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Improving English Understanding on Computer Software for Class IX Students at SMP Mathla'ul Anwar Tangerang Using the String Method

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Abstract

This research improves the understanding of English in class IX students at SMP Mathla'ul Anwar Tangerang through the use of computer software specifically for keyboard shortcut material using the string method (speaking and trying). The method used in this research was Pre-Experimental with a one-shot case study design with data collection using only post-tests, instruments in the form of post-tests as primary data and questionnaires as secondary data which were distributed to 24 students. Data processing was carried out using descriptive quantitative in the form of a descriptive and inferential statistical approach with Minimum Completeness criteria (KKM) as a basis for comparing student test results, besides that the questionnaire was used as a correlation between the use of computer software and the string method (speaking and trying). Validation of the statistical results shows that this method has an influence on improving students' understanding with post-test results above the KKM score and satisfaction scores showing a positive impact on improving English language skills.

Keywords: English Skill, Software, String Method, Speaking, Trying

1. Introduction

Language learning often becomes difficult due to a lack of space for expression and exploration which encourages students to get used to developing their abilities. Therefore, many students feel that there are many obstacles and are not confident in starting to use language in everyday life, so that alternatives to encourage students are always implemented through a curriculum that requires studying language at every level of school and college. However, currently there are still many Indonesians who feel it is avoidance to learn English. Especially among students, students argue that English is a language that is difficult to learn and understand. Furthermore, according to Maksan [1] students cannot use English well and correctly, even though students have studied it from elementary to high school. This was added in [2] that English has been studied in elementary school and some have even started in kindergarten, but it is still difficult to learn. English is the language of science and technology, so if someone who does not have the good speaking ability, it will face difficulties in a world that is increasingly open, fast and uncontrolled[3].

English language skills in the 1994 curriculum, which was changed to the 2004 curriculum and then refined into the 2006 curriculum, require learning to be oriented towards developing 4 language skills, there are listening, reading, speaking and writing[1]. These four skills are divided into 2 abilities, firstly, passive skills are listening and reading abilities, that are students reach the learning experience, such as new knowledge through listening and reading medias. Secondly, active skills consist of speaking and writing, which are students demonstrate their abilities in the form of dialogue or speaking directly using English and their writing properly with the appropriate grammar, that is be required in each sentence.

The main English skills above have a close correlation and need each other. The passive skill mentioned at the beginning is that listening skill is a basic necessary and cannot be separated from individual communication in social life, likewise reading skill is also an ability that everyone must hold in daily life [4]. These two abilities are the primary fundamental for a person to get the understanding a message in any information obtained in interacting with other people or exploring information in the form of medias, either electronics in the form of audio visuals using the listening and reading abilities or print medias using reading ability. Whereas, active skills consist of writing ability, which is communication skills with language forms that are arranged systematically with certain rules through written media [4]. Speaking ability conveys articulatory sounds and words in expressing, stating and delivering thoughts, ideas and feelings [5].

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Passive skills are income that is obtained and digested by the human brain, while active skills are outcomes that are used as products or results that can be demonstrated in the form of speaking or writing skillfully with appropriate grammar. It can be concluded that English language skills are extremely essential skills to learn as a whole learning, without having to eliminate one of them, because that are strongly linked to support each other's abilities.

Computer software must be realized for its use by someone who wants to operate a computer to make work easier and more efficient. This is the basic knowledge for using computers, because if it doesn't understand computers, it won't be able to operate them. According to Blissmer, a computer is also called an electronic device that can carry out tasks by receiving input, carryi[6]ng out the input according to the instructions instructed and storing the results of the processing and producing the output instructed [6]. Meanwhile, software is a collection of programs used to run a computer or certain applications on a computer [7]. Moreover, software is a collection of programs used to run certain applications on a computer, while a program is a collection of computer commands that are arranged systematically (Darmawan, in Jamaludin et al., 2021). The terms of software and computer cannot be parted, because it is part of a computer, but for understanding the terms of computer software, there are many instructions in the software use in English.

