



SNAP TO READ

EXPLORING THE PRESERVICE TEACHERS' PERCEPTION TOWARD THE USE OF DUOLINGO IN TEACHING VOCABULARY TO YOUNG LEARNERS

Dwi Ima Herminingsih
Universitas Tulungagung
dwima.hermin@gmail.com

First received: June 11, 2021

Final proof received: June 25, 2021

Abstract

The purpose of doing research is to have the investigation on the students' belief when Duo lingo application is applied in the class of vocabulary and to describe the justification of the advantages using the Duo lingo to empower the vocabulary enrichment. The students of English Study Program in State Islamic College as Pre Service – teachers have participated in this study. The data were collected by the questionnaire distribution and the interview methods. The data analysis uses the qualitative description. The result of the study exposes the facts that the respondents agree the Duo lingo can facilitate the vocabulary learning achievement. The medium labelled Duo lingo makes the students easy and interesting in learning the English word knowledge. The interview with the sample of informants suggests the testimony that the young learners can use the app overtime as far as they want. They are free to set or make up the schedule of lesson session. One more meaningful thing found in the application is that the English is spoken by the native speaker. By performing the English of the native speaker can be a model or master for the students. They get the chance to exercise repeating the word or the sentence spoken by the native speaker correctly.

Keywords: *Vocabulary, Duo lingo, Students' Perception.*

Vocabulary is one of language components which functions significantly in the construction of utterance to convey the meaning of the message sender. Someone can share his the feeling and the thought if she or he has the enough knowledge of words. Otherwise people can only understand the opinion or feeling of other people if the words or utterances delivered contain the meanings and understandable. In the case of classroom learning teaching activities the acquisition of rich vocabulary is demanded to be competent in conducting the interaction with others. The interaction between the students and teacher and students-peers can run well if each students owns the sufficient modal of vocabulary to build sentences expressing what she or he has in mind. It is only by the words she or he can say agree, disagree, reject, like, dislike, plan, want to do and so on. In sum up, it can be said the acquisition of jargon, lexicon or collection of glossary Can support the achievement in English competence (Bărbuleț, 2013)(Lelawati et al., 2018) (Alsaif Sarah Ali & Deris, 2019)

Due to the vocabulary mastering, the former studies done qualitatively and quantitatively have reported the students of any level of education meet the problem with collecting word of any field. There are many causes why the target of acquiring the words is not successful. The first, as it is investigated by Dwi Ima in Herminingsih the students think learning and understanding the words of the language that is not used every day is not easy (Herminingsih & Jazeri, 2020a). The words that are not only different from the language they speak daily in the case of spelling and pronunciation but also in the point of meaning very often become the source of problem to master the vocabulary. The insufficiency of passive and active words deposit then often make them fail in the English skills achievement. They stop writing and speaking when they do not know what are the English words to say. The other English skills such as the listening and the reading comprehension get also worst because of the bad understanding of word terminology (Herminingsih & Jazeri, 2020b) (Ibrohim et al., 2019).

Secondly, the bad attainment of the students' English is not only

affected by the poor word collection but can also be the media or techniques which are applied by the teacher. It is reported by Ibrahim. The unappropriated technique to teach vocabulary make the students get bored because there is not variation. He observes the teacher introducing the vocabulary by getting the meaning of word by word. The teacher asks the students to remember the words and recall the memory .this way is of course considered as a boring activity and not interesting for the students. It is widely known that the way how the children acquire the number of the word is much influenced by the characteristics of the young learners who are very moody and need particular treatments. The lexis in the dictionary will be more interesting learnt by fun, joys and innovative, imaginative techniques. Learning words by memorizing each single lexicon cannot meet what they need. To create the teaching and learning joyful and lively the optimization of integrating IT and the teaching learning process may get the solution research done by (Dakhi & Fitria, 2019)(Zhai, 2021)(Alsaif Sarah Ali & Deris, 2019) (Zhai, 2021). In the era where the teaching based internet media applications has been developing rapidly in the last current years are helpful for the teachers to come out from the serious issues in teaching(Susiati & Kartikasari, 2020)(A, 2019)(Zhao & Li, 2018)(Agustin, 2019)(Ramezanali & Faez, 2019)(Nugroho et al., 2021) (Kinasih & Rochmawati, 2020)(Rusanganwa, 2013)(Yang, 2017)

Besides the less practice of using words and the limited number of vocabulary, the students' lack of knowledge of grammar is blamed to be another cause of the students' failure in learning English (Herminingsih & Jazeri, 2020b)(Rezvani, 2011). Having awareness of the hardness of the students memorizing, spelling and getting the meaning of the English word collection, the researcher as an English teacher has the strong interest as well as the academic needs to search the data enriching the horizon of the important use of App Duo lingo in teaching. The data on the students' perception on the practice of Duo lingo App is expected to be meaningful to read and at the same can assure the significance of App in teaching to avoid being demotivated to run the vocabulary class (Zhao & Li, 2018)(Mardali

& Siyyari, 2019)(Kusumadewi, 2018)(Nugroho et al., 2021)

METHOD

In relation with the goal of research, understanding the perception of the Preserve-teachers on the use of Duo lingo in learning English Vocabulary, the study design is qualitative research. This means that there is not testing hypothesis or prove or testify the previous and the existing theories. Otherwise, the research is aimed to generate the theory, hence this is not a quantitative research design(Cohen, Lawrence, et al., 2017)(Cohen, Manion, et al., 2017). The steps done to collect the information about the opinion of the pre-service teachers about the application of Duo lingo in learning the lexicon are gathering the data and analysis them.

