

CHAPTER IV

RESULTS AND DISCUSSION

4.1 Research Finding

This study focuses on the development of interactive educational games as a learning medium to improve the speaking skills of eighth-grade students at SMP Negeri 4 Gunungsitoli Selatan. The design of this game-based learning medium is tailored to the characteristics and needs of the students, as evidenced by the results of validation by media, material, and language experts. The development process follows the ADDIE model, which includes five structured stages: Analysis, Design, Development, Implementation, and Evaluation. Each stage is carefully executed to produce a product that supports students' speaking practice in an enjoyable and meaningful way. The steps in designing and creating this interactive game can be explained as follows:

4.1.1 Analysis

As part of the needs analysis stage, researchers collected data at SMP Negeri 4 Gunungsitoli Selatan to examine the learning conditions and challenges that students face in developing their English-speaking skills. This analysis was conducted through classroom observations and interviews with English teachers and eighth-grade students. The data obtained from this stage served as the basis for designing learning media appropriate to the identified needs. Findings from observations and interviews conducted at SMP Negeri 4 Gunungsitoli Selatan indicate that there are several major issues preventing students from developing their speaking skills.

Based on the results of the observations conducted, an overview was obtained regarding the needs, learning styles, prior knowledge, skills, learning problems, potential use of games, and characteristics of students in English language learning. In terms of Student Needs, the observations showed that students did not need speaking materials related to everyday communication, but still faced difficulties in using certain vocabulary when speaking. Furthermore, in terms of Learning Style, it was identified that students tend to prefer interactive learning

styles, feel more comfortable with learning styles such as conversations, and tend to prefer a combination of various learning styles to facilitate the learning process. In terms of prior knowledge, observations indicate that students have not mastered basic vocabulary related to the topic and are unable to construct simple sentences according to the material, even though they already have some prior knowledge related to the topic being studied. Meanwhile, in terms of relevant skills, students are unable to follow simple instructions in English, but already have skills in using technology and interactive games that can support the learning process.

From the Learning Problems aspect, it was found that students still face difficulties in grammar, pronunciation, and expressing ideas or opinions orally. However, the results in the Potential of Games aspect show that games have great potential to support students' speaking skills. Games have been proven to increase motivation, help students understand difficult vocabulary or expressions through practice, and encourage interaction between students, which has a positive impact on their confidence in speaking.

Lastly, in terms of Student Characteristics, students indicated that they are more motivated to speak when learning activities are presented in an enjoyable and interactive manner. Additionally, they also strive to improve their pronunciation and the content of the information conveyed in speaking activities. Overall, these observation results indicate that although students still face challenges in vocabulary, grammar, and pronunciation, they have the potential to develop through appropriate learning approaches, particularly by utilizing suitable learning styles and incorporating interactive games as a learning medium that can enhance motivation, understanding, and confidence in speaking.

Table 4.1 Result of Observation in teaching learning process in Analysis

No	Observed Statement	Yes	No
Students Needs			
1	Students need speaking materials related to everyday communication.		/
2	Students still have difficulty using certain vocabulary in speaking.		/

Learning Style			
3	Students show a preference for kinesthetic learning (learning by doing/movement)	✓	
4	Students feel more comfortable with auditory-based learning (conversation)	✓	
5	Students prefer a combination of learning styles (combination)	✓	
Prior Knowledge			
6	Students understand basic vocabulary related to the topic		✓
7	Students are able to construct simple sentences based on the topic		✓
8	Do students have background knowledge about the material being discussed	✓	
Relevant Skills			
9	Students are able to follow simple instructions in English		✓
10	Students have the skills to use technology or interactive games	✓	
Learning Problems			
11	Students face difficulties in grammar when speaking		✓
12	Students face problems with pronunciation	✓	
13	Students find it difficult to express ideas or opinions orally	✓	
Potential of Games			
14	Games increase students' motivation to speak	✓	
15	Games help students understand difficult vocabulary/expressions through practice	✓	
16	Games facilitate student interaction to build speaking confidence	✓	
Students Characteristics			
17	Do students seem motivated to speak when activities are made fun	✓	
18	Do students try to improve their pronunciation or information when speaking	✓	

Based on interviews with English teachers, it was found that the main objectives of learning are focused on understanding basic vocabulary and increasing students' confidence in speaking. However, teachers admit that not all students are able to achieve these objectives, as most still need intensive guidance, especially in speaking skills. The teacher also explained that while some students are enthusiastic, many remain passive, tend to stay quiet, or only provide brief answers due to feelings of shyness and fear of making mistakes. To address this, the teacher strives to create a pleasant classroom atmosphere by providing activities such as role-playing and simple games, so that students are more confident and motivated to participate. This aligns with previous observations indicating that students are more motivated to speak when learning activities are designed to be interactive and enjoyable.

In addition, the interviews also revealed that teaching materials used are still dominated by textbooks, although videos or images are sometimes added to reduce student boredom. When giving instructions, teachers emphasize the importance of repetition and the use of Indonesian so that students fully understand, which is consistent with the observation that students are not yet fully able to follow simple instructions in English. Regarding technology, the teacher stated that its use is still limited due to school infrastructure constraints, although he believes that the use of interactive media, including games, has great potential to increase student engagement. This reinforces the observation that games can not only increase motivation but also help students understand difficult vocabulary and build their confidence in speaking.

Table 4.2 Result of Teacher Interview

No	Questions	Response
1	What are the main learning objectives you aim to achieve in teaching English to your students?	My goal in teaching English is usually to help students understand the basic material first, like daily vocabulary and getting them to speak up—even if they make mistakes. I focus more on building their confidence to speak.
2	Do you think your students are able to understand or achieve the learning objectives given?	Honestly, not all students can reach the learning objectives. Some get it quickly, but many still need a lot of guidance, especially in speaking.

