A. Background of the Research

   English is one of the international languages. Learning English is very important in this globalization era to get involved in the development of scientific and technological information worldwide. Therefore, introducing English as early as possible is necessary. Indonesian government has determined English as the first foreign language that should to be taught as one of the subjects studied by the students from elementary up to university level.

   The aim of teaching English at elementary school, junior high school, and senior high school is that students are able to achieve four language skills, such as: listening, reading, speaking, and writing. In order to master English, we should master the grammatical rule and vocabulary. If vocabulary is mastered, it will be easier to master English. Laufer (1997, p. 140) in Indriati (2014) states that “learning vocabulary is one of the most important elements without which neither comprehension nor production of language is possible. In the other word, vocabulary cannot be separated from other language skills.”

   Vocabulary is the most important material in foreign language teaching for young learners. Therefore, the teaching of English vocabulary has a very essential role in enabling Indonesian students to master English
as their foreign language. English vocabulary mastery, in fact has become a big problem for most Indonesian students. If one does not have sufficient number of vocabulary, he will not be able to communicate with his surroundings.

Allah says in Al-Baqarah verse 31 as follow:

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\text{وَعَلَّمَ آدَمَ الْأَسْمَاءَ كُلَّهَا ثُُّ عَرَضَهُمْ عَلَى الْمَلَائِكَةِ فَقَالَ أَنَّى}
\]

This verse tells us that human beings essentially must recognize the vocabulary, one of them by knowing the names of objects then we can apply it in the form of conversation and writing, with the number of vocabulary that we have then the easier we explore the science that we have not known.

Vocabulary is core component of language proficiency and provides much of the basic for how learners speak, listen, write and read. Without an extensive vocabulary and strategies for acquiring vocabulary, learners often achieve less than their potential and may be discouraged from making use of language learning opportunities around them such as listening to the radio, listening to native speakers, using language in different context, reading or watching television.

Vocabulary itself is the total number of words in a language (Oxford Advanced Learners’ Dictionary, 2000 p. 176). As vocabulary
becomes the key aspect in learning language, it should be introduced through interesting ways. In line with that, Lewis and Hill (1998, p. 94) state that students will not achieve success in learning unless they enjoy the process. From that statement, it can be seen that students will feel toward a learning process will affect their achievement. There is misconception in learning process so the class is not fun and relax. Actually, it is possible to find learning not in serious and solemn condition.

Nowadays people have been living in the globalization era, which the development of technology in most aspect of life grows rapidly. Consequently, they try to find a lot of information through the existence of technology for instance by using internet. People can browse a lot of information and news through internet.

The development of English is related to the growth of technology. Technology can change the way people work, learn, interact, and spend the leisure time. It also helps to lead the way in improving the teaching and learning process in school. Nowadays, many school have applied technology as a learning media as well. It is remarkable when technology is implemented in teaching and learning process.

The use of technology is an essential part to support the process of teaching and learning in order to make it more interesting. So far, video, cassette, and power point presentation are used in teaching learning processes. In addition, it will be one of the teaching and learning
instructional that is used either in the class or outside the class. According to National Research Council (1995, p. 51), technology offers new ways of teaching and learning, and provides new ways for all students in education to be openly accountable to parents, communities, and students. The use of technology can facilitate the learners achievement since it provides interesting media to learn English to become more fun and effective.

Technology has an important role in teaching and learning process. Bajcsy (2002, p. 81) says that technology in teaching and learning is more variety and he suggests that technology can work to help organize and provide the material for students, help students, teachers, and parents interact, anytime and anywhere. Also technology can facilitate and assist in the authentication and prioritization of internet material and simulate, visualize, and interact with scientific structures, processes, and models. For instance, the students are able to find the additional materials from the internet.

Dudeney and Hockly (2007, p. 92) stated that internet access is becoming increasingly available to learners, younger learners are growing in technology era, and English as an international language is being used in technological context. Therefore, it is significant to employ the technology as the media to support the teaching and learning materials without the limitation of time.

One of the application of technologies that popular in learning English is Duolingo. As described in Wikipedia web site “Duolingo uses
a heavily data driven approach to education. At each step along the way, the system measures which questions the users struggle with and what sorts of mistakes they make. It then aggregates those data and learns from the patterns it recognizes”. To ease the process of learning English language, and supported by a very advanced technology currently, the young learners who want to learn English with practical and fun applications might use Duolingo to practice English.

Practices are important to enable students to master English skills, and exercise is very important since it is made as a tool for measuring and evaluating student’s ability in achieving the material which is given. When doing exercises someone should examine whether the exercises are relevant or not. The researcher focuses on the exercises of vocabulary presented in Duolingo Free Language Learning Application.

