Contextual Electronics Learning Module in Sociology Learning at Senior High School

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A R T I C L E   I N F O

A B S T R A K

Rendahnya pencapaian hasil belajar siswa dalam pembelajaran sosiologi disebabkan oleh kesulitan belajar siswa. Kesulitan belajar ini disebabkan oleh terbatasnya sumber belajar yang kontekstual. Salah satu solusi untuk mengatasi kesulitan belajar tersebut adalah dengan menggunakan e-modul sosiologi berbasis kontekstual. Penelitian ini bertujuan untuk mengembangkan e-modul pembelajaran sosiologi berbasis pendekatan pembelajaran kontekstual, khususnya dengan konteks masyarakat Nusa Tenggara Timur. Penelitian ini merupakan Research and Development (R&D) yang dikembangkan menggunakan model Dick and Careys yang terintegrasi dengan Hannafin dan Peck. Metode pengumpulan data dilakukan dengan observasi, wawancara dan angket. Metode analisis data dilakukan secara kualitatif dan kuantitatif. Penelitian ini melibatkan guru, pakar dan siswa kelas XI IPS sebagai pengguna e-modul. Hasil penelitian menunjukkan bahwa E-modul sosiologi dinyatakan layak berdasarkan penilaian para ahli. E-modul sosiologi memperoleh penilaian baik oleh ahli desain pembelajaran, sangat baik oleh ahli materi, dan sangat baik oleh ahli media. Respon pengguna juga memberikan penilaian sangat baik terhadap E-modul. Berdasarkan hasil pengujian efektivitas, e-modul sosiologi efektif dalam meningkatkan hasil belajar siswa. Penelitian ini memberikan kontribusi terhadap pembelajaran sosiologi berdasarkan konteks masyarakat Nusa Tenggara Timur.

A B S T R A C T

The low achievement of student learning outcomes in sociology learning is caused by student learning difficulties. This learning difficulty is caused by limited contextual learning resources. One solution to overcome these learning difficulties is to use contextually based sociology e-modules. This study aims to develop sociology learning e-modules based on a contextual learning approach, especially with the context of East Nusa Tenggara society. This research is a Research and Development (R&D) developed using the Dick and Careys model which is integrated with Hannafin and Peck. Data collection methods are carried out by observation, interviews and questionnaires. Methods of data analysis carried out qualitatively and quantitatively. This study involved teachers, experts and students of class XI IPS as users of the e-module. The results of the study show that the Sociology E-module is declared feasible based on the assessment of experts. The sociology e-module received good ratings by learning design experts, very good by material experts, and very good by media experts. The user response also gives a very good assessment of the E-module. Based on the results of effectiveness testing, the sociology e-module is effective in improving student learning outcomes. This research contributes to sociology learning based on the context of East Nusa Tenggara society.

1. INTRODUCTION

Educational institutions play an important role in human self-actualization through the learning process (Halimi et al., 2020; Hwang et al., 2020). Through education, humans are able to actualize themselves and develop all their potential and abilities. Educational institutions are places where the learning and education process takes place. The quality of educational institutions also determines the quality of educational outcomes. Formal educational institutions such as schools are expected to be able to implement good learning activities so as to produce quality generations. In educational institutions, educators need to make certain innovations that accommodate the needs of learning and students. Innovation is made using technology to improve the quality of student learning (Darmaji et al., 2020; Sudira & Wiyasa, 2020). One of the scientific fields taught in schools is sociology. Sociology is the science of society. Sociology studies social behavior between individuals and individuals, individuals with groups and groups with groups (Soyomukti, 2014; Zaharah et al., 2020). The object of sociological study is society itself. In learning sociology, educators and students should understand the situation of society as the object of study. Sociological theories and concepts must be able to explain the situation of society in

