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THE EFFECT OF USING DUOLINGO APPLICATION TOWARDS STUDENTS' GRAMMAR MASTERY IN SIMPLE PRESENT TENSE

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Abstract: The purpose of this research to determine the effect of using Duolingo application towards students' grammar mastery in simple present tense at the seventh grade students of MTS Miftahul Afkar in academic year 2021-2022. This research used a quantitative approach, especially a quasi-experimental method with pre-test and post-test for collecting the data. Duolingo application used as learning media to improve students' grammar mastery especially in simple present tense. In this research, the researcher used two classes with total population of 58 students. The result of this research was calculated using the T-test. The result in the experimental class showed that the average post-test score (73,9) was bigger than the pre-test score (57,2) while the result in the control class showed that the average post-test score (67,1) was bigger than the pre-test score (57,2). By using the t-test, the result showed that the value of T_{table} (1,673) was bigger than T_{count} (-20,112) with a significant level of 0,05. This result indicated that H_0 was rejected and H_a was accepted. This findings indicated that the Duolingo application has a significant effect towards students' grammar mastery at the seventh grade students of MTS Miftahul Afkar in academic year 2021-2022.

Keywords: duolingo application, simple present tense, students' grammar mastery.

INTRTODUCTION

Language is a tool of communication that used by every human being. The most language used by humans to communicate is English because it is an international language. In the field of education, English has four skills including listening skill, speaking skill, reading skill and writing skill, of the four skills the researchers chose writing skills to improve students' grammar skills. In the field of education, English has four skills including listening

skill, speaking skill, reading skill and writing skill, of the four skills the researchers chose writing skills to improve students' grammar skills, because writing skill is very difficult skill to understand, students are expected to be able to master writing skill. To improve writing skills, students should be improving their grammar skill because grammar is the main component in every writing.

In every school in Indonesia, started from elementary school until university. English is a lesson that should be mastered by every student, because English are in every learning curriculum. At school students have problems that make it difficult to learn English, students felt difficult to English grammar mastery. The fact at the school where the researcher visited that there were problems the students and teachers were overcoming. Based on the results of interviews with English teacher at MTS Miftahul Afkar, the students were less interested in learning English grammar due to the lack of exposure to learning grammar using media.

Duolingo application is believed to provide a solution for students' problems in learning grammar. It is an application such as a game application that presents the best features so that students was interested in learning grammar. Duolingo effectiveness in learning grammar has been proven in previous studies. The first research was conducted by Rachmah (2018) who found that Duolingo is helpful in enhancing students' grammar mastery. The second research was conducted by Fatah (2019) and the result showed that Duolingo is useful in improving students' vocabulary knowledge mastery. This is also in line with the research findings of Siregar (2019) that indicated that Duolingo is effective in promoting students' vocabulary mastery.

Those previous research have investigated the use of Duolingo in grammar mastery in general and vocabulary mastery. This current research attempts to find out the effectiveness of Duolingo in learning tenses especially simple present tense.

LITERATURE REVIEW

Grammar

According to Crystal in Tarigan (2009), grammar is the study of phrase structure and is also referred to as syntax and morphology. It is frequently offered as a manual or textbook. A conviction in the rules governing language in general or in a specific language, including pragmatic, phonological, and semantic principles.

Chomsky in Tarigan (2009) stated that grammar is a hypothesis regarding the rules of sentence formation that underlie a collection of data that must be considered by its success in organizing, explaining, and making generalizations about the data, as well as accommodating new data. According to Ostler in Isyam & Zainil (2010), grammar is the study of linguistic rules that explain how words relate to another word, with the goal of ensuring that all language users can comprehend the language.

Based on the understanding to the experts above, the researcher was concluded that grammar is learning about sentence structures related to words, phrases, sentences and paragraphs that refer to the branch of linguistics, namely syntax and morphology.

Types of Grammar

According to David Crystal in Tarigan (2009), there are six types of grammar including descriptive grammar, pedagogic grammar, prescriptive grammar, reference grammar, theoretical grammar, and traditional grammar.

Descriptive grammar offers or depicts the grammatical structures found in a language without taking the role that language plays in society into account. In other words, descriptive grammar does not explain or describe how a language should be spoken or written; rather, it looks at how a language is actually spoken and written.

A language's pedagogical grammar is its grammatical description as it relates to pedagogical activities like teaching a language, creating a curriculum, or creating instructional materials.

Prescriptive grammar explains the rules for what is believed to be the most suitable and effective usage. A reference grammar, also described as a language reference or lexicon, is a thorough grammatical description or description that can serve as a reference book for persons who are interested in facts, solid grammatical facts (more like a dictionary that serves as a "reference lexicon").