		Sometimes they just memorize without really understanding.
3	How do you assess your students' prior knowledge before delivering new material?	Before starting a topic, I usually ask if they've learned something similar before. I also give small activities to see how much they already know. It helps me decide where to begin.
4	In your opinion, do students show interest or curiosity about the material being taught?	Not all students are active. Some of them are quiet, especially when asked to speak in English. Maybe they're shy or afraid of making mistakes. But some are quite enthusiastic.
5	How confident are your students in using English for speaking during classroom activities?	Students still rarely speak English fluently. Most of the time they give short answers or stay silent. We need a more creative approach to get them to speak.
6	What strategies do you use to encourage students to participate actively during the lesson?	I try to create a relaxed and fun atmosphere in class. For example, I give them role-playing activities or English guessing games. When the class feels comfortable, they become more motivated.
7	Do you think the teaching materials provided are appropriate and relevant to students' needs?	The material I use is mostly from textbooks. The content is okay, but sometimes it's not very interesting. If it's just long texts, students get bored quickly.
8	How do you ensure that students understand your instructions during the lesson?	I usually given instructions slowly and repeat them if needed. Sometimes I also explain in Indonesian to make sure they really understand what to do.
9	What references or additional materials do you use to support your teaching?	I have textbooks and worksheets, but I often look for extra materials online—like short videos or pictures—to make lessons less monotonous.
10	Do you use any technology (e.g., PowerPoint, videos, online platforms) during English lessons?	We have a projector in this school, but I haven't used it yet because everything learned can be done through books only.
11	How often do you integrate digital media or games into your lessons to help improve engagement?	I've never used game-based learning media before, but I think it's a good idea. Kids these days love interactive things, so I think they would enjoy it more
12	What challenges do you face in using technology based on the school's infrastructure and students' access?	Technology is also a challenge. School facilities do exist, but not all classrooms have internet or devices. So, I only rely on textbooks that already exist.

From the observation and interviews, it can be concluded that students still face a number of challenges in speaking skills, particularly in vocabulary, grammar, sentence structure, and pronunciation. Students also tend to be passive when asked to speak in English due to a lack of confidence and fear of making mistakes. However, students show a high level of interest when learning is presented through enjoyable and interactive activities, such as simple games or role-playing exercises. This aligns with teachers' assessments, which emphasize the need for creative strategies to encourage students to speak more confidently and actively engage in the learning process.

In addition, the results of the observation show that students tend to have learning styles and are accustomed to using technology, although it is still rarely utilized in learning. Teachers also emphasize that the media used so far is still limited to textbooks, which are less interesting to students. Therefore, both in terms of student needs and characteristics, it is clear that the use of interactive educational games is highly relevant for implementation. This medium not only enhances learning motivation and aids in understanding difficult vocabulary through practice but also encourages student interaction, builds self-confidence, and directly trains their speaking skills in a more enjoyable learning environment.

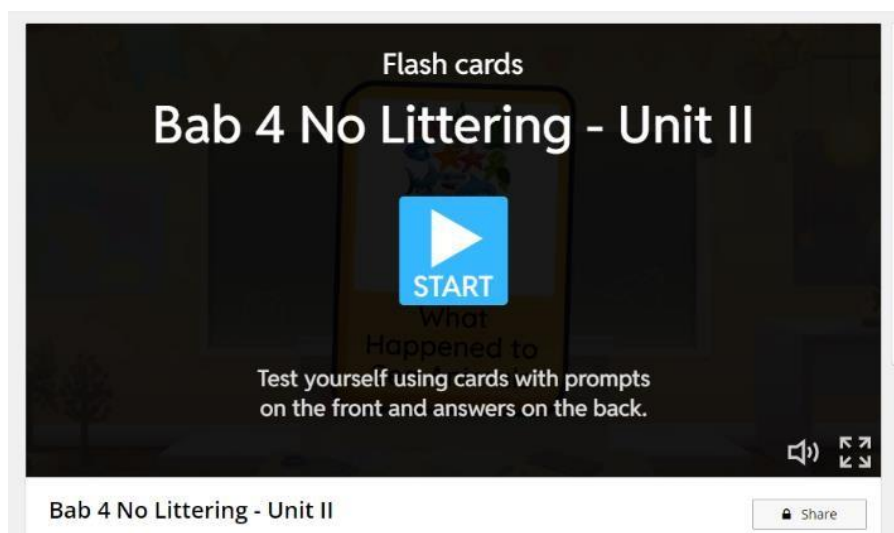
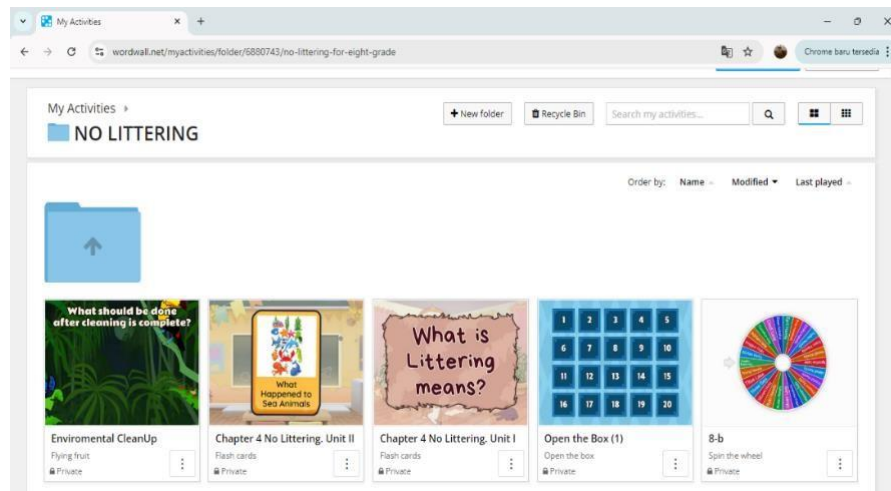
4.1.2 Design

The design stage is a follow-up to the needs analysis process that was previously conducted on students at SMP Negeri 4 Gunungsitoli Selatan. In this stage, researchers began to make a design for interactive educational game components aimed at overcoming students' problems in English speaking skills. The researcher has determined the learning objectives that are talk about past incident or event; make questions for a short interview; identify the main idea and detailed information on a series of past incidents or events and tell a series of past events. The researcher also selected the appropriate learning method that re Game based learning, and the learning media using project store featuring interactive educational game which has all been created in the learning teaching module.