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general and the situation of Indonesian society or local communities in particular. One learning model that is suitable to be applied in sociology is context-based learning (Hawa et al., 2019; Karraker, 2019). Context-based learning in sociology learning helps educators and students understand the situation of society as an object of learning study. Contextual learning is a methodical, directed and systematic process that helps students interpret academic material by relating the content of the material and the context of their daily lives. In contextual learning, learning theories are integrated with real-life contexts so that students can understand the theory comprehensively. In addition, students are also possible to apply the theory they have learned in real, everyday life (King & Henderson, 2018; Zakiah et al., 2019). Previous studies have found the role of contextual learning to improve students' abilities and learning outcomes. First study integrate teaching and learning instruction with material obtained from the local context (Noor, 2019). By using the R&D method, this research concludes that the use of local context learning materials can improve students' thinking skills and make learning fun. Another studies specifically discuss the importance of local context in learning (Asrial et al., 2020; Samo et al., 2018). Contextual learning based on local culture and local wisdom can improve students' critical thinking skills. This is supported by research which states that context-based learning materials can improve students' understanding of learning (Lidiawati et al., 2021). Research-relevant also finds the important role of contextual learning. Contextual learning-based approaches, strategies and media have been proven to improve students' cognitive abilities (Zuriatni et al., 2019). Contextual learning models can improve critical thinking skills and foster students' skills, analytical abilities, and creativity to solve problems in real life (Andrianingrum & Suparman, 2019).

Based on the results of observations, it was found that the learning process of sociology for class XI semester 1 in SMA St. Fransiskus Ruteng, East Nusa Tenggara has not run optimally. Students not being able to relate abstract concepts/theories to practical situations that exist in the society. The teacher has not explained the concept of sociology based on the context and situation of society. The material and social problems taught in sociology are not directly related to the social situation. Difficulties in understanding the concept of sociology are also supported by the limitations of learning resources that can be used by students. Learning resources are anything that can be used to facilitate student learning, help students achieve learning goals and improve student learning processes (Antara & Dewantara, 2022; Asrial et al., 2019). Students do not have independent learning resources that can broaden their horizons about learning concepts. Teachers and students have not optimized other learning resources and media such as the internet, books, videos, pictures and others that can add references and students' knowledge of sociology. One of the solutions to overcome the limitations of sociology learning resources for class XI students of SMA St. Fransiskus Ruteng is an e-module. E-module is learning media that use various media simultaneously such as graphics, audio and video, all of which work together to achieve predetermined learning goals (Sanjaya et al., 2019). The e-module integrates content with images and videos so that it is easy for students to understand (Prasetya et al., 2021; Ummah et al., 2020). The development of e-modules is influential in shaping students' understanding of learning concepts (Triwahyuningtyas & Suastika, 2021). Meanwhile, the use of e-modules can improve student learning outcomes. Studies on the use of multimedia components in e-modules show that the use of graphics, images and videos helps students understand learning concepts (Desriana et al., 2020; Prabakaran & Saravanakumar, 2020). In addition to improving students' cognitive aspects, several studies have also shown that e-modules help teachers and students apply interactive characters in learning (Rubini et al., 2019; Yulando et al., 2019). A previous study shows that the use of e-modules in learning can improve analytical skills as well as students' positive character in the form of concern for the environment (Aufa et al., 2021).

The sociology e-module was developed with a contextual learning approach to overcome student learning difficulties. The sociology e-module is able to overcome the limitations of learning resources while increasing students' understanding by linking theory to the context of society. Several studies show that the integration of e-modules with a contextual approach can improve student learning outcomes (Agung et al., 2020). The use of e-modules that are integrated with context can improve student learning processes (Tahya et al., 2022). Contextual-based e-modules make learning interesting and help students understand the material (Widiastuti, 2021). The other research showed that the integration of e-module and contextual learning can improve student learning outcomes (Sriyanti et al., 2022). Context analysis in learning can improve students' critical thinking skills (Suryawati & Osman, 2018). Students' critical thinking is shown in the ability to solve problems in real life (Eny & Wiyarsi, 2019). Contextual learning not only has an impact on the cognitive dimension but also penetrates the affective aspect, namely increasing the positive character of students (Rahman et al., 2017) and student learning motivation (Asmara et al., 2019; Habig et al., 2018). Learning motivation is related to learning suitable and fun. It can be said that contextual learning can help students to analyze learning theories in the context of life. This study aims to develop a contextual-based e-module in sociology learning, analyzed the feasibility of

developing contextual-based e-modules and analyzed the effectiveness of contextual-based e-modules in sociology learning.