The Respondents

The sixth semester pre-service teachers of English Study program in the State Islamic College Tulungagung have engaged in the research as the respondents. There are 104 respondents intentionally chosen as informants.

The Research Instrument

The instrument of to obtain the data uses the questionnaire distribution and interview There are 14 questionnaire items should be responded. The questionnaire item list are as follow: 1) Learning media makes students easy to learn vocabulary 2) The learning media can improve students' vocabulary mastery 3) Learning media with the application makes students interested in the learning process and Discarded in students 4) Duo lingo provides material suitability and basic competencies for the students 5) The suitability of the material and media with learning objective 6) Duo lingo presents depth of material 7) Completeness of the material 8) Clarity of material 9) Order of presentation 10) Clarity of instruction 11) The accuracy of word selection 12) The material can be a reference for learning 13) Make it easier for teachers to deliver material 14) Attractive appearance for the students to learn.

The Procedures of Collecting Data

The steps to find out the required data answering the formulated research problem begins with the preparation to construct the questionnaire then proceeded by distributing the questionnaire form to the informants by using the Google Form. The questionnaire response form submission is on the dated time by on line. The 94 of 104 respondents have submitted the responses. In the meantime, to meet the necessary data, the researcher runs the interview with sample of the informants.

The data Analysis

The obtained data then analyzed or interpreted qualitatively. Starting with organizing, creating transcription, gathering notes, documents, reviewing, coding and modeling themes (Newby, 2014).

FINDING AND DISCUSSION

The Perception of the Pre-Service Students of Semester Six (6) of Islamic State College Tulungagung on the Use of Duo Lingo in Acquiring Insight in Vocabulary

Table 1 Questionnaire Item 1

Learning media makes students easy to learn vocabulary	LEVEL OF AGREEMENT	FREQUENCY	PERCENTAGE
	1	1	1,08%
	2	0	0,00%
	3	4	4,30%
	4	20	21,51%
	5	68	73,12%
	TOTAL	93	100%

Figure 1

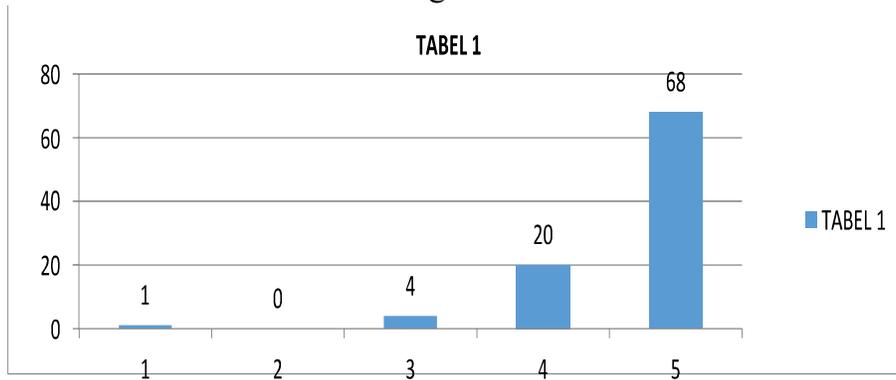


Table 2 Questionnaire Item 2

The learning media can improve students vocabulary mastery	LEVEL OF AGREEMENT	FREQUENCY	PERCENTAGE
	1	0	0,00%
	2	1	1,08%
	3	5	5,38%
	4	31	33,33%
	5	56	60,22%
	TOTAL	93	100%

Figure 2

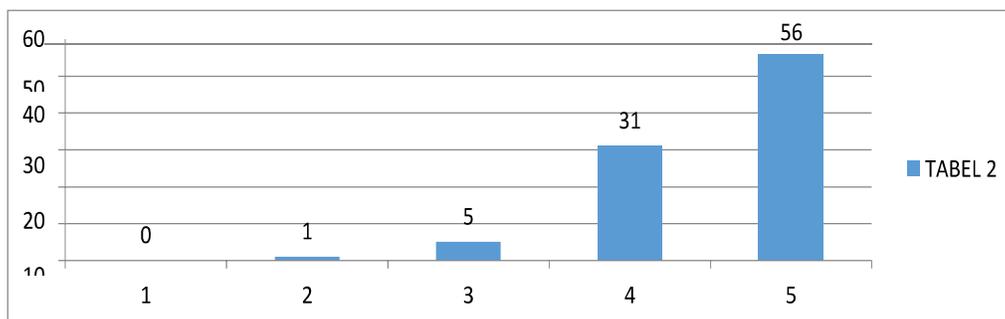


Table 3 Questionnaire Item 3

Learning media with the application makes students interested in the learning process and discarded in students	LEVEL OF AGREEMENT	FREQUENCY	PERCENTAGE
	1	0	0,00%
	2	0	0,00%
	3	15	16,30%
	4	37	40,22%
	5	40	43,48%
	TOTAL	92	100%