Duolingo Free Language Learning Application can be downloaded on the Phone or PC, so the user can practice anytime. Especially for English young learners can practice anytime and anywhere. Duolingo has an excellent learning strategy because it has very motivating learning system. It uses a strategy of game mechanics to create the incentive to keep students learning. It is built very similarly to a computer game where the participants have to pass certain levels. A student passes the three level of the language. The following lessons are unlocked after a learner has mastered the previous material. Users can complete a variety of exercise types including multiple choices, writing and also speaking through a
microphone. Duolingo uses mainly drills and repetitive exercises in the lessons.

Duolingo deliberately brought the concept of play and learn in order to feel more comfortable and easy to use by all walks of life. We certainly have felt tired doing daily routines and for a moment we can relax while learning a foreign language.

The research aims to offer convenience to learn English with the use of multimedia learning applications using Duolingo, which can be used to practice independently and can be used in place of study / course / school / home or everywhere.

The problem of study at the sixth grade of Madrasah Ibtidaiyah Darul Ilmi Banjarbaru is a lack of vocabulary. The researcher did observation at Madrasah Ibtidaiyah Darul Ilmi Banjarbaru, the teacher used learning methods that are less attractive to students. Because of that the researcher plans this experiment research in order to motivate students to learn and develop their skill.

Two previous studies were conducted by Laila Mahmudah (2015) and Natanael Mauricio Méndez Bermudez (2017). The similarity of this research and these two researches is about using Duolingo application.

The differences between this research and these two previous research are Laila Mahmudah used descriptive qualitative approach and the field of her research was pronunciation. And, Natanael Mauricio Méndez Bermudez also used qualitative approach. Her research was about
showing the possibility effectiveness of using Duolingo as a complement for English lessons. Whereas, in this research the researcher used quantitative approach with quasi experiment type. The purpose of this research is to know the effectiveness of using Duolingo application in Madrasah Ibtidaiyah Darul Ilmi and how Duolingo can improve the students’ vocabulary.

In this study, the researcher will use the Duolingo application to improve vocabulary ability at Class B of the sixth grader of Madrasah Ibtidaiyah Darul Ilmi Banjarbaru. The researcher wants to conduct a research entitled “The Effectiveness of Duolingo in Improving Vocabulary Ability at the Sixth Grade of Madrasah Ibtidaiyah Darul Ilmi Banjarbaru School Year 2017/2018”

B. Statement of the Problem

The researcher formulates the research question as follow:

Is Duolingo application effective for improving vocabulary ability at the sixth grade of Madrasah Ibtidaiyah Darul Ilmi?

C. Objective of the Research

To find out the effectiveness Duolingo application for improving vocabulary ability at the sixth grade of Madrasah Ibtidaiyah Darul Ilmi.
D. **Hypothesis**

Hypothesis is a statement of the research assumption about the influences of two variables that the researcher plans to test within the framework of the research.

The hypothesis of this study was prepared as a tentative answer for research problem stated previously. In this case the alternative hypothesis (Ha) is read as follows:

There is a significant difference in students’ achievement in learning English between students who are taught by Duolingo application and students who are taught without Duolingo at the sixth grade of Madrasah Ibtidaiyah Darul Ilmi Banjarbaru.

Because of statistical computation the alternative hypothesis need to be changed into null hypothesis (Ho) as follow:

There is no significant difference in students’ achievement in learning English between students who are taught by Duolingo application and students who are taught without Duolingo application at the sixth grade of Madrasah Ibtidaiyah Darul Ilmi Banjarbaru.

E. **Definition of Key Terms**

In order to make the readers get easier in understanding this study, here the researcher will give the definition of some key terms that important to be understood as the following:

1. Effectiveness
“Effectiveness refers to the intervention’s ability to do many good than harm for the target population in real world setting”. (Schillinger, 2010, p. 43)

In this research, effectiveness is how effective Duolingo application is for improving vocabulary ability at the sixth grader of Madrasah Ibtidaiyah Darul Ilmi.

2. Vocabulary

“Learning vocabulary is one of the most important elements without which neither comprehension nor production of language is possible. In the other word, vocabulary cannot be separated from other language skills.” Laufer (1997, p. 140) in Indriati (2014)

In this research, vocabulary is learning material that have to be learned by the students of Madrasah Ibtidaiyah Darul Ilmi. The learning material is also based on textbook, such as occupation, family, etc.

3. Technology

“Technology in teaching and learning as an enabler and suggests that technology can work to help organize and provide structure for material to students; help studentd, teachers, and parents interact, anytime and anywhere” Bajcsy (2002, p. 81)

In this research, technology means an application that can be used as English learning medium. It can be installed in PC, laptop, and
smartphone. It is free language-learning application that called Duolingo Application.

4. Duolingo

Duolingo is a free language-learning application. To ease the process of learning English language, and supported by a very advanced technology currently, the young learners who want to learn English with practical and fun applications might use Duolingo to practice English.