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# Android-Based Mobile Learning Media: Developing Short Functional Text Media for Eighth-Grade Students

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**ABSTRACT**

The purpose of this study was twofold: to develop an online learning application compatible with both Android and Windows platforms and to evaluate the effectiveness of an Android-based mobile learning tool in improving English proficiency and student perceptions. This research employed a research and development (R&D) methodology encompassing nine stages: needs assessment, data collection, product design, expert validation, testing, initial revision, trial implementation, second revision, and finalization. Data were collected through tests and questionnaires and analyzed using independent sample t-tests and descriptive statistics. Participants included second-year junior high school students in Central Java. The findings of this study are as follows: first, the validity of the developed product was confirmed through expert validation from media and material specialists, indicating its feasibility for educational use. Second, a statistically significant improvement in students' test scores was observed, highlighting the effectiveness of the Android-based mobile learning tool. Finally, 75.5% of participants agreed that the application provided a positive learning experience by delivering practical and concise materials on greeting cards, enhancing engagement, and reducing learning monotony. This study demonstrates that Android-based mobile learning media can be a valuable tool for English language instruction.

## INTRODUCTION

The Indonesian government has come to recognize the significance of other languages, particularly English, in today's age of globalization (Permendikbud No. 12, 2024). Teaching children English is intended to broaden their horizons so they can better comprehend other languages and the ideas behind them. One part of language proficiency crucial to raising future generations that are intelligent, critical, creative, and

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cultured is the ability to present brief discussions via cell phones. Acquiring the ability to convey significance through concise functional texts is crucial for children to engage with their immediate surroundings. By acquiring proficiency in these skills, students will be able to articulate their thoughts and emotions with intelligence, per the specific context and circumstances outlined in an article. Adas & Bakir (2013); Harmer (2007); Wijayatiningsih et al. (2022); and Wijayatiningsih & Wilujeng (2015) argue that Writing is generating ideas, considering the best way to convey them and crafting a sentence or paragraph that reader can easily understand. Various methods exist to enhance students' enthusiasm for acquiring English language skills, including using appropriate educational resources. In order to effectively transmit knowledge to students, teachers must possess a comprehensive understanding of several components of instruction, including methodologies, tactics, learning models, objectives, and materials. This knowledge enables teachers to tailor their teaching approach to suit the unique features of each student.

Moreover, the applications and the internet can be utilized to employ technology for communication. Individuals geographically distant from their relatives frequently employ written communication through mail or electronic media (Lam & Chiu, 2018). The situation becomes intriguing when a foreign language, English, is utilized. Proficiency in both the native and a foreign language, a strong command of syntax, word choice (diction), and an extensive vocabulary are essential for effective communication.

After conducting a preliminary observation in the eighth grade at a Junior High school in Central Java, it was discovered that certain students lacked enthusiasm for learning English and had challenges, mainly when memorizing short functional texts. It could be attributed to both the students themselves and the teacher. This problem occurred due to the use of online learning in schools during the COVID-19 pandemic, where teachers exclusively utilized the WhatsApp group application as their primary communication platform. The English learning process could have been more suboptimal, resulting in pupil boredom. Students encountered challenges composing concise functional texts due

to the difficulty of structuring their thoughts when they already had ideas in mind yet struggled to articulate them in writing form. In addition, pupils encountered challenges in differentiating between greeting cards and brief notes due to the nearly identical language style.

The influence of technology on community events is a fresh concept in technology-based learning (Chong & Reinders, 2020; Nurmantara et al., 2020; Papalia et al., 2018; Syathroh, 2022). In addition, the educator can create a splash by adapting the English language lesson plan to the current climate. The novelty of mobile learning as a social movement has led to its meteoric rise in popularity. (Berge, 2013; Each & Suppasetseree, 2021; Fang et al., 2021; Pachler, 2007; Pingmuang & Koraneekij, 2022; Viberg et al., 2020). Students are no longer constrained by physical location to participate in mobile learning activities. Thus, when engaging in online learning, teachers should provide students with Android-based media to assist them. Students can access Android-based mobile learning media anytime and in any location.

Furthermore, android-based mobile learning media can be obtained at no cost and does not necessitate a significant amount of storage space on the cellphone. This media offers several aspects specifically designed for educational purposes, including greeting card resources and exercises that enhance students' familiarity with greeting card content. This application features multiple quizzes, one of which prompts students to create greeting cards with accurate organization and text.

Besides, with the correct approach, teaching short functional texts can be more enjoyable for the instructor in light of these circumstances. Teachers must employ creativity and ingenuity in their teaching methods to cultivate students' interest in studying the English language. An example of innovations created by instructors in learning is the creation of learning media and the use of novel ways of teaching writing. The tactics should be engaging, practical, and enjoyable to foster students' positive attitudes toward writing and vocabulary acquisition.

This study involved developing a specialized application to acquire concise, functional written content knowledge. The researchers' design application combines their artwork

with musical instruments. The program's content is derived from various literary sources, enhancing students' learning ability in diverse environments.

Online and remote learning can both benefit from the deployment of Android-based media. The teacher will employ an intelligent application maker to facilitate students, utilizing an application as an educational tool. It will enhance students' engagement in learning, and this application offers the flexibility to be utilized at any time and in any location. The current research was focused on addressing two research questions:

1. How can using Android-based mobile devices facilitate teaching short functional text?
2. Is an Android-based mobile device effective for teaching short functional text?
3. How do students perceive studying short functional text using Android-based mobile devices?

## RESEARCH METHOD

Research and Development (R&D) was the methodology applied in this particular investigation. The purpose of this strategy was to build specific products for learning English and evaluate the success of those products from the perspective of the learning process as a learning medium. According to Cresswell (2009); and Cresswell & Plano (2018) in Research and Development research, there were stages that will be carried out on the media in this study.

An Android-based learning media application will be created as the product. This application will be developed using Smart Apps Creator (SAC), a tool designed for creating multimedia applications. SAC allows for the creation of mobile apps for Android and iOS, desktop programs, and HTML5 web applications that can be accessed via browsers. The details about SAC can be found on its product information page. Developing learning media involves several preparation steps, including:

*Identifying the content to be included in Smart Apps Creator.*

The researchers selected the brief functional text (greeting card) material that was covered in the Junior High School students.

We are creating written material and developing practice questions using Microsoft Word. Practice questions may take the form of multiple choice, essay, matchmaking, or other types.

*Compiling accompanying visuals for application design.*

The images are utilized to enhance the visual appeal of the application's interface. Button pictures were required in the application design, such as icons for home, back, start, restart, and so on.