Figure 3

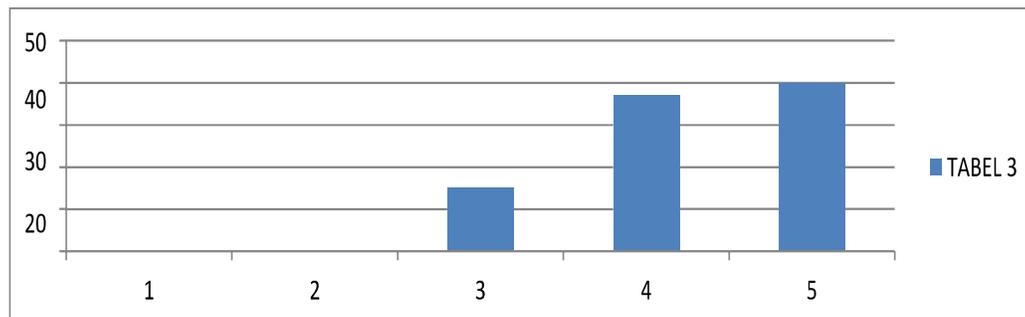


Table 4 Questionnaire Item 4

Duo lingo provides material suitability and basic competencies for the students	LEVEL OF AGREEMENT	FREQUENCY	PERCENTAGE
	1	0	0,00%
	2	2	2,17%
	3	13	14,13%
	4	51	55,43%
	5	26	28,26%
	TOTAL	92	100%

Figure 4

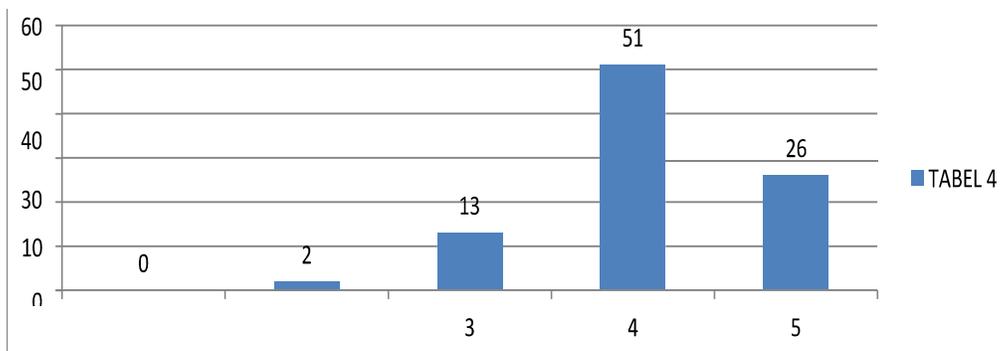


Table 5 Questionnaire Item 5

The suitability of the material and media with learning objectives	LEVEL OF AGREEMENT	FREQUENCY	PERCENT AGE
	1	0	0,00%
	2	0	0,00%
	3	21	22,58%
	4	48	51,61%
	5	24	25,81%
	TOTAL	93	100%

Figure 5

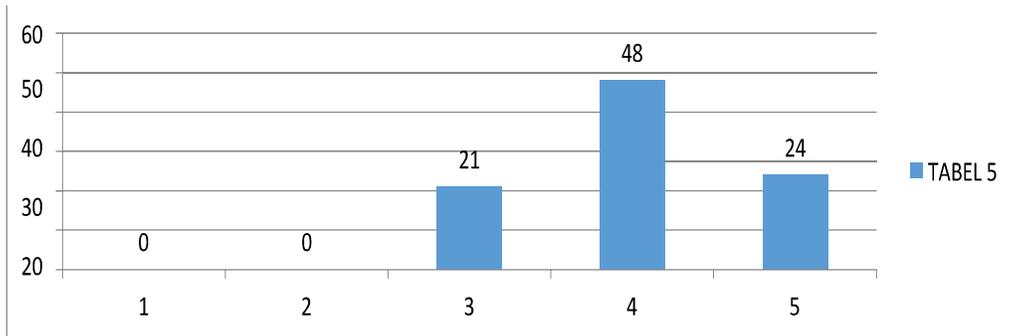


Table 6 Questionnaire Item 6

Duo lingo presents depth of material	LEVEL OF AGREEMENT	FREQUENCY	PERCENT AGE
	1	2	2,15%
	2	6	6,45%
	3	27	29,03%
	4	46	49,46%
	5	12	12,90%
	TOTAL	93	100%

Figure 6

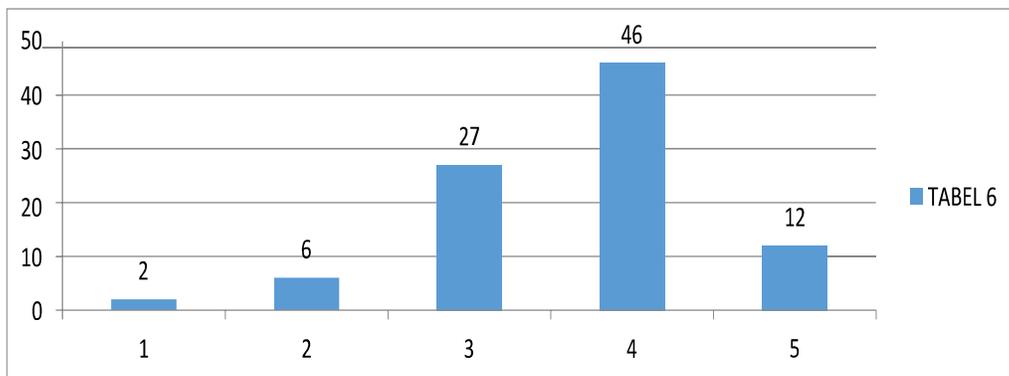


Table 7 Questionnaire Item 7

Completeness of the material	LEVEL OF AGREEMENT	FREQUENCY	PERCENT AGE
	1	0	0,00%
	2	5	5,43%
	3	20	21,74%
	4	54	58,70%
	5	13	14,13%
	TOTAL	92	100%

