DEVELOPING SCIENTIFIC APPROACH-BASED E-MODULE ASSISTED BY KSOFT FLIPBOOK MAKER APPLICATION FOR THE TENTH-GRADE OF SENIOR HIGH SCHOOL STUDENTS

Nurfajriyah[1], Nina Suzanne[2], Sirajul Munir[3*]

[1,2,3] English Teaching Department Faculty of Tarbiyah and Teacher Training State, Islamic University (UIN) Mahmud Yunus Batusangkar, Indonesia

Corresponding author: sirajulmunir@iainbatusangkar.ac.id

Article Info

Received: 23 January 2023
Accepted: 7 March 2023
Published: 25 April 2023

Keywords:
E-book; student academic achievement; universities; educational planners

Abstract

The limitations of the teaching materials, the absence of sample questions, individual assignments, and evaluations of narrative text materials are the issues covered in this study. This research aims to describe the needs of teachers and students for an electronic module (e-module) based on the scientific approach, to develop a prototype for an e-module based on the scientific approach, and to describe the experts' validation of the e-module. This study employed R&D using the 4D development model, which has four stages: define, design, develop, and disseminate. Three validators—two lecturers and one teacher—were used to evaluate the e-module. This research findings show as follows. Firstly, teachers and students need narrative text e-module teaching materials employing a scientific approach, secondly, the e-module narrative text prototype adheres to the scientific approach. Finally, the validation test on e-module narrative text for English learning is categorized as valid. These findings recommend that using the scientific approach-based e-module narrative text material that was developed with the help of the KSOFT flipbook maker is imperatively implemented in teaching a narrative text in the tenth grade of Senior High School.

INTRODUCTION

Teaching materials are needed in today's era, where teaching materials in principle can help students and teachers in the teaching and learning process. This study discusses the limitations of teaching materials, the teaching materials used are not in accordance with the

characteristics of students, the lack of sample questions, individual assignments, or evaluations of narrative text material in the teaching materials used by the tenth-grade English teachers. It is undeniable that teaching materials are required to adapt to developments in the current era, namely the 4.0 era.

The industrial revolution Era 4.0 is a major current that demands the readiness of human resources as a key aspect that can adapt to the dynamics of post-modern change (Arsyad, 2021). The development of science and technology in the Industrial Revolution Era 4.0 made an extraordinary breakthrough for some people. The development of science and technology has resulted in some people seizing the opportunity and being able to take advantage of it well. Some people who can balance and develop science and technology are able to give birth to new ideas. This idea emerged to meet human needs in various fields, including education (Astuti et al., 2019).

Technological developments encourage the combination of printing technology with computer technology in learning activities. A digital book is a form of presentation of a book or learning media in virtual form (Mulyaningsih & Saraswati, 2017). Flipbook Maker is a learning media application that can help in the learning process because this application does not only write but can also contain moving animations and videos that can be interactive and interesting learning media so that learning can be learning that is not monotonous (Wibowo & Pratiwi, 2018). The use of this software makes the media display more varied; not only text, images, videos, and audio can be inserted into this media so that the learning process will be more interesting and easier to understand (Bolla, 2014). The use of e-module teaching materials is in accordance with the 2013 curriculum, where students are required to be active (Amaliah et al., 2021; M. S. A. Dewi & Lestari, 2020). This teaching material uses a scientific approach and this is student-centered. The previous research on the use of e-module in teaching English yields positive impacts (Y. N. Dewi et al., 2019). Daud et al (2022), for example, clearly demonstrated that the use of e-module is very appealing and easy to use for students to improve their skills in English; effective in improving students' English ability (Subari, 2022); allows students to be more interested and active in receiving the materials (Ruslan & Rauddin, 2022); improves learning outcome (Arosyad et al., 2021); and a learning resource used in this current era (Nurhikmah et al., 2022).

The scientific approach is a learning process designed in such a way that students actively construct concepts, laws, or principles through the stages of observing (identifying or finding problems), formulating, proposing or proposing hypotheses, collecting data with various techniques, analyzing data, drawing conclusions, and communicating concepts, laws, or principles found. The scientific approach can help students learn independently. Students can learn and find learning resources, and students can be more active in the learning process and are able to increase student curiosity about lessons.

The results of interviews conducted by researchers at SMA N 1 Kinali showed that the teaching materials used by educators were student worksheets, but the students were not yet interested in English. Because the teaching materials are less interesting and still general in nature. As a result, students have difficulty understanding them. For this reason, special

teaching materials are needed, such as modules for student guidance. In this tenth grade, students learn several materials, such as procedure texts, recount texts, narrative texts, descriptive texts, and so on. However, in narrative texts, students have difficulty understanding the text because it required students to be able to understand the implicit moral values and imaginative stories. For this reason, special teaching materials are needed, such as modules containing guides for students (Zulfahrin et al., 2019).