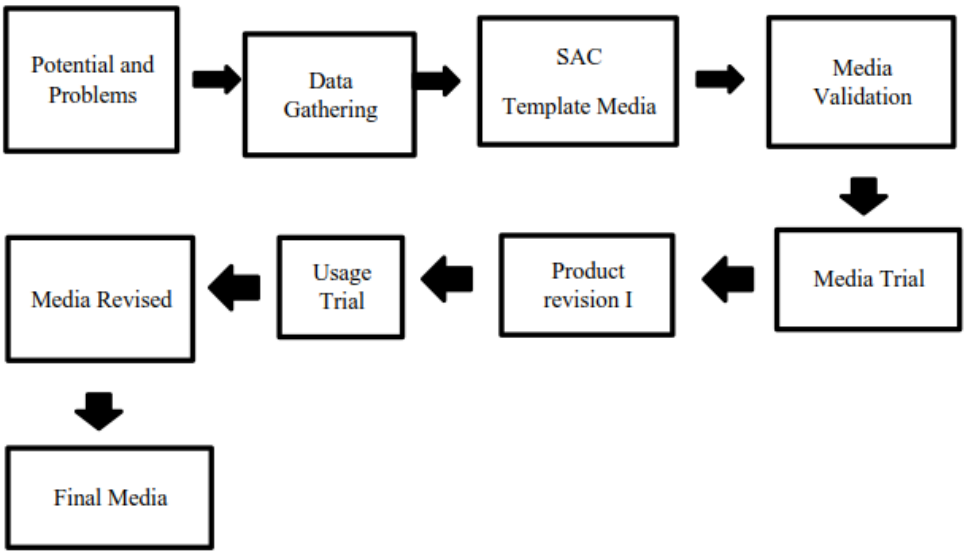
*Creating application models with innovative app creators.*

The application typically consisted of five primary components: opening, home, material, quiz, and developer.

Once the program has been finished, it can be saved as Android-based educational material and loaded on an Android phone.

**Figure 1**

*Research and Development Stages*




Based on Figure 1, the researchers examined the potential and issues related to using Android-based mobile learning media for teaching brief functional texts to junior high school students. The study focused on addressing English teachers' reluctance to use Android-based resources, as they preferred traditional media and textbooks. In response, the researchers developed and assessed mobile learning media created with Smart Apps Creator, aiming to improve the teaching of concise functional texts.

The study used questionnaires to evaluate the developed learning media. These included a feasibility test for media specialists and a student response questionnaire, each with ten questions about learning short functional texts through Android-based media. Students responded using a checklist, and the data was analyzed with SPSS.

The instructional resources were validated by two experts (an English teacher and a lecturer) and underwent multiple revisions. Media and material experts contributed to refining the Android-based media for teaching functional texts. A simple random sample of 30 eighth-grade students from a Central Java school was selected for product

testing. Students completed surveys on the media's effectiveness and provided feedback, which informed further product improvements.

In the usage trial, second-year junior high school students tested the product. After using the Android-based learning media, students took tests, and the results showed its effectiveness in teaching short functional texts. Expert reviews and student feedback led to further revisions until the product was finalized and validated.

The final product was successfully implemented as a practical learning tool, demonstrating its value for both teachers and students.

***Participants and Instruments***

The study involved 32 second-year junior high school students (20 females and 12 males) from Central Java. Researchers prepared lesson plans, learning materials, and functional texts. Data collection tools included a questionnaire and an exam. The questionnaire assessed students' and experts' views on the media, while tests evaluated students' knowledge and skills before and after using the media. Data was analyzed using descriptive statistics and independent sample t-tests to determine the media's impact.

***Data Collection***

The research applied a questionnaire to obtain information about the reactions of students and two professionals to mobile learning media based on Android. Before utilizing the product in the learning process, the researchers provided the product to the expert for validation and comments. After that, we adjusted the product based on the advice of the media and material experts.

***Data Analysis***

Furthermore, the data analysis employed approaches that were generated from the identification of the problem. The quality of this analysis is derived from the inclusion of affirmative and negative remarks in all aspects of ideas, assessments, reactions, and

criticisms provided by media professionals and English teachers. This research set out to assess the data and identify the opinions of experts and students in order to validate the use of mobile learning media based on Android in teaching short functional text. The subsequent equation represents the data derived from the media feasibility test.

The formula for the data from the media feasibility test is as follows.

$$N¿ \frac{k}{nk} x\,100\,\%$$

Explanation of the formula:

N = the percentage of aspects K = scored achieved

Nk = maximum score $\sum ni$ = scored valid

The findings were a tabulated representation of percentages based on the specified criteria for the application. The criteria application involved determining the highest and lowest percentages.

Furthermore, the researchers made sure to check both validity and reliability. Muhfiyanti et al. (2021) employed the product-moment correlation method to evaluate the validity of the tests administered to pupils. The test criteria were considered valid if the arithmetic value was more significant than the table value, with a significance level of 5% or 0.05. The test validity result was determined in Table 1.

**Table 1**

*Test Validity Analysis*

| Question | r arithmatic | Significant | r table | Criteria |
|---|---|---|---|---|
| Q1 | 0.384 | 5% | 0.361 | Valid |
| Q2 | 0.429 | 5% | 0.361 | Valid |
| Q3 | 0.384 | 5% | 0.361 | Valid |
| Q4 | 0.375 | 5% | 0.361 | Valid |

| | | | | |
|---|---|---|---|---|
| Q5 | 0.487 | 5% | 0.361 | Valid |
| Q6 | 0.458 | 5% | 0.361 | Valid |
| Q7 | 0.426 | 5% | 0.361 | Valid |
| Q8 | 0.375 | 5% | 0.361 | Valid |
| Q9 | 0.641 | 5% | 0.361 | Valid |
| Q10 | 0.503 | 5% | 0.361 | Valid |

Based on the validity test findings, it can be inferred that ten of the preceding 20 tests were deemed invalid, resulting in 10 accurate tests for the final results. According to the results presented above, all questions were deemed acceptable. The r value for arithmetic was more significant than the r value for the table, indicating that all questions were valid and suitable for future testing. The students' reactions to mobile learning media on Android and Windows were able to fulfill the objectives within the given problem's context.

The reliability analysis was employed in the same investigation, yielding consistent results. This study evaluated the test's reliability by utilizing the Alpha formula in the SPSS 16 software, as evidenced by the alpha value (a). If the value of r II is greater than the value of r table, then this test is classified as trustworthy. Table 2 presents a detailed explanation of the results obtained from the reliability test conducted.

**Table 2**

*Test Reliability Analysis*

| **Cronbach's Alpha** | **N Item** |
|---|---|
| 0.649 | 10 |

The reliability test results indicate that r11 = 0.649 and r table = 0.361. The conclusion is that 0.649 is more significant than 0.361, indicating that the test instrument falls into the reliable group.

## FINDING AND DISCUSSION

One discovery is the use of Android-based mobile media to instruct brief functional texts. Research and development are the basis of this development.

*Product Design of Android-based Mobile Learning Media*

During this stage of the process, the researchers developed a mobile learning media. They decided on fundamental competencies and indicators, developed materials, and conceived a strategy for mobile learning media. Using MLM, we selected a brief functional text (greeting card) as the material. The researchers utilized a program called Smart Applications Creator to develop media or multi-level marketing. We developed a design for an application connected to the content depicted on the greeting card. Developing multi-level marketing items took us at least a month.

