

## THE DEVELOPMENT OF E-WORKSHEETS THROUGH LIVEWORKSHEETS.COM FOR THE TENTH GRADERS OF SENIOR HIGH SCHOOL

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### ABSTRACT

This research aimed to develop the appropriate English e-worksheets through LiveWorksheets.com for the tenth-grade students at S.M.A.N. 3 Palopo. The researcher applied research and development by adopting the A.D.D.I.E. model. The data was collected through interviews, questionnaires, and expert validation. Furthermore, the results of this research were as follows: (1) data analysis findings showed that students need e-worksheet media because it can be used as learning media anywhere. The students lack pronunciation and vocabulary, and their English level is still essential. The students want a topic of self-introduction and the wonderful of Indonesia, the vocabulary aspect in the e-worksheet, and complete material with pictures and illustrations. (2) The appropriate students' e-worksheets covers: the e-worksheet material was designed with learning objectives tailored to the student's needs and syllabus. It includes grammatical items and two material units: self-introduction and Wonderful of Indonesia (descriptive text). The e-worksheet contains student-centered activities that encourage communication in the target language and consider different learning styles, attractive layouts, and media. (3) Then, evaluating English material, students' e-worksheet media fulfills the requirements of "Excellent." Based on all expert assessments, it scored 4.27 in the "Excellent" category. Apart from that, the average student perception scored 4.42 in the "Excellent" category, and the teacher's perception got the "Excellent" category with a score of 4.87. As a result, this English language material is appropriate for tenth graders at S.M.A.N. 3 Palopo.

**Keywords:** *A.D.D.I.E. Model; E-Worksheet; Research and Development*

### 1. INTRODUCTION

Learning media is the process of communicating information that includes the efficiency of delivering curriculum to students. Media use in learning is knowledge and skills. Learning media is a physical or non-physical tool teachers use to improve the effectiveness believed to help teachers communicate topics more effectively (Puspitarini & Hanif, 2019). To support students in schools, learning media must be produced or conveyed; one type of learning media that can develop the material is the student e-worksheet in English.

Electronic worksheets can replace the function of printed worksheets and become a place to design or develop learning materials. Thus, various learning materials can be more lively and varied in depth, increasing innovation and student creativity (Arifin, 2014). Learning materials help teachers prepare for effective learning. Some teachers use learning materials as the primary learning resource. The materials. give the basis for the lesson content, the proportion of skills taught, and the type of language exercises students use. Materials are mainly used to supplement the teacher's lessons in other situations.

Students' English learning materials should be interactive and innovative, supported by tools that actively involve students in a student-centered approach. The problem most often experienced by students in learning is that teachers only rely on materials in printed books (Ashari et al., 2020). In this case, students feel that learning feels monotonous apart from the project. When the teacher explains the material in the book, students sometimes feel that they do not understand, so they feel left behind and need learning media that can be used anywhere and at any time. The dynamic content, such as videos, animations, and quizzes, helps to maintain student interest and caters to various learning styles, making the learning experience more enjoyable (Harini et al., 2023). In connection with these conditions, it is necessary to prepare learning media that can be installed on smartphones for learning anywhere and anytime so that students can hone things they do not yet understand.

As a result of these issues, the researcher conducted research, namely developing materials in e-worksheet media through the LiveWorksheets.com Website. The researcher used this Website to develop material because it has a place to develop the material into e-worksheets that students can effectively study anytime and anywhere; there is more variety and fun in learning English so that they can learn independently. This E-Worksheet has the advantage of being multimedia and interactive, which paper-based worksheets cannot do.

Based on the statements above, the researcher posed the research question: "How can the appropriate English e-worksheets through LiveWorksheets.com be developed for the tenth-grade students at S.M.A.N. 3 Palopo?"

