INTENSIVE JOURNAL
http://ojs.uniska-bjm.ac.id/index.php/EJB
E-ISSN 2620-4746
October 2022, Vol 5 No.2

Development of ASSURE-Based Digital Learning Modules in English Subject at SMP Islam Al Azhar 13 Surabaya

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Abstract

This study aims to produce the appropriate digital learning modules in English subject for grade 9 at SMP Islam Al Azhar 13 Surabaya, find out the appropriateness of digital learning modules in English subject based on the criteria for teaching materials which were determined by the Board of National Standard Education, find out the results of responses of grade 9 students after using the digital learning modules in English Subject. This research is a kind of development research (Research and Development) with reference to the modified ASSURE development model including (1) Analyze Learners (2) State Objectives (3) Select Methods, Media and Materials (4) Develop Products (5) Validate Product (6) Conduct Product Trial (7) Evaluate and Revise Product. The research subjects included a media expert lecturer, material expert lecturer, subject matter expert teacher, and 20 students of grade 9 at SMP Islam Al Azhar 13 Surabaya. The object of this research is digital learning modules. The instruments used to assess the appropriateness of digital learning modules included appropriateness' assessment sheet by a media expert, appropriateness assessment sheets by material experts, and student response questionnaires on the use of digital learning modules. The results of the study revealed that the appropriateness of the digital learning modules in English subject in terms of the media included very appropriate categories. In term of materials included very appropriate categories. The learning process included a decent category.

Keywords: ASSURE, digital learning modules, English Subject

INTRODUCTION

The use of internet information technology in Indonesia is increasing rapidly. This can be seen from a survey conducted by APJII (2018) which shows that of the total population of Indonesia of 264.16 million people, there are 171.17 million people actively use internet services. And judging from the type of internet substance accessed by users, there are around 124.4 millions of them accessing internet content in the field of education.

From this data, it is known that the number of Internet content access in the education sector is not as many as those in the fields of social media, entertainment and news. However, this fact confirms that most internet users are already familiar with internet content in the field of education, even though the content needs to be increased in quantity and quality in order to attract the attention of users, especially students in schools (APJII, 2018).

Improving internet content in the education sector can be done through efforts to develop digital modules which currently have high potential and urgency to be designed and utilized in the world of education. A teacher is required to be able to design and utilize digital modules that are integrated in the teaching and learning process in the classroom to provide appropriate educational services for the current generation (Gan, Menkhoff, & Smith, 2015) (Akyuz & Yavuz, 2015)(Anissa, Nunez Castellar, & Van Looy, 2016).

One of the teaching materials that can be presented through digital learning modules is English which is one of the important subjects at schools that serves to equip students with knowledge and skills in international languages orally and in writing which is realized in four language skills, namely listening, speaking, reading and writing. SMP Islam Al Azhar 13 Surabaya is one of the Islamic schools that makes English one of the most important subjects taught at school. By implementing the 2013 curriculum, English is taught in this school according to competencies contained in the curriculum.

The results of interviews related to needs analysis at SMP Islam Al Azhar 13 Surabaya, it is known that the teaching materials in English subjects, especially in English Subjects, are still very lacking and seem monotonous. Most of the English class is done traditionally through the lecture method. Students tend to understand material perfunctorily and answer questions by drilling without understanding the English reading content well. The traditional learning strategies and methods implemented are not very effective in improving student learning outcomes. This can be seen from the value of student learning outcomes which are still relatively low.

The English teaching materials for grade 9 which used by teachers and students so far are in the form of textbooks that contain the main material and are presented by accommodating three cognitive levels, namely; level of knowledge and understanding, level of application and level of reasoning but unfortunately the discussion of these questions is packaged in a monotonous and uninteresting manner for students. This makes students feel bored quickly and less able to improve their ability in English to the fullest. For this reason, innovative efforts are needed in

designing teaching materials that are in accordance with the characteristics of current students who incidentally include the digital native generation.

Based on the foregoing, a solution can be offered in the form of developing digital learning modules for English Subject. Researchers propose this solution on the grounds that according to the needs of students in the current digital era, it is one of the imperatives in improving the quality of learning through the use of technology. It is hoped that through this digital module, students' learning motivation will also increase. The existence of digital learning modules and their use in the learning process, allows students to learn independently without the help or presence of a teacher in classroom. The use of digital learning modules encourages students to develop skills to explore information and materials and develop them independently. The digital learning modules can replace the teacher's function the teaching source.

Based on this explanation, researchers are interested to do research on development of ASSURE-based digital learning modules in English subject at SMP Islam Al Azhar 13 Surabaya.