Based on the preliminary research and the phenomena above, the researchers want to know how the needs analysis and design of teaching materials are needed by students and how the validity of the e-module product is based on the scientific approach. Therefore, the purpose of this study is to determine the need for analysis, design of teaching materials, and validity of the E-module product based on the scientific approach, assisted by the KSOFT flipbook maker application.

Based on the background of the problem above, the researchers focus their research on developing a scientific approach-based E-module assisted by the KSOFT Flipbook maker application for the tenth grade of Senior High School Students. The research questions in this study are elaborated as follows:

a. What is the need for an e-module based on a scientific approach assisted by the flipbook maker application?

b. What is the design of an e-module based on a scientific approach assisted by the flipbook maker application?

c. What is the validity of an e-module based on a scientific approach assisted by the flipbook maker application?

METHODOLOGY

This research was a Research and Development (R&D). R&D is a process that initially assesses needs in the field and then develops products to meet those needs, with the aim of developing effective products, not testing theories (Gay et al., 2012). This research is to analyze the needs in the field and then produce a product instead of testing the theory. This study is also intended to test the validation and effectiveness of a product.

The technique of data collection in this study was based on the 4-D development model above. However, this study only consisted of three stages; Definition, design, and development. At the stage definition, the researchers carried out to see the initial conditions in the field. The steps that the researchers took at this stage were as follows: interviewing teachers of English Studies; analyzing students' needs; analyzing package modules; doing literature analysis; and finally analyzing learning objectives. Then, at the stage design, the researchers designed an electronic module on narrative text products. Finally, at the stage of development, the researchers produced a revised product based on input from experts so that

the level of validity of the e-Module in the narrative text was obtained. The steps taken at this stage were:

a. Validation Stage

The development of the E-Module model for narrative text materials for the tenth grade of SMA, class X IPA 2, and SMAN 1 Kinali used three kinds of validity, namely: (1) Content validation, namely whether the E-Module in the narrative text is in accordance with the syllabus. (2) Media validation, which includes the appearance and elements of the medium as well as the suitability of the letters used, font size, letter thickness, and the use of images that are in accordance with the material, The Narrative Text E-Module for class X IPA SMAN 1 Kinali, which has been designed, is consulted with the supervisor and then given to the validated for validation. (3) Learning materials validation, namely the suitability of the finished E-Module component in Narrative Text with predetermined indicators of content validation, namely E- Technical validation, namely the suitability of the letters used, font size, letter thickness, and the use of images that match the material.

The test subject or the validators in research on the development of electronic modules in English subjects, especially in narrative text material, are experts in English language material and learning media. In this trial, the provisions of the test subject include: a lecturer and two English subject teachers. The data collected in this study includes both qualitative and quantitative data. Qualitative data; validation sheets and document analysis were used to collect qualitative data.

Meanwhile, the quantitative data is the Narrative Text e-module assessment data using the KOFT Flipbook maker application from the validator. Since this study aims to produce a Narrative Text E-Module Development product based on a Scientific Approach Assisted by the KSOFT Flipbook Maker Application for Class X High School Students, data collection was carried out in several ways: Distributions of Questionnaire.

Analyzing Documents The researcher analyzed documents related to learning English for class X students, Based on a Scientific Approach Supported by the KSOFT Flipbook Maker Application for Class X High School Students, The validation of the e-module is validated by an expert by filling out the validation form, and Revise the revised E-Module based on suggestions from experts.

b. Validation Analysis

$$P = \frac{\sum sk\ or\ per\ item}{skor\ maksimal} x\ 100\%$$

FINDINGS

Based on the data analysis, the researchers found:

1. Need Analysis

Need analysis is a primary step for developing learning material. The need analysis should reveal all aspects of learners' needs in learning English such as competency, skills (listening, speaking, reading, and writing) level of proficiency and tasks needed by the students. The information was collected from teachers' documents and students in form of fundamental questions to guide a textbook designer in making relevant and useful content to meet these needs.

The results showed that both teachers and students needed all the material presented in the 2013 curriculum for the second semester. They are what they look like. We love what we do, I am proud of my parents and love who they are. Because the focus of the product being developed is an e-module for learning English based on a scientific approach, the researchers asked about the students' needs for teaching materials. It was found that students needed teaching materials that were interesting and easy to understand. The results also show that students need interesting e-modules, the outputs of which are listening to learning videos and pictures, listening to recordings, speaking, reading material, and writing assignments that are uploaded to the assignment link. Then, at the language focus stage, students need complete sentences. In short, e-modules are tailored to the needs of students. Moreover, the e-module is to help students learn independently anywhere and anytime, with a simple but attractive and easy-to-understand display.

2. Design Stage

The product design e-module was developed into a scientific approach-based teaching material. It is the process of transferring a design into a tangible product. The product model is an e-module for learning English based on a scientific approach. Researchers also consider the results of previous research on the development of e- modules with a scientific approach in previous studies. In addition, this research focuses on the development of e-module teaching materials using a scientific approach.