### *Findings*

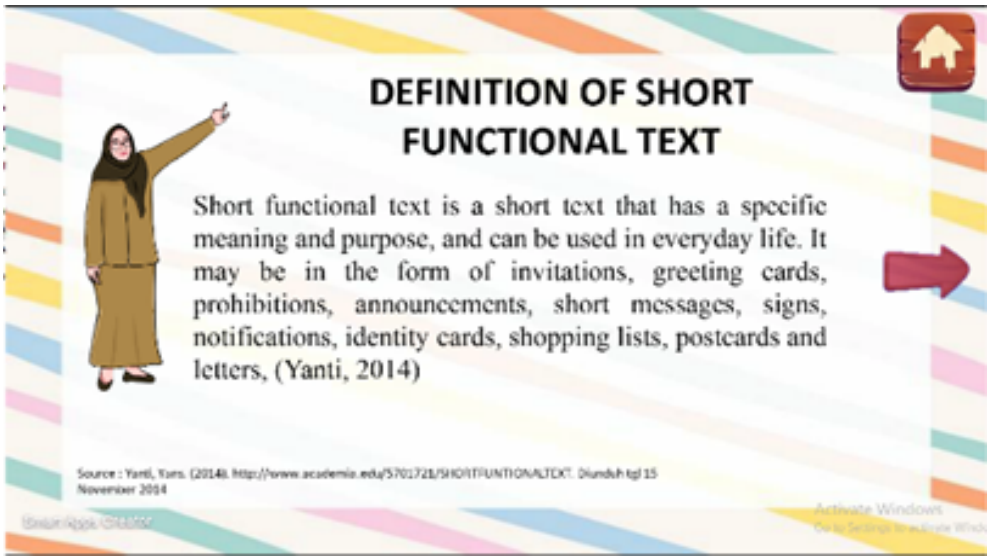
**Figure 2**

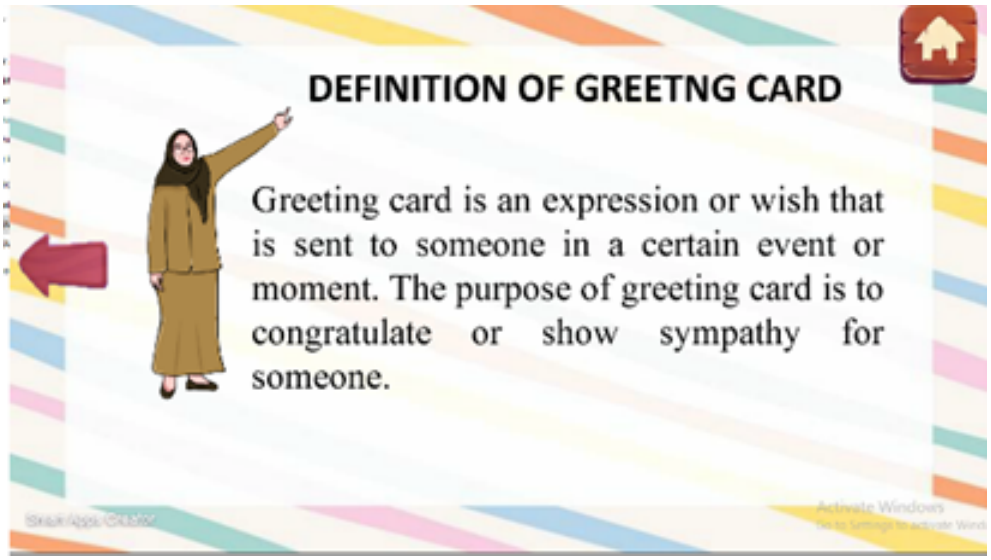
*Main Menu of the Greeting Card Mobile Learning Media*

Figure 2. illustrates the primary menu structure used in the greeting card application. The primary menu has several options, such as the definition, language features, generic structure, types, quiz, and developer.

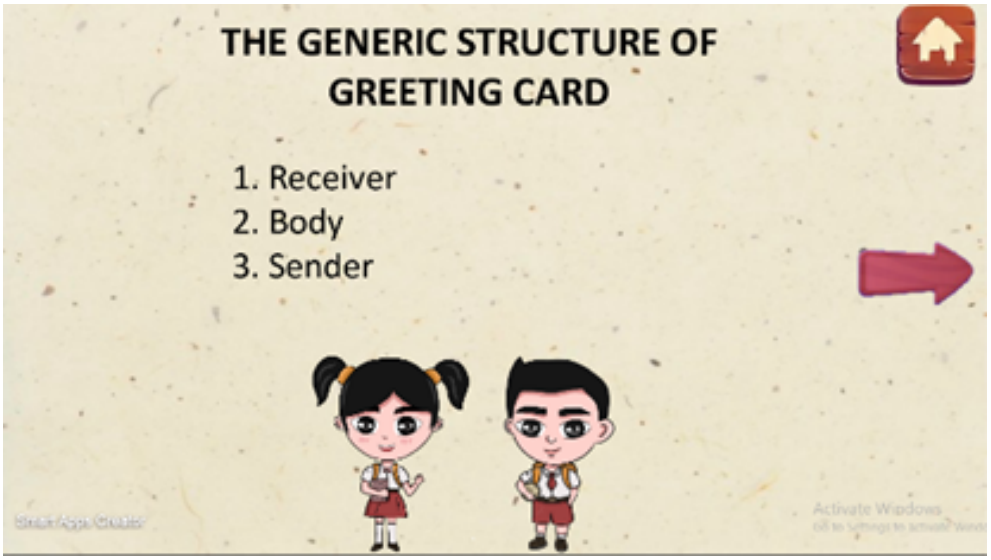
**Figures 3**

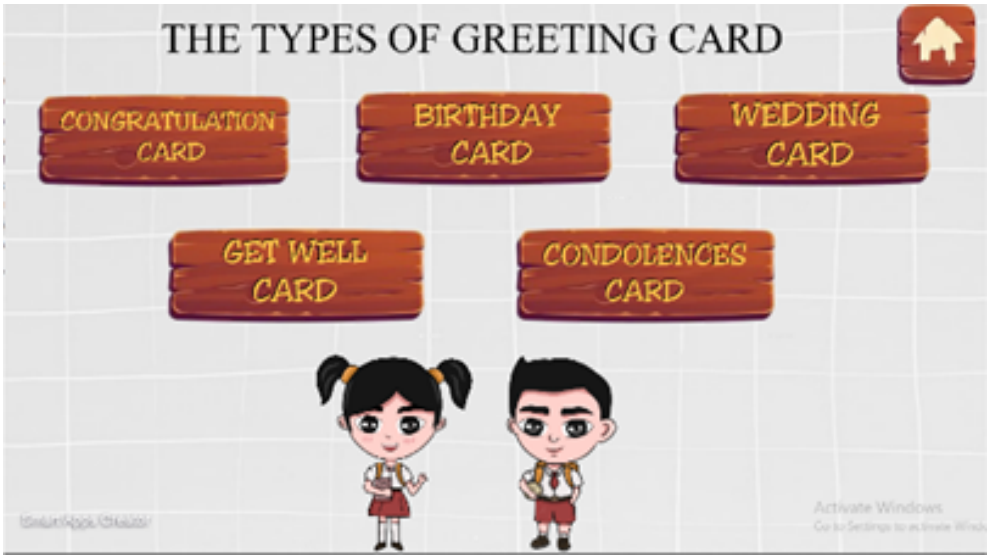
*Materials of the Greeting Card Mobile Leaning Media*