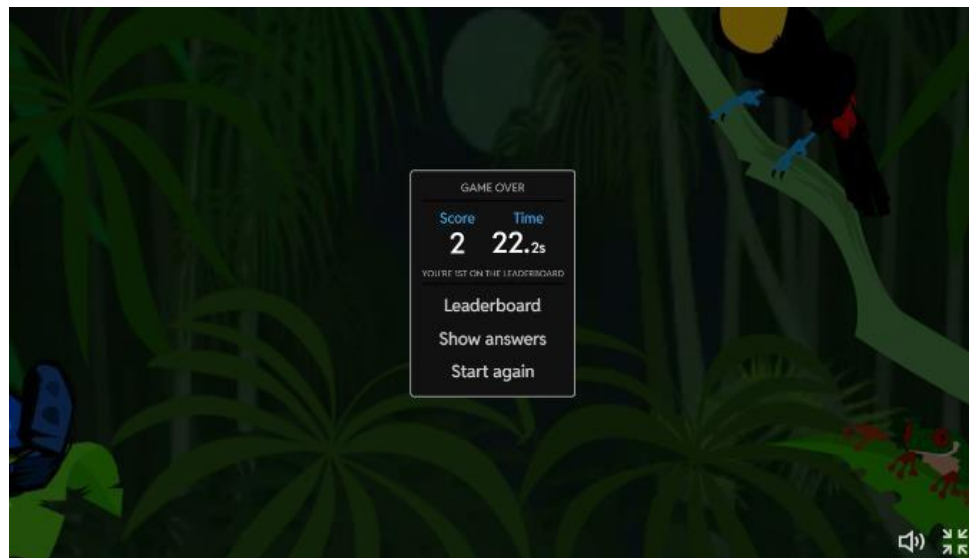
a. Game Content Design

The development plan for the educational game began with formulating learning objectives relevant to the conditions of students at SMP Negeri 4 Gunungsitoli Selatan. The main objective is to help students master English speaking skills, particularly in recounting past experiences, asking simple interview questions, and understanding and conveying the main ideas of an event. The game content is aligned with the current curriculum and integrated with environmental education values through the “No Littering” theme, which is closely related to students' daily lives. The material presented in the game is designed with a thematic, interactive, and communicative approach. Exercises such as answering questions and creating dialogues with classmates are designed to make students more interested and interactive. All activities are developed based on a contextual approach so that students feel that learning is closer to real life and easy to understand.

The media design in this interactive educational game is designed to attract students' attention and support an enjoyable English learning process. Visual components such as colours, icons, characters, navigation buttons, and the layout of each game screen are created with the age of the users, namely junior high school students, in mind. Bright colours are chosen to create a positive impression and enthusiasm for learning, while the shapes of icons and buttons are made simple and easy to understand. Additionally, each visual element is arranged consistently to prevent confusion when students move from one section to another. Illustrations and environmental symbols, such as trash bins, clean/dirty areas, and student characters engaged in dialogue, are used to reinforce the game's messages and meanings. With visually appealing and contextually appropriate designs, it is hoped that students will be more focused and motivated to actively participate.



Picture 4.1 Front Page and Menu of Website



Picture 4.2 Button and navigation icon design

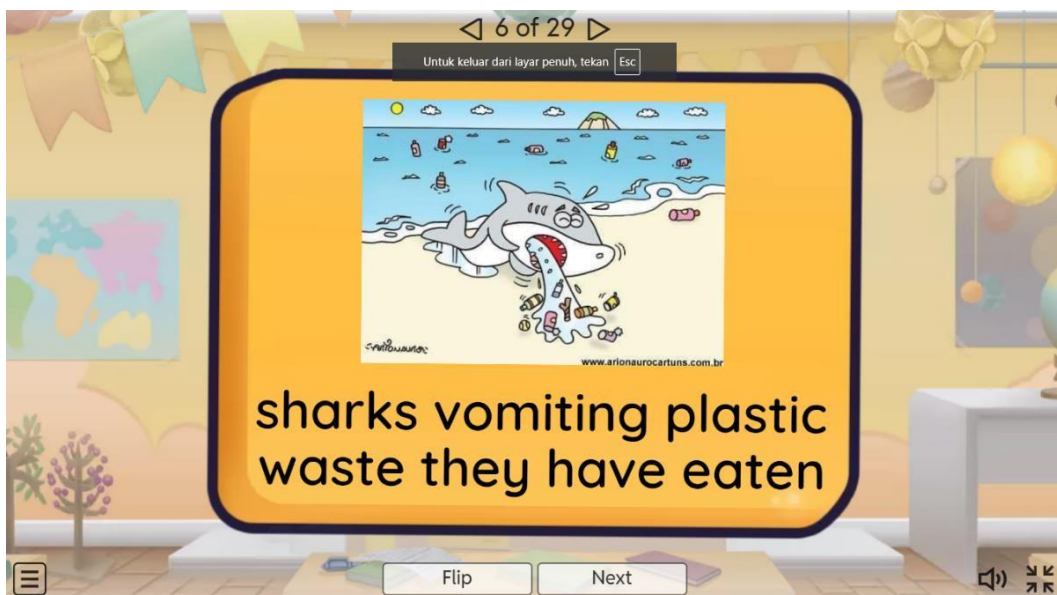
b. Material Content

The material included in this interactive educational game is based on the learning Objective outlined for eighth-grade junior high school students, specifically topics related “No Littering.” The content is developed in a contextual and communicative manner so that students not only understand the theoretical aspects but are also able to apply them in the form of speaking practice. The content includes expressions for recounting past events, formulating simple interview questions, and composing short stories based on images or text excerpts.