Then, the researchers developed an e-module using a scientific approach where this e-module has five stages where the first is observing, questioning, collecting data (experimenting), associating, and communicating. In the first stage, those observing were given a video link to the story of Malin Kundang. In the second stage of the question, students are given the opportunity to ask questions about the video given previously. The third stage, collecting data (experiment), is where at this stage an explanation of narrative text material and several questions about narrative texts are given. The fourth stage, associating, is where at this stage a summary of narrative texts material is given. The fifth stage is communicating, where at

this stage students are asked to make a story-telling video, then upload the video to the task link. The following describes modules based on a scientific approach in narrative text material:

a. *Creating a media program outline*

This e-module used Scientific-based narrative text. Despite the fact that the semester's focus is on narrative text material, the e-module is designed and developed for class X. outlines the media programs on e-module narrative text using the KSOFT flipbook maker application:

Table 1. Outlines the media programs on e-module narrative text using the KSOFT Flipbook maker application

No	Aspect	Description
1	Subject Name	Bahasa Inggris
2	Class/ Semester	X/ 2
3	Basic competencies	3.8 Distinguishing social functions, text structures, and linguistic elements of several oral and written narrative texts by giving and asking for information related to folk legends, in simple terms, according to the context of their use 4.8 Capturing contextual meaning related to social functions, text structure, and linguistic elements of simple narrative, spoken and written texts related to folk legends
4	Learning objectives	1. Explain the purpose of communication, the structure of texts, and linguistic elements of simple oral and written narrative texts about folk legends according to the context of their use. 2. Explain the contents of oral and written folklore by taking into account the purpose of communication, text structure, and linguistic elements of narrative texts according to the context of their use. 3. Telling folk legends orally and in writing while considering the purpose of communication, text structure, and linguistic elements of the narrative text in relation to the context of its use.
5	Title	Narrative Teks
6	Media	Laptop/handphone

b. *Flowchart creation (flow chart)*

A flowchart is a program flow that is designed from creation, and content, to the program according to the product made. The following e-module flowchart can be observed in Figure 1:

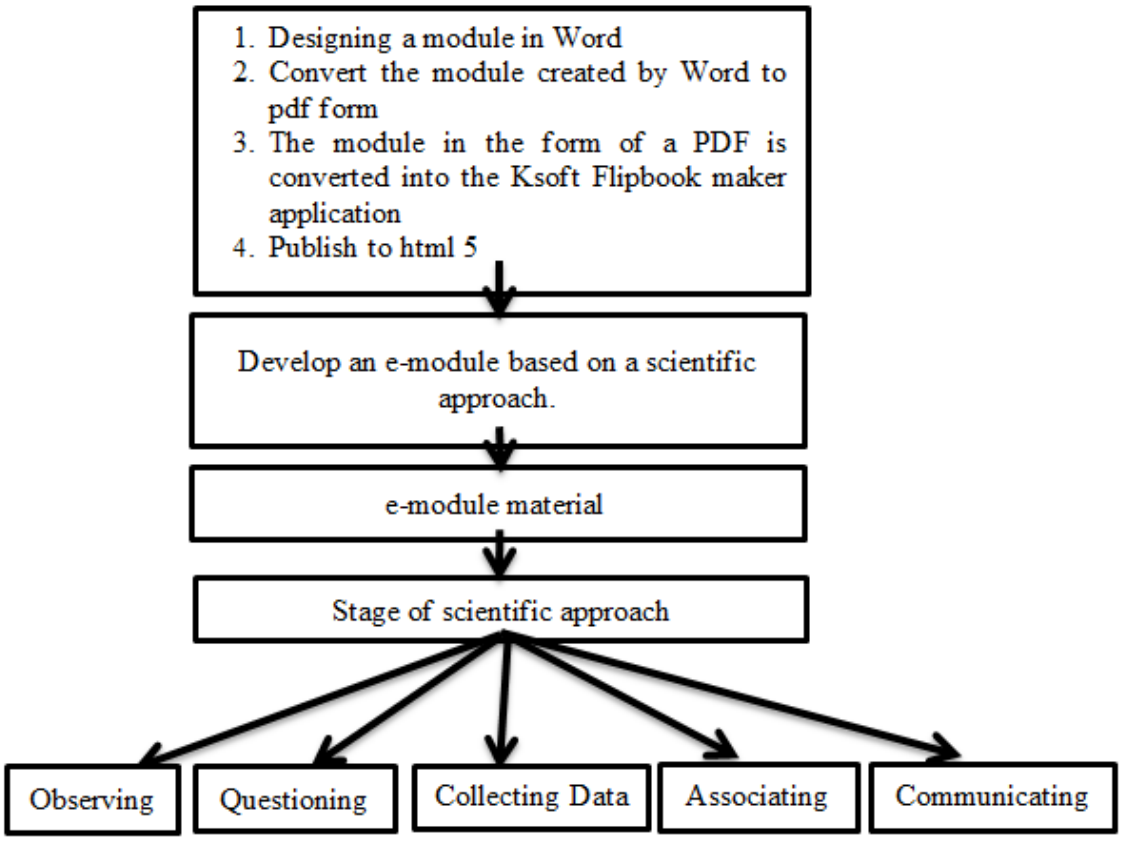

Figure 1. Flowchart of a Product Design

c. *Overall Product Design (Story Board)*

The storyboard is a description that contains a visual as well as an audio explanation of each plot in the flowchart. For e-module storyboard using KSOFT flipbook maker software in English with the title "Narrative Text", which can be seen as follows:

1) Cover Page

The cover and title/identity are designed using Word 2010 in cream color. An image is given that demonstrates the contents of the module. The cover is also equipped with the

name and class as well as the logo. The designed e-module cover can be seen in the following image:

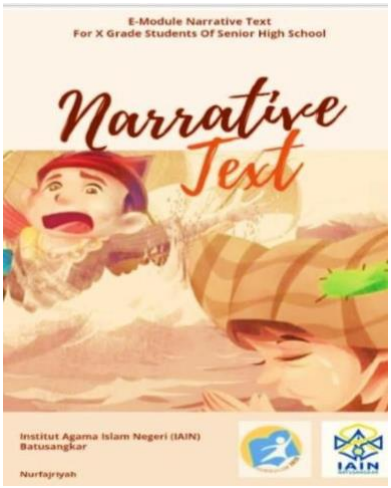

Figure 2. Cover Page

2) Acknowledgment Page

At the beginning of the e-module based on the scientific approach, there is an introduction that contains a brief review of praise to Allah SWT and Rasulullah SAW, followed by thanks. As well as a review of the designed scientific approach-based e-module. The plan is as follows:


ACKNOWLEDGEMENT

Alhamdulillah, thanks to Allah SWT who always gives the blessing of fluency in solving all difficulties so that the English E-Module for class X SMA is formed, which has a fairly long process. There are many things that the author does not know so that he has to learn a lot from various circles and various circles and various sources.

This module is written for students, as a learning guide for narrative text material. This module is used by students in meeting student needs. In addition, to assist students in adding insight into narrative text material.

The author knows that this E-module is still not perfect and that there are many errors in this E-Module. The author hopes for constructive criticism and suggestions for the formation of a better module.

Finally, the author is grateful for the help of everyone who has helped in the completion of this E-module which will be used by teachers, students and all parties.

Batusangkar, 10 Juni 2022

Author,

Nurfajriyah

ii

Figure 3. Acknowledgment Page

3) Table of Contents Page

The table of contents makes it easier for teachers and students to find certain pages in the e-module they want to download. The type of writing used is a stencil and Times New Roman using font size of 12, 24.

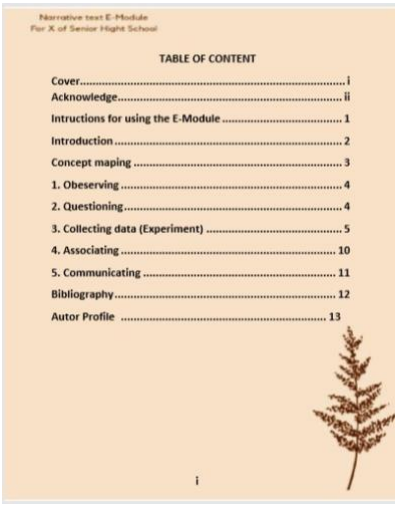

Figure 4. Table of Content

4) Instructions for using the E-module Page

This section contains instructions for using e-based e- modules with a scientific-based approach for teachers and students to make it easier to understand and use the e-module, made with Times New Roman typeface in size 12.

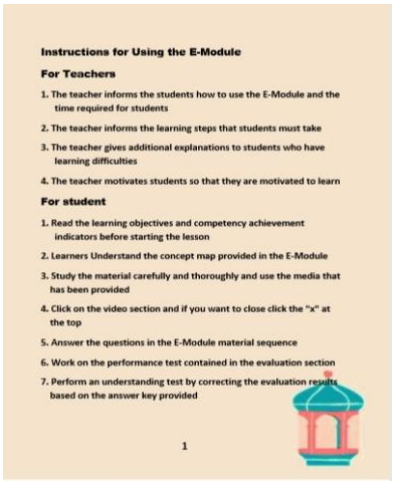

Figure 5. Instructions for Using the E-Module Page

5) Introduction Page

This introductory page consists of basic competence, core competence, and learning objectives. This introductory section is provided to explain various things about the initial description and can be a guide for teachers and students in using e- modules.

Figure 6. Introduction Page

6) Concept Map Page

Concept maps provide a large overview of the sub-materials that would be studied by students. This section helps students know what material will be learned.