## 2. METHOD

This type of research was used as a research and development design. Research and development (R&D) is used to produce and test specific products (Sugiyono, 2015). In this R&D research, the A.D.D.I.E. model consists of five instructional designs: analysis, design, development, implementation, and evaluation. The subjects in this research were divided into Three expert judgments (material, media, and language): English teachers in S.M.A.N. 3 Palopo and 35 tenth-grade students of S.M.A.N. 3 Palopo in the academic year 2022/2023. The instruments used in this research were questionnaires, observation and interviews, and documentation. The data from teacher and student interviews were analyzed through the descriptive qualitative method. Data analysis of students' questionnaires was analyzed quantitatively by calculating the answers. Data analysis of the validation product used the Likert Scale to calculate the validation results of experts, teachers, and students. The data were analyzed by calculating the average of the answers based on experts', teachers', and students' scoring.

## 3. RESULTS

### *The Result of Need Analysis*

This section determined the students' wants, needs, and necessities for the design product. The results of the need analysis questionnaire are shown. Question number one concerns the learners' reason why students need the e-worksheet or the teaching materials. There are five means figured in the chart. Twenty-four learners picked option A, with 68.6% of students indicating that the e-worksheet or the teaching materials could be used as a learning tool in the classroom, in the practice room, or outside the school. Option D, with 54.3%, is the second highest choice because e-worksheets can provide opportunities to carry out various activities such as writing, drawing, dialogue, listening to audio, using tools, and watching videos. It can be concluded that the students need media that can be used anywhere.

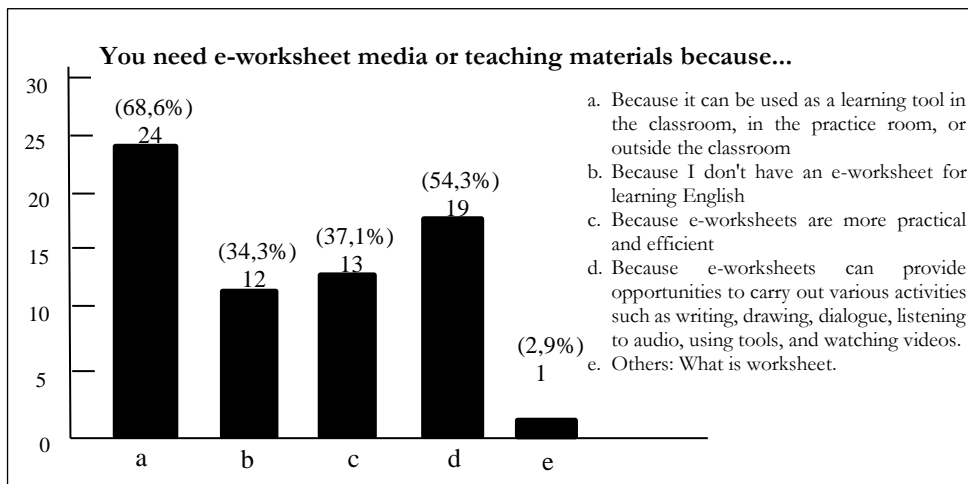


Figure 1. The Students' Percentage of the Need for e-worksheet media or teaching materials

Question number two is about the learner's level of understanding in English. There are seven ways depicted in the graph. Twenty-five students answered option A, namely Pre-A1 Breakthrough, where students are still at the primary (lower) level; five students answered option B, namely A2 Waystage, where students are at the primary level but can already connect and speak a few words, five people. The students responded that they were still at the B1 threshold level where the level was pre-intermediate, no one chose D, E, F or G. This means that 71.4% of students were at the primary (lower) level.

In question three, learners are sorted based on what English material they want to learn. The chart has seven kinds of material options, and this research will highlight the top two preferred options. Based on their answers to the paper questionnaire, most learners want to learn material number 1, "Self-Introduction?" and material number 2, "Wonderful Indonesia."

Question four concerns the language aspects students want to help learn English. The chart shows five language aspects suitable for students learning English. Twenty-eight students chose option c, namely Vocabulary; twenty-seven students chose option A, namely grammar; twenty-four chose option b, pronunciation; sixteen chose option d, namely parts of speech; and no students chose others. This means that 80% of students select vocabulary as a language aspect to help improve their skills in learning English.