LITERATURE REVIEW

ASSURE Model

According to Heinich et al. as stated by Sharon E. Smaldino et al. states that the ASSURE model of learning planning includes 6 systematic stages (Heinich, Molenda, Russell, & Smaldino, 2005) namely: (1) Analyze learners, (2) State objectives, (3) Select methods, media and materials, (4) Utilize media and materials, (5) Require learner participation, (6) Evaluate and revise. The ASSURE model is a learning design model that is easy and practical to implement in designing learning activities both classically and individually. The step of analyzing student characteristics will make it easier to create effective, efficient and interesting learning activities. At the evaluation and revision stages, it can also be used to ensure the quality of the applied learning process.

Research conducted by DeWitt et.al shows that the existence of the module and its use can make students learn independently. This indicates that students have the skills to explore information critically and independently and are able to develop it creatively without always depending on the teacher (DeWitt, Siraj, & Alias, 2014). Sezer concludes in his research entitled Integrating Technology into Classroom: The Learner-Centered Instructional Design that using e-learning-based digital modules is more effective in improving student learning outcomes than book modules.(Sezer, Yilmaz, & Ramazan, 2013).

RESEARCH METHODS

Research Design

This research is a research development that develops English subject learning module by adopting a new model, namely the ASSURE-based module in digital form. This model is a formulation for classroom-oriented teaching and learning activities. The ASSURE model includes 6 systematic stages, namely: (1) Analyze learners, (2)

State objectives, (3) Select methods, media and materials, (4) Utilize media and materials, (5) Require learner participation, (6) Evaluate and review. The six steps are then abbreviated as ASSURE.

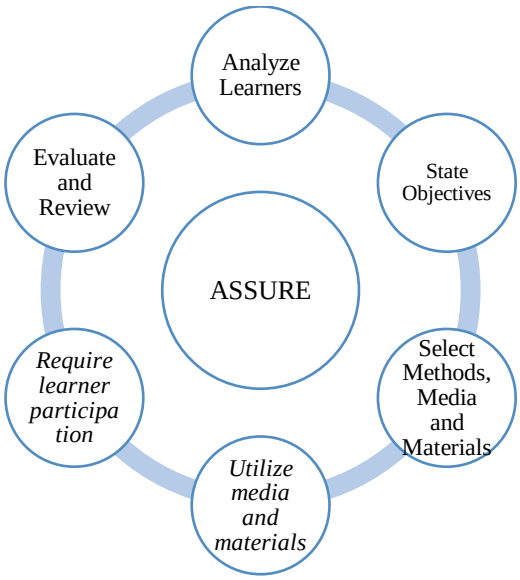


Figure 1 ASSURE model

The preparation of this ASSURE-based module is intended to increase student activity or participation in learning and more importantly improve student learning outcomes. The design for the development of this digital module is as follows: 1) Analyze Learners; analyzing student characteristics. 2) State Objectives; setting learning objectives. 3) Select Methods, Media and Materials, 4) Design and Develop Products, design and develop teaching materials in the form of digital learning modules. 5) Conduct Product Trial; testing digital learning modules for students. 6) Validate Product; validate the digital learning module that has been developed to experts. 7) Evaluate and Revise; evaluate and revise.

This research data collection technique was carried out through a feasibility test instrument and student responses through an assessment questionnaire which is used to find out how respondents' opinions regarding the feasibility of the digital learning module as a learning medium for English subject for grade 9 SMP Islam Al Azhar 13 Surabaya in terms of media and materials. The questionnaire in this study was addressed to media experts, material experts and students. Data analysis used in this research is descriptive analysis technique. This data analysis analyzes the feasibility of digital learning modules from the results of filling out questionnaires by media experts, material experts and student responses to digital learning modules. The results of the analysis are used as a reference in improving the development of digital learning modules.

Participants

The research subjects included media expert lecturer, material expert lecturer, subject matter expert teacher, and 20 students of Grade 9 at SMP Islam Al Azhar 13 Surabaya.

Instruments

The instruments in this research included appropriateness' assessment sheet by media expert, appropriateness' assessment sheets by material experts, and student response questionnaires which used to assess the appropriateness of digital learning modules.

Data Analysis

The data analysis technique used in this research is descriptive analysis technique. This data analysis analyzes the feasibility of digital learning modules from the results of filling out questionnaires by media experts, material experts and student responses to digital learning modules. The results of the analysis are used as a reference in improving the development of digital learning modules.

The steps for data analysis techniques to determine the feasibility of the Digital Learning Module from media experts, material experts and student responses to the Digital Learning Module are as follows:

a. Determining the eligibility score of the Digital Learning Module using the provisions of the assessment criteria as in Table 3.4

Table 3.4.
Questionnaire Assessment Criteria

Information	Score
Very Worthy	4
Worthy	3
less worthy	2
Not feasible	1

for the ideal maximum score is 4 to the ideal minimum score is 1.

b. Change the average score obtained into a qualitative value (interval data) with a scale of four using the reference according to Djemari Mardapi (2008:123) in Table 3.5. to determine the feasibility value of the Digital Learning Module media experts, material experts and student responses to the Digital Learning Module.