2. METHODS

This research produces an e-learning module with a contextual-based learning approach in sociology using the Researches and Development (R & D) model. The researcher uses the Dick and Carey's development model which is integrated with the Hannafin and Peck model. Dick and Carey's development model consists of 10 stages (Dick et al., 2015), namely: (1) identifying instructional objectives, (2) conducting instructional analysis, (3) analyzing student character and context, (4) writing learning objectives specifically, (5) developing assessment instruments, (6) developing instructional strategies, (7) developing and selecting instructional materials, (8) designing and implementing formative evaluations, (9) revising learning, (10) designing and conducting summative evaluations. Hannafin and Peck's model itself consists of three stages (Hannafin, 1988), namely (1) needs analysis, (2) design and (3) implementation-development, which will be applied to the 7th stage, namely developing and selecting instructional materials. This research involves teachers, experts and students of class IX SMA St. Fransiskus Ruteng. Class IX students were chosen because the e-module contains material for class XI. Initial research to measure students' need for e-module development involved 100 students of class XI IPS SMA St. Fransiskus Ruteng. The e-module feasibility trial involved 3 students for the one-to-one test and 8 students for the small-group test. The effectiveness test involved 32 students. Data collection techniques were carried out through observation, interviews, questionnaires, and tests. The purpose of the observation is to obtain initial data about learning activities, methods and learning strategies as well as student self-study activities. The questionnaire in this study was made for analyze the needs of e-module, analyze the feasibility and validity of the product by material experts, media experts, learning design experts and users. Interviews were conducted to complete the data obtained through observation and questionnaires. The type of interview conducted is unstructured; it does not use systematic interview guidelines. The interview guide is in the form of an outline of the problem to obtain information about the problem to be studied. Interviews were conducted with teachers of sociology subjects. Learning outcomes test is used to measure student achievement towards the objectives of sociology learning and to see the effectiveness of the developed e-module product. Learning tests are carried out at the evaluation stage before producing the final product. The data analysis technique used in this research is descriptive qualitative and quantitative analysis. Qualitative descriptive analysis techniques were used to process data from observations, interviews and reviews from material experts, design experts and media experts. Quantitative descriptive analysis technique was used to process questionnaire data about student's need, expert validation, module feasibility test questionnaire and module effectiveness test with pre-test and post-tests. The feasibility of the electronic learning modules was analyzed using conversion scores into 4 quantitative categories (Table 1). Product effectiveness was analyzed using N-gain score in 4 categories (Table 2).

Table 1. E-module Feasibility Scores and Categories

Score	Category
3,26-4,00	Very good
2,51-3,25	Well
1,76-2,50	Enough
1-1,75	Not enough

Table 2. Score and Category of E-Module Effectiveness

Score	Category
>76	Effective
56-75	Effective enough
40-55	Less effective
<40	Ineffective