Each section of the material is designed to support the progressive mastery of speaking skills, starting from basic exercises (such as selecting past tense verbs) to productive activities (storytelling and short interviews). The content is enhanced with visuals and audio support to make it more engaging and easier for students to understand. All materials are based on the English for Nusantara textbook and input from subject teachers to ensure alignment with local context and student needs.

Picture 4.3 Sample Material in Unit I





Picture 4.4 Sample Material in Unit II

4.1.3 Develop

The development stage is the core process in producing the final form of the designed learning media, in this case an interactive educational game on the students' speaking for junior high school students. After going through the analysis and design stages, the media is developed gradually with reference to input from experts and the results of initial trials. The primary objective of this stage is to optimize the product to align with students needs and effectively support the speaking learning process. All elements of the game from visual design, game

instructions, language content, to interactive features are designed and modified based on feedback obtained during the validation process. As a result, the final product is not only visually appealing but also functional and educational, tailored to the characteristics of middle school students.

At this stage, the input of experts is crucial to ensure the quality and suitability of the product being developed. Validation is conducted by three types of experts: design experts to evaluate the visual aspects and interactivity of the game; language experts to ensure the accuracy of the structure and use of English; and content experts to assess the relevance of the game's content to the curriculum and the needs of junior high school students. The validation results from these experts serve as a reference for revising and refining the product before proceeding to the implementation and evaluation stages.

Table 4.3 Validator's Name

No	Name	Job/Position
1	Trisman Harefa, S.S.,M.Pd.	Lecturer in English Education Study Program
2	Ofelius Laia, S.Kom., M.Kom.	Lecturer in Information Technology Education Study Program
3	Dian Desrini Harefa, S.Pd.	English teacher at SMP Negeri 4 Gunungsitoli Selatan

a. Validation Result

After the interactive educational game has been developed, the next step is to validate it to ensure that the product is suitable for use in learning. This validation is carried out by three experts, namely a design expert, a language expert, and a subject matter expert. Each expert evaluates the game based on their area of expertise, such as visual appearance, correct use of English, and the suitability of the content with the subject matter. The experts' assessments are used as a basis for improving and refining the game before it is tested on students.

1) Design Validation

Design validation was carried out by Ofelius Laia, S.Kom., M.Kom lecturer at the Information Technology Education Study Program. Validation ensures that visual elements such as colours, fonts, icons, and

layouts comply with design principles that are eye-catching, unambiguous, and comfortable to view.

Table 4.4 Validation Result of Design Expert

No	INDICATOR	RATING SCALE				
		1	2	3	4	5
Design Appearance						
1	The layout of elements (menus, buttons, content) is neat and easy to understand.					5
2	Colors and images are consistent with the learning theme					5
3	Icons, buttons, and symbols are easy to recognize and understand				4	
Layout and Structure						
4	The placement of elements (titles and instructions) is neat and logical.				4	
5	The display is neither too full nor too empty; it is proportional and pleasing to the eye.					5
6	There are interactive elements (images, quizzes) that enrich the learning experience.					5
Audience Suitability						
7	The design is tailored to the characteristics of students (colors, icons, and text)				4	
8	The text on the design display is clear and easy to understand				4	
9	Illustrations and image descriptions					5
10	The design is able to attract attention and motivate students to use the game				4	
Total Score		45				
Percentage		90%				
Category		Very Good				

After undergoing a design validation process by Mr. Ofelius Laia, S.Kom., M.Kom., a lecturer in the Information Technology Education Study Program, the assessment results showed a score of 90%. This score is categorized as “very good,” indicating that the interactive educational game design developed has met the required criteria in terms of aesthetics, visual

structure, and user comfort. Aspects such as colour selection, icon consistency, text readability, and layout organization are deemed consistent with the principles of good instructional design.

Additionally, this validation result serves as an indicator that the designed game can present an appearance that is not only appealing but also supports student engagement during the learning process. The high scores obtained indicate that this design is suitable for middle school students, considering their age, visual needs, and technical limitations. Therefore, the product design can be considered suitable and ready for implementation as an educational tool that can enhance students' speaking skills through an interactive and enjoyable approach. The Validation value will be displayed in the chart as follows:

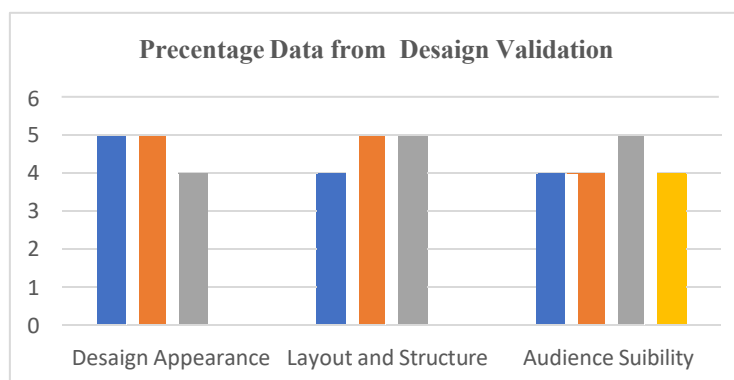


Chart 4.1 Percentage Data from Design Validation

2) Linguistic Validation

The linguistic aspects of this product were evaluated by Mr. Trisman Harefa, S.S., M.Pd., a lecturer in the English Language Education Study Program, to ensure that all content in the game, including instructions, dialogues, and narratives, uses appropriate, communicative English that is suitable for junior high school students. The assessment covers sentence structure, word choice, clarity of meaning, and the appropriateness of the language context with the illustrations used. The results of this validation are a key determinant in ensuring the inaccuracy and effectiveness of language use, while also reinforcing the game's function as an educational medium that promotes speaking skills in a natural, interactive, and meaningful way.