Beyond the study of specific languages, theoretical grammar provides a way for specifying the constructs needed for each type of grammatical analysis, as well as how they should be consistently applied.

The term "traditional grammar" is used to describe the variety of viewpoints and research techniques used during time of grammatical study prior to the introduction of linguistics.

Simple Present Tense

Azar in Rosyada (2016) stated that the simple present tense often indicates situations or events that occur regularly, always, or routinely; they do so in the present, have done so in the past, and most likely will do so in the future. The simple present has different sentence patterns which include:

Table 1. Simple present tense

Nominal Form	Verbal Form
S + to be 1(are, am, is) + Complement	S + Verb 1 + (s/es) + O/C
S + to be 1(are, am, is) + not + Complement	S + Do/does + not + Verb 1 + O/C
To be 1(are, am, is) + S + Complement?	Do/does + Verb 1 + O/C?

Assessing Grammar

According to Purpura (2004), grammatical knowledge is assessed by asking them to repeat rules, analyze texts and state the rules, or repeat rules. In short, grammatical assessment was closely matched with the goals of education and was rarely a source of concern until recently.

Based on the expert's understanding, the researcher can conclude that, grammar assessment is the most important aspect to see the students' grammar mastery. In this research, the researcher chose an objective test to assess the students' grammar mastery.

According to Asrul et al., (2014), the standard method of examination used by all students who take the test is what gives objective examinations their name. Objective tests, often known as short answer tests, are a type of learning outcome test that consists of items that the tester can respond to by choosing one (or more) choices from a list of options. Answers that have been paired with each item, or by putting the answers in the spaces supplied for each of the things concerned in the form of words or specified symbols.

Based on the understanding to the experts above, the researcher was concluded that the objective test is a test that is often used in the assessment of every skill, including grammar skills. The following are the types of objective test suggested by Asrul et al., (2014).

The first type of objective test is completion test which is known as complete or perfect. This type of test is almost similar to the fill-in objective test. The difference lies in the objective test of the fill-in form, the material being tested is a single unit. Meanwhile, in the objective test, the completion form does not have to be like that.

A multiple-choice exam is an objective assessment in which each test has a different set of options is provided with more than possible answers, and only one of the choices is correct or the most correct.

A match-up test, an interpretation test, an adapting test, and a matching test are all terms used to describe this type of test. The objective test of this fill-in form is usually in the form of a story or essay.

The objective test of true false form is also often known as an objective test in the form of "Yes-No." The objective test in the true false form is a form of test, there are right and there is wrong.

From the many explanations of the grammar assessment above, the researcher chose a multiple-choice test to assess students' grammatical skills in class, because multiple choice tests are assessments that are often used to assess students' grammar tests and are the most effective assessment to use.

Duolingo Application

Duolingo is a free language learning application in Play store introduced by Luis von Ahn and Severin Hacker in 2012. It is one of the most favorable application in the market even it has been awarded as the best education startup and learning application. This application enables the user to learn many languages (e.g. English, Arabic, Spanish, French, Dutch, etc) in enjoyable ways (Ajisoko, 2020). Duolingo offers four English skills including reading, listening, writing, and speaking. It provides numerous exercises that are easy for novice students to learn a new language. The exercises in the application are based on translation, dictation, and pronunciation. It can measure students' achievement with fun ways by proving information related to point earned, overview tree, the streak, and the time spent (Krashen, 2014). This application is very simple and easy to understand as the target of this apps is appropriate for all ages starting form kids, teenagers, and parents (Bustillo, et al., 2017; Ajisoko, 2020).

Rachmah (2018) stated that Duolingo has many benefits for language learners. Firstly, it helps students to improve grammar mastery. Secondly, it helps teachers to teach English easily and practically. Moreover, Munday (2016) stated that students prefer to use Duolingo than regular assignment because it is easy to use and it has exciting features when they are using it as a learning media in the classroom. Grego and Vesselinov in Ajisoko (2020) found that students are satisfied to use Duolingo in learning a language and they enjoyed learning with it.

In this research, the researcher only uses unit one because it discusses the simple present. Duolingo has many features. The first feature is a tree skill that discusses about basic skills for improving the capacity for listening, speaking, reading, and writing. Basically every

unit always displays these exercises, but in this unit only discusses about basic skills and it relates to the simple present tense that was taken by the researcher as research material to improve students' grammar mastery. There are 55 skills including simple past, infinitive, abstract, degree of comparison, conjunction, abstract 2, reflexives pronoun, nature, gerund, sport, arts, communication, medical, politics, possessive pronoun, animal, plural, possessive pronoun, objective pronoun, clothing, present 1, colours, question, conjunction, preposition, date and time, family, occupation, adjective 1, present 2, adverb, places, things, citizen, travel, determiner, numbers, present 3.