Table 3.5.
Convert Scores into Categories

No.	Score Interval	Qualitative Category
1	X (Ẍ+ 1.SBi)	Very Worthy
2	(Ẍ + 1. SBi) X	Worthy
3	X (Ẍ - 1.SBi)	Decent enough
4	X (Ẍ - 1.SBi)	Not feasible

Description of Table 3.5.:
X = the average number of scores obtained from the study.
 = the average number of ideal scores using the formula:
=(). (ideal maximum score + ideal minimum score)
SBi =Standard deviation of the ideal score, with a coefficient of 1 (one)
Using the formula:
SBI =**() . (ideal maximum score – ideal minimum score)**

c. Based on Table 3.4., the results of the processed values obtained guidelines in stating the average score of each aspect into qualitative data. The guidelines for these changes can be seen in Table 3.6.

Table 3.6.
Guidelines for Converting the Average Score into Qualitative Data on a Scale of Four

No.	Score Interval		Qualitative Category
1	X (Ẍ+ 1.SBi)	X 3	Very Worthy
2	(Ẍ + 1. SBi) X	3 X 2.5	Worthy
3	X (Ẍ - 1.SBi)	2.5 X 2	Decent enough
4	X (Ẍ - 1.SBi)	X 2	Not feasible

The minimum value for the feasibility of the Digital Learning Module in this study is determined by the value in the "Eligible" category.

FINDINGS

Media Expert Data Analysis

The lattice of the media expert eligibility questionnaire instrument developed by the researchers was used to determine the quality of learning media in terms of multimedia design. The questionnaire made for media experts is reviewed from 3 components as follows:

1. Module size
2. Front screen display

3. Module content design

The module size component has 1 statement item, while for the home screen display component and Each module content design component has three sub-components as follows:

1. Layout
2. Typography
3. Illustration

Table 1. Grid of Digital Learning Module Feasibility Research Instruments for Media Experts

No.	Component	Sub Component	Number of Items	Item Items
1.	Digital Module Size	Size	1	1
2.	Display Design Advance Digital Module	Layout	6	2,3,4,5,6,7
		Typography	5	8,9,10,11,12
		Illustration	3	13,14a,14b
3.	Module Content Design Digital	Layout	3	15,16,17
		Typography	11	18,19,20,21,22,23,24 25,26,27,28
		Illustration	5	29,30,31,32,33

Data from the digital learning modules assessment results are converted into four-scale score intervals. The questionnaire for media experts consists of 33 questions, so it can be seen that the maximum score is 132 , and the minimum score is 33 with an ideal mean of 67 and a standard deviation of 22.

Table 2. Trends in Media Expert Data

No.	**Score Interval**	**Category**
1.	> 100 to 132	Very Worthy
2.	> 83 to 100	Worthy
3.	> 66 to 83	Decent enough
4.	33 to 66	Not feasible

From the results of media expert validation, the average components or sub components are obtained as follows:

1. The digital learning module size component gets an average score of 3.00 with a decent category; this is because at first the digital learning module guide used the F4 size, but after being assessed by media experts the size changed to the standard size, namely A4.
2. The design component of the layout sub-component gets an average score of 3.67 with a very decent category.
3. The face design component of the typography sub component gets an average score of 3.80 with a very decent category.

4. The face display design component of the illustration sub-component gets an average score of 4 with a very decent category.
5. The content design component of the layout sub-component module gets an average score of 4.00 with a very decent category.
6. The content design component of the typography sub-component module gets an average score of 3.55 with a very decent category.
7. The content design component of the illustration sub-component module gets an average score of 3.60 with a very decent category.
8. The total score of the media expert's final assessment is 125 with an average score of 3.79 which is equivalent to a percentage of 94.69% with a very decent category.
9. The general assessment of the validator is that it is suitable for use with minor revisions.

The results of the analysis of the assessment of the digital learning module from media experts, it was found that the overall average score of all aspects of the media was 125 from a maximum score of 132 or equivalent to 94.69% with a very decent product category. The results of the average score indicate that the media developed in this module has met the eligibility requirements of learning media.

Material Expert Data Analysis

Furthermore, the results of the analysis of the assessment of the digital learning module by 2 material experts from 1 expert lecturer and 1 subject teacher, found that the overall average score for the material aspect was 92, from a maximum score of 104 or equivalent to 88.46% very feasible category.

