Using Kids Coloring Fun Application to enhance Children Vocabulary Mastery at Tumbuh Kembang Kindergarten

Muhammad Chairil Imran¹, Nasaruddin²
Universitas Islam Makassar, Indonesia¹,²
muh.chairil.imran@uim-makassar.ac.id¹, nasaruddin.dty@uim-makassar.ac.id²

Abstract
The research was mainly discussing the use of Kids Coloring Fun Application to enhance the vocabulary mastery of children in the Tumbuh Kembang Kindergarten. The researchers selected the sample from the population by using total sampling technique. The number of the sample was 40 children. This research was a pre-experimental design with one group pretest and posttest. The group was tested after treatment, the test included pretest and posttest that consisted of 25 items. The result of data analysis showed that there was a significant difference between the mean scores of pretest and posttest. The mean score of posttest was greater than the mean score of pretest. The mean score of pretest was 5.06 and the mean score of posttest was 8.07. Then, the T-test value was 25.5 and T-table value was 2.042 with df = 39 and α = 0.05. It can be concluded that the use of Kids Coloring Fun Application can enhance children voculabularies. It means that there is a significant difference (H₁) of the children vocabularies before and after treatment by using Kids Coloring Fun Application.

Keywords: Application, Vocabulary, Children

Introduction
Vocabulary is the basic requirement to learn English; it is the element that conveys meaning of individual expression through writing and speaking, it is even required by students who want to pick up knowledge from any written text. Nunan (2001) states that the acquisition of an adequate vocabulary is essential for successful second language use because without an extensive vocabulary, an individual will be unable to use the structures and function comprehensibly. Vocabulary is needed to convey what individual wishes to say that is organized by grammar, the teaching of vocabulary is essential and at the heart of developing proficiency and achieving competence in the target language (Basal, 2016), the ability to communicate to convey the social expression should be having sufficient vocabulary.

Teaching English vocabulary in a foreign language classroom is not easy, English teacher should prepare list of words and ask students to memorize them. In a classroom where students are not comfortable with the second language, the teacher should make the language learning interactive and interesting with the introduction of appropriate vocabulary.
exercises (Wulanjani, 2016). It is expected to provide students with rich and interested exercises which can help them to prepare in improving their vocabulary. Teaching English to children is different from adults, especially in vocabulary teaching, teachers should try to present as clear as possible the explanation of the meaning of the words being taught by using a technique (Wulanjani, 2016).

Some of the children like to study, but some others possibly like to play. Teachers in this case, have a big role to motivate all of children to have the same perception about English today. In spite of all the help that teacher and course books may provide to the students, the number of words is to be learnt in a new language is a burden for most children because the lack of vocabulary. Another perpective, teaching today can not separate from technology, technology can easily facilitate the rich environment where students can interact and communicate with each other (Jati, 2018). The low interest and motivation of the students in learning English, particularly vocabulary, the situation and condition of the classroom, and the boring method that is used by the teachers in teaching support the children to be less excited in improving their vocabulary, realizing this, A teacher is demanded to be smart in teaching vocabulary (Hariadi, 2014).

This situation is the place where ITC can support. ICT is as a scientific, technological and engineering-based management technique which are used in information storage and communication mechanism with optimal time and space utilization incomparison to other traditional methods adopted for the same (Raval, 2014 in Zakir Hussain, 2018). The fact, there is still teacher less use ICT in his/her teaching more over a teacher has less innovation and creativity in making good teaching and seldom uses technology to attract the students’ attention (Hariadi, 2014). It is to be undoubted that the development of ICT such as electronic mail, internet and multimedia in using collaborative platforms influences the process of using them in everyday classroom (Xuan, 2013 in Zakir Hussain, 2018).

Based on the above statements, the teacher as facilitator should put ICT as new alternative ways or methods to stimulate children to improve their own vocabulary, a practical solution that can be proposed is developing learning media that takes advantage of the advances in information technology (Tohe, 2019). The consequence, when children are motivated, automatically they can improve their vocabulary mastery, the use of application on various ways in classroom create a comfortable and fun situation in learning and give encouraging result, (Susanti, 2017). In relation to this, Murcia, Murianne and Olshtain (2002) also stated that strategies which learners can use independently of a teacher are the most important of all way of learning vocabulary. For this reason, it is worthwhile ensuring that learners are able to apply the strategies and hey get plenty of help and encouragement in learning process.