Figure 7

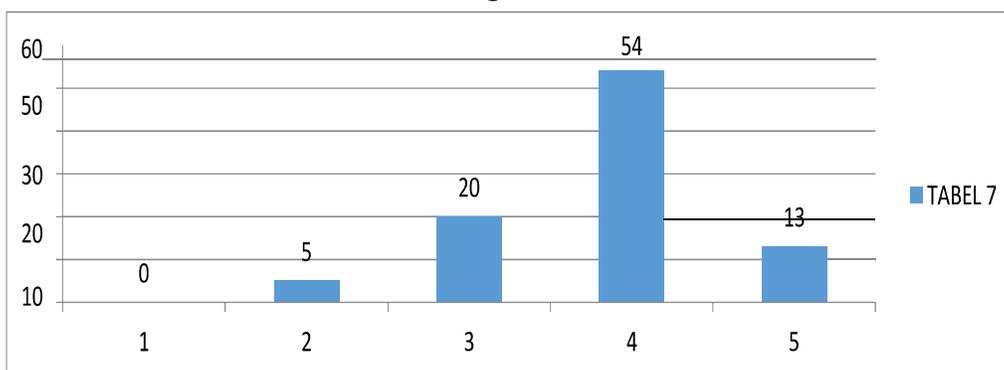


Table 8 Questionnaire Item 8

Clarity of material	LEVEL OF AGREEMENT	FREQUENCY	PERCENT AGE
	1	0	0,00%
	2	2	2,17%
	3	16	17,39%
	4	51	55,43%
	5	23	25,00%
	TOTAL	92	100%

Figure 8

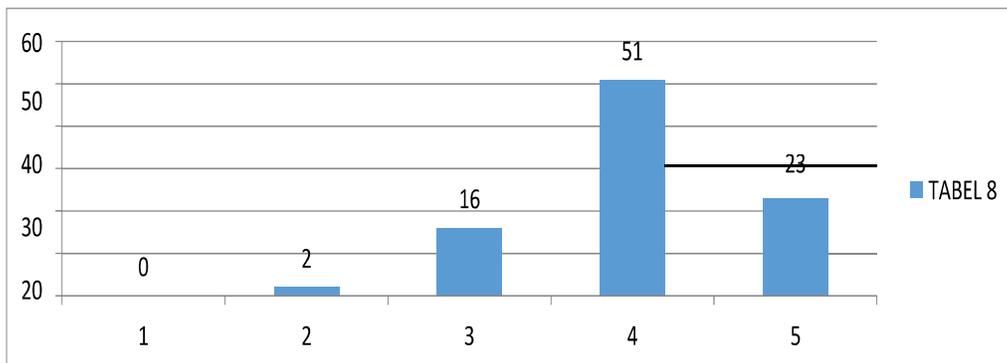


Table 9 Questionnaire Item 9

Order of presentation I	LEVEL OF AGREEMENT	FREQUENCY	PERCENT AGE
	1	3	3,23%
	2	4	4,30%
	3	21	22,58%
	4	48	51,61%
	5	17	18,28%
	TOTAL	93	100%

Figure 9

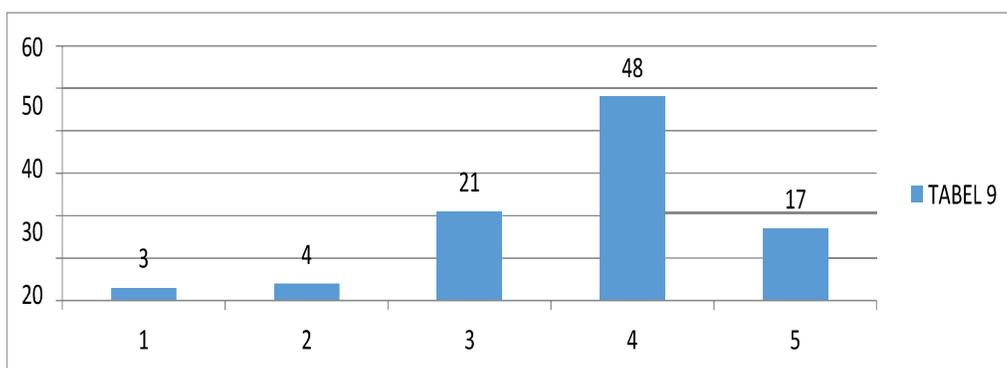


Table 10 Questionnaire Item 10

Clarity of instructions 1	LEVEL OF AGREEMENT	FREQUENCY	PERCENT AGE
	1	0	0,00%
	2	0	0,00%
	3	12	12,90%
	4	49	52,69%
	5	32	34,41%
	TOTAL	93	100%

Figure 10

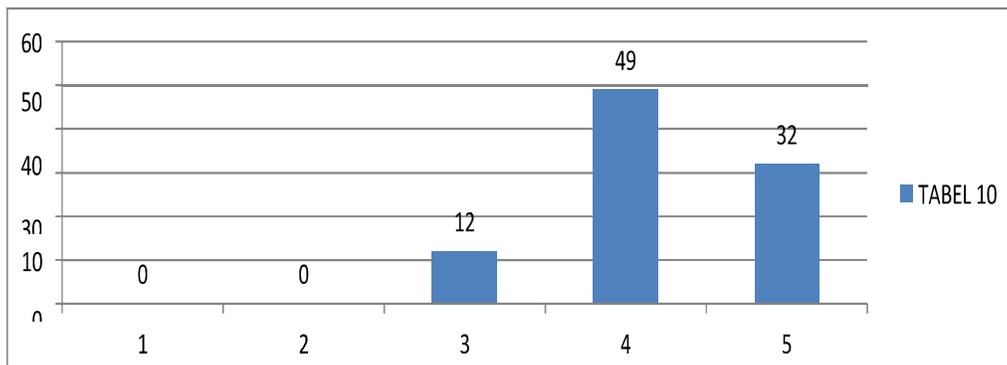


Table 11 Questionnaire Item 11

The accuracy of word selection	LEVEL OF AGREEMENT	FREQUENCY	PERCENT AGE
	1	0	0,00%
	2	0	0,00%
	3	12	13,04%
	4	43	46,74%
	5	37	40,22%
	TOTAL	92	100%