Software consists of various types, in this research, especially talk about the packaged program software, that is a special program created by a software house or built directly into the operating system [8] one of the programs chosen is Microsoft Office. Microsoft Office fulfills all documentation, administration and reporting needs, as well as supporting data processing, problem solving and decision making for each function or department [9]. Microsoft Office itself is not a system to operate, but rather an application program found on the computer to be run according to the required functions. In Microsoft Office software there are several applications, which are Microsoft Word, Microsoft Excel, Microsoft Power Point applications [10].

Microsoft Word is word processing software, with multi-tool Word published in 1983 called by Xenix, whilst Microsoft Excel is an application program that is used to process numbers, then Microsoft PowerPoint is an application that has a program that is used as a tool or medium for presenting learning [10]. Microsoft Word is intended for creating documents, such as at school students are taught to create text, or teachers use it to create exam questions and correspondence. It has different function for Microsoft Excel, that is for processing data, usually in the form of numbers, because there are certain formulas to function according to needs, it usual's for inputting student grades, calculating salaries or financial credit profits and so on. Besides, Microsoft PowerPoint is used for presenting documents and data, for example creating outlines or mind maps summarizing student papers, teachers' teaching materials that have been summarized and so on.

As a learning media material that is commonly used in the three Microsoft Office applications, a method was taken that can be used with the same function, that is keyboard shortcuts. Keyboard shortcut is a limitation taken in this research on software media, but the function of these shortcuts is able to operate computer software, so make it more effective and efficient as a tool used to learn English. A keyboard is a computer input device that contains an arrangement of letters, numbers and other control functions. The keyboard can enter letters, numbers and special characters, and functions as a medium for users to carry out other necessary commands, such as saving files and opening files [11]. Based on the previous material observations results, shortcuts can enable students to work more quickly using Microsoft Word [12]. Meanwhile, computer function is [13] application that uses those keyboard shortcuts, most people issue certain commands by clicking on icons on a toolbar or by selecting commands from a pull-down menu.

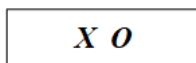
Each institution has a particular term for teaching-learning plan. For example, lesson plans are used by teachers to prepare lessons in class, Lesson plans are designed based on a predetermined syllabus and curriculum. The method is a learning approach technique that has been determined by the teacher which is adjusted based on the results of student observations and current developments. Another term for learning media is the skill of developing learning media, the teacher's skills are designed, created or modified simple media and creating electronic media or multimedia software [14]. Media is often referred to as a tool that is applied in the learning process with various teacher creativity and innovation, so that it is not boring and easy to understand when the teaching and learning process takes place. One of the classic and still preserved methods in language learning, where students become active in participating in teaching and learning activities, which is the role play method. Role playing is an improved learning method that makes students do a lot of activities. According to Richard [2], v role play, also role play in language teaching, is a class activity that is similar to drama in which students take ROLE roles from different participants in a situation and act out what usually happens in that situation. This method aims to make students more excited and more enthusiastic in learning language, the studied concepts make easier understanding and improve learning outcomes.

The String Method is actually part of English language skills, that consist of the words (Speaking and Trying), "speaking is one of the skills that students have to master in English. It is a productive skill that produces a voice to share the ideas, information, and to express meaning to interact with other people" [15]. Meanwhile,

based on a search through the Merriam-Webster online dictionary "Trying is severely straining the powers of endurance" [16]. String (Speaking and Trying) is the term for a learning method that uses active English skills to learn computer software with the aim of getting wo positive feedback on learning outcomes, there are improving English comprehension of terms contained in computer software, especially in the shortcut material provided.

2. Research Methods

The research design used is a Pre-Experimental Design, One-Shot Case Study, this experimental research only uses one experimental group. In this design, the experimental group is given a treatment, then the results are measured using a post-test and questionnaire. The following is an overview of the research design:



Picture 1. One-Shot Case Study (Sugiyono, 2021)

Explanation :

X = treatment given (independent variable)

O = observation (dependent variable)

The independent variable in this research is the string method (speaking and trying) which is used in learning computer software to increase understanding of English. Meanwhile, the dependent variable is a variable that is influenced by the independent variable. The subjects of this research were 24 grade students at SMP Mathla'ul Anwar, Tangerang. This practicum consists of 2 data sources, that are the primary source, it is post-test results, and the secondary source is a questionnaire to measure the level of understanding of English.

