

Students' Perception of Duolingo as an English Learning Tool at Politeknik Negeri Bali Civil Engineering Department

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ABSTRACT

This study examined the perception of the Android-based Duolingo application as an English learning resource among students enrolled in the D3 Civil Engineering program at Bali State Polytechnic. Data were collected through surveys and interviews involving thirty-two fourth-semester students, randomly selected from one class to represent the entire population. The study employed a quantitative approach, focusing on gathering detailed information regarding students' perceptions of Duolingo as a supplementary tool for learning English. The results indicated that 3.70% of respondents had a very good perception of Duolingo, 51.85% had a good perception, 33.33% had an adequate perception, and 11.11% had a poor perception. These findings suggest that the majority of D3 Civil Engineering students at Bali State Polytechnic view the Duolingo application positively. Overall, it can be concluded that Duolingo is perceived as an effective and beneficial resource for enhancing English language skills among these students.

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INTRODUCTION

This research aims to understand students' perceptions of using the Android-based Duolingo application for learning English, specifically among students in the D3 Civil Engineering program at Bali State Polytechnic. Duolingo was chosen for its simplicity, fun features, and familiarity, making it an appealing tool for students. Given the app's numerous advantages, the study seeks to uncover how students perceive its use and its impact on their English language skills. The objective is to determine if Duolingo can be an effective additional resource for learning English in this academic setting.

The study addresses two specific problems: students' perceptions of Duolingo in the D3 Civil Engineering program at Bali State Polytechnic and the impact of Duolingo on their English learning. It aims to identify whether students view Duolingo positively and if it enhances their language capabilities. Currently, many Civil Engineering students face challenges with English proficiency. By introducing Duolingo, the study hopes to improve their English skills, making the language more accessible for daily learning. The feedback from students who have used the application is crucial to understanding its effectiveness.

Previous studies have shown positive outcomes from using educational applications, including Duolingo, in learning environments. Research indicates that such applications can increase enthusiasm, provide diverse learning experiences, and overcome challenges like boredom. Studies by researchers like Rifdinal (2021), Tyas (2014), and Miftah (2014) highlight the benefits of Android-based learning tools in improving language skills and maintaining student interest. This study employs a unique methodology using SPSS to process data, ensuring measurable and factual conclusions. By combining questionnaires and interviews, the research aims to provide a comprehensive understanding of students' perceptions of Duolingo, helping educators consider this method for teaching English.

METHODS

Research Design

This study employed a quantitative approach in the survey design. First, the quantitative design was chosen because this study particularly aimed to seek information from the students of D3 Civil Engineering, Bali State Polytechnic to find out the perception towards the use of the Duolingo app as media for learning English. A quantitative approach is one in which the investigatory primarily uses postpositive claims for developing knowledge (i.e., cause and effect thinking, reduction to specific variables and hypotheses and questions, use of measurement and observation, and the test of theories), which employs strategies of inquiry such as experiments and surveys, and collect data on predetermined instruments that yield statistics data. Particularly, survey design is a procedure in quantitative research in which a survey or questionnaire is administered to a small group of people (called a sample) to identify trends in attitudes, opinions, behaviours, or characteristics of a large group of people (called the population). The questionnaires were then given to a class of students to find out their perception of using Duolingo. They were given a questionnaire after 12 meetings. The questionnaires consist of 12 questions using the Likert scale. The answer is then analysed using statistic V.26.

Participants/samples

The Participants of this research are the students of D3 Civil Engineering in B class with participants is 32 persons. They study Civil Engineering English for about 1 semester. They have moderate command of English in general with some low command in English for some students.

Data Collection

Arikunto stated that data are the result of research quotations, either fact or numeral (Rahmadani, 2019). Data are rough materials that researchers have collected from the world they are studying. In other words, data are a group of information from the respondents. The data collection method is the way to collect the data. In this research, the data about students' perception of the use of the Duolingo app for learning English were collected this year (2023).