The second feature is a user account, where users can see what position the user is in and can compete with other users to improve their exercise every day. Here users can also get new friends to join. The third feature is Lingot which is a gem or virtual currency. Its use is to give rewards when the user has completed an exercise.

The next feature is translating exercise in which the user can practice a language that is already known to the language that the user wants to know or vice versa. The fifth feature is matching exercise. In this feature, the user can practice vocabulary knowledge by matching pictures and words. The next feature is pairing exercise. It can be used to practice the user's grammar and vocabulary, by pairing the sentences given from English to Indonesian.

The seventh feature is listening exercise where the user can practice listening and writing skills. When the user listens to the sound, the user must write correctly what user has heard. The last feature is speaking exercise in which the user can practice the user's speaking skill.

From the explanation above, it is concluded that the Duolingo application can be one of alternative applications to be used as a learning tool in the classroom because the Duolingo application contains exercises that can improve listening, speaking, reading and writing skills. From many types of exercises in the Duolingo application, the researcher focused on students' grammar mastery in the simple present tense.

METHOD

In this research, the researcher used a quantitative approach. According to Cresswell (2012), quantitative method is a method that involves the process of gathering, reviewing, interpreting, and writing research findings. In this research, the researcher also used a quasi-experimental method with one experimental class group and one control class group. This research design was used to compare student achievement before and after giving treatment seen from the results of the pre and post-test.

The population in this research is seventh grade at MTS Miftahul Afkar. Grade A is an experimental class which contains 29 students, while grade B is a control class which is consisted of 29 students. The total population in this research is 58 students. This research uses a purposive sampling. To collect the data, a pre-test and post-test were given to the students. The pre-test is consisted of 30 multiple-choice questions about grammar, especially the simple present tense to measure students' grammar mastery. After giving the pre-test, the researcher conducted treatment in class. In the experimental class, the researcher used Duolingo application as learning media while in the control class the researcher used Cake application. The last, the researcher conducted a post-test to identify the effect of using Duolingo application towards students' mastery. To find out the results of the pre-test and

post-test, the researcher used several tests including normality test, homogeneity test, and hypotheses test.

FINDINGS AND DISCUSSIONS

This research was conducted at MTS Miftahul Afkar in the seventh grade in the second semester. Before teaching, the researcher conducted an instrument test. (Sa'idah, 2019) said that the test instrument or commonly called the question is one of the measuring tools used for detect students' abilities. Activities measure students to determine ability Thinking highly is an activity that cannot be separated from student learning outcomes. The instrument test was conducted at seventh grade MTS Fathul Adzmi, the format of the questions that was given is the form multiple choice with the number of questions that was given 50 questions, and from 50 questions only 30 questions were valid. From the 30 questions were valid the researcher conducted a pre and post-test with the same questions at MTS Miftahul Afkar in seventh grade. (Nuzularachmania, 2022) said that One-Group Pretest-Posttest Design, where the pretest (initial test) is conducted in a group to determine the starting conditions, and then the following study sample receives treatment (treatment) and is observed posttest (final test).

The researcher conducted treatment in seventh grade MTS Miftahul Afkar for five meetings, the researcher only held five meetings because there was final exam schedule at school, then the researcher continued the final treatment after students conducted the final exam. The pre and post-test scores in the experimental class, the lowest score for the pre-test was 53 and the highest was 67, while the lowest score for the post-test was 63 and the highest was 83. The pre-test and post-test scores in the control class, the lowest score for the pre-test was 53 and the highest was 63, while the lowest score for the post-test was 53 and the highest was 80.

Table 2. Descriptive statistics

Class	N	Minimum	Maximum	Mean	Standard Deviation
Pre-test experimental	29	53	67	57.17	3.5
Post-test experimental	29	63	83	73.89	5.9
Pre-test Control	29	53	63	57.24	3.5
Post-test Control	29	53	80	67.13	8.3

The researcher conducted a reliability test after conducting the validity test. In this research the value of reliability was 0,909, then based on the classification of the reliability of the test it is very high, and the result of the data were reliable.

After the researcher was conducted treatment in two classes, the researcher conducted post-test to know the comparison and whether there was an effect of using Duolingo application towards students' grammar mastery at the seventh grade of students MTS Miftahul Afkar. The researcher examined post-test data from the experimental and control classes for normality. The researcher used the Liliefors formula for normality test, which stated the data was considered normal if L_{count} is smaller than L_{table} , the data was declared normal.