THE LANGUAGE FEATURES OF GREETING CARD
1. Greeting expressions : Happy Birthday, Congratulations, Happy Mother's Day, Happy Graduation, Happy Wedding
2. Wishing words/sentences : Wish you all the best, good luck, get well soon, and hope you get good score.
3. Salutation : Sincerely, love, hug and kiss, your best friend, and regards.
4. Pronouns : I, my, me, mine, you, your, yours, we, our, us, and ours

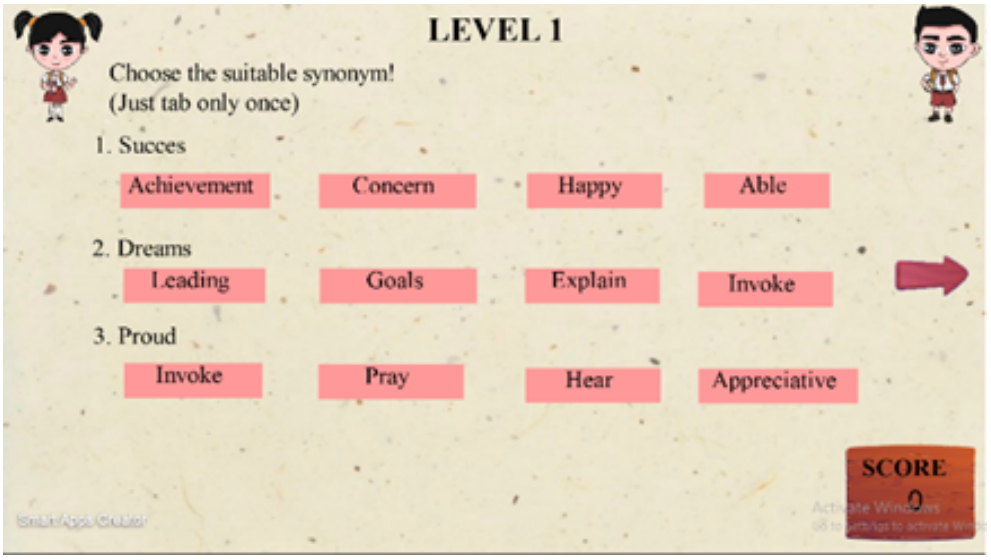

THE GENERIC STRUCTURE OF GREETING CARD
1. Receiver
2. Body
3. Sender

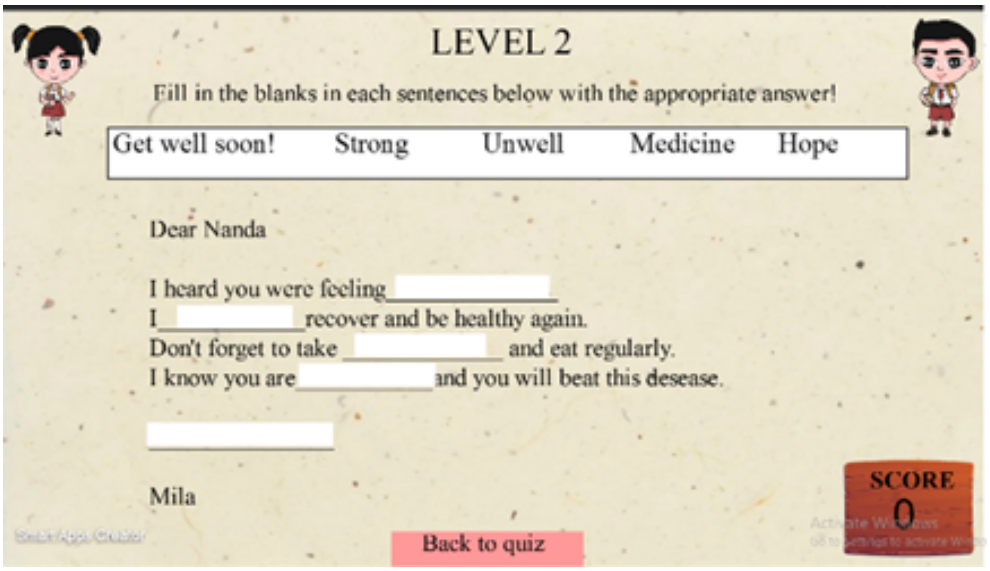



The instructional material page included greeting card content (see Figure 3). The website provides a detailed explanation of greeting cards and examples of each style. Furthermore, a synonym phrase was included to raise pupils' awareness of synonyms frequently used in greeting cards. Even if students did not have access to the internet, they could still access the accessible materials and exercises individually and offline.

**Figure 4**

*Greeting Card Mobile Learning Media Quiz*


LEVEL 1
Choose the suitable synonym!
(Just tab only once)
1. Succes
Achievement
Concern
Happy
Able
2. Dreams
Leading
Goals
Explain
Invoke
3. Proud
Invoke
Pray
Hear
Appreciative
SCORE
0


LEVEL 2
Fill in the blanks in each sentences below with the appropriate answer!
Get well soon! Strong Unwell Medicine Hope
Dear Nanda
I heard you were feeling _____
I _____ recover and be healthy again.
Don't forget to take _____ and eat regularly.
I know you are _____ and you will beat this desease.
_____
Mila
SCORE
0
Back to quiz

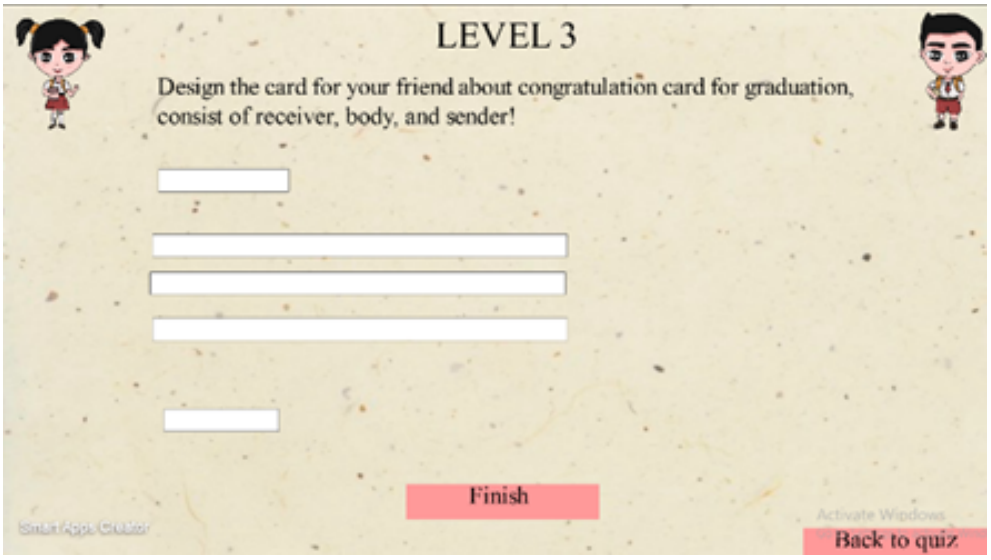



Figure 4 depicts an example of a design quiz for the greeting card app. In total, there were three different stages of the examination. The first level consisted of locating a suitable synonym for each of the provided words. At Level 2, some questions required students to fill in the blanks on greeting cards. An assignment given to students at the third level was to design a greeting card that included a sender, a receiver, and a body.

