

DEVELOPMENT OF AN INTERACTIVE COMPENSATORY LEARNING MODEL TO IMPROVE THE READING COMPREHENSION ABILITY OF GRADE XI HIGH SCHOOL STUDENTS IN SOUTHEAST MALUKU REGENCY AND TUAL CITY, MALUKU PROVINCE

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ABSTRACT

Reading is one of the important competencies in English. So far there are still many high school students who cannot read English texts properly and correctly. Various efforts from the government to improve the quality of education in the field of English through updates to the curriculum, improvement of facilities and improvement of teacher quality. But this is still felt to be unanswered. This research aims to produce a reading learning model product that suits current and future needs in high school. This study used an approach Research and Development. The subjects of the study were 11 teachers and students in 10 schools in the research site. Data collection techniques were carried out using questionnaires, interviews, observations, documentation and tests. Data analysis techniques are carried out using qualitative and quantitative analysis techniques (statistical tests). The results showed that there were differences in students' English learning outcomes for the three groups of good, medium and less who used the learning model interactive Compensatory and conventional learning. This is shown statistically using the t test, where the group of both tcount values (22.58) > ttable (2.02); medium group t valuecount (17.19) > table (2.02); The group lacks tcount value (10.26) > ttable (2.02). Statistically it can be seen that learning using models Interactive Compensatory More effective in improving capabilities reading comprehension rather than conventional learning. Reading techniques scanning, skimming, bottom-up, top-down In this study produced a reading model Interactive Compensatory.

KEYWORDS English, Reading Comprehension Ability, Interactive Compensatory Model



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INTRODUCTION

English is one of the foreign languages whose position according to Law No. 24 of 2009, Part II, Article 29 (2), can be used as the language of instruction in education aimed at improving the foreign language competence of learners. The fact that English is a language that has the largest number of speakers compared to other languages on earth has opened the awareness of the world community that English has a high functional to be used as a communication tool in the global era like today. With its very important position, namely as a communication tool in the global era, it is not surprising that people in various parts of the world are trying to master English for various purposes.

The competence of high school students in speaking English is still very low. In fact, they have studied English for many years in school, from elementary to junior high school. Likewise with the ability to read, the ability of high school students to read English texts is still very low. The results of research conducted by the *Program of International Student Assessment (PISA)* Team, Research and Development Agency, Ministry of National Education of the Republic of Indonesia, reported that the reading ability of 15-year-old children in Indonesia is very concerning. Statistics show that about 37% of them can only read without being able to grasp the meaning, and as many as 24.8% can only associate the text read with one piece of knowledge information. The data shows that there are still many Indonesian children who have difficulty understanding reading material.

Average UAN scores for English subjects in the last four years in Southeast Maluku Regency and Tual City, Maluku Province. The average UAN score is believed to be a result that describes the quality of English learning carried out in schools. In Table 1, the author presents the average UAN value for English hahasa subjects obtained by high school students in Southeast Maluku Regency and Tual City.

Table 1. Average Score of High School Students in Southeast Maluku Regency and Tual City for English Subjects in the National Final Examination

No	Program	Exam Year	Value Average
1.	Language, IPS and IPA	2006/2007	6,86
2.	Language, IPS and IPA	2007/2008	6,56
3.	Language, IPS and IPA	2008/2009	7,20
4.	Language, IPS and IPA	2009/2010	7,00
Average of the Last 4 Years			6,90

Data source: National Education Office of Maluku Province in 2010

Table 1 shows that the average UAN score for English subjects obtained by high school students in Southeast Maluku Regency and Tual City only reached a score of 6.90. This value means that the UAN results in English subjects are generally not good. Conditions like this attract the attention of researchers to study further in order to understand what factors directly affect the acquisition of these values.

Reading competence is the most important part that affects other competencies so that reading is seen as a determining and main factor in a learning process, especially in English language learning. The goals and objectives of a learning point to optimal student success, in this case it means that students have good reading competence.

Sukmadinata (1997: 442-443) asserts that students are the subject of learning activities. Thus, learning should be directed so that students can learn through learning activities. Through this process, the potential skills and characteristics of students are developed. Student abilities are very complex with regard to the stage of development of status, learning, and various factors behind it.

Related to learning activities illustrated by several expert expressions related to the weaknesses of high school students in reading competence revealed above, associated with data on the results of UAN scores in the last 4 years for high school students in Southeast Maluku Regency and Tual City, showing substantial weaknesses in the learning process in these schools. Related to the process of learning English, especially at the research location, it is strongly suspected that there are weaknesses of students in reading English texts.