Data analysis to determine the distribution of frequency data and test the hypothesis of this research by determining the average score (mean), standard deviation, one sample t-test, average score for each question and presentation of answers. To obtain these results, this research uses descriptive and inferential statistics to describe the results obtained.

- a. Post-Test Data Analysis consist of descriptive statistics and inferential statistics. Descriptive statistics used to analyze data by describing or illustrating the data that has been collected as it is without the intention of making general conclusions or generalizations [17]. Inferential statistics provides rules or that can be used as a tool in order to try to draw general conclusions from a set of data that has been compiled and processed [18].

The results of student learning are categorized based on a brief guide to the management of the Indonesian Ministry of Education and Culture's 2019 learning competency improvement program, as follows:

Table 1.

Standard Category Based on Decree of the Ministry of Education and Culture of the Republic of Indonesia in 2019

Number	Ranking Numbers	Category
1	>90 – 100	Very Good
2	>80 – 90	Good
3	> 70 – 80	Enough
4	> 60 – 70	Currently
5	< 60	Not enough

Source:[19]

The amount of valid data is then calculated for reliability using the one sample t-test formula with reference to the passing score/KKM, that is 70. There is also a formula used to compare the post-test score with the standard score/KKM.

- b. Questionnaire Data Analysis used a Likert scale with descriptive statistical analysis which included the average score of the questions that had been determined and the presentation of observation frequency answers.

3. Results and Discussions

Results

The results of learning computer software with Microsoft Office operating shortcut specifications in class 9 at SMP Mathla'ul Anwar Tangerang using string method with the pre-experimental design one-shot case study. The data collection was carried out in one group only, without any comparison group. The aim of this research is to test the effectiveness of improving students' English using computer software with the string method. Data is collected through skills tests at the end of the stage and filling out questionnaires. Data obtained from the student test result sheets of 24 students.

1. Post-Test Data Analysis

Table 2. Student Test Results

Number	Student code	Result exam	Score	Category
1	S1	14	93	Very Good
2	S2	11	73	Enough
3	S3	11	73	Enough
4	S4	9	60	Currently
5	S5	12	80	Good
6	S6	12	80	Good
7	S7	13	87	Good
8	S8	13	87	Good
9	S9	9	60	Currently
10	S10	13	87	Good
11	S11	12	80	Good
12	S12	13	87	Good
13	S13	11	73	Enough
14	S14	10	67	Currently
15	S15	13	87	Good
16	S16	9	60	Currently
17	S17	12	80	Good
18	S18	11	73	Enough
19	S19	11	73	Enough
20	S20	11	73	Enough
21	S21	13	87	Good
22	S22	12	80	Good
23	S23	13	87	Good
24	S24	13	87	Good
Total			1874	

Source: Processed Premier Data (2025)

a. Descriptive Statistics Results

Table 3. Descriptive Statistics Results

No	Descriptive Measure	Score
1	Mean	78.08
2	Median	80.00
3	Mode	87.00
4	Standard Deviation	9.64
5	Sample Variance	92.86

Source: Processed Premier Data (2025)

Table 4. Results of Inferential Statistics (Normality Test) Post-Test of Students

No	Intervals	fo	xi	Zi	Class Limits	F(Zi)	Lo	fe	$\frac{(fo - fe)^2}{fe}$	
1	60 - 65	3	62.5	-1.254	59.5 - 65.5	0.105	0.125	2.875	0.0021	
2	66 - 71	1	68.5	-0.631	65.5 - 71.5	0.264	0.167	3.833	2.0962	
3	72 - 77	6	74.5	-0.009	71.5 - 77.5	0.497	0.233	5.6	0.029	
4	78 - 83	5	80.5	0.614	77.5 - 83.5	0.73	0.233	5.6	0.0643	
5	84 - 89	8	86.5	1.237	83.5 - 89.5	0.892	0.162	3.9	4.2032	
		24							Xhicount	3948