*Design Validation by Experts*

The researchers presented the multi-level marketing (MLM) product based on Android to material and media experts once it had been developed. We employed a questionnaire that was prepared to find out the findings of the expert validation before the expert validated the media and materials. It was done before the expert validated the sources. We selected an English teacher from SMP N 4 Pruwodadi to serve as the material expert validation, and eight questions were to be answered by the material validation. A lecturer in the English department at one of private university in Central Java received the media expert's services then. To finish the media expert validation questionnaire, nine questions needed to be answered. The material and media experts questionnaire was broken down into two categories: the criteria for teaching material experts and the

layout criteria for media teaching experts. Both categories were divided into these two categories.

Revisions to the product were developed in response to comments and suggestions made by industry professionals. The researchers made expert revisions to the product before it was released for usage in the field. Following that, we compiled a questionnaire that professionals had examined in the previous step. Viewing the data from the expert validation and the interval assessment are available in Tables 3, 4, and 5 is possible.

**Table 3**

*Short Functional Text Materials Validation Result*

| **Validation Result 1** | | |
|---|---|---|
| Component | ∑ *ni* | Interpretation |
| Aspect of Eligibility of contents | 100% | Very relevant |
| Aspects of Quality | 87,5% | Very relevant |
| Aspects of the Quality Exercise | 100% | Very relevant |

**Table 4**

*Media Validation Result*

| **Validation Result 2** | | |
|---|---|---|
| **Component** | ∑ *ni* | **Interpretatio** |
| Aspect of Feasibility of Graphic | 91.6% | Very relevant |
| Language Feasibility Aspect | 83,3% | Very relevant |

**Table 5**

*Assessment Interval of Mobile Learning Media*

| **Score** | **Category** |
|---|---|

| | |
|---|---|
| >80 | Very relevant |
| >60-80 | Relevant |
| >40-60 | Quite relevant |
| >20-40 | Less relevant |
| <20 | Very less relevant |

Based on the findings of expert validation, all of the media and material components were rated as extremely relevant. Consequently, the product was deemed appropriate for integration into the educational curriculum. However, the validator made a few modifications.

a. Modifications to provide more explicit directions for teaching students how to learn synonym phrases in the text of a greeting card.
b. Using level 1 quiz tips, students are limited to selecting an answer with just one tap.
c. The display color on the varieties of greeting card pages was altered to enhance the clarity of the writing.

*Revisions of Product*

The expert validation results indicate that certain adjustments must be made to produce mobile learning materials based on Android. The purpose of the product redesign was to enhance the medium's efficiency, attractiveness, and effectiveness. The explanations for the criticisms and suggestions provided by the validator are as follows.

Several improvements were made to this program, including clarifying the directions regarding the material to encourage students to acquire synonym phrases from the greeting card text. The original design can be seen in Figures 5 through 6.

**Figure 5**

*The Application Design Before Revision*


**Figure 6**

*The Application Design After Revision*


On the quiz page for Level 1, there were multiple-choice questions with helpful hints—press the tab key once.

**Figure 7**

*The Application Design Before Review*

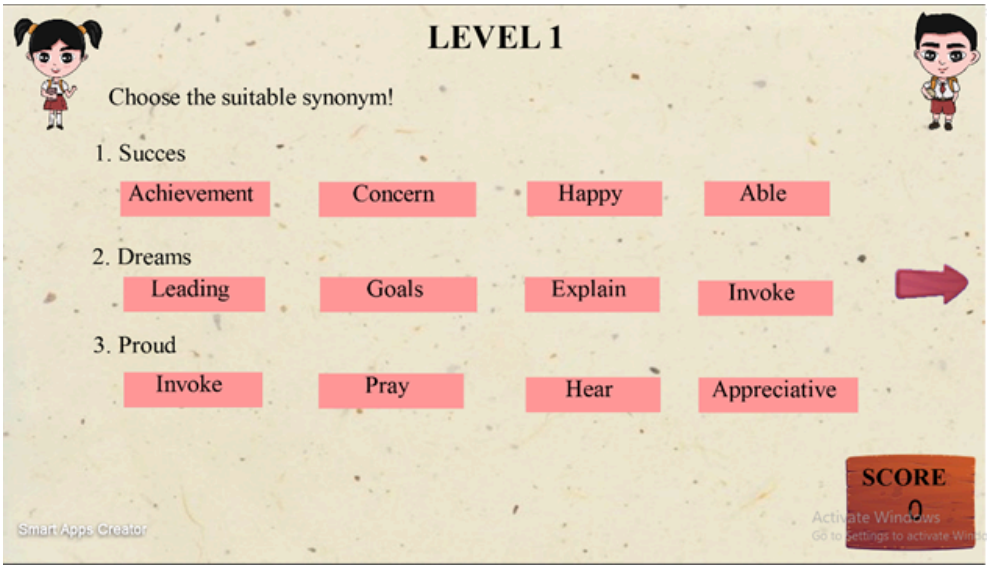
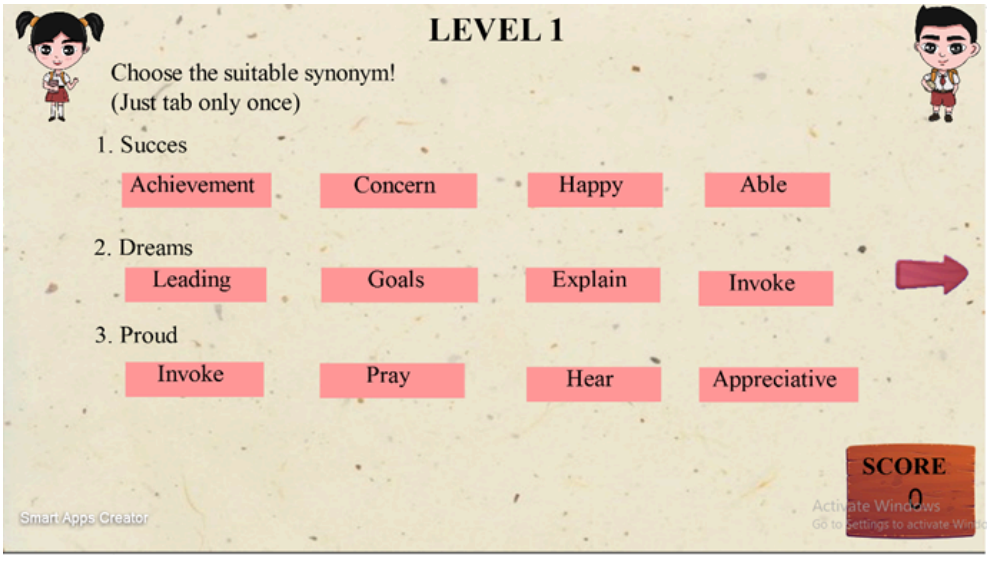