RESEARCH METHOD

This research is a type of *Research and development* (R&D) developed by Borg & Gall. According to Borg & Gall (1989: 626) "*Educational research and development is a process used to develop and validate education products*". R&D research is a process or steps to develop a new product or perfect an existing product, which can be accounted for (Sukmadinata, 1997: 164). This R&D model includes ten steps in its implementation depicted in Figure 1.

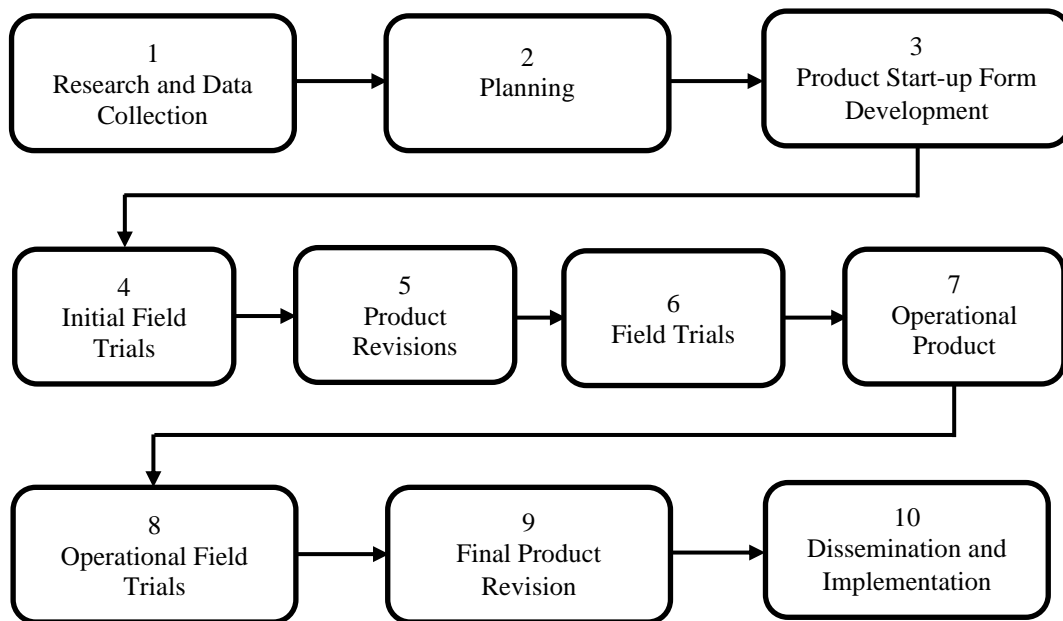


Figure 1. Borg and Gall R&D Procedure

Research Subjects

The implementation of this research involved teachers and students in 10 schools in Southeast Maluku Regency and Tual City, Maluku Province. The preparation of the initial draft of the model was carried out by involving 3 English teachers who taught in class XI of high school and as many as 223 students in three schools involving six classes, namely three experimental classes and three control classes.

Of the three schools that were used as locations for limited trials or as model testing sites, as well as validation tests as in the research format, each school can be identified as the following levels of good, medium and less. Sample determination of both the *experimental group* and the *control group* was carried out based on the classification of school conditions.

Based on the number of samples taken in schools with such a large number of students in sample size, there are several considerations for selection and collection (Sukmadinata (2004: 260-261). The determination of the type and number of sample members taken in the study will greatly affect the *representativeness* of the sample to the population. The representativeness of the population will greatly determine the correctness of the conclusions of the research results. Large sample needs if there are a number of variables that cannot be controlled. A clearer unsure examination of the subject of research can be made in the form of Table 2.

Table 2. Subject and sample of the study.

Stages of Research & Development	Stages of Research	Number of SMA in the Study	Sum Class	Sum Student	Number of Teachers
Preliminary Study	Pre survey	10 Negesi High School &; Private	20	557	11

	Model preparation	-	-	-	11
	Limited trials	3 High school	6	223	3
	Extensive trials	5 SMA good, medium & less	10	334	5
Model validation test	Experimental class	3 SMA good, medium & less	3	-	3
	KLS control	3 SMA good, medium & less	3	-	3

Data Collection Techniques

The data analyzed in this study includes qualitative and quantitative data types. (Mixed method) data collection techniques used by researchers include observation, questionnaires, interviews, documents and tests. In the implementation of limited trials, data collection techniques were used several observations and tests to students, the test was in the form of multiple choice writing (reading text) then in the wider trial stage data collection techniques using questionnaires, and written tests. To find out how much progress students make towards learning English reading comprehension used written tests.

At the stage of developing and testing the model, an initial draft of the reading learning model was compiled, then tested. It can be explained that at this stage the data are obtained through interviews, observations, documentation that is analyzed qualitatively. The data obtained through the test aims to measure students' cognitive abilities in reading English texts.