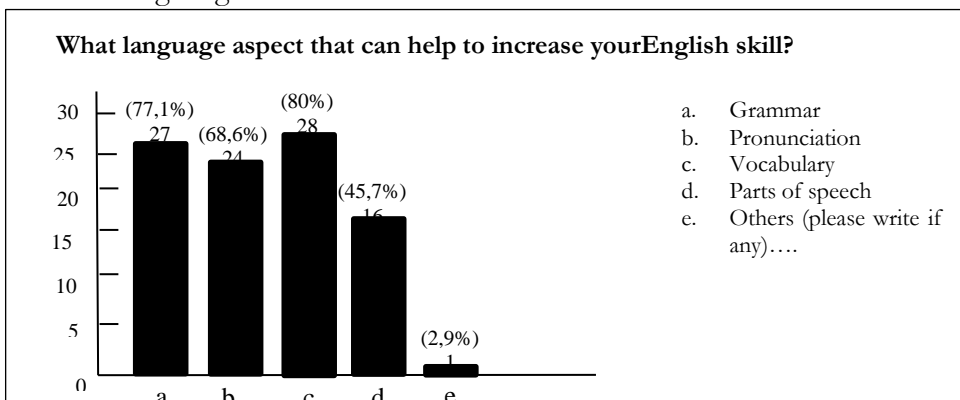


Figure 2. The percentage of the students' preferred language aspects

Question five is about what media students want to help the learning process. The chart has four options: Twenty-eight students chose social media, twenty-four students chose Audio, seventeen students chose print media, thirteen students chose only pictures and writing, and one student chose others (please write if any). This means that 80% of students want social media to help learning.

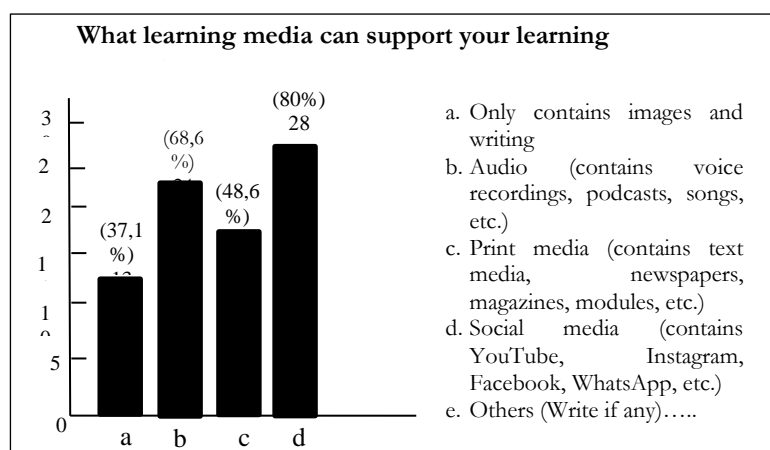


Figure 3. The percentage of the students' preferred media in learning English

### ***The results of the teacher and student interview***

The teacher interview consisted of nine questions. Following the completion and analysis of interviews with English teachers, it was determined that most of the students were at the primary level. They are pretty good at communicating in English, and their grammar is quite good. Students use books the school provides to guide the learning process and occasionally use g-forms in their studies.

The questionnaire and the student's interview questions were correlated. Students were interviewed in Indonesian and asked seven questions. The researcher presented each question to the students, who simultaneously answered them. The results of the interviews indicated that although students only used textbooks to learn English, they still needed additional teaching resources. E-worksheets appeared to be an effective way to help students comprehend textbook content. Students require e-worksheets because they are more enjoyable, memorable, and varied.

### ***Design Stage***

#### *Designing objectives for learning*

The researcher designed English e-worksheet topics for tenth-grade students at S.M.A.N. 3 Palopo based on the results of a needs analysis and ATP (learning objective flow). The topics include self-introduction and descriptive text (Wonderful Indonesia). The researcher then developed learning objectives for each topic or unit are below:

In unit one, the topic is "Me, Myself, and I" (Self-Introduction). The learning objectives are that students understand the concept of self-introduction, ask and give information about themselves, understand and use pronouns, and precisely make their identity using these expressions and pronouns.

In unit two, the topic is Wonderful Indonesia (descriptive text). The learning objectives are for students to identify the descriptive text, its function, and the use of simple present tense to make a descriptive text using simple present tense.