The normality test in the experimental class, the researcher obtained the L_{count} value = 0.123, while the L_{table} value was obtained = 0.164 with the number of $df = N = 29$. By

comparing L_{count} and L_{table} , obtained $L_{count} < L_{table}$ or $0.123 < 0.164$. This shows that the data on student learning outcomes in the experimental class is normally distributed. Then the researcher found the findings from table 4.2 for the normality test in the control class, the researcher obtained a value of $L_{count} = 0.094$, while the L_{table} value was obtained = 0.164 with the number of $df = N = 29$. By comparing L_{count} and L_{table} , obtained $L_{count} < L_{table}$ or $0.094 < 0.164$. This shows that the data on student learning outcomes in the control class is normally distributed.

The homogeneity test utilized the variance test or F test formula while taking the homogeneity distribution criteria into consideration. If F_{count} was smaller than F_{table} , the data was declared homogenous. The significant value was 5%. Post-test data from the experimental class and the control class. That the value of $F_{count} = 0.507$ with a significant level $\alpha = 0.05$ comparing the value of F_{count} and F_{table} with df numerator = $n - 1 = 29 - 1 = 28$ (for the largest variance) and df denominator = $n - 1 = 29 - 1 = 28$ (for the smallest variant). The researcher used Microsoft Excel to obtain the F_{table} formula, the formula = $F.INV(0.05; 28; 28)$ then the F_{table} value is 0.531. By comparing F_{count} and F_{table} , obtained $F_{count} < F_{table}$ or $0,507 < 0,531$. This shows that the data is homogeneous.

By comparing the outcomes of the pre-test and post-test in the experimental class while allowing for the distribution criteria of the hypothesis, this hypothesis test was carried out. The null hypothesis (H_0) was accepted and H_a was rejected if T_{table} is smaller than T_{count} by focused on the df value and the significant value in table T distribution, wich was 0,05. The test hypothesis obtained the value of $T_{count} = -20,112$, the H_0 is accepted and the H_a is rejected if T_{table} is smaller than T_{count} . T_{table} obtained a significant value of 0.05. With the obtained $df_{n1+n2-2}$, in this research N_1 and $N_2 = 29$, then $df = 29+29-2=56$, the researcher obtained $T_{table} = 1.673$. By comparing T_{count} with T_{table} , because T_{table} is bigger than T_{count} or $1,673 > -20,112$, then H_0 is rejected and H_a is accepted.

Table 3. The summary of the data processing

Analysis	Result	Criterion	Description
Normality Test of Experimental Class	$L_{count} = 0.123$ $L_{table} = 0.164$	$L_{count} < L_{table}$	Data distribution was normal
Normality Test of Control Class	$L_{count} = 0.094$ $L_{table} = 0.164$	$L_{count} < L_{table}$	Data distribution was normal
Homogeneous Test	$F_{count} = 0.507$ $F_{table} = 0.531$	$F_{count} < F_{table}$	Data distribution was Homogeneous
Hypotheses Test	$T_{count} = -20.112$ $T_{table} = 1.673$	$T_{table} > T_{count}$	H_a Accepted

The findings of the current research is in line with the research of (Rachmah, 2018) who found that Duolingo provides assistance to students with its easy to use grammar features. Second line with the research of (Fatah, 2019) who found that duolingo helped students vocabulary knowledge mastery. The third line with the research of (Siregar, 2019)

who found that Duolingo provides assistance facilitate students in learning English, especially vocabulary mastery.

The previous research have investigated the use of Duolingo in grammar mastery in general and vocabulary mastery. This current research will attempt to find out the effectiveness of Duolingo in learning tenses especially simple present tense. As a result, there is a significant effect of using Duolingo application towards students' grammar mastery in simple present tense at the seventh-grade students of MTS Miftahul Afkar. This findings in the table indicate that the Duolingo application has a significant effect towards students' grammar mastery at the seventh grade students of MTS Miftahul Afkar in academic year 2021-2022.

CONCLUSIONS

This research focuses on the use of Duolingo application for students' grammar mastery. Duolingo application is an online-based application so it can be used in class or at home. Dulingo application was published in 2012, therefore, in this era globalization, Duolingo application can be used as an effective learning media, when the world is under siege by the covid-19 virus and all activities in the outdoors have been stopped including studying in class, so Dulingo present to make it easier for teachers and students to learn English easily and effectively.

The findings show that in this globalization era teacher use many types of online applications such as Zoom meeting, Google meet and Whatsapp to facilitate the learning process and this requires a lot of time. There are have many problems in using online-based applications such as no signal, no quota, and students often find that they don't have a smartphone. In this research, students and teachers can work together in the learning process so that Duolingo application can be used effectively.

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