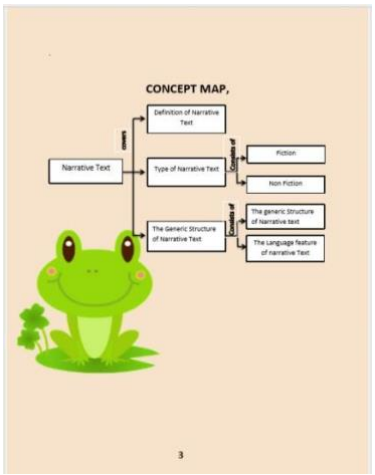

Figure 7. Concept Map Page

7) Observing Page

There is a video showing Narrative Text stories in the form of folklore/legendary Malin Kundang. This is the first syntax of the scientific approach, namely observing.

Figure 8. Observation and Question Page

8) Questioning Page

It contains a let's ask activity, which is presented in the form of questions to test students' critical thinking skills before being presented with a video explanation of the material to answer the question.

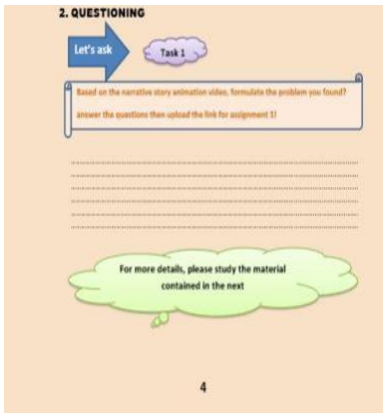

Figure 9. Question Page

9) Collecting Data Page

It contains a video explanation of the Narrative Text materials and contains a brief explanation of the materials and some examples of supporting understanding of the material. It contains a video explanation of the Narrative Text material and contains a brief explanation of the materials and several examples to support understanding of the material.

At this stage, three tasks are provided, namely starting from tasks 2, 3 and 4, which aim to increase students' understanding of narrative text material.

