

DESIGNING SUPPLEMENTARY READING E-WORKSHEET BASED ON SDGs (SUSTAINABLE DEVELOPMENT GOALS) FOR TENTH-GRADE STUDENTS AT SMAN 3 TARAKAN

Nurul Rezky Alya¹, Arifin², Syarif Rafiq³

^{1,2,3}*English Education Department, Faculty of Teacher Training and Education, Borneo Tarakan University*

nurulrezkyalya.works123@gmail.com

arifin.ubt@gmail.com

rafiqa@borneo.ac.id

ABSTRACT

This study aims to design a supplemental reading e-worksheet based on SDGs (sustainable development goals) with adequate materials and an attractive design for the tenth-grade students at SMAN 3 Tarakan. This research and development research used the ADDIE Model, which consisted of five stages: (1) Analysis, (2) Design, (3) Development, (4) Implementation, and (5) Evaluation. The subjects of the research were 35 students of Class X-E in SMAN 3 Tarakan. This research included two expert validators: the media expert and material expert validators. The results indicated that validation by the material expert was 86% included the excellent category and the material expert were 100% with the very good type for the supplemental reading e-worksheet based on SDGs (sustainable development goals). The evaluation test results were divided into two: the small evaluation test was 81% (good category), and the field evaluation test was 83% (suitable type). The research and development results of the Supplementary Reading E-Worksheet based on SDGs (Sustainable Development Goals) for Tenth Grade students at SMAN 3 Tarakan are feasible for use in English learning.

Keywords: *Development, Reading E-Worksheet, SDGs*

INTRODUCTION

Learning English is important because English is the language of the world. English, being the first world language, is said to be the first global lingua franca, and it is the most widely used language in the world in international trade, diplomacy, mass entertainment, international telecommunications, and scientific publications, as well as publishing newspapers and other books (Sofyan, 2021). Students have realized the importance of learning English as it is recognized as an international language that can be used to communicate with people all over the world. English is important because English will be essential in the future in terms of work, education, and social activities.

One aspect in learning English that students must to known well is Reading. Reading is one of the skills in a language that the students must master because it will enrich students' vocabulary, and the students will be brave in speaking or expressing their pronunciation well if they have a habit of reading. Individuals' ability to read a language is influenced by their inherent abilities and capacity for rapid and efficient information digestion (Tang et al., 2019). If word recognition was complex, students used too much of their processing capacity to read individual words, interfering with their ability to comprehend what was read. Reading comprehension was characterized as how a text/message is understood. Such comprehension

is derived from the connection between the written words and the information elicited by the text or message. Many topics that can be read one of them is about SDGs.

The Sustainable Development Goals (SDGs) have transformed global efforts to foster development and enhanced sustainability. in addition as pointed out by Allen et al (2018) to achieve the three noble goals, compiled 17 Global Goals. Implementation of the SDG framework commenced at the beginning of 2016, and there is emerging international practice and a growing catalogue of related reviews, assessments, guidelines and scientific publications. At the global and regional level, research and implementation has included indicator-based assessments and benchmarking.

While involving everyone both in generating the goals and in implementing them is inclusive, it also comes with limitations around flexibility, which is much needed for adapting the SDGs to local contexts, specifically for Senior High School students who will get a demography bonus in 2030. There are limited sources and learning material from Indonesian authors or publishers discussing SDGs issues, specifically in SMAN 3 Tarakan. Moreover, Rozhenkova et al. (2019) argue that more work is needed to create such a database, either by an organization such as the United Nations or by a civil society organization, or potentially, both.

The existence of learning resources from the surrounding environment is expected to increase students' knowledge, especially about the purpose of the SDGs, specifically in the SMAN 3 Tarakan area, as a form of the process of creating a superior society in 2030. After interviewing SMA Negeri 3, the research found that Tarakan was one of the schools that still used printed student worksheets. The learning process was carried out by the educator only using student worksheets that did not include SDGs material that can be used as a supplementary material for students in classroom. According to Karki (2018), supplementary resources or enrichment materials include materials for skill development, grammar, vocabulary, and phonological practice items; a collection of communicative activities; and teacher resource materials. Supplementary materials could be beneficial when a language instructor is confronted with insufficient tactics, methods, and materials for teaching English in schools.

The student worksheets used in SMA Negeri 3 Tarakan are printed worksheets that contain general materials quoted from package books or modules. The images contained in worksheets in school are also illustrative images taken from the internet that didn't make students interested in reading a worksheet. In addition, the worksheet that students used did not comprise SDG content or even local issues in the environment.