Figure 11

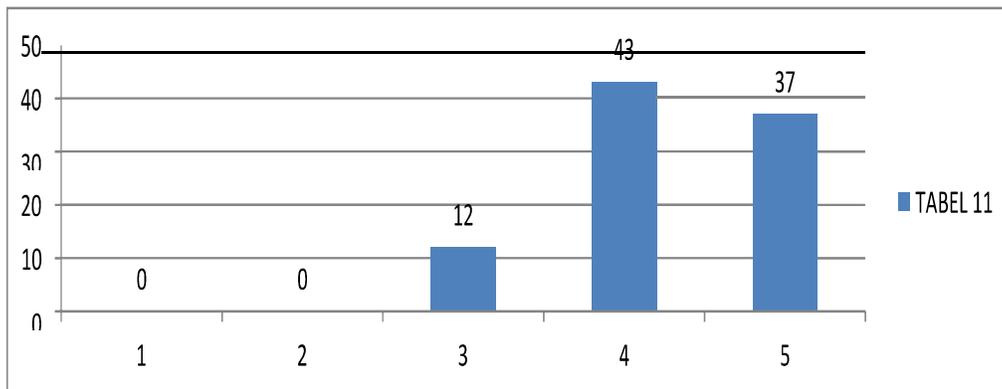


Table 12 Questionnaire Item 12

The material can be a reference for learning	LEVEL OF AGREEMENT	FREQUENCY	PERCENT AGE
	1	0	0,00%
	2	1	1,08%
	3	17	18,28%
	4	37	39,78%
	5	38	40,86%
	TOTAL	93	100%

Figure 12

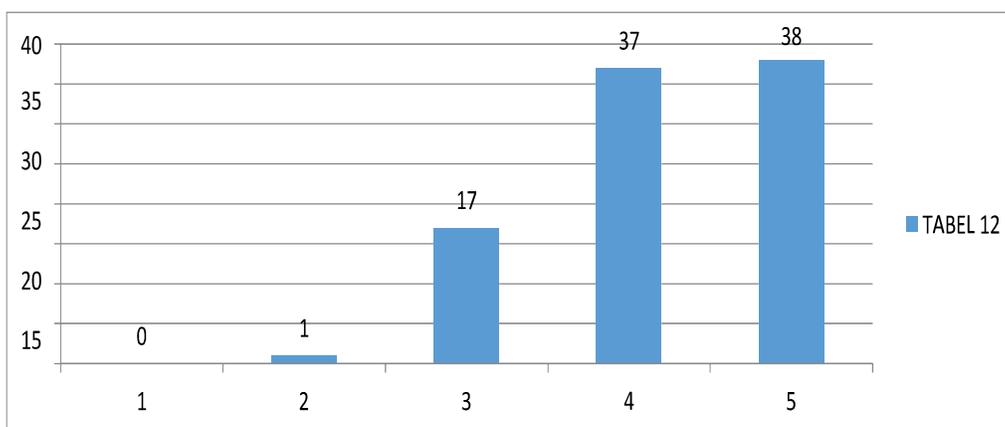


Table 13 Questionnaire Item 13

Make it easier for teachers to deliver material	LEVEL OF AGREEMENT	FREQUENCY	PERCENT AGE
	1	0	0,00%
	2	2	2,15%
	3	15	16,13%
	4	42	45,16%
	5	34	36,56%
	TOTAL	93	100%

Figure 13

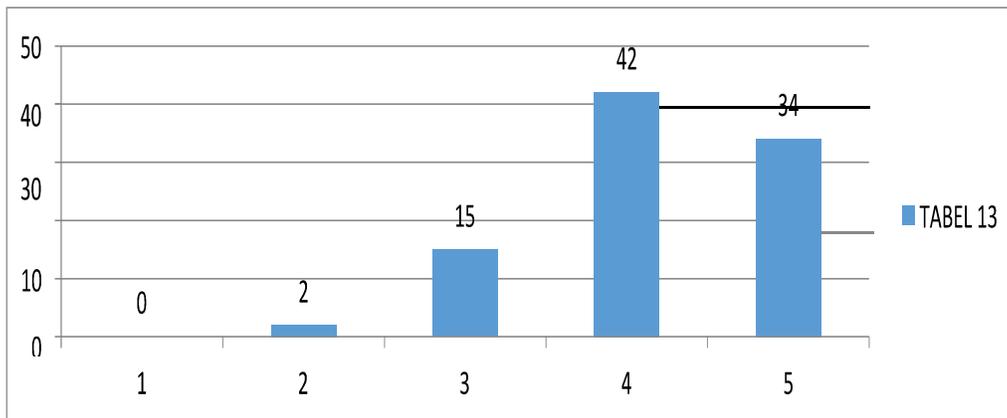
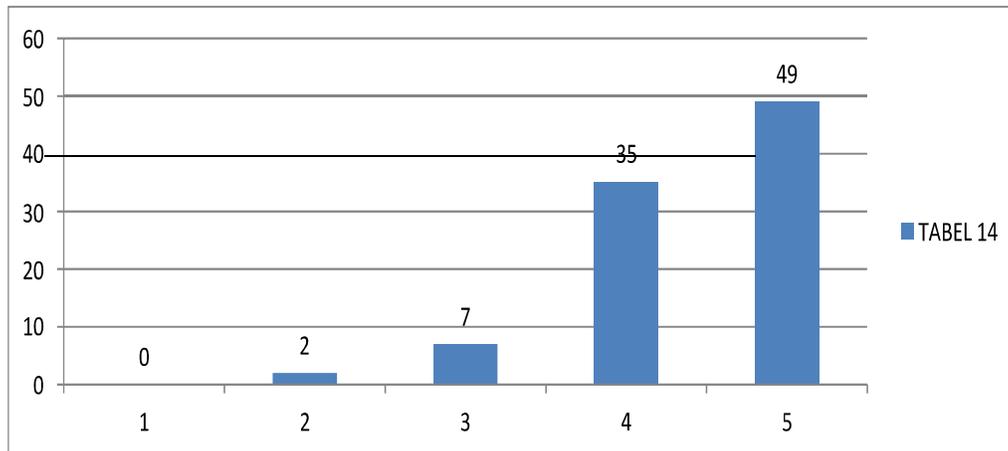