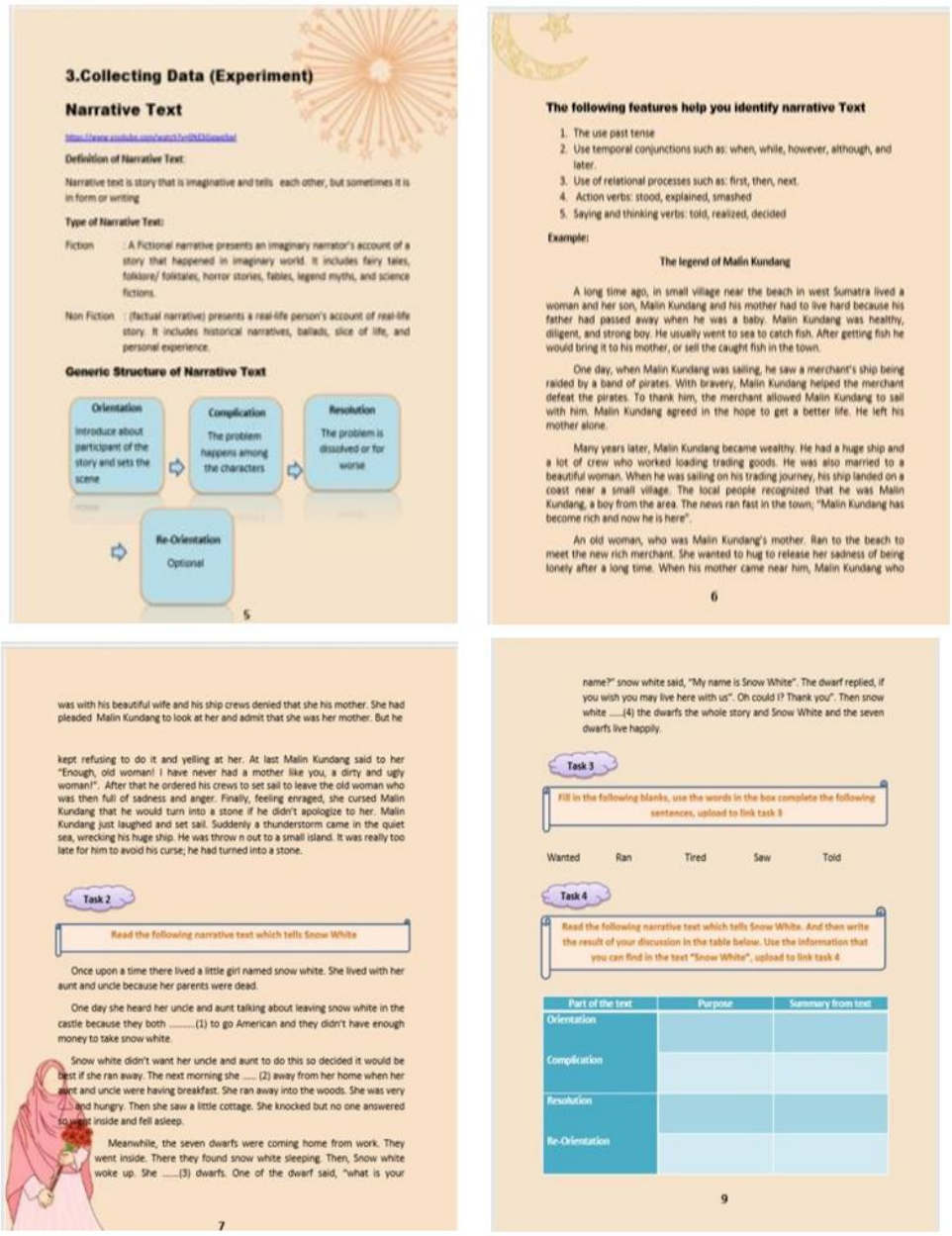

Figure 10. Collecting Data Page

10) Associating Stage Page

It contains activities. Let's summarize the material, which is presented in the form of a summary/conclusion of the Narrative Text material.

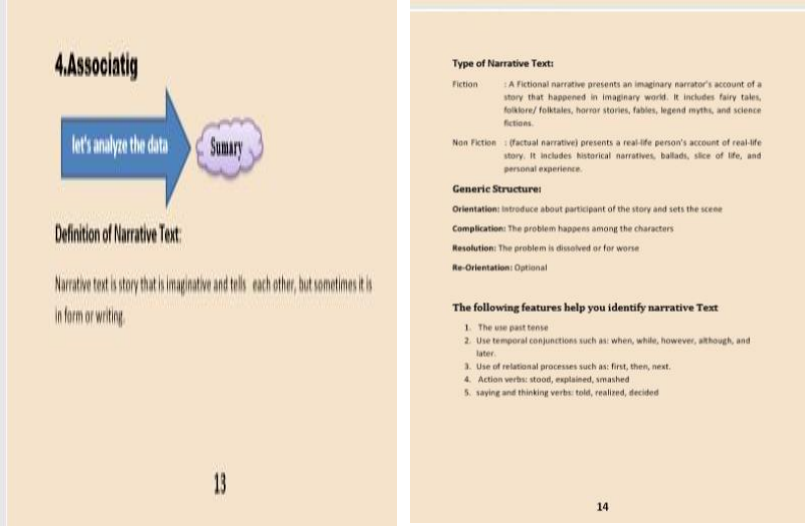

Figure 11. Associating Stage

11) Communicating Stage Page

It contains activities to communicate understanding related to the material, which is presented in the form of orders to students to present their understanding of the narrative text material, with students making video stories to tell stories of Malin Kundang's summary or conclusion of the narrative text material.

Figure 12. Communicating Page

12) Bibliography Page

A brief explanation of the material, types of narrative, generic structure, and language features of narrative text.

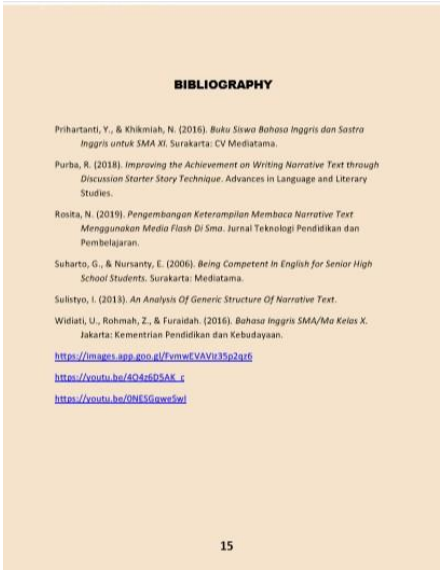

Figure 13. Bibliography Page

d. *Programming*

KSOFT Flipbook is an e-module using KSOFT. The general appearance of the e-module is shown.

3. Development Stage

a. *E-Module Validation Results*

At this stage, the validation stage is carried out with experts from the media experts and material experts (lecturers and teachers). The researchers carry out discussions and ask for suggestions for improvement before being tested on the validator. The results of the data obtained from the three validators can be observed in Table 2.

Table 2. Amount, content conformity, instructional quality, technical quality aspect

Indicator	Validator			Amount	Max Score	%	Description
	1	2	3				
Content Conformity	23	22	25	70	90	77,78	Valid

Instructional Quality	16	14	18	48	60	80,00	Valid
Technical quality aspect	18	15	22	55	75	73,33	Valid
Amount	57	51	65	173	225	76,89	Valid

Based on the table, an e-module could be declared a valid product with an average achievement of 76.89 percent, meaning that the e-module narrative text using KSOFT flipbook maker is suitable for use by students at school. The revisions suggested by the validator are as follows: (1) The exercises provided for students to experiment with the concept of narrative have not been well defined; (2) Adding an explanation of the material and example questions, and add an explanation of the instructions; (3) Adding an explanation of the material and example questions, and add an explanation of the instructions(4) There are some problems found in this e-module, such as writing errors; (5) Adjusting the animation used for the topic; (6) Taking note of the font size and increase the visibility of the e- module; and (7) Enhancing the user guide for e-modules and animated videos used in e-modules.