Limited trials were carried out process evaluation. The learning outcomes carried out in each round through the test aim to determine the extent of the teacher's teaching success in class, and measure students' understanding of the English text material they learn through reading scanning and skimming methods.

In wider trials, data were obtained through pretests, in this case carried out before learning and posttests after model treatment. The analysis used on quantitative data used t-tests (pretest and posttest) as well as the use of t-tests to see the difference in models before and after treatment.

Model validation stage data analysis

The final model, which is the result and refinement at the development stage, is tested for validity, can be analyzed through *pretest* and *posttest* testing. The experimental method was carried out on two groups of students, each class that received model treatment (experiment) and control class (using conventional models). The design is aimed at Table 3.

Table 3. Pretest-posttest design of a non-random control group

Group	Pretest	Treatment	Posttest
Experiment	Y1	X	Y2
Control	Y1	-	Y2

To see the difference in the average level of the two groups against the pretest and posttest, a t-test analysis (paired) was used which was processed using SPSS. The statistical hypothesis to be tested to determine the difference is formulated as follows:

H0 : $\mu_a = \mu_i$

There is no difference between the average *pretest score* and the posttest score

H1 : $\mu_a < \mu_i$

There is a difference between the average posttest scores

Information: Rejection of H0 and acceptance of H1 if $t_{count} > t_{table}$, and vice versa acceptance of H0 and rejection of H1, if $t_{count} < t_{table}$.

It can be described that before the t-test (pretest – posttest) is carried out, a data normality test is carried out. Furthermore, the ANOVA test was carried out to see the average difference between groups, namely the difference between experimental groups that were disproportionate in the upper group (schools that were considered good), the middle group (schools that were considered moderate) and the bahawah group (schools that were considered lacking). Furthermore, to see the effectiveness of the model and the improvement of *student reading comprehension* learning outcomes , a nominated score gain was used with the following formula:

$$g = \frac{\text{posttest} - \text{pretest}}{\text{skor ideal} - \text{pretest}}$$

Table 4. Normalized Gain effectiveness criteria

Normalized gain score	Effectiveness
$0.00 < g \leq 0.30$	Low
$0.30 < g \leq 0.70$	Keep
$0.70 < g \leq 1.00$	Tall

RESULT AND DISCUSSION

The Learning Model developed in this study is an *interactive reading* model with learning stages that can be seen in Table 5.

Table 5. Stages of the Interactive Reading Learning Model

Learning phase/stage	Teacher Activities	Student Activities	Time Allocation
Open the initial lesson/presentation	<ol style="list-style-type: none"> The teacher opened the meeting with a greeting The teacher discusses the learning outline. 	<ol style="list-style-type: none"> Return the greeting. Students actively follow the progress of the teacher's direction. 	15 minutes for each meeting

Material presentation	<ol style="list-style-type: none"> 3. The teacher discusses <i>the text reading material</i> 4. The teacher discusses the main idea seen from the content of the reading text. Identify the learning components, namely the preceding, content, and closing of a reading & type of essay and continued with 5. The teacher begins to discuss the substance 	<ol style="list-style-type: none"> 3. Students focus on following it with regard to the teacher's instructions 4. Students are ready to read the text actively. Understand the content of the reading text in question 5. Students read the text in a sound voice. 	Time for each point is 45 minutes for each meeting
Strengthens cognitive organization	<ol style="list-style-type: none"> 6. The teacher discusses reading in terms of various aspects such as reading vocabulary, sentences, the position of the main sentence, the organization of the essay, and the content of the reading <i>in the reading text</i>. 	<ol style="list-style-type: none"> 6. Students take tests orally and in writing from the results of the learning carried out 	20 minutes for each meeting
Cover	<ol style="list-style-type: none"> 7. Master says greetings 	<ol style="list-style-type: none"> 7. Students return greetings 	5 minutes for each meeting

Limited Trial Results

It can be explained that improvements based on the results of trials and interpretations of limited trials will be obtained a final / temporary final learning model, can be described as follows:

- a. From the results of limited trials, it was further revised to the various shortcomings of the model encountered. Furthermore, the revised design of the model that has been tested in limited trials is developed for wider trials. This is done in order to strengthen and sharpen materials that students think are poorly understood and do not provide satisfaction for them.
- b. In conducting limited trials repeatedly, the steps used are: (1) developing an initial draft; (2) implementation of learning programs; (3) improvement of learning in accordance with the pre-designed program.

Wider Trial Results

Phase two research or wider trials are carried out in five schools, and for the results of the trials can last for five times. As a consideration of school status, the researchers used three schools based on school levels including: good, medium and less. These schools include SMA Negeri 1 Tual (good), SMA Negeri 2 Maluku Tenggara (medium) and SMA Muhammadiyah Tual (less).