Table 3. Tendency of Material Expert Data

No.	Score Interval	Category
1.	> 78 to 104	Worthy
2.	> 65 to 78	Decent enough
3.	> 52 to 65	less worthy
4.	26 to 52	Not feasible

From the results of material expert validation, the average component or sub-component is obtained as follows:

1. The content feasibility component gets an average score of 3.70 with a very decent category.
2. The linguistic component gets an average score of 3.67 with a very decent category.
3. The serving component gets an average score of 3.50 with a very decent category.
4. The graphic component gets an average score of 3.30 with a very decent category.

5. The average final score of the material expert's assessment is 92 with an average score of 3.54 on a fourth scale, equivalent to a percentage of 88.46% with a very decent category.
6. The general assessment of the validator is appropriate for use with revision.

The average score of all material aspects is 92.00 from a maximum score of 104.00 (88.46%) including the "Very Eligible" category with the percentage of Very Eligible 50% and Eligible 50%.

Students Responses Data Analysis

The feasibility of the English digital learning module was also tested on 20 students of grade 9 SMP Islam Al Azhar 13 Surabaya. The results of the feasibility test of the digital learning modules by student responses from the questionnaire given indicate that the English digital learning modules are declared worthy as a teaching material in learning activities. The results of the quality of digital learning modules in the learning process obtained an average score of 97.9 from a maximum average score of 112 or equivalent to 87.41% including the Very Eligible category.

Table 4. Tendency of Learning Process Data

No.	Score Interval	Category
1.	> 84 to 112	Very Worthy
2.	> 70 to 84	Worthy
3.	> 56 to 70	Decent enough
4.	> 28 to 56	Not feasible

From the results of student responses to the material, the average component is obtained as follows:

1. The content feasibility component gets an average score of 3.46 with a very decent category.
2. The linguistic component gets an average score of 3.50 with a very decent category.
3. The benefit component gets an average score of 3.45 with a very decent category.
4. The graphic component gets an average score of 3.57 with a very decent category.

5. The average number of scores on a fourth scale is 3.49, which is equivalent to a percentage of 87.41% with a very decent category.

Thus the quality of digital modules in the learning process is included in the very eligible category.

DISCUSSION

This study also observed the learning activities in the classroom when students used digital modules, and the consistency of the overall learning activities with the expected learning activities. Students appear more independent in learning activities. Practice questions and quizzes in the digital module were also well done by students. Student responses to digital modules and the overall average results observed by researchers during the use of digital modules indicate that the use of digital modules has met the needs of teachers and students in their teaching activities.

Based on the discussion above, the results of the research on the feasibility test of the English Subject digital learning module by media experts, material experts, and student responses to the use of digital learning modules fall into the very feasible category. In accordance with the purpose of evaluating teaching materials contained in the guidelines for writing teaching materials by the Ministry of Education and Culture, that to find out if teaching materials are declared good and can be used in learning activities, from the three assessments it is said that the English Subject digital learning module is one of the appropriate teaching materials to be used in the learning process. teaching and learning activities by teachers and students, and is expected to ease the teacher in delivering learning materials to students and can help students learn independently.

Similar research results related to digital learning media conducted by Suwarsito et al. (2011) concluded that Digital Learning Media for Rural and Urban Geography Subjects, the subject of Internal Structure and Urban Spatial Patterns can increase students' motivation and enthusiasm for learning in studying the course material and improve their learning achievement.(Suwarsito, Sutomo, & Fauziah, 2011). Research Baran et. al. (2011) entitled Transforming online teaching practice: Critical Analysis of the Literature on the Roles and Competencies of Online Teachers. This study analyzes student experiences in designing learning with online interactive whiteboards as instructional media. The results showed that the use of ASSURE-based online interactive whiteboards received positive responses from teachers and students. In addition, the ASSURE model helps them in analyzing developments systematically (Baran, Correia, & Thompson, 2011). In another study related to the effectiveness of the learning module, Basuki (2016) stated that the effectiveness of the implementation of the ASSURE-based entrepreneurship module showed that the ASSURE-based entrepreneurship learning module was effective in improving student learning outcomes. (Basuki, 2016). Rahmawati et al. (2017) also stated in their research related to the development of digital learning modules based on Visual Basic

for Application (VBA) PowerPoint that digital modules were effectively used with an increase in learning outcomes of 72.3%(Rahmawati, Budiyono, & Wardi, 2017).

Based on the results of related research, research on the development of digital English Subject modules based on ASSURE can also be used as a reference for developing digital modules on other materials. The research results can also be a recommendation for further research related to the development of digital-based modules on other materials or topics.

CONCLUSION

Based on the results of research and discussion regarding the development of the English digital learning modules, it can be concluded that the quality of the English digital learning modules is very feasible to use, in terms of the components of the media, material and use in the learning process. However, it is necessary to further investigate the effectiveness of using digital modules on student learning outcomes.

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