**Figure 8**

*The Application's Designed Outcome After Revision*



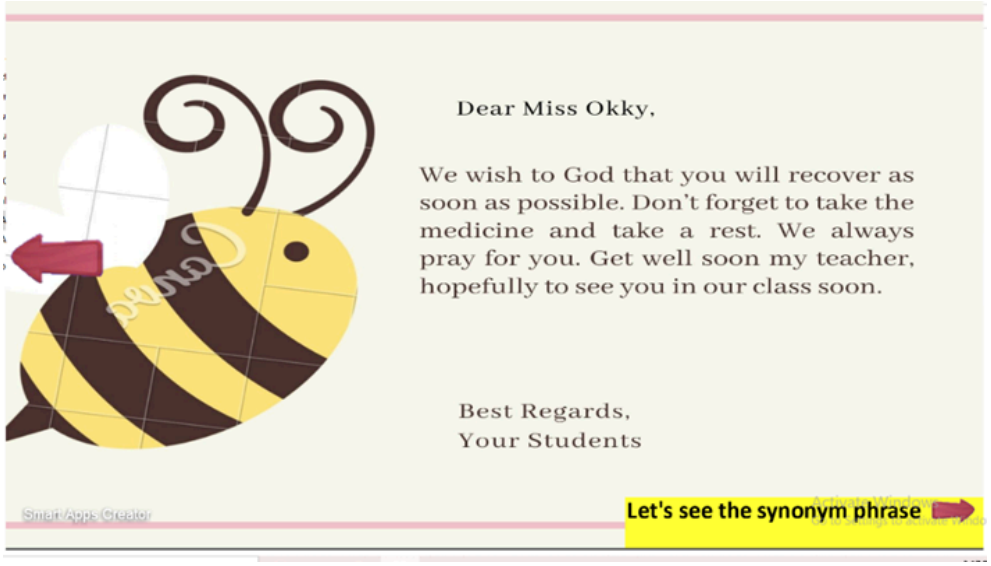

The lettering on the area for different sorts of greeting cards was illegible, so the researchers had to alter the color of the writing to enhance its clarity.

**Figure 9**

*The Application Design Before Revision*


**Figure 10**

*The Application Design After Revision*




*Product Trial*

The researchers experimented to determine the product's sophistication. The media was evaluated in two distinct phases: field testing, which involved an experimental class, and small group testing. The present study employed a questionnaire to gather data. The

questionnaire consisted of ten statements pertaining to the use of Android-based mobile learning media. In this instance, we consolidated the data into a single group. In this phase, the researchers collected data by soliciting opinions and evaluations from 30 respondents through a questionnaire focused on product quality. The data results are displayed in Table 6.

**Table 6**

*The Data Results from Questionnaire of Product's Quality*

| NO | ITEM | SCALE | | | | RESPONDENT | TOTAL SCORE | CATEGORY |
|---|---|---|---|---|---|---|---|---|
| | | 4 | 3 | 2 | 1 | | | |
| 1 | 1 | 14 | 16 | 0 | 0 | 30 | 104 | GOOD |
| 2 | 2 | 11 | 19 | 0 | 0 | 30 | 101 | GOOD |
| 3 | 3 | 9 | 10 | 11 | 0 | 30 | 88 | GOOD |
| 4 | 4 | 5 | 14 | 10 | 1 | 30 | 83 | GOOD |
| 5 | 5 | 4 | 16 | 9 | 1 | 30 | 83 | GOOD |
| 6 | 6 | 11 | 17 | 2 | 0 | 30 | 99 | GOOD |
| 7 | 7 | 7 | 20 | 3 | 0 | 30 | 87 | GOOD |
| 8 | 8 | 9 | 13 | 8 | 0 | 30 | 91 | GOOD |
| 9 | 9 | 4 | 11 | 12 | 3 | 40 | 76 | GOOD |
| 10 | 10 | 6 | 22 | 2 | 0 | 40 | 94 | GOOD |

Percentage = Total Score (N) / The among of max score * 100%
= 906/1200*100%
= 75.5 %

The trial data showed that after the experiment was completed, there was an average good accumulation of 75.5% with categories. According to the information available, thirty students agreed that mobile learning media based on Android might assist students in learning greeting card material.

*Final Product*

The final revision meant the final result was prepared as an instructional tool. The field testing questionnaire yielded a percentage score of 75.5%, indicating that this media falls within the "good" category and can be applied in the learning process. Students also noted that this medium was engaging for acquiring knowledge about greeting cards.

This investigation's evidence supports using mobile-based media for brief functional text on Android devices in the classroom, which can help students build their vocabulary and improve their public speaking abilities.

The second discovery concerns the efficacy of Android-based mobile learning media in instructing concise functional text. This outcome is derived from examining pre- and post-test data following the incorporation of Android media.

This section used descriptive statistics and the normality T-test to describe the SPSS analysis of the students' pre- and post-test findings. This current investigation solely involved Class 8A; the control group met in the second session, whereas the experimental group met in the first. The experimental class served as the treatment group and examined short functional texts of greeting cards using Android-based mobile learning media. Greeting card learning through the use of instructional

technology based on Android-based mobile learning media was not used in the control group.

This research aimed to analyze the brief functional sentences used in greeting card advertisements. Both parts of the study process included several steps. In the first step, students took a pre-test to gauge how much they knew about the greeting card content with their English language acquisition. The second post-test consisted of seeing how much the participants had learned after reviewing the greeting card content.

Test and questionnaire results were used in this study. The data analysis aimed to determine the efficacy of greeting card learning through Android-based mobile learning media. The results were compared between the pre-and post-test times at various points in the learning process. The researchers are currently using descriptive statistics and the normalcy test to determine how effective Android-based mobile learning media are. Table 7 provides a complete overview of the data analysis outcomes.

**Table 7**

*The Normality Test of Experimental Class*

One-Sample Kolmogorov-Smirnov Test

| | | Unstandardized Residual |
|---|---|---|
| N | | 15 |
| Normal Parameters[a] | Mean | .0000000 |
| | Std. Deviation | 8.74986573 |
| 4Most Extreme Differences | Absolute | .174 |
| | Positive | .127 |
| | Negative | -.174 |
| Kolmogorov-Smirnov Z | | .174 |
| Asymp. Sig. (2-tailed) | | .200 |

a. Test distribution is Normal.

The normality test results showed no significant change between the pre-and post-test data (Sig. (2-tailed) value > 0.05). Based on average data, the significance level of the

difference between the eighth-grade pre- and post-tests was 0.200. It means that 0.200 is more than 0.05. The experimental class's pre-and post-test data were found to be within the usual range.

**Table 8**

*The Normality Test of Control Class*

One-Sample Kolmogorov-Smirnov Test

| | | Unstandardized Residual |
|---|---|---|
| N | | 15 |
| Normal Parameters[a] | Mean | .0000000 |
| | Std. Deviation | 7.96819073 |
| 4Most Extreme Differences | Absolute | .210 |
| | Positive | .190 |
| | Negative | -.210 |
| Kolmogorov-Smirnov Z | | .210 |
| Asymp. Sig. (2-tailed) | | .074 |

a. Test distribution is Normal.

The control group, meanwhile, had a Sig. (2-tailed) value of 0.074 for both the pre-and post-tests. That 0.074 > 0.05 was the meaning. It was possible to demonstrate that the pre- and post-test data were typical.

Table 9 demonstrates the validity of the pre-and post-test scores in this class. The pre- and post-test variables' values were demonstrated with fifteen participants in the control and experimental groups. The average score in the experimental group increased from 56.67 on the pretest to 90.67 on the posttest. The experimental group improved from a minimum pretest score of 40 to 70 after the intervention. The experimental group's pre- and post-test standard deviations were 13.452 and 88.337, respectively.