DISCUSSION

1. Need Analysis of E-Module

As stated previously, the result of the needs analysis shows teachers and students need an e-module in a narrative text. Richard (2001, p. 51) states that need analysis is the procedure of collecting information about students' needs. It can be used to check whether the existing product adequately meets the needs of students and to see the problem of students in experiencing the existing product. The purpose of a need analysis is to determine the source of a difference between the ideal performance and the actual performance of a task. According to Nation and Macalister (2010, p. 24), who agree with Grabowski, need analysis is the process of evaluating what the learners already know and what they need to know. By identifying the gap that exists, it can be considered that need analysis is designed to provide information.

In addition, Hutchinson and Waters (1987, p. 53) distinguish between learning needs and target needs. What the learners must achieve in the target situation are the target needs. The learner must fulfill their learning demands in order to progress. The three categories of target needs are: wants, needs, and wants.

The result of the needs analysis explicitly shows that students need the e-module in narrative text. This is parallel with Subari's idea (2022). He claimed that e-module in language learning can stimulate the thought, the feelings, and the willingness of students. Daud et al (2022), further explain that teachers must be able to adapt to the development of the digital

world. Moreover, Arosyad et al (2021) state that it is crucial to develop an e-module to make students understand more easily.

2. Design and Development of E-Module.

Product designs are developed into e-module teaching materials, transferring designs into real products. The product model is in the form of a module that is online in an e-module. This e-module considers printed teaching materials previously used in the 2013 curriculum, which used a scientific approach. Then this researcher develops teaching materials in the form of teaching materials that can be accessed online, namely e-modules based on the scientific approach (Perdana et al., 2017).

At this design or planning stage, the e-module is designed based on the core competencies (KI) and basic competencies (KD) contained in the syllabus at SMAN 1 Kinali. In addition, this e-module is designed according to the module components, namely: teacher guidelines, student activity sheets, worksheets, sheet keys, test sheets, and test sheet keys (Wena, 2016). In addition, there are two steps in developing a product. First, the product is developed in the form of an e-module product prototype. Second, the product received several revisions from validators and teachers. Revisions are made based on suggestions from supervisors, validators, and teachers. In short, the developed product has been validated and revised.

3. Validation test of the e-module.

The results of the validation of the narrative text e-module are valid in terms of the aspect of the quality of the content and objectives and the instructional and technical aspects. This is to say that this e-module narrative text can be used in learning. It can also be operated anywhere and anytime using a laptop or cellphone. So that this e-module narrative text can help students in the learning process independently and be more active, as well as attract students' interest in learning during this pandemic. This is in accordance with previous research conducted by Hermalina (2021), from which it can be concluded that the learning media using the KSOFT flipbook maker is very valid, very practical, feasible, and effective to use in the learning process.

CONCLUSION

This research concludes as follows. Firstly, the tenth-grade students at SMA N 1 Kinali need an e-module based on a scientific approach assisted by the KSOFT flipbook application. Secondly, this e-module has four units in the task-based language teaching worksheet. They are what they look like, we love what we do, I am proud of my parents and love who you are. Each unit has three stages: pre-task, task cycle, and language focus. The pre-task uses the words that match the picture and completes the picture task. The task cycle uses listening, speaking, reading and writing tasks. Language focus uses complete sentences as assignments; finally, the e-module using the KSOFT flipbook maker application meets valid categories,

both in terms of the quality of content and objectives, aspects of instructional quality, and technicality.

Based on the research results obtained, it can be suggested that teachers should be able to develop teaching materials such as e- modules that are in accordance with the development of students. This innovative module is really needed in this industrial era. Then, other researchers can develop e-modules with the help of KSOFT Flipbook Maker on different materials.

This study can be used by English students as a learning guide and a means of developing their higher-order thinking skills and exploring their intelligence. Furthermore, this research is valuable for English teachers as an alternative material in teaching narrative texts. Moreover, the results of this research hopefully could motivate further researchers to continue to the next stage, to conduct more in-depth research on the making of instructional media, especially research developing a model of narrative text material e-module for the tenth grade of senior high school students.