According to Rosmawati (2021), The worksheet is a printed material in the form of paper sheets that contain the material. Summary and instruction manual implementation of learning tasks that must be done in students, which refers to the necessary potencies that must be achieved. Student worksheets are sheets that contain assignments from educators and must be done by students. Worksheet is one of the media used by students as a guide in activities in the form of problem solving or investigation. Meanwhile, Apriliyani and Mulyatna (2021) stated One of the interesting teaching materials is the electronic student worksheet (E-WORKSHEET). E-Worksheet is an electronic student worksheet that could be used anywhere and at any time by using a laptop or smartphone. In addition, electronic media become more

interesting for students specially in this generation because easier to use in daily live activities in school

Apart from providing diverse and structured learning media, the researcher developed a reading E-worksheet based on SDG material that enriches reading comprehension and training other language components. The materials in the E-worksheet could be a fresh additional teaching resource and help develop the Senior High School students' English reading comprehension and their knowledge about literacy in practical information. Based on the problems described above, the researcher has Designed a Supplementary Reading E-Worksheet based on SDGs (Sustainable Development Goals) for Tenth-grade Students in SMAN 3 Tarakan in the hope that the electronic worksheet helps students find importance in learning English, especially in reading.

METHOD

The research design was a type of research and development in the purpose of conducting the need analysis and designing a supplementary E- Worksheet for tenth-grade students in SMA Negeri 3 Tarakan. Sugiyono (2013) stated that R&D is research used to produce certain products and test the effectiveness of these products. The research procedure used for worksheet development and testing students used the ADDIE model. ADDIE is an acronym for Analyze, Design, Develop, Implement, and Evaluate (Sweller, 2021). The learning system that was included was related to the process and selection of content (teaching resources), prepared the learning strategies and covered the selection and development of media to be used and evaluated for the achievement of goals.

The subjects in this research were 35 students of SMA Class X-E taken from the population of all Class X students, totalling eight classes consisting of 287 students. The researcher used purposive sampling, since Sugiyono (2013) stated that purposive sampling is sampling with specific considerations. The types of data obtained from this research and development were in the form of qualitative data and quantitative data.

RESULTS

1. Small Test Result

In this stage, the SDGS-based electronic learner worksheet product was tested on students at SMA Negeri 3 Tarakan, consisting of 10 students. The results of the small-scale trial can be seen in Table 4.1.

Table 4.1 Students Small Test Result

Assessed indicators	Score	Max Score	Score %	Type
MATERIAL ELIGIBILITY				
The cover page makes you interested in using E-Worksheet	42	50	84%	Valid
Topics/chapter title is very interesting and relevant with the material	42	50	84%	Valid
The existing learning objectives make you get easier to know what abilities you should have after learning the E-Worksheet	39	50	78%	Quite Valid
The material presented is in accordance with competency standards and learning objectives	36	50	72%	Quite Valid
The existence of practice questions helps you comprehend reading material about SDGs Content	41	50	82%	Valid
Language used in E-Worksheet is easy to understand	39	50	78%	Quite Valid

Systematics of material presentation in E-Worksheet makes it easier for you to understand learning materials	45	50	90%	Very Valid
Sum	284	350	81%	Valid

2. Field Test Result

At this stage, E-Worksheet products based on SDGS were tested on 35 Students. The results of the large-scale trial can be seen in Table 4.2.

Table 4.2 Students Large Scale Trial Results

Assessed indicators	Score	Max Score	Score %	Type
MATERIAL ELIGIBILITY				
The cover page makes you interested in using E-Worksheet	137	175	78%	Quite Valid
Topics/chapter title is very interesting and relevant with the material	143	175	81%	Valid
The existing learning objectives make it easier to know what abilities you should have after learning the E-Worksheet.	150	175	85%	Valid
The material presented is in accordance with competency standards and learning objectives	147	175	84%	Valid
The existence of practice questions helps you comprehend reading material about SDGs Content	145	175	83%	Valid
Language used in E-Worksheet is easy to understand	139	175	79%	Quite Valid
Systematics of material presentation in E-Worksheet makes it easier for you to understand learning materials	152	175	86%	Very Valid
Sum	1013	1225	83%	Valid

Based on the results of small-scale students' responses in Table 4.1, it was revealed that, on average, the value given by ten respondents obtained a discount of 81% with the category very and quite interesting. The responses of students from the questionnaire stated that the Reading E-Worksheet Based on SDGS developed by the researcher was interesting, the types of questions varied, and the material was easy to use and easy to understand.

Table 4.2 shows the results of large-scale learner responses involving 35 respondents. Overall, in this large-scale trial, collecting questionnaires from 35 respondents, the average result in class X-E was 83%—the overall average mark of respondents in the exciting category. The responses of students from the questionnaire stated that the Reading E-Worksheet based on SDGS that the researcher had developed was enjoyable and complete because it was equipped with more familiar language so that it was easy to understand and work on questions.

DISCUSSION

The analysis stage started with analyzing the characteristics of students and learning objectives, which are the results of interviews with English teachers in class X SMA Negeri 3 Tarakan. According to Moises (2020), Direct observation makes it easier to do ethnographic and case study research, in which the researcher takes part in the subjects' regular activities. On the other hand, a face-to-face interview enables the researcher to quickly collect data from the participants in the dialogue that follows the semi-structured questionnaire. After the initial observation was carried out, the researcher distributed a need analysis questionnaire, which

became the primary reference in making the Reading E-Worksheet Based on the SDGS product.

