posttest

No.	Rated aspect	Score V1	Score V2	Score (%)	Category
A. Feasibility of Material					
1.	Questions according to the indicators.	3	4	87,5	valid
2.	Fill in the questions according to the level and level of student ability.	3	3	75	valid
Validity Score				**81,25**	**valid**
B. Construction Eligibility					
1.	The questions developed are clear.	3	4	87,5	Very valid
2.	Questions do not lead to the correct answer.	4	4	100	Very valid
3.	Questions do not depend on each other.	4	4	100	Very valid
4.	Useful discourse in problem-solving.	4	4	100	Very valid
Validity Score				**96,87**	**Very valid**
C. Grammar					
1.	Sentences used are communicative	4	4	100	Very valid
2.	Sentence questions using good and correct language in accordance with the rules of writing	4	4	100	Very valid
3.	The sentence used does not cause double interpretation	4	4	100	Very valid
4.	The question sentence does not contain statements that can offend students	4	4	100	Very valid
Validity Score				**100**	**Very valid**
D. Characters of Questions Measuring Scientific Literacy					
1.	The subject matter can measure one of the indicators of the scientific literacy skills being trained, namely: a. Competence (Analyzing scientific phenomena, formulating problem-solving ideas, conducting scientific investigations	4	4	100	Very valid
	b. Context (applying scientific concepts in solving environmental problems)	4	4	100	Very valid
	c. Knowledge (Relate real conditions with the knowledge that has been owned)	4	4	100	Very valid
	d. Attitude (applying science skills in solving problems, drawing conclusions or decisions based on data analysis)	4	4	100	Very valid
Validity Score				**100**	**Very valid**
Average validity score				**94,53**	**Very valid**

Information:
V1 : validator (Lecturer of Education Expert)
V2 : validator (Material Expert Lecturer)

Validity Score Interpretation Criteriaurer

0-20 %	: Not Valid
21-40%	: Poor
41-60%	: Average
61-80%	: Valid
81-100%	: Very Valid

Based on the results of the validity of the pre-test and post-test questions above, it is stated that each aspect has the same score and level of validity, with very valid categories. The difference in scores is only found in several aspects, namely the material feasibility aspect and the construction feasibility aspect, but all aspects have the same category, which is very valid.

According to the data above, the validation of the pretest and posttest questions obtained an average score of 94.53%, with the results of the validity test showing very valid. Lesson plans validation is an average score of 98.75%, with the result of the validity test showing very valid. This shows that the learning package in the form of lesson plans and pretest and posttest questions are appropriate to be used in learning the material "Environmental Change" so that they are able to train students' scientific literacy skills.

Regarding the validation of learning package in the form of lesson plans and questions, there are inputs and suggestions from the validator. The validator's input and suggestions for improving the lesson plan learning package are 1) the sequence of aspects on the syllabus sheet in the lesson plans with the aspects in the lesson plan must be sequential and appropriate; 2) the description of the material needs to be completed with a chart of air, soil, water pollution, which presents the source, impact and resolution of pollution; 3) methods on aspects of learning activities in Lesson Plan should be adjusted to the pandemic conditions; 4) on the aspect of learning tools and resources adapted to pandemic conditions; 5) the aspect of the indicator title and the main material in the table on the syllabus sheet is inverted; 6) the form of assessment in the syllabus sheet contains an analysis of environmental problems around which are packaged in the form of a discussion; 7) it is better that the learning objectives in the lesson plan are made in ABCD format, namely Audience, Behavior, Condition and Degree; 8) the material presented in the lesson plans is sufficient in the form of core points only; 9) the explanation of the method in the lesson plan is sufficiently explained in the learning step; 10) tools and practicum materials should use a pH meter and not litmus paper; 11) the closing part of the learning step, the student worksheets should be brought home by students as teaching material to be studied but must be discussed so that students know the correct answer; 11) in addition to the posttest, there should be a practice test to measure presentation skills in explaining the results of discussions and practicum in problem solving.

The validator's input and suggestions for improving the questions are 1) an inaccurate answer to question no. 1; 2) in question no. 2, the answer to the question is not quite right and the answer key is too long if students put in forward; 3) for question no. 3 the competence domain is not precise and on the scoring, the answer key requested is cause and not effect 4) questions no 4 and no 6 questions and answers are less relevant; 5) in question no 4, the question is not in accordance with the indicators that ask students to analyze the impact of pollution; 6) the realm of competence in question no 5 does not match and the scoring rubric is not detailed enough to accommodate all possible answers from students; 7) the question in question no. 6 should be changed to a number and not a letter because it consists of 2 sub-questions; 8) the answer to question number 8 is confusing.

Revisions made by researchers in improving learning package are based on the validity results by getting input and suggestions from the validator. Researchers have made improvements to the lesson plans and questions based on input and suggestions from the two validators.

The results of this study indicate that a series of learning package in the form of lesson plans and pretest and posttest questions on environmental change materials can train students' scientific literacy skills and obtain very valid validation results (fit for use). The design and preparation of lesson plans and syllabus tables in lesson plans based on CTL syntax and CTL activities. The lesson plans format developed refers to Permendikbud No. 22 of 2016 concerning the standard of primary and secondary education processes and Permendikbud No. 37 of 2018 concerning core competencies and basic competencies of primary and secondary education.