In the learning process, learners can cope with thousands of words. Technology can afford chances for meaningful teaching and learning environments which can affect students’ motivation, critical thinking, and independence (Rahimi & Yadollahi, 2011), it also provides more opportunities for interaction with their peer learners (Padurean & Margan, 2009 in Zakir Hussain, 2018) and the apps can be teacher’s teaching aid, and students’ learning can be more multiple (Wang, 2017). The result of observation at Tumbuh Kembang
Kindergarten showed that the children vocabulary mastery is still low. Based on the problem, it is expected to use Kids Coloring Fun Application as one solution to enhance the children vocabulary mastery, coloring activity is as new method that can mitigate children linguistic knowledge (Pinto & Zuckerman, 2018). Based on previous ideas above, the researcher is interested to conduct research on the use of Kids Coloring Fun Application to enhance children vocabulary Mastery at Tumbuh Kembang Kindergarten.

Method

The researchers applied a pre-experimental design with one group pretest and posttest design. This design involved one group which was pre-test (O1), treatment (X), and post-test (O2). The design might also be presented as follows:

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\begin{array}{c}
O_1 \times X \times O_2 \\
\end{array}
\]

(Gay, 2015)

Where:
- O1 is the pre-test
- X is the treatment
- O2 is the post-test

Population and Sample

The population of this research was children at Tumbuh Kembang Kindergarten. The total number of population was 40 children.

Sample

The researchers used total sampling technique, it consisted of 40 children.

Results

The Mean Score and Standard Deviation of Pre-test and Post-test

A pre-test is given before the treatment to know the children prior knowledge, while the post-test is administered after the treatment which aims to know the vocabulary mastery of the children after giving treatment. Both the mean scores of pre-test and post-test were then compared to see whether or not there is a significant difference of the children mastery before and after treatment by using Kids Coloring Fun Application. Table 1 below shows the mean score on the post-test was 8.07 and standard deviation on the post-test was 0.65. It was a significant difference than the result of pre-test.

| Test    | Mean Score | Standard Deviation |
|---------|------------|--------------------|
| Pre-test| 5.06       | 1.01               |
| Post-test| 8.07       | 0.65               |

T-test and T-table Values of Pre-test and Post-test

Seeing the hypothesis whether it is accepted or rejected, the researchers compared the T-test value and T-table value. If the T-test value < T-table, it means there is no significant difference between the result of pre-test and post-test. So, the null hypothesis \( H_0 \) was accepted and alternative hypothesis \( H_1 \) was rejected. Conversely, if the T-test value > T-table, it means there is a significant difference between the result of pre-test and post-test.
value > T-table value, it means there is a significant difference between the result of pre-test and post-test. It means the alternative hypothesis ($H_1$) was accepted.

**Table 2. T-test and t-table values of pre-test and post-test**

| Variable | T test Value | T table Value |
|----------|--------------|---------------|
| $X_1-X_2$ | 25.5         | 2.042         |

Table 2 above shows that the value of T-test was 25.5 and T-table value was 2.042. Thus the value of T-test was greater than T-table value (25.5 > 2.042). It means that Kids Coloring Fun Application could significantly enhance children vocabulary Mastery at Tumbuh Kembang Kindergarten.

**Discussion**

The result of data analysis showed that there was significance different between pretest and posttest. It was based on the fact that the average scores of students in the pretest and posttest were different. Posttest was greater than pretest. In line with the result of Fitrianingsih (2019) in her research that shows an effect of coloring pictures on fine motor development in children aged 4-5 years group, Wu (2014) also shows the of use graphic organizer as a learning tool is as better to understand vocabulary meanings and then assess or review, for a test, any new vocabulary items learned in a subject area.