#### *Designing the materials and activities*

In this phase, the researcher decides on various materials and activities for each unit based on the needs analysis results, material expertise, and research limitations. The researcher then considered which activities could assist class X students at S.M.A.N. 3 Palopo to reach their learning objectives. The researcher organized several activities based on task-based language teaching. Apart from that, the researcher also involves speaking, listening, reading, and writing skills in the e-worksheet, which are integrated with the task activities given in the e-worksheet. The activities in each unit are as follows.

In unit one, self-introduction. The activities are watching a video about self-introduction, matching pictures and words, finding the meaning of some words, discussing, completing the conversation, filling in the blanks, asking friends, Q & A, short questions, and creating paragraphs. In unit two, descriptive text. The activities are matching, True or False, short questions, studying

the text, matching, jumbled sentences, finding the meaning of some words, word pronunciation, mind mapping, and creating paragraphs.

### **Development Stage**

#### *The first draft of the English material students' e-worksheet*

The electronic worksheet's contents are built using the need analysis and ATP. The e-worksheet is divided into two units, each with ten tasks. The tasks are divided into three sections based on T.B.L.T. (Task-Based Language Teaching): pre-task, task cycle, and language focus and feedback composed by (David Nunan, 2004). The researcher followed Nunan's task design, which consists of six steps for each unit. It progresses from the easiest to the most challenging level.

The researcher then created an electronic worksheet prototype in Microsoft Word by entering all the materials, activities, and supporting aspects (required) that had been prepared into an e-worksheet framework. After designing the prototype, the researcher developed it with more appealing visuals in Canva. After that, the researcher changed the E-Worksheet format to PDF and uploaded it to LiveWorksheets. The researcher used the LiveWorksheets.com site to create an interactive worksheet. The researcher started designing the e-worksheet by adding several elements using the features provided by LiveWorksheets, then saving them so that the e-worksheet created was stored in LiveWorksheets. The result after using LiveWorksheets.com was two links; each unit has a different link/e-worksheet.

#### *The results of the Experts' Product Validation*

In this expert validation, the researcher validated the materials by distributing a questionnaire to design and layout, language, and material experts, which included product-related questions. The questionnaire includes 20 questions for material experts, ten questions for language experts, and 15 questions for design and layout experts, which examine all areas of the product. Three specialists evaluated these aspects.

Following the first draft of product validation, the researcher obtained feedback and suggestions from various experts. The experts' conclusions are shown below.

**Table 1. Revisions from Experts**

Assessment Aspect	Unit	Part	Point to revise
Material	1 and 2	All tasks	Since the activity is too dominant in the T.L.B.T. model, it should be carried out in a PjBL-based learning form or model so students can learn more independently in groups or in collaboration.
	1 and 2	All tasks	When doing exercises, it is best to emphasize group work or collaboration so students can learn to collaborate.
Language	1	Page 1	The topic title should use appropriate and suitable English words.
	1 and 2	Learning objectives	Use the article “the” correctly at the beginning of the sentence.
	2	Task 3, and Grammar focus	The instructions or the sentences should use appropriate, effective, and efficient English, and the correct diction should be chosen.
Design and Layout	1 and 2	Unit 1 tasks 3, 6. Unit 2 tasks 5, 6, 8.	There are still unusable features found in voice input.
	1 and 2	All tasks	Use a different background color on each page to make it easier for users to move between pages.
	2	Grammar focus	Some spaces are too tight in the grammar focus section.
	1 and 2	Every page	If a serif font is too stiff, use a sans-serif font like Roboto, Montserrat, or <i>Poppins</i> .
	1 and 2	The submit answer	Isn't there a feature that allows students to see the answer results? If there is, it would be better displayed.

After revising the first draft, the writer continues to oversee the development process until the finished product is ready for users to test.