Table 4.5 Validation Result of Linguistic Expert

No	INDICATORS	RATING SCALE				
		1	2	3	4	5
Straightforward Aspects						
1	Effectiveness of sentences					5
2	Terminology				4	
Communicative Aspects						
3	Understanding messages or information					5
Language Rules						
4	Grammatical accuracy					5
Aspects of Terms and Symbols						
5	Spelling accuracy					5
6	Consistent use of terminology					5
7	Consistent use of symbols					5
Total Score		34				
Percentage		97,14%				
Category		Very Good				

The validation results conducted by Mr. Trisman Harefa, S.S., M.Pd., as an expert in the field of English, indicate that the linguistic aspects of the developed learning media have achieved a very good level of suitability. From the assessment process, which included grammar, word choice, clarity of instructions, and appropriateness of language use in context, a percentage of 97.14% was obtained. This score reflects that the language used in the game is appropriate for the needs and abilities of junior high school students, both in terms of structure and meaning. The accuracy of the language and the ease of understanding each part of the material make this media suitable for use as a means to improve students' speaking skills in a fun and meaningful learning environment. The following is a diagram of the results of language experts' validation of the learning media that has been developed.

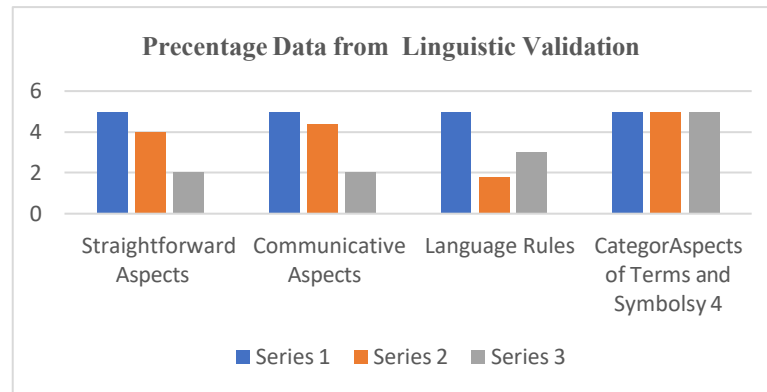


Chart 4.2 Percentage Data from Linguistic Validation

3) Material Expert Validation

The material was validated by Ms. Dian Desrini Harefa S.Pd, English teachers at SMP Negeri 4 Gunungsitoli Selatan to ensure that the content presented in the game was in line with learning objectives, students' language proficiency levels, and curriculum standards. This process aimed to ensure that the material was accurate, relevant, age-appropriate, and supported the effective development of students' speaking skills. Through this validation, the content was assessed as having strong educational value and appeal for students.

Table 4.6 Validation Result of Material Expert

No	INDICATORS	RATING SCALE				
		1	2	3	4	5
Content Feasibility Aspects						
Appropriateness of material to learning outcomes						
1	Completeness of material				4	
2	Breadth of material					5
3	Depth of material					5
Accuracy of material						
4	Accuracy of concepts and definitions					5
5	Accuracy of data and facts					5
6	Accuracy of examples and cases					5
7	Accuracy of images and illustrations					5
8	Accuracy of terminology				4	

Learning material supporters						
9	Availability of teaching materials					5
Presentation Feasibility Aspects						
Presentation Techniques						
10	Conceptual coherence				4	
Support for presentation						
11	Examples of images in everyday life					5
12	Images and illustrations for each indicator					5
13	Introduction				4	
14	Summary			3		
Presentation of learning						
15	Student involvement					5
Completeness of presentation						
16	Presentation of material in the form of a website					5
Total Score		74				
Percentage		92,5%				
Category		Very Good				

The learning media design was also validated by Ms. Dian Desrini Harefa, S.Pd., who has a background in education and experience in implementing interactive teaching media in schools. Based on her assessment, this interactive educational game received a score of 92.5%, which is categorized as very good. This achievement indicates that the visual aspects and interface of the game meet the feasibility standards from the perspective of educators in the field. The assessment covers colour accuracy, icon clarity, navigation comfort, and alignment with the material being presented. The high percentage obtained reflects that the game design is considered effective in supporting an engaging learning process that aligns with the characteristics of junior high school students. The following diagram presents the results of the validation of the material aspects of the designed learning media.