The pre-test acquired means score 5.06, where in the post-test increased to 8. 07. Then, the T-value was 25.5, while T-table was only 2.042 with df = 39 and $\alpha = 0.05$, it showed the hypothesis was proven. The given treatment was successful, it could be concluded that the Kids Coloring Fun Application could improve the children vocabulary mastery. There is a significant difference of vocabulary mastery of the children before and after giving treatment using Kids Coloring Fun Application. It is In line with the result of Tohe (2019) that the younger generations of students have always had their phones in their hands, the application will help students increase their vocabularies, the result from Wang (2017) also shows that the app helps college students master their English learning and enhance their English ability.

The mean score of the students obtained high mastery in learning vocabulary by using Kids Coloring Fun Application. It can be inferred that using mobile applications is more effective in teaching vocabulary compared to the traditional ways of teaching, there are many studies proved that ICT can be effective for vocabulary teaching (Basal, 2016), the influence of coloring pictures and fine motor development starts in children aged 4-5 years (Fitrianingsih,2019).

**Conclusion**

It can be concluded that Kids Coloring Fun Application can enhance the children vocabulary mastery at Tumbuh Kembang Kindergarten. It is proven by mean score of pretest (5.06) and posttest (8.07). In the level of significance T-test value is 25.5 while T-table value is 2.042. Thus, the research supported ($H_1$) there is a significant difference of the children vocabulary mastery before and after treatment by using Kids Coloring Fun Application.
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References

Ahmet, B., Selahattin.Y., Asli.T., & Lutfiye.S. (2016). Effectiveness of Mobile Applications in Vocabulary Teaching. Contemporary Educational Technology, 7(1), 47-59.
Fitrianingsih, N., & Sari, N. S., N., I. (2019). The Influence of Picture Coloring on Fine Motor Development in Children Aged 4-5 Years. Journal of Science Innovare, 2(2), 19-22.
Gay, L. (2015). Educational Research, New.York. Charles Merill Publishing. Co. A Bell and Howel Company.
Hariadi, I., & Amir, Z. (2014). Teaching English Vocabulary through K.I.M (Key Word, Information, And Memory Clue) Vocabulary Strategy in Junior High School. JELT, 2(2), B, 111-119.
Jati. A., Gumawang. (2018). The Use Of Smartphone Applications In English Language Teaching And Learning. Jurnal Sosioteknologi, 17(1), 144-153.
Murcia, Murianne Celce & Olshtain. (2002). Discourse and Context in Language Teaching. A Guide for Language Teachers. Cambridge: Cambridge University Press.
Nunan, David. (2001). Language Teaching Methodology. New Definition. New York.
Pinto, M., & Zuckerman, S. (2018). Coloring Book: A new method for testing language comprehension. Behavior Research Methods, 51(6), 2609-2628. doi:10.3758/s13428-018-1114-8
Susanti., A. (2017). The Application of Classroom Management in English Language Teaching to Increase Students’ Speaking Ability at Tenth Grade of SMK Trisakti Bandar Lampung. Pedagogy Journal of English Language Teachin, 5(2), 113-121.
Tohe, A., Al-Ayubi, M. A., & Maksum, A. (2019). Developing an Android-based Screen Lock Application for Arabic Vocabulary Enrichment of the Tenth Graders at the Madrasah Aliyah. KnE Social Sciences, 3(10), 400-408. doi:10.18502/kss.v3i10.3923
Wang, B. (2017). Designing Mobile Apps for English Vocabulary Learning. International Journal of Information and Education Technology, 7(4), 279-283. doi:10.18178/ijiet.2017.7.4.881
Wu, Q. (2014). Learning ESL Vocabulary with Smartphones. Procedia - Social and Behavioral Sciences, 143, 302-307. doi:10.1016/j.sbspro.2014.07.409
Wulanjanjani, A. N. (2016). The Use of Vocabulary-Games in Improving Children’s Vocabulary in English Language Learning. Transformatika, 12(1), 76-83.
Zakir, H. (2018). The Effects of ICT-Based Learning On Students’ Vocabulary Mastery in Junior High Schools in Bandung. International Journal of Education, 10(2), 149-156.
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