Model Validation Test Results

Based on the results of trials conducted five times in a row during limited trials with three trials carried out in three schools and continued with carried out in control classes and experiments and the same test and different treatment. To determine the improvement of *reading comprehension* skills using the *Interactive Compensatory* learning model for each school category, it can be known through statistical hypotheses tested through t tests using SPSS version 18.

Before testing using the t test to see whether there is a difference in students' *reading ability*, it is necessary to do a normality test to see the normality of the data. From the results of the normality test using the *Kolmogorov test*, it can be seen that the data is normally distributed, where the normality of the data is shown by a sig value of $> \alpha = 0.05$.

Furthermore, testing was carried out using test analysis between *pre-test* scores and *post-test* scores in all schools with good, medium, and less categories, showing that the average pre-test score. The results of data processing using SPSS are shown in Table 6.

Table 6. Results of Analysis (t-test) in Schools with Good, Medium and Less Categories

School categories	Test Group	n	Average	S	tcalculate	tTable	Ket.
Good	<i>Pre-test</i>	38	5.34	0.59	22,58	2.02	Significant
	<i>Post-test</i>	38	8.66	0.71			
Keep	<i>Pre-test</i>	40	4.77	0.88	17.19	2.02	Significant
	<i>Post-test</i>	40	8.40	0.99			
Less	<i>Pre-test</i>	30	4.50	0.86	10.26	2.02	Significant
	<i>Post-test</i>	30	7.30	1.12			

Ket: If t-hit > t-table then significant.

From the table of analysis results above, it can be seen that *the pre-test* and *post-test* results for all school categories statistically for average scores and standard deviations show that there is a difference that tends to increase (higher). The t-test statistics also showed that there were significant differences, which for the three groups can be explained as follows: The groups of both t-hit values (22.58) > t-tab (2.02); medium group-t-hit values (17.19) > t-tab (2.02); The group lacked a t-hit value (10.26) > a t-tab (2.02). From these results, there were differences in scores in the three groups before (*pretest*) and after (*posttest*) treatment with *The Interactive Compensatory learning model using scanning, skimming and bottom up reading techniques*.

Statistical tests were also conducted to see the improvement of learning outcomes in schools categorized into experimental classes that were treated with *The Interactive Compensatory learning model using Bottom up* techniques and control classes using conventional learning. This was done in all three groups: good, medium, and less. From pretest results and *posttest results* in experimental classes and control schools. The following are presented the average values, *standard deviations* and *N-gain values* of the three categories.

Table 7. Final Results for Model Validation in Three Schools

Category	Experimental Class					Control Class						
Good	N	X_{min}	X_{max}	\bar{x}	S	N_{gain}	N	X_{min}	X_{max}	\bar{X}	S	N_{gain}
<i>Pre-test</i>	38	4	7	5,34	0,59	0,68	40	4	7	6,05	0,78	0,13
<i>Post-test</i>	38	7	10	8,66	0,71		40	5	8	6,57	1,17	
Keep												
<i>Pre-test</i>	40	2	7	4,77	0,87	0,65	40	3	7	5,67	0,82	0,19
<i>Post-test</i>	40	7	10	8,40	0,99		40	4	8	6,50	1,06	
Less												
<i>Pre-test</i>	30	2	6	4,50	0,66	0,50	35	1	5	5,14	0,80	0,10
<i>Post-Test</i>	30	3	9	7,30	1,12		35	4	7	5,63	0,97	

Table 7 shows that the group of students who get learning with The Interactive Compensatory learning model using Bottom up reading techniques are better than students who get learning with conventional learning. It can also be interpreted that for all experimental class groups who get learning with The Interactive Compensatory learning model using canning, skimming and bottom up reading techniques are higher than control classes that get treatment with conventional learning.

From the overall N-gain value in both experimental and control classes, it can be concluded that the increase in learning outcomes in experimental classes that get learning with The Interactive Compensatory Model learning model using canning, skimming and bottom up reading techniques has a high increase, while for the control class the N-gain value It can be seen that the improvement in learning outcomes is very low. These results indicate that, that learning with The Interactive Compensatory Model learning model using canning, skimming and bottom up reading techniques is very effective in improving learning outcomes in reading comprehension.

CONCLUSION

Based on the findings of learning outcomes in the resulting design model, it can be seen that the interactive reading model applied can improve student learning outcomes in reading comprehension. This can be seen based on the results of wider trials on three high schools classified as good, medium and less. There are differences in student English learning outcomes for the three groups (Good, medium and less) using the Interactive Compensatory reading model and conventional learning. This is shown statistically using the t-test, where the group either t-hit value ($22.58 > t\text{-tab} (2.02)$); medium group t-hit value ($17.19 > t\text{-tab} (2.02)$); group less t-hit value ($10.26 > t\text{-tab} (2.02)$).

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