Table 14 Questionnaire Item 14

Attractive appearance for the students to learn	LEVEL OF AGREEMENT	FREQUENCY	PERCENT AGE
	1	0	0,00%
	2	2	2,15%
	3	7	7,53%
	4	35	37,63%
	5	49	52,69%
	TOTAL	93	100%

Figure 14



The qualitative responses of The Pre-Service Students of Semester Six (6) of Islamic State College , Tulungagung on the Use of Duo Lingo in Acquiring Insights in Vocabulary

The testimony provided by the sample of informants that can be judged as representation of selected informant are descriptively presented next sections of this paper. The letter Q is the abbreviation of interview question delivered by the researcher. The alphabet IA, IB are for the informants A and B,

Q : Learning media makes students easy to learn vocabulary.

IA : I very agree with this statement because using learning media the students will get the New vocabulary easily and by using the media the students learn the vocabulary Attractively.

Q : The learning media can improve students' vocabulary mastery.

IA : I very agree with this statement because the students not only know about the word and meaning but they also know about the pronunciations.

Q : Learning media with the application makes students be interested in the learning process and discarded in students.

IA : I agree with this statement because using the application will make the students not bored and they also feel easy to understand and memorize

the vocabulary.

Q : Duo lingo provides material suitability and basic competencies for the students.

IA : I agree with this statement because duo lingo provides many materials which suitable with the students competencies so the students are free to choose the material which suitable with their competencies.

Q : The suitability of the material and media with learning objectives.

IA : I agree with this statement because there are many kinds of materials starting from basic to advance level.

Q : Duo lingo presents depth of material.

IA : I agree with this statement because in each level duo lingo will repeat the material until the students understand about the material.

Q : Completeness of the material.

IA : I agree with this statement because the application provides many kinds of material such as grammar, vocabulary, speaking, writing, and listening.

Q : The material presented is clear and attractive, simple and easy to understand.

IA : The reason why I chose option 4 which means I agree is because the material is orderly presented so that it is clear.

Q : The instructions given are clear so that it is easy and quick to understand.

IA : The reason why I chose option 4 which means I agree is because the instructions given are clear so that it is easy and quick to understand.

Q : The accuracy of selecting words is precise and interesting because there are pictures.

IA : The reason why I chose option 4 which means I agree is because the accuracy of selecting words is precise and interesting because there are pictures.

Q : The material can be a reference for learning

IA : The reason why I chose option 4 which means I agree is because

the material can be used as a reference for learning.

Q : The Duo lingo easier for the teacher to deliver the material but helps the teacher to provide material

IA : The reason why I chose option 4 which means I agree is because make it easier for the teacher to deliver the material but helps the teacher to provide material even though it is not appropriate and explain again.

Q : The duo lingo has an attractive appearance to see.

IA : The reason why I chose option 4 which means I agree is because the eye catching performance presents the interest of the student to follow the lesson content.

Q : Learning media makes students easy to learn vocabulary.

IB : The reason why I chose option 5 which means that I strongly agree on the first question is because Duo lingo is indeed a good application. It can make easier for students to learn new vocabulary. Duo lingo is handy and assessable as it is set up in Hand phone.

Q : The learning media can improve students' vocabulary mastery.

IB : The reason why I chose option 5 which means I strongly agree is because for me Duo lingo is an application that can help students in mastering vocabulary. Besides presenting material in text form, Duo lingo also presents material in audio form which makes it easier for students to know how to read the vocabulary they just know. Soon after all material shared to the students, test is conducted to find out the extent of students' understanding of the material they have learned.

Q : Learning media with the application makes students get not only the substance of lesson but also the feeling of joys to enrich the vocabulary.

IB : The reason I chose option 4 which means I agree is that in my opinion Duo lingo brings a learning media design that attracts students' interest when using the application by presenting good visual images and audio. However, it would definitely be even more interesting if Duo lingo present animation to support learning especially for the most basic material

so that children would be more interested.

Q : Duo lingo provides material suitability and basic competencies for the students

IB : The reason I chose option 5 which means I strongly agree is because Duo lingo does present the suitability of material and basic competencies for students.