Source: Processed Premier Data (2025)

The normality test calculation shows that the mean score (\bar{x}) is 78.08 and the standard deviation score (s) is 9.64. Based on these calculations, Table 5.2 is used to calculate the Chi Square to obtain the Chi Square post-test results with $X^2_{count} = 6.3948$. Next, a comparative calculation is carried out between X^2_{count} and X^2_{table} to determine the distribution of the data. Then the X^2_{table} score for $\alpha = 0.05$ and $df = k - 1 = 5 - 1 = 4$ is 9.488 because $X^2_{count} (6.3948) < 9.488$. It can be concluded that the data from the post-test results for improving English language skills through computer software for class IX students at SMP Mathlaul Anwar were distributed normally.

b. Inferential Statistics

Based on the results of the normality test of descriptive statistical data which is normally distributed, this data can be used to calculate a one-sample t-test to determine the effectiveness of the sample average score which has a significant effect on the Minimum Completeness Criteria (KKM=70), as follows:

Mean (\bar{x}) : 78.08
 KKM Score (μ_0): 70
 Standard deviation (s) : 9.64
 Number of students (N) : 24

$$t = \frac{\bar{X} - \mu_0}{s/\sqrt{N}}$$

$$t = \frac{78.08 - 70}{9.64/\sqrt{24}}$$

$$t = \frac{8.08}{1.968}$$

$$t = 4.106$$

The results of students' learning abilities after gaining learning experience [20] based on the one sample t-test calculation, obtained a score of $t = 4.106$. To find out whether the difference between the average score (\bar{x}) of students' post-test results of 78.08 and the KKM score (μ_0) is significant or not is significant, it is necessary to know the results of the t-calculation score with the *t-table* to find out the distribution of the data. So the *t table* score for $\alpha = 0.05$ and $df = k - 1 = 24 - 1 = 23$ is 2.069 because $t\text{-count} (4.106) > t\text{-table} (2.069)$. Then H_0 is rejected and H_1 is accepted. It can be concluded that in the effectiveness of the treatment given there is a significant difference between the average score (\bar{x}) of students' post-test results, that is (78.08) and the KKM score (70) because student learning outcomes are above the minimum standards that have been set.

2. Questionnaire Data Analysis

The next data analysis is in the form of the results of a questionnaire distributed to 24 students with 15 questions, so that data on the results of student satisfaction while receiving treatment is obtained.

Table 5. Results of Student Satisfaction Levels

No.	Questions Code	Frequency					Total	Mean
		STS (1%)	TS (2%)	N (3%)	S (4%)	SS (5%)		
1	P1	0 (0.0%)	4 (16.7%)	4 (16.7%)	13 (54.2%)	3 (12.5%)	24 (100%)	3.63
2	P2	0 (0.0%)	3 (12.5%)	4 (16.7%)	11 (45.8%)	6 (25.0%)	24 (100%)	3.83
3	P3	0 (0.0%)	4 (16.7%)	7 (29.2%)	7 (29.2%)	6 (25.0%)	24 (100%)	3.63
4	P4	2 (8.3%)	2 (8.3%)	4 (16.7%)	11 (45.8%)	5 (20.8%)	24 (100%)	3.63
5	P5	0 (0.0%)	0 (0.0%)	6 (25.0%)	12 (50.0%)	6 (25.0%)	24 (100%)	4.00
6	P6	0 (0.0%)	1 (4.2%)	6 (25.0%)	9 (37.5%)	8 (33.3%)	24 (100%)	4.00
7	P7	0 (0.0%)	0 (0.0%)	12 (50.0%)	6 (25.0%)	6 (25.0%)	24 (100%)	3.75
8	P8	1 (4.2%)	3 (12.5%)	3 (12.5%)	10 (41.7%)	7 (29.2%)	24 (100%)	3.79
9	P9	0 (0.0%)	0 (0.0%)	7 (29.2%)	11 (45.8%)	6 (25.0%)	24 (100%)	3.96
10	P10	0 (0.0%)	3 (12.5%)	7 (29.2%)	9 (37.5%)	5 (20.8%)	24 (100%)	3.67
11	P11	0 (0.0%)	0 (0.0%)	9 (37.5%)	11 (45.8%)	4 (16.7%)	24 (100%)	3.79
12	P12	0 (0.0%)	1 (4.2%)	5 (20.8%)	12 (50.0%)	6 (25.0%)	24 (100%)	3.96
13	P13	0 (0.0%)	3 (12.5%)	5 (20.8%)	12 (50.0%)	4 (16.7%)	24 (100%)	3.71
14	P14	0 (0.0%)	0 (0.0%)	10 (41.7%)	8 (33.3%)	6 (25.0%)	24 (100%)	3.83
15	P15	0 (0.0%)	0 (0.0%)	5 (20.8%)	8 (33.3%)	11 (45.8%)	24 (100%)	4.25
Mean							3.83	