3. RESULT AND DISCUSSION

Results

First stage is identified instructional goals. At this stage the researcher identifies and determines the abilities or competencies that grade IX students of SMA St. Fransiskus Ruteng after taking the

sociology course. The formulation of learning objectives was developed from the formulation of existing learning objectives on the mapping of core and basic competencies. Competency mapping becomes the direction and basis for educators to develop subject matter, learning activities and indicators of competency achievement for assessment. The researcher then developed the General Instructional Objectives which were formulated as follows: "After participating in sociology lessons, student of class 11 at SMA St. Fransiskus Ruteng will be able to analyze the relationship between social groups in society in Indonesia". After identifying the learning objectives, the researcher conducted an instructional analysis to determine the relevant skills and knowledge needed by students to achieve the learning objectives. Some of the main ideas needed to support the achievement of general goals are the concept of social groups, the concept of social problems, and the concept of social equality. The instructional analysis in this study was formulated in a competency map. Next stage is analyzed learners and contexts. In this stage the researcher will analyze the characteristics of students and the context of student learning. This stage is made to find out information about research and research variables in relation to the material and characteristics of the media. The results of interviews with teachers, students and questionnaires distributed to 100 students showed data about the learning context in class XI SMA St. Fransiskus. The results of the interview data are presented in Table 3.

Table 3. Data on e-Module Development Needs Interviews

Aspects	Current Conditions	Expected Conditions
Sociology Teacher	Teachers have adequate competence and knowledge of sociology; however, they lack pedagogical training to develop teaching methods and strategies.	Teachers need to receive training to be able to take a more varied and innovative approach to learning; which helps students understand concepts and theories
Learning Methods and Strategies	The implementation of sociology learning mostly uses the lecture method. The teacher does not provide examples and raises social issues based on the student's context.	The teacher uses a varied approach in teaching the concept of sociology to students. In addition, the teacher must provide contextual illustrations to make it easier for students to understand the concept of sociology
Media and Learning Resources	Teachers usually use media and learning resources in the form of books prepared by schools and the government. Most students do not have independent learning resources that can add to their insight into sociology	Teachers use many sources and learning media that can add insight to students about the concept of sociology. Students should also have self-study resources that help them understand sociological concepts
Utilization of multimedia components	Teachers use technology in teaching (such as laptops) but do not often use multimedia components such as images, videos and audio that are contextual, which makes it easier for students to understand sociological concepts.	Teachers use multimedia components to increase students' motivation, interest and understanding of sociological concepts.

Analysis of student characteristics aims to map the profile and potential of students who will use e-modules. This analysis shows that contextual-based sociology e-modules can be a source of student self-study. Students have the ability to use and explore multimedia components in e-modules. Students can also understand the context and the relationship between theory and context presented in the sociology e-module because most of the students come from the same area, namely Manggarai – East Nusa Tenggara. Based on the instructional analysis, the researcher developed specific learning objectives that need to be mastered by the eleventh graders of SMA St. Fransiskus Ruteng to achieve the learning objectives. The Specific Instructional Objectives are formulated as: (1) Class XI students can explain the concept of social groups; (2) Class XI students can identify social problems that occur in people's lives; (3) Class XI students can analyze the concept of social equality. Based on the specific competency objectives that have been formulated, the researcher develops an assessment tool or instrument that is able to measure the achievement of student learning outcomes. The assessment instrument was mapped based on specific instructional objectives, materials, learning outcomes indicators and the number of questions. The instrument that will be used can measure student performance in achieving the learning objectives that have been formulated. Furthermore, researchers develop learning strategies that used to implement

learning activities. At this stage, a resulting document is *Garis Besar Program Pembelajaran dan Pemetaan Materi Pembelajaran Sosiologi Kelas IX*. Next steps are developed and select materials. At this stage, e-module development is carried out. This stage includes 3 steps of Hannafin and Peck, namely analysis, design, development, and implementation. At analysis stage, the researcher conducted an analysis of student needs and a literature survey. Analysis of student needs will use a questionnaire distributed to 100 students of class XI SMA St. Fransiskus Ruteng. The results of needs analysis are presented in Table 4.