*Material Expert Validation*

Table 2. The Recapitulation Score of Material Expert's Judgement

	Aspects Indicator	Mean Score	Categories
<b>A. CONTENT</b>			
1.	The scope of material content developed in e-worksheet teaching materials is to the needs of class X students.	4	Good
2.	The material's difficulty level is to the cognitive development of class X students.	4	Good
3.	The material developed is relevant to the discussion topic.	3	Fairly
4.	The material developed is based on the images used.	4	Good
<b>B. LEARNING ACTIVITIES</b>			
5.	Instructions for each task are easy to understand.	3	Fairly
6.	The activities for each task involved many students.	4	Good
7.	The activities in tasks vary.	4	Good
8.	Each activity in the tasks corresponds to a topic.	4	Good
9.	The activities and tasks are arranged from easy to challenging levels.	4	Good
10.	The activities and tasks are helpful in students' real lives. The activities and tasks are helpful in students' real lives.	3	Fairly
11.	Activities and tasks involve students working individually and in groups.	3	Fairly
<b>C. INPUT</b>			
12.	Input material in the form of relevant text and images.	3	Fairly
13.	Input material in the form of text with attractive images.	4	Good
14.	Input material includes correct language structures.	4	Good
15.	Material input can broaden students' insight.	3	Fairly
16.	Material input can increase students' vocabulary.	3	Fairly
17.	Input and task are balanced.	4	Good
<b>D. SUITABILITY OF PRESENTATION OF MATERIAL</b>			
18.	Material descriptions are presented clearly.	3	Fairly
19.	Systematic presentation of sequence.	3	Fairly
20.	Activities in tasks can motivate students to learn English.	3	Fairly
<b>TOTAL</b>		70	

$$M = \frac{B}{N} = \frac{70}{20} = 3,5$$

The data presented above demonstrates that the average rating of the material experts' judgments is 3,5. This category received a rating of "Good". It indicates that the content can be used with little revision.

Language Expert Validation

Table 3. The recapitulation score of the language expert's judgment

	Aspect Indicators	Mean Score	Categories
1.	The language used is appropriate for students' level of English proficiency.	5	Excellent
2.	The language presented is comprehensive and according to the student's level of cognitive development.	5	Excellent
3.	Students can understand the instructions and explanations in the material developed.	4	Good
4.	The language used is clear and compelling.	4	Good
5.	The use of language is communicative.	5	Excellent
6.	The language used is appropriate grammatical rules in English.	4	Good
7.	The spelling used is appropriate, and the English rules are correct.	4	Good
8.	The choice of vocabulary in the material is by the rules of English.	5	Excellent
9.	The expressions used in the e-worksheet are grammatically correct.	5	Excellent
10.	The message or information presented reflects a sequence of meanings in one part (sentence or paragraph).	5	Excellent
<b>TOTAL</b>		<b>46</b>	

$$M = \frac{B}{N} = \frac{46}{10} = 4,6$$

The above data shows that the average score of the language experts' judgments is 4,6. This category received an "Excellent" rating, indicating that the content can be used without revision.

Design and Layout Expert Validation

Table 4. The recapitulation score of design and layout expert

	Aspect Indicators	Mean score	Categories
1.	The e-worksheet link works well.	5	Very Good
2.	E-worksheets can be accessed easily.	5	Very Good
3.	Every activity in the task functions well.	3	Fair
4.	The use of language in the e-worksheet is good.	5	Very Good
5.	The font used is easy to read.	5	Very Good
6.	Instructions for using the e-worksheet are clear and easy to understand.	5	Very Good
7.	Attractive e-worksheet display design.	4	Good
8.	The material display is clear.	5	Very Good
9.	It is an exciting material display.	4	Good
10.	Appropriate font size.	5	Very Good
11.	Spacing is appropriate.	4	Good
12.	Correct use of punctuation.	5	Very Good
13.	The choice of e-worksheet colors is generally reasonable.	5	Good
14.	The use of illustrations or visualizations in e-worksheets is appropriate.	5	Good
15.	The quality of the illustrations or visualizations in the e-worksheet is good.	5	Good
<b>Total</b>		<b>70</b>	

$$M = \frac{B}{N} = \frac{70}{15} = 4,67$$

The above data shows that the average score of the design and layout experts' judgments is 4,67. This category received an "Excellent" rating, indicating that the content can be used without revision.

The data from the three expert validity tables above reveal that the researcher's e-worksheet is already qualified for class use. The material expert validation result received a score of 3,5, which implies "good." The language expert validation score was 4,6, which means "very good." Also, design and layout expert validation scored 4,67, indicating "very good." After calculating the value of the three expert validations, the product generated by the researcher had an average score of 4.27. It qualifies as "very good".