Q : The suitability of the material and media with learning objectives

IB : The reason I chose option 4 which means agreeing is that after trying and studying some of the material presented by Duo lingo, the material presented is in accordance with the learning objectives. For example, the material about part of the body, the material presented is in accordance with the existing learning objectives, namely students know the part of the body and can mention part of the body.

Q : Duo lingo presents depth of material

IB : The reason I chose option 4 which means agree is because in my opinion Duo lingo is sufficient to present the material in detail and deep enough, such as after presenting the material there is a little test starting from the material comprehension test, listening and also writing.

Q : Completeness of the material

IB : The reason I chose option 4 which means agree is because the material presented is quite complete and good enough to be used as learning medium

Q : Clarity of material

IB : I choose to agree because after I used the Duo lingo application, I felt the materials order were clear and easy to understand.

Q : Order of presentation

IB : I agree the order of presentation is sequent organized based on the level of English proficiency. This strategy gives the positive thing to the learners to make the decision on what the level of English they want to study.

Q : Clarity of instructions

IB : I choose very agree because I think all of the instruction is clear and not complicated to get the message delivered.

Q : The accuracy of word selection

IB : I choose agree because the duo lingo application selecting words that are easy to understand and accurate for students who want to learn vocabulary from the basics.

Q : The material can be a reference for learning

IB : I choose agree because the material taught on the duo lingo application is like grammar and vocabulary material taught in school, so of course the material in the duo lingo application can be used as a learning reference.

Q : Make it easier for teachers to deliver material

IB : I choose neutral because not all teachers find it easier to use the duo lingo application to deliver material, there are also many teachers who are more comfortable using other application or some are even more comfortable without using application, but not a few teachers also find it easier to use duo lingo application to deliver material.

Q : Attractive appearance for the students to learn

IB : I very agree because the duo lingo application displays lots of funny pictures and appropriate with vocabulary being taught. The application also uses a unique icon, namely a green bird so that students are interested in continuing to learn the vocabulary in this application.

DISCUSSION

The tables and figures which are previously displayed suggest the percentages of the respondents to the 14 questionnaires items. 73, 12 % respondents agree that the Learning media makes students easy to learn. The learning media can improve the students' vocabulary mastery (66, 22%). 43.20% respondents are in the view Learning media with the application makes students interested in the learning process and Discarded in students. Take for example, the performance of Duo lingo raises up the students' interest

to study (52, 69%). In sum up, the above data show that the respondents mostly agree studying vocabulary can be more effective and attractive if the media are integrated in the classroom interactions, namely for the beginner. The presence of animations and pictures can create the lovely, friendly and interesting learning atmosphere. 55, 43% respondents argue the duo lingo which is 15 MB in size is not merely dynamic and impressive but also quite helpful to learn the meaning, the sameness, the antonym of the word and the formation of English lexicons. There are link and match between material, media and objectives of teaching learning (51, 61%). Besides the students see that the materials are detailed and complete (58, 70%) and clear (55, 43%), the details of learning contents (49, 46 %). The materials are systematically arranged (51, 61%) and provided with understandable guide line (52, 69%). The diction or word choice is properly selected coincided with the level education of the students' English proficiency (46, 86%). The lesson offered in Duo lingo application can enrich the learners' bibliography (40, 86%). The teacher does not find the difficulties in using delivering the course content (45.16%). These research findings are relevant to the theories have been proposed by the previous researchers. They proved the contribution of media in teaching vocabulary (Rusanganwa, 2013) (Nugroho et al., 2021). In addition, the interview with the informants firmly notifies that the role of media also they are in the opinion that the Duo lingo is potentially raise the curiosity of the learners to inquiry the insights of lexicons or vocabulary. The right selection of media advantages to the English language learning since the phases of teaching learning run effectively and cheerfully. This existing data findings obtained from the informants can be a highlighting to the former studies on the related same topics (Nugroho et al., 2021) (Kinasih & Rochmawati, 2020) (Nizar, 2020) (Mu, 2019).

CONCLUSION

One linguistic components which has a significant role is word. The success of being capable to access either oral or written information or

communication relies on how rich are the learners or students in vocabulary deposit. In addition, the students' property in vocabulary mastery is affected whether the media used can best introduce or practice the vocabulary teaching. Many former research results have reported that the students are often obstructed in mastering vocabulary of English (Izah, 2019)(Nizar, 2020) (Nizar, 2020). Regarding to these research explorations, it is understandable that the use of accurate media is firmly demanded to assist the students to learn vocabulary. The invention of IT based teaching media is expected to help the teacher distributing the lesson materials and elevating the eagerness of the students to gain the word knowledge. The research inquiry on the perception of Preservice teachers serves the data assuring that Duo lingo is interesting, attracting and helpful enough to be a medium to study .The major of questionnaire responses stated that the students are well motivated in learning vocabulary with this application because it is provided with an interactive game. The interactive game takes the form of a test that a student has to take . If she or he failed, the application will automatically swift to the kind of test that stay on level of the students' English ability. On the contrary, if she or he is susuccessful, she or he will get points. Additionally interesting learning features and an alarm feature are also available to remind the set schedule. In conclusion, it can be declared that the perception on the use of duo lingo in learning vocabulary is positive.

ACKNOWLEDGMENTS

I would like to devote my great thankfulness of gratitude the Preservice teachers, students of the semester six, State Islamic College , Tulungagung who have been a part of my research activity so the research can be accomplished on due time . I also owe you all because you warmly give a hand to collect the required data by submitting the responses on the right schedule. Many thanks also go to the chairperson of English Study Program, Mr Dr. Nursamsu , M.Pd who has assigned me to run the class and given the opportunity to have my study.