Table 4. Needs Analysis for E-Module Development

No	Statement	Student's Answer	
		Yes	No
1	Student interest in studying sociology	92	8
2	The use of multimedia components (images, videos, audio) can help students understand sociological theories and concepts well	91	9
3	The use of examples, illustrations, pictures or videos in e-modules is mostly taken from the context/situation of the local community	100	-
4	Interested in using context-based sociology electronic modules for learning	96	4

Table 4 shows that most students are interested in studying sociology and want to study media. It can be concluded that the students' interest in studying sociology is very high. The data also show that most students think that using multimedia components such as pictures, audio, and video will help them learn and understand sociological concepts. It can be shown that most students need sociology learning that uses multimedia components. The data shows that all students are interested in the use of multimedia components that are taken from the community context and describe the actual community context. From the data in Table 4, it can be seen that all students need learning related to the context of their lives. The data also shows that most students agree and are interested in the development of a context-based sociology e-module. It can be seen that most students need e-modules to study. At design stage, the developer designs the e-module script, creates a schematic, flowchart, storyboard and interface for the sociology e-module. Development and implementation stage includes the development of an e-module based on the articulate storyline software and placing multimedia materials and components in it. Design and conduct formative evaluation of instruction includes product validation by experts, user trials and product effectiveness tests. The evaluation stage is the stage that is made to find out the results of product development and refine the product until it is ready for use. The results of the expert review can be seen in Table 5.

Table 5. The Results of the Expert Review and User Trials

Subject	Indicators	Average	Category
Learning Design Expert	Learning	3,25	Good
	Contextual characters	3,4	
	e-module components	3,26	
	Average	**3,3**	
Media Expert	Design	3,8	Very Good
	Programs/compatibility	3,75	
	Media Presentation	3,9	
	Average	**3,8**	
Material Expert	Learning	3,7	Very Good
	Material	3,5	
	Language and communication	4	
	Average	**3,7**	
One to One Trial	Appearance	3,5	Good
	Programs/compatibility	3,25	
	Language and communication	3,5	
	Average	**3,42**	
Small Group Trial	Appearance	3,85	Very Good
	Programs/compatibility	3,58	

Subject	Indicators	Average	Category
	Language and communication	3,85	
	Average	**3,76**	

The effectiveness of the sociology e-module is carried out through an analysis of the percentage increase in student learning outcomes after using the developed product. The effectiveness of e-module calculated using the N-Gain Score is 0.77. The value of 0.77 is converted to 77%. Based on the n-gain category table, contextual-based sociology e-modules were declared 'effective' in improving student learning outcomes. The revision of the contextual-based sociology e-module was mainly carried out after the expert review stage and user test based on expert and student responses as e-module users.

Discussion

The analysis of learning objectives in the development of the sociology e-module was carried out based on teacher and student interviews and competency standards set by the government. This mapping is expected to provide the widest possible learning experience for students to develop the ability to behave, have knowledge, be skilled and act. Based on these general objectives, it can be seen that the purpose of developing e-modules is that students can master the concept of sociology especially the concept of social groups. The words 'will be able to' in the formulation of general learning objectives indicate the abilities that students will acquire after studying sociology (Antara et al., 2022; Antara & Dewantara, 2022). To achieve the general goal, namely the analysis of the relationship between social groups that occur in Indonesian society, several main ideas are developed to support this goal, namely the concept of social groups, the concept of social problems, the concept of social equality. This competency analysis is mapped procedurally. This means that each theme is discussed in the order in which it is arranged. The procedural arrangement makes it easier for students to achieve general learning objectives. Context and characteristics analysis aims to see how students need contextual-based sociological e-module development. The results of the questionnaire show that most students want to use contextual-based sociological e-modules. This shows the great need for students for learning resources that can increase their understanding of sociology. Context analysis was also conducted by interviewing teachers. From the interviews, there are important notes, namely the lack of strategies, models and learning approaches provided by the teacher, the limited resources and media for student learning and the lack of use of multimedia in learning. This limitation is caused by the lack of pedagogical training carried out by teachers. Teachers are still the only source of information in learning so that the limitations of teachers can have an impact on the lack of implementation of contextual learning in the classroom. The results of the analysis of student characteristics indicate that students actually have the ability and potential to learn which must be supported by the availability of learning facilities and infrastructure. Therefore, the limitations of student learning resources and media can be overcome by providing many and adequate learning resources and media; especially with the use of technology.