Conversely, the control group saw an average increase from 40 to 70 between the two assessments. Students in the control group may get as high as 100. The control group had a standard deviation of 10.142 before and 8.452 after the test.

In addition to finding statistically significant differences between the experimental and control groups, the data presented above suggests that students in the Android-based mobile learning media group performed better on average during the learning process. Following the instructor's explanations, the outcomes of the students' practice tasks provided further evidence.

Besides, the pre-test and post-test results in the experimental and control sections were compared using a T-test. A T-test with paired samples was utilized to ascertain whether the hypothesis should be accepted or rejected based on the acquired data. Tables 9, 10, and 11 describe the data.

**Table 9**

*The Result of Paired Sample T-test*

Paired Samples Statistics

| | | Mean | N | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Pair 1 | Pre Test Eksperimen | 56.67 | 15 | 13.452 | 3.473 |
| | Post Test Eksperimen | 90.67 | 15 | 8.837 | 2.282 |
| Pair 2 | Pre Test Control | 48.00 | 15 | 10.142 | 2.619 |
| | Post Test Control | 80.00 | 15 | 8.452 | 2.182 |

**Table 10**

*The Result of Paired Samples Correlations*

Paired Samples Correlations

| | | N | Correlation | Sig. |
|---|---|---|---|---|
| Pair 1 | Pre Test & Post Test Eksperimen | 15 | .140 | .618 |
| Pair 2 | Pre Test & Post Test Control | 15 | .333 | .225 |

**Table 11**

*The Result od Paired Sample Test*

| Paired Samples Test | | | | | | |
|---|---|---|---|---|---|---|
| | | Paired Differences | | | | |
| | | 95% Confidence Interval of the Difference | | | | |
| | | Lower | Upper | T | DF | Sig. (2-tailed) |
| Pair 1 | Pre Test– Post Test Eksperimen | -42.320 | -25.680 | -8.765 | 14 | .000 |
| Pair 2 | Pre Test- Post Test Control | -37.994 | -26.006 | -11.451 | 14 | .000 |

Results for mobile learning media built on Android are shown in Tables 9, 10, and 11. Researchers would detail the steps used to arrive at their working hypothesis. He implied that the mobile learning media based on Android did not impact learning since there was no average difference between the pre-and post-test results. According to Ha, either mobile learning media affected the learning process, or there was an average difference between the pre-and post-tests. We used a significant value (sig.) of the SPSS output to evaluate the effectiveness of the media. The null hypothesis (Ho) was rejected, and the alternative hypothesis (Ha) was accepted if the one-tailed significant value was less than 0.05. There was a rejection of Ha and acceptance of Ho when the 2-tailed significance value was more significant than 0.05.

Table 10 shows the two-tailed significant values (0.000 > 0.05) for the control and experimental classes, which led to the rejection of Ho and acceptance of Ha. According to the Paired Sample T-test results, the average difference between the pre-and post-test results was statistically significant which show that Android-based mobile learning

media can improve retention and comprehension. When teaching and studying the brief functional text, using media based on Android mobile devices is a great choice.

Thirdly, we discover how students perceive android-based mobile learning of short functional text. Students' perspectives on the instructional process, particularly the usage of short functional text utilizing Android-based mobile learning media in the experimental class, are explained by the results of the questionnaires administered in this study. After students had mastered the greeting card content using the Android-based mobile learning platform, they were given the surveys to complete. Afterward, the researchers used a questionnaire to evaluate the gathered data. The results of the survey are displayed in Table 12.

**Table 12**

*Data Result of Questionnaire in Experimental Class*

| NO | Statement | mean | category |
|---|---|---|---|
| 1. | Greeting card instruction with the use of mobile educational technologies. | 3.3 | Good |
| 2. | Android-based greeting card learning media design is intriguing. | 3.3 | Good |
| 3. | Android-based mobile learning material fosters student independence. | 3.2 | Good |
| 4. | The pupils' engagement when learning with Android media. | 3.06 | Good |
| 5. | Students'responsibilities in learning using Android media. | 3.2 | Good |
| 6. | Helping students practice English via greeting cards. | 3.6 | Good |
| 7. | Students' exciting and motivating to learn grreting card using android base-mobile media. | 3.2 | Good |
| 8. | Students' first exposure with android media | 3.4 | Good |
| 9. | Android media is more engaging than textbooks. | 3 | Good |
| 10. | The clear exercise and discussion of the material in the application to the students. | 3.6 | Good |

Table 12 illustrates that one greeting card found that the media is advantageous and satisfactory. The first indicator, which received a score of 3.3, pertains to the application of mobile learning media in aiding students' comprehension of greeting cards. The grade was deemed satisfactory. This finding suggested that the pupils agreed with the assertion, and the content was more easily understood because every pupil had access to the aforementioned media.

The second indicator was assigned a positive evaluation score of 3.3. This finding suggests that students agreed that the aesthetics of the media were attractive, which consequently sparked curiosity regarding using Android media.

The average outcome is denoted by the third indicator, which is 3.2. This indicator stated that Android media could promote the growth of increased learner autonomy throughout the learning process. It was classified as being outstanding. This finding suggested that learners preferred Android media due to the potential for these media to promote increased student autonomy throughout the educational journey.

The following suggestion is that using Android-based mobile learning media could foster increased student engagement in the educational journey. The mean score assigned to the fourth indicator was 3.06. This result was classified as excellent quality. The Android-based mobile learning media-based learning process exhibited higher student engagement than usual. This could be attributed to the requirement for independent comprehension of the material.

The fifth indicator, with a mean score of 3.2, was within the acceptable range. When Android-based mobile learning media are utilized, a greater understanding of the material may increase student engagement. Thus, students were enabled to take on a greater degree of responsibility in understanding the material by utilizing Android-based mobile learning media.

Furthermore, the average score obtained for the sixth indicator was 3.6. It demonstrated that the pupils agreed with the assertion that honing their skills in greeting card creation

could yield advantageous outcomes. The favorable categorization indicated this outcome.

The following indication was that this application could motivate and inspire students to study greeting cards more. A mean score of 3.2 was obtained in the favorable category. It suggested that students cultivate an increased motivation toward learning due to having access to the media outside of class time.

The average score achieved on the eighth indicator was 3.4. The eighth indicator concerned the degree of novelty demonstrated by pupils in their use of Android-powered mobile learning media. Sufficiency was attributed to this category. A subset of students agreed that gaining an understanding of greeting cards via Android-based mobile learning media was an unparalleled experience for them, as they had previously exclusively utilized textbooks or video tutorials.

The ninth indicator found that mobile learning media based on Android were more engaging than traditional media (textbooks). The average score for this claim was three, which was deemed adequate. As a result, students perceived mobile learning media based on Android to be a captivating resource for greeting card study. The application consisted of various exercises, and students were provided with a score after finishing each exercise, which allowed them to evaluate their own progress in learning.

With an average score of 3.6, the final indicator was classified as "good." The concluding statement functioned as a trial run, and the application explicitly addresses the subject matter. This finding suggests that the pupils agreed on the comprehensibility of the content, evaluations, and activities featured in the application as they pertained to the study of greeting cards. Examining students' perspectives concerning incorporating Android-powered mobile learning media into the educational experience indicates that many students concurred with this methodology.