Learning with the CTL model has a syntax that must be met so that it can run well. This is in accordance with the opinion of Seel, Lehmann, Blumschein, & Podolskiy (2017) which states that explain that learning planning can serve as a frame of reference and rules in the development of learning that lead to improvement learning and affect the motivation and attitudes of learners in such a way in such a way that they can reach a deeper understanding of subject that must be studied.

The lesson plan was made in 2 meetings, the first meeting with 2 x 45 minutes of lessons and the last meeting with 1 x 45 minutes of lessons arranged in three activities, namely: preliminary activities, core activities, and closing activities.

The process of validating the lesson plans and questions was carried out by two experts, namely two lecturers of the Department of Biology. Based on the validation results, it find that the learning device was feasible to be applied to research. The percentage value of Lesson Plan validation is 98.75%, with a very valid assessment category (Table 2). The percentage value of the validation of pretest and posttest questions is 94.53%, with a very valid assessment category (Table 3).

One of the student worksheets that have developed for environmental change material, namely the student worksheets developed by Paramastri (2019), was declared very valid with a validity score of 3.91. Judging from the implementation of the CTL-based student worksheets, it is stated to be very practical, with an average implementation of 90.80%. The learning outcomes of students have complete scientific literacy skills with an average of 80.00%. This shows that the student worksheets is in the good category, and the achievement of indicators which have an average of 84.13%, indicates the complete category. The CTL-based student worksheets also received a positive response from students in the very good category, which was 98.33%.

This study uses a 3-D model (define, design, and develop) from the four stages in the process of developing a 4D model learning device (define, design, develop, and disseminate) which is developed by Thiagarajan, Semmel, and Semmel (1974). In this research, the development stage is limited to the Develop stage. In its implementation, one stage is not carrying out, namely the Disseminate stage. There are three activities in the Disseminate stage: validating testing, packaging, diffusion, and adoption, but the research is limited to the development stage and not to the dissemination stage.

The dissemination stage requires feedback from students and teachers. This response will assesse at this stage. The existence of the Covid-19 pandemic condition has caused changes in the rules for student learning activities, one of which is teaching and learning activities that are carried out online, so that the dissemination process is difficult to carry out. This is in accordance with the policy of the Minister of Education and Culture as stated in Circular Letter Number 4 of 2020 concerning the Implementation of Education Policies in the Emergency Period of the Spread of Covid. This factor coincided with the process of learning device development research activities when this research was conducted. The dissemination stage, which requires the dissemination of products that have been developed, has been hampered.

The reason for developing learning package in the form of lesson plans and CTL-based questions that contain steps and learning methods that have been adapted to the CTL-based worksheets that have been developed by previous researchers is to develop students' scientific literacy skills. Some research results show that learning with CTL is effective in terms of motivation and learning achievement (Laili, 2016) and learning using CTL-based modules improves students' science process skills and scientific attitudes (Rinsiyah, 2016). The importance of preparing lesson plans that are prepared professionally, systematically, and efficiently, can improve the ability of educators to see, observe, analyze, and predict learning programs as a logical and planned framework (Chusni et al, 2017).

This is a guide for teachers to be able to apply the student worksheets in achieving learning objectives. The teaching and learning process in learning package is carried out in face-to-face activities directly so that it can maximize the activities of students in working on the student worksheets which has been presented through the learning method in the lesson plan. This is also in line with the opinion of Rismawati et al (2017) which states that the teacher only acts as a facilitator in experimental activities. The task of the teacher is to guide students during the experimental process so that they are in accordance with the procedures in the student worksheets.

Due to the current pandemic conditions, the use of student worksheets which is taught through lesson plans and questions is a very good breakthrough because based on experience in the field, teaching and learning activities carried out online cause students to only learn through theory and are less involved in conditions in the school environment. This is supported by the results of research from Rando (2016) which states that the percentage of student learning outcomes using conventional methods (lectures) is lower and student learning outcomes using the CTL strategy have increased. Submission of learning activities presented in CTL-based lesson plans while still paying attention to health protocols can help maximize the ability of students to work on student worksheets. The scientific literacy ability of students can also be measured by working on the questions that have been prepared. According to research results from Setiawan (2019), questions are arranged in the form of a description. This choice was taken because we view that the essay type is superior in measuring the ability to organize, integrate, analyze,

synthesize, and evaluate information. So that the form of the description is considered more suitable for use. This form is also chosen to minimize students' speculation opportunities when answering the questions presented.

Based on the description above, the learning package in the form of lesson plans and question grids to train students' scientific literacy skills on environmental change material for 10 grade in Senior High School are feasible to be applied. Of 98.75% and the questions of 94.53 % with the results of the validity test showing very valid.

CLOSING

Conclusion

Based on the validation results of the learning package, including the syllabus, lesson plans, and the questions developed, the score is above 70%, which indicates the device is very valid.

The average results of each validation score on the syllabus and lesson plans are 90% and on the questions of 92.96%. This shows that the learning package, including the syllabus, lesson plans, and questions, are very valid and feasible to be used in the learning process.valid.

Suggestion

Learning package such as Syllabus, lesson plans, and CTL-based questions on environmental change materials need to go through a trial process on students. In the implementation process, it is necessary to pay attention to the availability of tools and materials to be used in accordance with the steps arranged in the learning device so that this can train students' scientific literacy skills. In addition, implementing this learning device should still pay attention to health protocols in the current pandemic conditions.

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