*The Second Draft of the English material students' e-worksheet*

Following the product validation, the researcher received various expert additions and suggestions. Furthermore, the expert provided some suggestions as corrections to help improve this worksheet. The following is the data:

Table 5. The revisions from experts

No.	Revisions result
1.	The researcher added a learning model, PjBL, on task 9 and task 10 in each product unit.
2.	The researcher changed the topic title to self-introduction.
3.	The researcher added the article (the) at the beginning of the sentence.
4.	The researcher has repaired features that cannot be used in voice input so it can be used.
5.	The researcher used two background colors on each page to facilitate user movement between them.
6.	The researcher added space so that the grammar focus section is not too tight.
7.	The researcher changed the <i>Serif</i> font into <i>Sans-serif</i> and <i>Montserrat</i> .
8.	The researcher has changed the product to display the results of students' answers and their correct or incorrect answers, but only a few because some tasks use open answers and project assignments that must be checked, so the results cannot be displayed immediately.

**Implementation Stage**

The researcher implemented the product after it had been changed. The researcher tried the product with 33 S.M.A.N. 3 Palopo's class X IPA1 students. During this trial, the researcher presented the material created using the e-worksheet. The researcher briefly describes its definition and function before explaining its purpose and use. The researcher also taught how to follow the instructions, scan the barcode, and record their voice. The trial's purpose at this stage is to determine the effectiveness of the English e-worksheet. Its goal is to clarify how to use the product so students do not become confused using the English electronic worksheet. The try-out results are revealed at the evaluation phase.

**Evaluation Stage**

An evaluation is required to develop a better product. Three experts were requested to complete a questionnaire to provide feedback and suggestions for the design worksheet. The researcher also circulated a questionnaire to students and teachers to learn their perceptions of the e-worksheet.

Before releasing the final product, the researcher spread a questionnaire to users to solicit feedback and suggestions on the first edition of the e-worksheet. As a result of their comments and suggestions, the researcher's e-worksheet has several features that cannot be used, such as sound that does not play, some words on the e-worksheet that are too small, and the background color must be differentiated so that you can tell when it is on a different page.

Table 6 below depicts the learner's perception of the final product.

Table 6. The student's perception of the product

No.	Indicators	Total Score	Average Score	Categories
<b>A. Content</b>				



1.	The material presented in the e-worksheet is easy to understand and suits your needs.	146	4,42	Excellent
2.	Activities throughout the unit are varied and efficiently organized, from easy to challenging.	140	4,24	Excellent
3.	Assignments in the unit include individual, pair, and group exercises.	144	4,36	Excellent
4.	The practice questions provided can help you measure the knowledge you have gained.	144	4,52	Excellent
5.	The activities in the unit encourage you to express ideas and develop communication and collaboration skills.	138	4,18	Excellent
<b>B. Language</b>				
6.	The language used in the e-worksheet is good and correct.	145	4,39	Excellent
7.	The language used in the material in the e-worksheet is presented clearly and is easy for you to understand.	147	4,45	Excellent
8.	The language used in each instruction throughout the unit is simple and easy to understand.	147	4,45	Excellent
9.	The language used in the material is appropriate for developing your language skills.	146	4,42	Excellent
10.	The language used is communicative.	146	4,42	Excellent
<b>C. Layout</b>				
11.	E-worksheets have an attractive appearance.	150	4,54	Excellent
12.	The color composition in the e-worksheet is interesting to read.	148	4,48	Excellent
13.	The display design on the e-worksheet is attractive.	148	4,48	Excellent
14.	The material displayed on the e-worksheet is clear.	143	4,33	Excellent
15.	The use of illustrations and visualizations in the material is appropriate.	150	4,54	Excellent
16.	The quality of the illustrations and visualizations in the e-worksheet is good.	147	4,45	Excellent
17.	E-worksheets can be accessed easily.	148	4,48	Excellent
Total			75,15	

$$M = \frac{B}{N} = \frac{75,15}{17} = 4,42$$

Based on the statistics, the mean score is 4,42, indicating "Excellent". The calculation suggests that the product can be used without revision. Furthermore, the learners shared various comments on the set e-worksheet, as listed below:

“The content displayed is exciting, and the illustrations are unique.”