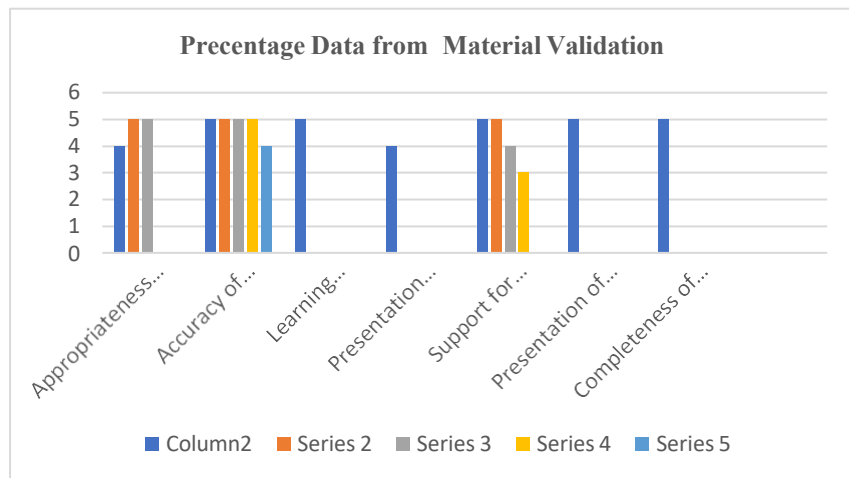


Chart 4.3 Percentage Data from Material Validation

The results from the three expert validations design, language, and material show that the interactive educational game is of high quality and ready to be used. Mr. Ofelius Laia assessed the design and gave a score of 90%, Mr. Trisman Harefa evaluated the language and gave 97.14%, while Ms. Dian Desrini Harefa reviewed the material and gave 92.5%. After averaging these three scores, the total result is 93.21%, which is included in the *very good* category. This means the product is suitable and feasible to be tried out in the classroom as a learning tool to help students improve their speaking skills in a fun and meaningful way.

b. Product Revision

After validation by experts in design, language, and materials, the researchers received various constructive inputs. These suggestions aimed to improve the media so that it would be more suitable and appropriate for the students' needs. A summary of the suggestions from the three validators is presented in the following table as a reference for product revision.

Table 4.7 Product Revision

No	Name	Job/Position	Revision
1	Trisman Harefa, S.S.,M.Pd.	Lecturer in English Education Study Program	Use simpler language that is easier for junior high school students to understand.
2	Ofelius Laia, S.Kom., M.Kom.	Lecturer in Information Technology Education Study Program	Add illustrative games that students can play so that they can understand the topics being studied on their own.
3	Dian Desrini Harefa, S.Pd.	English teacher at SMP Negeri 4 Gunungsitoli Selatan	The introduction and summary sections still need to be clarified, both in terms of content and structure, so that students can more easily understand the core topics being studied.

4.1.4 Implementation

The implementation stage was carried out in class VIII of a junior high school, involving two groups: an experimental class and a control class. In the experimental class, students were taught using the interactive educational game that had been developed, while the control class received instruction through conventional lecture methods using the school's official textbook. This division aimed to observe and compare the effectiveness of the developed media in enhancing students' speaking skills, particularly in terms of student engagement, participation, and speaking performance during the learning process.

a. The Implementation of Interactive Educational Games

The learning media that had been developed was implemented on eighth-grade students at a junior high school. As explained earlier, this study involved two different groups, namely the experimental group and the control group. The experimental group was taught using interactive educational games, while the control group received instruction through conventional methods, namely explanations from the teacher and the use of

school textbooks. The implementation process was carried out in two sessions for each group, with the material focusing on speaking skills, specifically about past events and environmental awareness. The complete schedule of implementation is presented in the next section.

Table 4.8 Schedule of Implementation

No	Schedule	Class	Activity
1	06 Mei 2025	EG & CG	Pre-test
2	10 Mei 2025	EG	Teaching the students about the topic No Littering Unit I Did it rain last night using Interactive educational games
3	11 Mei 2025	CG	Teaching the students about the topic No Littering Unit I Did it rain last night using Printed book
4	19 Mei 2025	EG	Teaching the students about the topic No Littering Unit II What Happened to Sea Animals using Interactive educational games
5	20 Mei 2025	CG	Teaching the students about the topic No Littering Unit II What Happened to Sea Animals using Printed book
6	27 Mei 2025	EG & CG	Post-test

b. The Result of Implementation: effectivities

The implementation was carried out after the interactive educational game had been verified by experts. This stage involved conducting speaking tests and distributing questionnaires. The purpose of this implementation was to test the feasibility and effectiveness of the media developed in supporting students' speaking skills. The results obtained from this stage provided valuable insights into how well the product functioned in a real classroom environment and how it was received by students.

1) Effectivity of interactive educational games

The implementation stage involved two different student groups, each receiving distinct instructional approaches. One group, as the experimental class, was taught using interactive educational games to

support the speaking activities, while the other group, as the control class, followed conventional instruction through textbook-based lectures and discussions. This differentiation was intended to observe the impact of the developed media on students' speaking performance through comparative analysis.

(a) The result of experimental group

This section presents the outcomes from the experimental group, where students were taught using interactive educational games. The aim was to examine how this media influenced their speaking skills during the learning process. The results are based on students' performance and progress observed throughout the treatment period.

Table 4.9 Result of experimental group

No	Student	Pre-test	Post-test
1	AH	55	75
2	PH	50	75
3	CG	45	70
4	AN	65	80
5	EN	55	75
6	EH	60	75
7	ES	60	80
8	ER	55	75
9	FD	60	80
10	FV	60	80
11	HS	60	80
12	IG	65	75
13	JH	50	65
14	KH	70	85
15	KP	65	80
16	MG	60	80
17	MC	50	75
18	OL	45	75
19	RH	40	70

20	RR	45	70
Total		1.115	1.515
Percentage		55.75%	75.75%

The results of the analysis of pre-test and post-test scores in the experimental class showed a significant increase in students' abilities after the use of interactive educational game media. During the pre-test, the total student score was 1,115 with an average of 55.75 or equivalent to 55.75%. This figure illustrates that most students have not understood the material optimally. After being given treatment through interactive learning media, the post-test scores increased to a total of 1,515 with an average of 75.75 or 75.75%. That is, there was an increase of 20 points or about 20% from the previous average score. This increase indicates that the media used is able to help students understand the material and improve their skills, especially in the speaking aspect.

(b) The Result of Control Group

In this part, the focus is on the learning outcomes of the control group, which followed a traditional teaching approach using the school's textbook and teacher explanation. This comparison aims to see how the conventional method affects students' speaking abilities without the support of interactive games.