E-modules are one solution to the limitations of student learning resources and media, because e-modules can be used as independent learning media that help students understand learning concepts. The ease and potential offered by technology in the module provides an interactive aspect of the e-module itself. Utilization of technology as a communication medium can be seen from the hypertext group, namely software facilities in computers that are able to provide opportunities for developing information needed by users. Previous studies have stated that the use of software provides convenience in combining text, video, images, animation in e-modules (Fathirma'ruf et al. 2021; Linda, Nufus, and Susilawati 2020; Munzil et al. 2022; Purwoto 2022). The interactive aspect makes the module not only a passive object used by students but also a medium that provides opportunities for interaction between students and learning resources. The sociology e-module aims to assist students in studying sociology and to help students understand sociology if learning sociology in class is inadequate. For example, the lack of use of contextual examples and illustrations in learning sociology in the classroom will be supported by the use of contextual illustrations in the classroom. Utilization of multimedia components in e-modules can create learning experiences that help students understand social theories and concepts. Several previous studies have shown that the use of multimedia can increase students' motivation and interest in learning (Oksa & Soenarto, 2020; Putri et al., 2019). Multimedia components that are integrated with the community context make it easier for students to understand the concept of sociology. Multimedia can describe the context easily to students. Illustrations, pictures and videos depicting community situations help students see the context comprehensively and relate the theory they are learning to real life. Thus, the use of e-modules can help students understand sociology in relation to society and make sociology a useful science for the development of society. The e-module development is made based on the articulate storyline

application until it is ready to be used and tested. This software can be operated online or offline, making it easier for users to use it (Yahya et al., 2020). The use of the articulate storyline application can improve student learning outcomes (Octavia et al., 2021). This is also supported by the research which shows the use of the articulate storyline application to improve student skills (Yolanda et al., 2022).

After getting the final form, the e-module is evaluated and revised. Direktorat Tenaga Kependidikan states that a product that can be used internally must be appropriate in terms of content, presentation and language. Based on this, e-module validation is carried out by 3 experts, namely instructional design experts, media experts and material experts. The aspects assessed by instructional design experts are learning, contextual character, e-module components. The learning aspect is very important to measure the clarity of the learning objectives and the suitability of the learning objectives with the characteristics and assessment instruments. The learning objectives are abilities, competencies, talents, values and attitudes that are expected to be achieved by students after participating in learning (Castro-Rodríguez et al., 2022). Aspects of contextual characters are seen based on Real world learning characters that motivate students to understand the meaning of subject matter in relation to the context of everyday life (Merck et al., 2021); Student centered which emphasizes learning as an active process in which students construct their own knowledge models (Chen & Tsai, 2021; Sudarman, S. & Ardian, 2021); Meaningful learning relates to the functional aspects of learning related to situations and the application of knowledge in society (Merck et al., 2021; Wijaya et al., 2021); Learning not teaching which emphasizes learning, not teaching. In learning, students are expected to be able to understand the material well, not just memorizing; Problem solving and high order thinking are contextual learning characters that can improve critical thinking skills and foster students' skills, analytical abilities, and creativity to solve problems in real life (Andrianingrum & Suparman, 2019). Components that will be developed in the e-module are titles, learning objectives, instructions for use, student activity sheets, student worksheets, summaries, evaluation sheets, assessments and formative test answer keys (Vembriarto, 1981). The results of the learning design expert's review of the product development results are in the "good" category. This assessment means that e-modules can be a learning resource that helps students achieve learning goals. The assessment of instructional design experts also shows that e-modules already have a contextual character that is related to community situations. Media experts judge modules based on design feasibility, compatibility and appearance. Design feasibility relates to the use of graphics, layouts, colours and images. Direktorat Tenaga Kependidikan states that a good E-module must have an attractive combination of colours, letters, images to make it easier for students to read and understand the e-module. The feasibility of compatibility is related to the ease of use of the e-module. The resulting e-module must be user friendly, that is, easy to use and help students understand learning concepts (Prima Sari et al., 2021; Tyerman et al., 2021). Instructions and information contained in the module must make it easier for students to use and access the module. E-modules that are supported by technology applications can make it easier to use and access information in the module. The results of the review by learning media experts are in the "very good" category. This assessment means that e-modules become digital media suitable for students to use. The digital component in the e-module can help students understand the concept of sociology well.