Source: Processed Secondary Data (2025)

The results of this research at SMP Mathla'ul Anwar Tangerang also involved analysis of satisfaction levels through questionnaires on the results of the treatment or learning provided, this assessment used a Likert scale. Each question has a score from 5 to 1, where 5 indicates very satisfied and 1 indicates very dissatisfaction. The results of the questionnaire data analysis showed that the majority of students were satisfied with the treatment given, as for each question, the frequency and presentation were calculated. The average satisfaction

score from the questions distributed was 3.83, which shows that the majority of students were satisfied with the learning that had taken place. So it was found that the String (Speaking and Trying) method used in computer software shows the effectiveness of understanding English from student satisfaction.

Discussion

Based on the statistical test analysis that has been carried out, the aim of this research is to obtain a positive influence on increasing understanding of English by using computer software to explore the understanding of class IX students at SMP Mathla'ul Anwar Tangerang using the string method (talk and try). The normality test was carried out using the chi-square method with premier data, namely the post-test results after treatment. These results can be seen from the value $X_{hitung}^2 < X_{tabel}^2$, namely in the form of variables (X1) use of computer software and (X2) string method on the effectiveness of improving English language skills. It is proven that the data obtained is normally distributed.

The results of research that identifies the use of computer software using the string method (talking and trying), it is useful to make an even greater contribution in improving understanding of English, as well as speeding up the experience of using a computer because you already understand the menus contained in computer applications, where computer applications use English. This is in line with previous research conducted by [21] that it can foster students' interest in learning and make it easier to understand the material. One of learning method is by implementing interactive multimedia learning media in the form of applications computer-based software.

Other research is supported by [22] which notes the application of information and communication technology to share his experience, especially its application in the English class. Although it is realized that there are still other elements that influence the success of a teaching and learning system, especially the role of the teacher. If we look at the results of student satisfaction from the questionnaire obtained, it shows that there is a level of satisfaction above the average with the use of this string method, namely 3.83. These figures show that there is a significant impact on improving English understanding. Therefore, this research can be a more efficient strategy and method for improving students' English. In the world of education, it is recommended to continue to maximize the use of technology in learning, especially English learning, while still paying attention to other aspects as supporting factors to optimize the positive influence.

4. Conclusion

In this research on Improving Understanding of English on Computer Software for Class IX Students at SMP Mathla'ul Anwar Tangerang using the String Method, it can be concluded that: Based on the normality test table, it is indicated that the treatment given has had a positive impact, as it is known that the average student score is 78.08, which is above the Minimum Completeness Criteria (KKM) score of 70. This shows that the use of computer software has increased the understanding of English using the String method for class IX students at Mathla'ul Anwar Middle School; There is a level of student satisfaction with the treatment given that most students are satisfied with the method provided, shown by an average satisfaction score of 3.83 on a Likert scale using the string method which is acceptable and provides a positive learning experience.

Conflict Of Interest

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