### *Discussion*

Applications Package Files (APKs) were created as a byproduct of developing mobile learning media for Android. These APKs were compatible with Windows-based and

Android-based mobile devices. Furthermore, this application's storage capacity on mobile devices or computers was restricted to 39.4 MB, facilitating its installation on such devices for the convenience of users or students. This application was more interactive and user-friendly than PowerPoint. Additional file types The Media supports include audio, video, pictures, and animations. Android media additionally furnished students with practice opportunities and feedback. Mobile learning media have been implemented and are now more straightforward to deploy on students' computers, mobile phones, and other devices.

**Figure 11**

*Application Overview*


This study implemented the advancements of the Android media in English language acquisition. Windows also permitted students to install applications on their devices. Android was intended to facilitate pupil learning by implementing mobile phone applications.

This media had been created and deemed appropriate for educational purposes. It aligns with what the students think about Android-based mobile learning media and what the experts found in the validation test. Furthermore, the learner's active participation in the learning process using Android-based mobile learning media could be responsible for the study's success. Since this medium could also be used for online learning, making

sure that all course materials were available on students' cell phones would engage and eagerly engage the students.

The results also show that mobile media based on Android is effective. We used descriptive statistics, a paired sample T-test, and a normality test to see how well Android-based mobile learning media worked. Using the paired sample T-test, the researchers compared the experimental and control groups' pre-and post-test scores to find the minimum, maximum, standard deviation, and significant value (sig.) linked with the paired sample T-test.

The study's findings revealed that the researchers found significant results for the paired sample T-test in both the experimental part ($p = 0.000.05$) and the control section ($p = 0.000.05$). Ha was subsequently approved, whereas Ho was rejected. The findings of the paired sample T-test showed that the use of Android media had a substantial impact on students' learning and was advantageous for the learning process.

Furthermore, the experimental group got an average score of 48.00 on the pre-test, while the control group got an average score of 56.67. The average scores on the post-test for the experimental and control groups were 90.67 and 80.00, respectively. An exact difference of 34.00 was noted in the experimental class's average scores on the pre-test and post-test. Before distributing Android-based mobile learning media to the students, we found that the post-test score had a greater significance level than the pre-test score. In addition, we computed a disparity of 32.00 between the average scores on the pre-test and post-test for the control group.

As previously clarified, a statistically significant disparity was observed between the groups of eighth-grade students who received instruction prior to the implementation of Android media and those who received instruction subsequent to its implementation in the two research classes analysis. This could be illustrated by calculating the average of the pre-test and post-test scores.

Consequently, a notable disparity was observed between students who received instruction before implementing Android media and those who were instructed post-implementation of such media. According to the preceding description, Android media is acceptable. Based on their prior research, it was possible to deduce that their investigation centered on creating mobile learning materials for Android and that their study subjects were students. Nevertheless, the researchers endeavored to conduct research in a manner distinct from theirs. The research questionnaire was completed by students, material specialists, and media specialists. This study focused on Windows and Android media developed with the SAC application to produce learning media appropriate for students' circumstances.

Nonetheless, this investigation addresses an alternative aspect of the findings presented by Cahyana et al. (2018); Muhfiyanti et al. (2021); Razaq et al. (2022). The present investigation centered on acquiring brief functional texts by junior high school pupils, whereas (Muhfiyanti et al., 2021)concentrated on reporting text material by high school pupils. While both studies employ identical applications, the final deliverables differ in content, educational goals, and media-related topics. Further, this study's findings were consistent with those of (Cahyana et al., 2018; Marzuki et al., 2022; Muhfiyanti et al., 2021; Razaq et al., 2022)

Technology-based learning material can stimulate students' interest in the learning process. Utilizing mobile phone technology holds immense promise in facilitating student activities throughout the learning process. Additionally, a notable disparity was observed in the experimental group throughout the learning process before distributing content via Android media. Both the pre-and post-test scores, as well as the student's desire to study, are drastically different.

In addition, the findings above suggest that Android media may pique students' interest in learning more than traditional media. The scores of the students also demonstrated their comprehension when the researchers administered practice questions and inquiries throughout the learning process. The research result is in line with Zatulifa & Fitriawan

(2018). They claimed that mobile technology-based learning media may serve as a viable alternative to traditional learning methods due to its adaptable nature, allowing students the flexibility to learn wherever they happen to be. The implementation of Android media was facilitated by the fact that students could engage in independent study without necessitating teacher explanations. This media was a complex application with audio, video, and image components, exercises that automatically displayed score results, and many icons that students could manipulate to suit their requirements(Klimova & Polakova, 2020; Marzuki et al., 2022; Nurmantara et al., 2020). Students were consequently able to learn brief functional text greeting cards and efficiently utilize Android media with the media assistance.

The efficacy of English Android media was assessed, suggesting that it might be a viable substitute for traditional learning methods due to its adaptable nature and ability to accommodate students' studies at any time and in any location (Mulyadi et al., 2023). Students were taught the short functions of text greeting cards using Android media, which had a notable effect on their learning.

The last, based on the findings regarding the students' perspectives regarding the utilization of Android media, 75.5% of the experimental and control classes scored well in the field trials, with 30 students comprising the "good" category.

Drawing from the student's viewpoint, they are required to create educational materials that could enhance their motivation and efficacy in the classroom because smartphones and Android have substantially impacted the field of education. In addition, with smartphones meeting these requirements, instructors could develop Android as an educational tool. This result was also same with the finding of Rohimah et al. (2021); Tania & Tolino (2020); Widyastuti & Wuryanto (2020) that smartphones can be utilized as educational media. Furthermore, this result was consistent with the findings of (Muhfiyanti et al., 2021), who also demonstrated how technological advancements in education could significantly advance educational progress through learning objectives, attributes, and abilities.

## CONCLUSION

According to the findings, this study's product was an Android and Windows application called Android-media that instructed second-grade junior high students in the functional aspects of greeting cards through brief functional texts.

The findings of this research demonstrate the efficacy and validity of utilizing mobile learning media based on Android for second-grade students in Junior High School. Additionally, the post-test scores were more significant than the pre-test scores. Hence, mobile learning media based on Android may enhance their academic pursuits. Additionally, media could be incorporated into all instructional materials, not just brief functional texts.

Moreover, the efficacy of this media was demonstrated in the results of the post-test and pre-test. The post-test produced a more excellent value compared to the pre-test. The mobile learning medium based on Android positively impacted the learning process, as indicated by a significance value (sig.) of $0.00 < 0.005$. The experimental and control groups exhibited contrasting performance levels on the pre-test and post-test. The experimental group obtained a mean post-test score of 90.67, while their pre-test score was 56.67. Android-based mobile learning media has the potential to enhance student engagement and participation in the classroom significantly. Indeed, students conveyed that using Android-based mobile learning media was pleasant and advantageous for getting knowledge about greeting cards.

Furthermore, the outcomes of students' evaluations of Android media indicate that 75.5% of the thirty students reached the "good" classification. Additionally, the students responded positively to this media; many felt inspired and were assisted in their studies by the Android- media.

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