Material experts assess e-modules from aspects of learning, content, as well as language and communication. In the learning aspect, the material expert assesses the synchronization of the learning objectives with the content of the e-module. In the content aspect, the expert assesses the completeness and depth of the material as well as the contextualization of the material. This material expert assessment refers to the Permendiknas which states that e-module material is used to facilitate student learning and help students master learning concepts (Asrial et al., 2019). According to material experts, e-modules can be used as independent learning media (Logan et al., 2021). As an independent learning medium, e-modules help students deepen the concepts they have learned in class. In the language aspect, material experts assess the correct and good use of language and use it according to the student's character. The use of language in e-modules must be understood by students and can increase students' thinking levels. Every word, sentence and paragraph that is built must be related and coherent. Material experts give an "very good" assessment of the e-module. The material expert confirmed that this module can be used as a medium for student self-study. The material expert's assessment shows that the content of the e-module is adequate and helps students achieve their learning goals. Expert input covers various aspects that are necessary in the development of an e-module. Expert advice is constructive which helps developers design e-modules that are effective and efficient in learning. Suggestions and input from learning design experts, media experts and material experts were then followed up by revising the product developed. The results of the expert review showed that the module was feasible to be used by students.

The evaluation is then continued with a feasibility test for users, namely students. User trials aim to get responses, data and evaluations regarding the ease of use of e-modules. This user evaluation is

made based on aspects of appearance, compatibility and language. User feasibility evaluation is made in two stages, namely one to one test and small group test. This one-to-one test was conducted on 3 students who have different ability levels, namely high, medium and low. The results of the one-to-one user trial show that the learning products developed are in the good category and the results of the small group trial are in the "very good" category. From the results of the one-to-one test, it was found that the e-module can be used practically and easy to use, has an attractive appearance and uses understandable language. However, there are improvements to the colour selection and use of fonts. The trial was then carried out in small group. The small group test results show that the e-module is easy to use. Thus, e-modules can be used as a medium for student learning. The effectiveness test showed a difference between the pre-test and post-test. There are differences in the achievement of learning outcomes which are indicated by the differences in the pre-test and post-test scores. The results of the effectiveness test on participants who took the pre-test and post-test showed that there was an increase in learning outcomes after using the developed product by 77% so it can be said that the contextual-based sociological e-module in class XI SMA St. Fransiskus Ruteng is "effective" based on the percentage increase in student learning outcomes. Contextual characters in e-modules are able to improve students' understanding and ability to understand theory (Oktariyana & Oktariyani, 2020; Suryawati & Osman, 2018). Thus, it can be said that e-modules can be used by students in learning sociology.

4. CONCLUSION

E-modules answer the problem of student learning difficulties and the limitations of student learning resources. It can improve students understanding of sociological concepts. The e-module becomes a source of student self-study that can be used to add insight in learning sociology. This sociology e-module can provide opportunities for students to be able to build social knowledge based on the community context and improve analytical skills and learning outcomes. This e-module has been tested by experts and users. Sociology electronic learning module based on contextual learning meets the eligibility criteria based on the validation results of instructional design experts in the 'good' category, media experts in the "very good" category and material experts in the "very good" category. The results of user trials on e-modules are in the "very good" category. The results of the effectiveness test showed that the contextual-based sociological e-module was effective in improving student learning outcomes.

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