“In terms of material, it is excellent. The material is easy to understand and meets your needs.”

“The images displayed are fascinating.”

In addition, the researcher also distributed the perception questionnaire to S.M.A.N. 3 Palopo's English teacher. The results of the teachers' perceptions of the product are shown below.

**Table 7. Teacher's perception**

No.	Indicators	Total Score	Average Score	Categories
1.	The material presented is appropriate for students' level of ability.	5	5	Excellent
2.	The material is appropriate for class x students at S.M.A.N. 3 Palopo.	5	5	Excellent
3.	Overall, material input is diverse.	4	4	Good
4.	The input material is exciting and easy to understand.	5	5	Excellent
5.	The topic of input material is student needs.	5	5	Excellent
6.	Activities in all units are varied.	5	5	Excellent
7.	The available exercises are arranged from easy to challenging levels.	5	5	Excellent
8.	The language used in each instruction throughout the unit is simple and easy to understand.	5	5	Excellent

9.	The language used in the e-worksheet is good and correct.	5	5	Excellent
10.	Practice questions presented in e-worksheets can encourage students to express ideas and can develop communication and collaboration skills.	4	4	Good
11.	Exercises in the unit include individual and group exercises.	5	5	Excellent
12.	E-worksheets can be accessed easily.	5	5	Excellent
13.	The e-worksheet display design is generally reasonable.	5	5	Excellent
14.	The use of illustrations or visualizations in e-worksheets is appropriate.	5	5	Excellent
15.	The e-worksheet link works fine.	5	5	Excellent
Total			73	

$$M = \frac{B}{N} = \frac{73}{15} = 4,87$$

Based on the numbers, the mean score is 4.87, classified as "Excellent". The calculation suggests that the product can be used without further revision. The comments and suggestions from the teacher are:

“Keep innovating and creating.”

Based on the results of the students', teachers', and experts' judgments above, the researcher concluded that the development of the e-worksheet was appropriate for learners' needs. Furthermore, the final product e-worksheet consisted of two units, each with ten tasks using T.B.L.T. and PjBL methods.

#### 4. DISCUSSION

This research aims to create appropriate English learning materials for students in the tenth grade at S.M.A.N. 3 Palopo. The materials are being developed into an E-Worksheet. E-worksheets are teaching materials developed using technology that has developed over time. According to (Furwana et al., 2024), technology plays a vital role in modern education, especially with the widespread adoption of online or e-learning methods, replacing traditional teaching approaches. Several processes are taken to create the materials in the e-worksheet. The steps the researcher took were based on the A.D.D.I.E. development model. As a result, the researcher conducted an analysis and interview to add more data as the first stage.

The Needs analysis questionnaire contains students' needs, lacks, and wants. From the needs analysis and interview results, the researcher found that students need e-worksheet media because they can be used as learning media anywhere. The students lack vocabulary, and their English level still needs to be improved at the primary level (Breakthrough A1) in each skill. Students' wants are as follows: Topic of self-introduction and the wonderful of Indonesia. The vocabulary aspect. Complete material with pictures and illustrations. This finding is the same as the (Ramadhan, 2023) research, where in his findings, 36% of students chose a visual style (pictures and illustrations in the material). Data obtained at the analysis stage will be processed at the design stage. The researcher used the principle from (Tomlinson, 2011) in the previous chapter 2 as a guide in developing effective material and adapted three parts of T.B.L.T. (Task-Based Language Teaching). The skills developed in the tasks are speaking, listening, reading, and writing (integrated).

The third component is the development stage. The researcher developed the material into an e-worksheet based on the design stage. The researcher used the Canva application in product development, which was developed further using the LiveWorksheets.com Website for the final product. During the development process, the expert suggested adding a project-based learning

model. Research conducted by (Fatoni, 2024) found that project-based learning is appropriate and suitable for e-worksheet media. Next, the product prototype results are handed over to the experts. In this Expert Judgment, five experts validated the material. These experts are classified into two distinct categories: two expert evaluations on product validation instruments and three experts on learning materials (design and layout, language, and material validation). Finally, the overall average score for product validity was 4.27, which was "Excellent."