The next stage is the Design stage. At this stage, an initial design plan is prepared. This product design stage aims to make the development process more effective and efficient. In accordance with Cross (2021), in product development, the design stage is critical to all operations because the researcher will be clear and accessible in an interactive loop of decision-making. Based on the statement, The stages that the researcher did include preparing instruments, selecting media, and drafting a reading E-Worksheet design based on SDGS.

The next activity is the development stage, which consists of product design development, validation, and revision—reading E-Worksheet design development based on SDGS systematically to make it easier for students to answer questions contained in the E-Worksheet. Researchers developed a Reading E-Worksheet based on SDGS, which is interactive through text, has attractive shapes and colors, and has questions that are easy to understand so that students are more interested and active in learning activities.

The material expert validator assessed the E-Worksheet based on local potential, with an average result of 52% in the first validation. After the product was revised, revalidation was carried out where the average effect of the feasibility of the students' worksheet was 86%, which was included in the category of very valid and quiet valid. Almost all aspects of the assessment get an increase consisting of the feasibility of content and language, including 1) clarity of material discussion; 2) suitability of images and shapes to facilitate understanding of questions; 3) suitability of evaluation with material; 4) as well as complete and easy to understand.

The media expert validator assessed the E-worksheet based on SDGs with an average result of 85%, which included in the valid and quiet valid category; after conducting the second validation, the average score of the media expert on the developed E-Worksheet based on SDGs product was 100% which was included in the and quite; Very Valid and quite; category. From this validation activity, it indicated that the E-Worksheet based on SDGs was suitable for use in this research.

After validation and revision, a small-scale product trial was conducted on ten students of class X SMA Negeri 3 Tarakan to assess the E-Worksheet that had been developed. The overall average result was 81% with the category of very feasible and quiet. After that, a large-scale trial was conducted on 35 respondents in class X - E SMA Negeri 3 Tarakan with an average score of 83% in the Very Feasible category. Based on the results of students' responses to the E-Worksheet based on SDGs developed, the product received positive responses, which were broad as follows: E-Worksheet based on SDGs developed by researchers is interesting, diverse types of questions and varied colors.

CONCLUSION

Based on the results of research and discussion, which includes feasibility tests and student responses to supplementary reading E-Worksheet based on SDGs, it could be concluded as follows:

1. The supplementary reading E-Worksheet based on SDGs developed meets the eligibility criteria from validation by a material expert was 86% with the category

outstanding and media expert was 100% with the class very good with the average results of the two validators of 93% in the quiet, very valid, and quite a category.

2. The students' responses to the supplementary reading E-Worksheet based on SDGs were divided into two. The score of the small evaluation test was 81%, and the field evaluation test was 83% with the category quite, very feasible, and quiet, with an average score of 89.75%.

REFERENCES

- Allen, C., Metternicht, G., & Wiedmann, T. (2018). Initial progress in implementing the Sustainable Development Goals (SDGs): a review of evidence from countries. *Sustainability Science*, 13(5), 1453–1467. <https://doi.org/10.1007/s11625-018-0572-3>
- Apriliyani, S. W., & Mulyatna, F. (2021). Prosiding Seminar Nasional Sains Flipbook E-WORKSHEET dengan Pendekatan Etnomatematika pada Materi Teorema Pythagoras. 2(1), 491–500.
- Cross, N. (2021). *Engineering Design Methods: Strategies for Product Design*. New York: John Wiley & Sons.
- Karki, T. M. (2018). Supplementary Resources Materials in English Language Classrooms: Development and Implementation. *Tribhuvan University Journal*, 32(1), 251–260. <https://doi.org/10.3126/tuj.v32i1.2479>
- Moises Jr, C. (2020). Online data collection as an adaptation in conducting quantitative and qualitative research during the COVID-19 pandemic. *European Journal of Education Studies*, 7(11). <https://doi.org/10.46827/ejes.v7i11.3336>.
- Rosmawati. (2021). Developing worksheet for the eleventh-grade automotive students for vocational high school Nusa prima lamas Kab. Luwu South Sulawesi.
- Rozhenkova, V., Allmang, S., Ly, S., Franken, D., & Heymann, J. (2019). The role of comparative city policy data in assessing progress toward the urban SDG targets. *Cities*, 95, 1-8. Article 102357. <https://doi.org/10.1016/j.cities.2019.05.026>
- Sofyan, N. (2021). The Role of English As a Global Language. *Edukasi*, 19(1), 21. <https://doi.org/10.33387/j.edu.v19i1>
- Sugiyono. (2013). *Metodologi Penelitian Kuantitatif, Kualitatif, dan R & D*. Bandung: ALFABETA.
- Sweller, J. (2021). Instructional Design. In: Shackelford, T.K., Weekes-Shackelford, V.A. (eds) *Encyclopedia of Evolutionary Psychological Science*. Springer, Cham. https://doi.org/10.1007/978-3-319-19650-3_2438.
- Tang, S., Asrifan, A., Chen, Y., Haedar, H., & Agussalim, M. (2019). The Humor Story in Teaching Reading Comprehension. *Journal of Advanced English Studies*, 2(2), 77–87.