REFERENCES

Amaliah, K., Diantoro, M. F., & Setiawan, S. A. (2021). Efektifitas Penggunaan e-modul mata pelajaran administrasi infrastruktur jaringan. *GENTA MULIA: Jurnal Ilmiah Pendidikan*, *12*(2), 89–97. https://ejournal.stkipbbm.ac.id/index.php/gm/article/view/668

Arosyad, M., Jazeri, M., Maunah, B., & Choiruddin. (2021). The development of english e-modules based on multicultural and contextual teaching learning approach to improve student learning outcomes. *Jurnal Teknologi Pembelajaran (JTeP)*, *1*(2), 42–53. https://doi.org/10.25217/jtep.v1i02.1841

Arsyad, M. (2021). *Teori Belajar dan Peran Guru pada Pendidikan di Era Revolusi Industri 4.0 Banjarmasin: Lambung Mangkurat University Press.* Lambung Mangkurat University Press. https://repo-dosen.ulm.ac.id/bitstream/handle/123456789/21975/Buku_Full_Teori_Belajar_dan_Peran_Guru_pada_Pendidikan_di_Era_Revolusi_Industri_4_0_M__Arsyad.pdf?sequence=2&isAllowed=y

Astuti, Waluya, S. B., & Asikin, M. (2019). Strategi pembelajan dalam menghadapi tantangan era revolusi 4.0. *Seminar Nasional Pascasarjana 2019*, *2*(1), 469–473. https://proceeding.unnes.ac.id/index.php/snpasca/article/view/327

Bolla, M. R. (2014). Use of media as an instructional tool in English Language Teaching (ELT) at undergraduate level. *International Journal of English and Literature*, *5*(6), 141–143. https://doi.org/10.5897/ijel2014.0580

Daud, A., Supriusman, S., Rozalinda, R., Harfal, Z., Suryani, A., Nabilla, O., & Thahirah, Z.

(2022). The development of interactive e-module using flipbookmaker for English structure learning at an Indonesian university. *Ta'dib*, *25*(2), 160. https://doi.org/10.31958/jt.v25i2.7501

Dewi, M. S. A., & Lestari, N. A. P. (2020). E-modul interaktif berbasis proyek terhadap hasil belajar siswa. *Jurnal Imiah Pendidikan Dan Pembelajaran*, *4*(3), 433–441. https://doi.org/10.23887/jipp.v4i3.28035

Dewi, Y. N., Masril, M., Naf'an, E., Hendrik, B., Veri, J., Munawwaroh, K., Silfia, E., & Widyatama, A. (2019). The development of e-module English specific purpose based on computer application for vocational high school students. *Journal of Physics: Conference Series*, *1364*(1), 1–9. https://doi.org/10.1088/1742-6596/1364/1/012043

Gay, L. R., Mills, G. E., & Airasian, P. (2012). Educational research: Competencies for analysis and application. In *Nucl. Phys.* (10th ed., Vol. 13, Issue 1). Library of Congress Cataloging-in-Publication Data.

Hutchinson, T., & Waters, A. (1987). *English for Specific Purposes: A Learner-Centered Approach*. Cambridge University Press. https://doi.org/10.1017/CBO9780511733031

Mulyaningsih, N. N., & Saraswati, D. L. (2017). Penerapan media pembelajaran digital book dengan kvisoft flipbook maker. *Jurnal Pendidikan Fisika*, *5*(1), 25–32. https://doi.org/10.24127/jpf.v5i1.741

Nation, I. S. P., & Macalister, J. (2010). *Language Curriculum Design.* Routledge.

Nurhikmah, Aris, M., Arismunandar, A., Sujarwo, S., & Sukmawati, S. (2022). Development of local content teaching material for the history of wajo. *Journal of Innovation in Educational and Cultural Research*, *3*(2), 264–270. https://doi.org/10.46843/jiecr.v3i2.82

Perdana, F. A., Sarwanto, S., Sukarmin, S., & Sujadi, I. (2017). Development of e-module combining science process skills and dynamics motion material to increase critical thinking skills and improve student learning motivation senior high school. *International Journal of Science and Applied Science: Conference Series*, *1*(1), 45. https://doi.org/10.20961/ijsascs.v1i1.5112

Richards, J. C. (2001). *Curriculum Development in Language Teaching*. Cambridge University Press.

Ruslan, R., & Rauddin, R. (2022). Development of e-module for introduction to educational technology at the University of Muhammadiyah Makassar. *Indonesian Journal of Educational Technology*, *1*(1), 53–66. https://ojs.unm.ac.id/IJET/article/view/33176

Subari. (2022). Developing e-module for English language teaching (R&D study at tenth grade students of SMAN 1 Donggo). *International Journal of Multicultural and Multireligious Understanding*, *9*(10), 102–117. https://doi.org/10.18415/ijmmu.v9i10.4128

Wena, I. M. (2016). *Strategi Pembelajaran Inovatif Kontemporer: Suatu Tinjauan Konseptual Operasional*. Bumi Aksara.

Wibowo, E., & Pratiwi, D. D. (2018). Pengembangan bahan ajar menggunakan aplikasi kvisoft flipbook maker materi himpunan. *Desimal: Jurnal Matematika*, *1*(2), 147–156. https://doi.org/10.24042/djm.v1i2.2279

Zulfahrin, L. U., Wardani, S., Hijau Bumi Tridharma, K., & Tenggara, S. (2019). The development of chemical e-module based on problem of learning to improve the concept of student understanding article info. *Innovative Journal of Curriculum and Educational Technology*, *8*(2), 59–66. https://doi.org/10.15294/IJCET.V8I2.31340