Table 4.10 Result of control group

No	Student	Pre-test	Post-test
1	AL	50	55
2	AP	55	60
3	AH	55	55
4	AI	60	65
5	CL	45	55
6	CG	65	70

7	DL	60	60
8	DH	55	60
9	EL	45	50
10	EN	60	60
11	EH	55	60
12	AS	65	70
13	FH	50	55
14	FL	70	75
15	FS	55	55
16	HD	60	65
17	HM	50	60
18	JL	60	65
19	KG	45	55
20	SL	45	50
Total		1.110	1.200
Percentage		55,5 %	60%

The results of the pre-test and post-test measurements in the control class showed an increase in student ability, although not very significant. The total pre-test score obtained was 1,110 with an average of 55.5%. After the learning process took place without the use of interactive media, the post-test score increased to 1,200 with an average of 60%. This increase of 4.5% reflects an increase in students' understanding of the material, but the increase is relatively slow and tends to be stable, indicating that the learning approach used has not provided maximum encouragement to student development.

4.1.5 Evaluation

The implementation was carried out after the product passed expert validation. Students were given speaking tests and questionnaires. This stage aimed to measure the practicality and effectiveness of the developed media.

(b) Questionnaires

To assess students' responses toward the developed interactive educational game, a questionnaire was distributed to 20 participants from the experimental class. The questionnaire aimed to gather students' opinions on the usefulness, attractiveness, and ease of use of the media. The percentage results of their responses are presented in the following table to illustrate the overall level of acceptance and engagement with the product

Table 4.11 The Percentage of questionnaire

No	Aspect of Assessment	Score					Total score	Mean	Percentage
		1	2	3	4	5			
1	Design attractiveness				11	9	89	4.45	89%
2	Good colors and images				10	10	90	4.50	90%
3	Content attractiveness				8	12	92	4.60	92%
4	The letters used are easy to read				9	11	91	4.55	91%
5	Color blend attractiveness				11	9	89	4.45	89%
6	Easy to use				10	10	90	4.50	90%
7	Easy to understand				9	11	91	4.55	91%
8	Simple sentences				12	8	88	4.40	88%
9	Usage guidelines				13	7	87	4.35	87%
10	Ease of learning				6	14	94	4.70	94%
11	Interest in using the game				5	15	95	4,75	95%
12	learning				9	11	91	4.55	91%

The assessment of educational game design was carried out based on twelve aspects including visual appearance, readability, ease of use, and content attractiveness. A total of 20 respondents provided an assessment using a scale of 1 to 5. The results of data processing show that the total score obtained is 1,077 out of 1,200, or equivalent to 89.75%. This figure reflects that in general the game design has met the eligibility standards with a very good category. All aspects obtained dominant scores in the 4 and 5 categories, which indicates that the appearance and function of the design are considered adequate and in accordance with the needs of students.

The overall average score or mean of the twelve aspects of the assessment was 4.52 out of 5, with details of some aspects such as ease of learning and interest in using the game getting the highest scores, 94% and 95% respectively. Meanwhile, the instructions for use aspect scored slightly lower at 87%, but still in the excellent category. The high percentage obtained in almost all aspects reinforces that the game design is not only visually appealing, but also effective in conveying the material clearly and easy to use. Overall, the results of this assessment indicate that the educational game design is suitable for use in the learning process.

(c) Observation Sheet to the Researcher in Teaching Learning Process

This observation sheet is used by subject teachers to assess the learning process carried out by researchers during the implementation of interactive educational games in experimental classes. The assessment covers several important aspects such as the suitability of learning objectives with the material, creativity in designing interesting and relevant activities, appropriate use of media and technology, and the ability to manage the class and create a conducive learning atmosphere.

Table 4.12 Observation Sheet for the Researcher in Teaching Learning Process

No	Aspects assessed	Assessment indicator	Skor (1-5)	Note
Preliminary Stage				
1	Classroom Management Skills	Researchers are able to organize classes, schedules, and student interactions from the beginning of the learning process.	5	Very Good
2	Creating a Conducive Learning Environment	Researchers create a learning environment that is comfortable, safe, and supportive of student participation.	5	Very Good
3	Implementation of Initial Steps Interactive Educational	Researchers explain learning objectives, provide an overview of activities, and motivate students to participate.	5	Very Good
Core Activity Stage				
4	Game Suitability for Learning Objectives	The games used are relevant to the material and support the achievement of learning objectives.	5	Very Good
5	Innovation in Activity Design	Learning activities are designed to be creative, engaging, and relevant to students' lives.	4	Very Good
6	Researchers' Ability to Present Material	The material is explained clearly, coherently, and in accordance with the students' level of understanding.	5	Very Good

7	Student Activity	Students are actively involved in learning activities (asking questions, answering questions, trying things out, discussing).	5	Very Good
8	Student Motivation	Students showed enthusiasm and excitement in participating in the learning process.	5	Very Good
9	Students' Ability to Use Interactive Educational Games	Students can play educational games according to the instructions and objectives of the activity.	5	Very Good
10	Researchers' Ability to Monitor Student Progress	Researchers actively observe, provide feedback, and adjust methods according to student progress.	5	Very Good
Closing Stage				
11	Learning Outcomes in Line with Learning Objectives	Student learning outcomes show that the planned learning objectives have been achieved.	5	Very Good
12	The Impact of Learning on Students	Learning has a positive impact on students' knowledge, skills, or attitudes, and motivates them to learn more.	5	Very Good
Total				59
Percentage				98,33%

Based on the data obtained from the assessment table, the observation results show that the use of interactive educational games in the learning process in the experimental class reached a percentage of 96%. This value reflects that the learning practices

applied are very good, and shows that this media is practical and effective for use in increasing student engagement and speaking skills during learning activities.