The fourth part reaches the implementation stage. The researcher has completed limited class X I.P.A. 1 S.M.A.N. 3 Palopo trials. The product was sent to students as a link given to 33 students. The implementation results bring the researcher to the evaluation stage. This section is carried out by distributing student and teacher perception questionnaires regarding the product. This questionnaire will measure whether the product correlates with students or not. The student perception questionnaire was filled out, where the average value for product perception was 4.42. Then, the teacher perception questionnaire was filled out, with an average score of 4.87. The results of the two perception questionnaires show that the e-worksheet product is appropriate for use as a learning medium.

Based on the evaluation results of expert assessments and teacher and student perceptions, the English material developed through e-worksheets is appropriate for tenth-grade students at S.M.A.N. 3 Palopo. The e-worksheet received positive feedback since it addressed the students' qualities and needs. Targeting students' characteristics and needs was essential for the learning process. Identifying students' characteristics can help them learn with tremendous success. Using e-worksheets can boost students' enthusiasm and interest in studying English. Additionally, using the E-worksheet affects students' communication skills, awareness, focus, and capacity for inquiry and discovery during the teaching and learning process (Arifin, 2014).

This research's results align with earlier studies, but there are a few discrepancies. The results of this research are similar to (Mu'amanah, 2023) research because both studies focus on developing material through e-worksheets, especially with the help of live worksheets. The research results also show product validation in the outstanding category. Apart from that, the e-worksheet designed as a product of this research has several differences from the previous e-worksheet, including 1) The previous e-worksheet did not include grammatical items. In contrast, the newly designed e-worksheet explains grammatical items such as nouns, verbs, pronouns, tenses, etc. 2) No results are shown When students complete the assignments on the previous e-worksheet. In contrast, the newly designed e-worksheet presents the results of the students' assignments on the e-worksheet display. 3) The English material in the previous e-worksheet only focused on one skill, even though the newly designed e-worksheet presents English language material that includes listening, speaking, reading, and writing. Unlike Ratnawati et al. (2023), who developed live worksheets containing project methods to teach narrative text, the researcher integrated skills in her e-worksheet. If the researcher implemented project-based learning to develop an e-worksheet, Maharani & Marhamah (2024) implemented task-based learning to develop e-student worksheet through LiveWorksheets.com.

Finally, based on the results of expert validation and student and teacher perceptions in trials, the development of student e-worksheets for the tenth grade of S.M.A.N. 3 Palopo is appropriate for students with a small number of revisions because the e-worksheets are created based on the needs analysis of students, teachers, and also ATP (syllabus).

## **5. CONCLUSION**

This research aims to develop an English material e-worksheet for S.M.A.N. 3 Palopo students in the tenth grade using liveworksheet.com. The research needs analysis and interviews; students prioritize listening and speaking abilities as essential for learning and e-worksheets as convenient learning tools. The students' deficiencies include: a) needing more vocabulary and their English ability must improve. Each skill has a fundamental level. Students want the following: a)

Self-introduction and Wonderful of Indonesia topic. b) The vocabulary aspect of the e-worksheet. c) Material that includes images and graphics, among other things.

Appropriate English material. Students' e-worksheets for the tenth grade of S.M.A.N. 3 Palopo include a variety of components. They are: a) The e-worksheet content is prepared with learning objectives specific to the student's needs and syllabus. b) It contains grammatical items. c) The material is provided in an understandable and accessible format with a visually appealing and consistent arrangement. d) Written in a clear, compelling, and communicative language.

Evaluating English material students' e-worksheet media fulfills the requirements as "Excellent." Based on all expert assessments, it scored 4.27 in the "Excellent" category. The student perception scored 4.42 in the "Excellent" category, and the teacher's perception got the "Excellent" category with a score of 4.87.

The researcher realizes that the product in this study has several weaknesses. Therefore, future authors who wish to conduct similar research are advised to improve the material in the designed product. The researcher also recommends further improvement of the features in the e-worksheet.

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