REFERENCES

- A, A. M. (2019). The Use of Technology in English Language Teaching. *Frontiers in Education Technology*, 2(3), p168. <https://doi.org/10.22158/fet.v2n3p168>
- Agustin, M. (2019). TEACHERS' TECHNIQUES IN TEACHING ENGLISH VOCABULARY TO YOUNG LEARNERS. *JELA (Journal of English Language Teaching, Literature and Applied Linguistics)*. <https://doi.org/10.37742/jela.v1i1.8>
- Alsaif Sarah Ali, M., & Deris, F. D. (2019). Vocabulary learning through duolingo mobile application: Teacher acceptance, preferred application features and problems. *International Journal of Recent Technology and Engineering*. <https://doi.org/10.35940/ijrte.B1017.0982S919>
- Bărbuleț, G. (2013). Teaching English vocabulary through ICT's. *The Journal of Linguistic and Intercultural Education*. <https://doi.org/10.29302/jolie.2013.6.4>
- Cohen, L., Lawrence, M., & Morrison, K. (2017). *Research Methods in Education*. Eighth Edition. In *Research Methods in Education*.
- Cohen, L., Manion, L., & Morrison, K. (2017). *Research Methods in Education*. In *Research Methods in Education*. <https://doi.org/10.4324/9781315456539>
- Dakhi, S., & Fitria, T. N. (2019). The Principles and the Teaching of English Vocabulary: A Review. *JET (Journal of English Teaching)*. <https://doi.org/10.33541/jet.v5i1.956>
- Herminingsih, D. I., & Jazeri, M. (2020a). Elevating the speaking ability through a culture talk in a video: Evidence from universitas Tulungagung, Indonesia. *Asian ESP Journal*.
- Herminingsih, D. I., & Jazeri, M. (2020b). Exploring Language Input and Provoking Language Output to Raise English Attainment of the University Students. *Asian EFL Journal*.
- Ibrohim, A. T., Septianti, A., & Sadikin, I. S. (2019). STUDENTS' PERCEPTION TOWARD TEACHING ENGLISH VOCABULARY THROUGH TOTAL PHYSICAL RESPONSE

(TPR) METHOD. PROJECT (Professional Journal of English Education).
<https://doi.org/10.22460/project.v1i2.p145-156>

Izah, N. (2019). Upgrading Students ' Vocabulary Through " Memrise " App. Proceeding of First Conference of English Language and Literature (CELL).

Kinasih, T., & Rochmawati, D. (2020). Teaching Vocabulary to Indonesian Young CHildren with ADHD. JET ADI BUANA. <https://doi.org/10.36456/jet.v5.n01.2020.2291>

Kusumadewi, H. (2018). THE EFFECTS OF USING DUOLINGO TOWARDS STUDENT'S VOCABULARY MASTERY (AN EXPERIMENT OF JUNIOR HIGH SCHOOL

STUDENTS AT OMEGA SAINS INSTITUTE). IJET (Indonesian Journal of English Teaching). <https://doi.org/10.15642/ijet2.2018.7.2.172-186>

Lelawati, S., Dhiya, S., & Mailani, P. N. (2018). The Teaching Of English Vocabulary To Young Learners. PROJECT (Professional Journal of English Education),.

Mardali, J., & Siyyari, M. (2019). English teachers' beliefs and practices in teaching vocabulary: The case of teaching experience. Cogent Education. <https://doi.org/10.1080/2331186X.2019.1686812>

Mu, H. (2019). The Application of Iconicity in Teaching Vocabulary in College English. Theory and Practice in Language Studies. <https://doi.org/10.17507/tpls.0911.11>

Newby, P. (2014). Research methods for education, second edition. In Research Methods for Education, Second Edition. <https://doi.org/10.4324/9781315758763>

Nizar, A. I. S. (2020). Teaching Vocabulary Using Digital Media DURING COVID-19 Pandemic.

Jurnal Pendidikan Riset UNISMA.

Nugroho, B. S., Nafasya, F. D., Nurshanya, N., & ... (2021). the Implementation of Hellotalk Application in Teaching Vocabulary To Young Learners. Connects

Ramezanali, N., & Faez, F. (2019). Vocabulary learning and retention through multimedia glossing. Language Learning and Technology.

- Rezvani, E. (2011). The Effect of Output Requirement on the Acquisition of Grammatical Collocations by Iranian EFL Learners. *Journal of Language Teaching and Research*, 2(3). <https://doi.org/10.4304/jltr.2.3.674-682>
- Rusanganwa, J. (2013). Multimedia as a means to enhance teaching technical vocabulary to physics undergraduates in Rwanda. *English for Specific Purposes*. <https://doi.org/10.1016/j.esp.2012.07.002>
- Susiati, S., & Kartikasari, N. (2020). Do the Techniques Really Improve Students' Mastery in Vocabulary? *Journal of English Education and Teaching*. <https://doi.org/10.33369/jeeet.4.2.248-263>
- Yang, H. (2017). Empirical analysis of vocabulary teaching in college english based on computer-assisted memetics. *Boletin Tecnico/ Technical Bulletin*.
- Zhai, C. (2021). Practical research on college English vocabulary teaching with mobile technology. *International Journal of Electrical Engineering Education*. <https://doi.org/10.1177/0020720920985057>
- Zhao, Q. Y., & Li, H. L. (2018). Application of new media technology in college english vocabulary teaching. *Kuram ve Uygulamada Egitim Bilimleri*. <https://doi.org/10.12738/estp.2018.6.271>