(d) Lesson Plan Validation Result

In order to ensure the suitability of the lesson plans designed by researchers using the interactive educational game approach, teachers conducted assessments using special evaluation sheets. This assessment covers several important indicators, such as alignment with the current curriculum, clarity of learning objectives, relevance of content, variety of methods used, suitability of media to student characteristics, and an objective assessment system. The evaluation aims to determine how well the instructional materials are suitable and support the overall learning process.

Table 4.13 Lesson plan validation result

No	Assessment Aspect	Assessment Criterion	Skor				
			1	2	3	4	5
1	Curriculum Alignment	Are the tools in line with the current curriculum?					✓
2	Learning Objectives	Are the learning objectives clear and measurable?				✓	
3	Learning Materials	Is the material relevant and up-to-date?					✓
4	Learning Methods	Are the methods used varied and appropriate for the students' characteristics?					✓
5	Learning Media and Resources	Do the media and learning resources used support the learning process?					✓
6	Assessment and Evaluation	Is there a clear and objective assessment system?				✓	

7	Student Engagement	Do the tools encourage students to actively engage in learning?					✓
8	Integration	Does the tool demonstrate integration between learning components?					✓
9	Creativity and Innovation	Are there elements of creativity and innovation in the tool?					✓
10	Time Feasibility	Is the time allocated for each activity appropriate?					✓
Total Score			48				
Percentage			96%				

The assessment of the lesson plans that had been adapted for use with interactive educational games showed a percentage of 96%. This figure indicates that the lesson plans were considered to be very good and suitable for use, as they fulfilled important aspects such as suitability with the curriculum, clarity of learning objectives, relevance of material, variety of methods, and appropriate learning media support during the learning process in the experimental class.

Based on the results of the questionnaire for the students, observation sheet to the researcher in teaching learning process, and lesson plan validation, it can be assumed that the interactive educational game design, learning implementation, and teaching tools have fulfilled the criteria of excellent feasibility. This is indicated by the high percentage of assessment, namely 89.75% for game design, as well as 96% for learning observation results and lesson plan validation. With this achievement, the developed media is considered feasible, practical, and effective to be used to support the learning process, especially in increasing students' engagement and speaking ability.

4.2 Discussion

This research aims to develop learning media in the form of interactive educational games that can be used to improve the speaking skills of junior high school students.

The media development process was carried out on a systematic basis by following the stages in the research and development model. The first step I took was to conduct a needs analysis through observations and interviews to find out the problems of learning English, especially in speaking skills. Based on the preliminary results, I developed a game design that is in accordance with the characteristics of junior high school students, including the selection of themes, materials, illustrations, and preferred game types. Once the design was complete, the game was technically developed using a software that supports interactive elements. The initial product was then reviewed and validated by media design experts, English language experts, and subject teachers. This stage was important to ensure that the content created was not only visually attractive, but also in line with the curriculum and learning objectives. Any feedback from the validators was used to revise and improve the product before it was tested in the classroom. This process shows that development is not done on a random basis, but through a structured procedure and considering input from various parties.

To find out if the interactive educational game developed is suitable for use in learning, the researcher validated the media and learning tools. Based on the results of the questionnaire given to 20 respondents, the media received a total score of 1,077 out of 1,200, or equivalent to 89.75%, which is in the very good category. The average score of each aspect of the assessment is also high, with a mean of 4.52 on a scale of 5. This indicates that the media is generally attractive, easy to use, and in accordance with the learning needs of junior high school students. Not only on the media, the feasibility was also assessed from the accompanying learning tools, namely lesson plans that were specially prepared to support the use of this game in the classroom. The results of the lesson plan validation show a score of 96%, which indicates that this teaching tool is considered very good in terms of the suitability of the material, clarity of objectives, variety of methods, and utilization of supporting media. With these results, I am confident that the media developed is

not only visually appealing, but also meets the pedagogical and curricular requirements needed in the teaching and learning process.

To determine the impact of using educational games on students' speaking skills, I compared the pre-test and post-test results in the experimental and control classes. In the experimental class, the students' total score increased from 1,115 (55.75%) in the pre-test to 1,515 (75.75%) in the post-test. This shows an increase of 20%, which illustrates that the use of media has had a real impact on improving students' speaking ability. Meanwhile, in the control class that did not use educational game media, the improvement was much smaller. The total score increased from 1,110 (55.5%) to 1,200 (60%), or only 4.5%. This difference in results shows that interactive educational game-based learning media is more effective in helping students improve their speaking skills. Through a fun approach, students became more confident to speak in English and more actively engaged during the learning process.

One important indicator in the success of learning media is how students respond when the media is applied in the classroom. From the results of observations made during the learning process in the experimental class, data obtained that the level of student involvement reached 96%. This shows that students are very active, enthusiastic, and motivated during learning activities using educational game media. They look more confident in speaking, dare to express their opinions, and are not afraid to try. The more relaxed and fun learning situation seems to have a big influence on students' learning spirit. The game media developed succeeded in changing the learning atmosphere to be more interactive and participatory. This is certainly an important point, because speaking skills cannot be developed only with a one-way approach from the teacher, but through active activities that provide space for students to practice directly. The positive response from the students reinforces that the educational media developed is not only effective from the technical side, but also well received by the learners.

The results indicated that the developed interactive educational game is feasible to use and effective to improve the speaking ability of junior high school students. The media was validated with a result of 89.75% and the supporting lesson plan reached 96%, both in the excellent category. The increase in student learning

outcomes in the experimental class reached 20%, much higher than the control class which was only 4.5%. In addition, students also showed high engagement during the learning process. This finding proves that the media created is not only interesting, but also has a positive impact on the teaching and learning process