In this research, the data were collected using a questionnaire. To measure students' perception of the use of Duolingo in increasing English learning motivation, the Likert scale was used in this study. According to Joshi et al. (2015), the Likert scale is a group of statements (items) presented in response to a real or hypothetical scenario. On a metric scale, participants must indicate their degree of agreement (from strongly disagree to strongly agree) with the supplied statement (items). In this study, the participants were given the option of using a Likert scale with five options: strongly agree (5), agree (4), neutral (3), disagree (2), and strongly disagree (1). The questionnaire consists of 15 questions that are classified into two parts. Part one (question number 1-10) relates to students' perceptions of using Duolingo. This part contains several elements of the Duolingo Application (Usability, content, context, control, and connectivity/mobility). The statements are adapted from the previous research conducted. The second part (question number 11-15) deals with the features of Duolingo. The second data collection is qualitative using interviews based on interview guidelines. The interview was used to add a deeper explanation to data collection. The interview was developed from a questionnaire adapted from Fujimoto (2012) that was composed of four questions and then explained descriptively. To get more in-depth and maximum results, after surveying with a closed-ended question to the participants, the researcher continued the research by using in-depth interviews with several participants who had been selected based on their answers. This interview aims to uncover problems more freely by asking informants for their thoughts and opinions. A semi-structured interview was chosen because it was suitable to strengthen the quantitative

data that had been analyzed. In the interview section, there are 6 questions divided into 4 points. Points one deals with using mobile applications to learn English while the next is about using Duolingo to learn English.

Data Analysis

After the data was collected from questionnaires and interviews. Then the questionnaire data is analyzed using SPSS v.26. The filling of the questionnaire can be seen in Table 1. The questionnaire used the Likert scale. In this study, the participants were given the option of using a Likert scale with five options: strongly agree (5), agree (4), neutral (3), disagree (2), and strongly disagree (1). The questionnaire consists of 15 questions that are classified into two parts. Part one (question number 1-10) relates to students' perceptions of using Duolingo. This part contains several elements of the Duolingo Application (Usability, content, context, control, and connectivity/mobility). The statements are adapted from the previous research conducted. The second part (question number 11-15) deals with the features of Duolingo. The interview data is used as extra information on the perception of the students.

RESULTS AND DISCUSSION

Based on some observations done in the class show that students have some problems in studying English. The conventional way of learning English seems too boring for them, such as studying grammar and their rules. That is why then the idea of using applications is tried to give a more relaxing way to study English. Students were then instructed to download the Duolingo application. At that time Duolingo was in free mode, and they did not need to pay for using the application. When Duolingo is used in class, some students show enthusiasm when they used it. Therefore, the idea to do research comes from. The questionnaire was then spread to two classes of students to get some data. The questionnaire was a set of questions that were given to people to collect facts or opinions about something. In this research, the questionnaire aimed to find the student perception of the use of Duolingo to learn English. The purpose of the first question was to know about the student's perception duration of Duolingo. Based on the graph above, 3.70% of respondents have a very good perception of using the Duolingo application, 51.85% have a good perception, then 33.33% have a fair perception and 11.11% have a poor perception. There were no respondents with unfavourable. The result is shown in Figure 1.

Below is the student's data when they fill out the questionnaire given. It will show numbers according to the Likert scale with five options: strongly agree (5), agree (4), neutral (3), disagree (2), and strongly disagree (1). The data can be seen in Table 1. Because every questionnaire should have a validity and reliability test then on the table 2 and 3 we can see the test result, which shows that the questionnaire is valid and reliable. The validity test was carried out using the Pearson product-moment correlation test, the r_{xy} value of the SPSS v.26 program output will be compared with the r table value for $N=27$ and $\alpha=5\%$ is 0.381. For the reliability test, is used Cronbach Alfa with the result 0,60 which means that the result of the questionnaire is reliable.

For calculating the student's perception then it is used the Likert formula.

$$total\ score = \frac{actual\ score}{ideal\ score} \times 100\% \dots\dots\dots$$

The distribution of respondents' answers is then assessed based on the following equation:

$$total\ score = \frac{actual\ score}{ideal\ score} \times 100\% \dots\dots\dots (1)$$

The actual score is the answer of all respondents to the questionnaire that has been given, while the ideal score is the score with the highest weight, assuming all respondents choose the answer with the maximum score. In this case, the ideal score obtained from 15 statement items with a Likert scale of 5 is 75.

The criteria for the percentage of respondents' perceptions used in this research can be seen in Table 1 below.

No.	Score Percentage	Kategori
1	20,00 % - 36,00 %	Very poor
2	36,01 % - 52,00 %	insufficient
3	52,01 % - 68,00 %	sufficient
4	68,01 % - 84,00 %	good
5	84,01 % - 100 %	very good

Table 1: Respondents' Perceptions' Criteria

Based on analysis using equation 1 and the criteria in Table 1, the results obtained were the distribution of perceptions of 27 respondents as in Table 2.

Very poor	insufficient	sufficient	good	Very good
0 %	11,11 %	33,33 %	51,85 %	3,70 %

Table 2: Respondents' Perceptions' Criteria

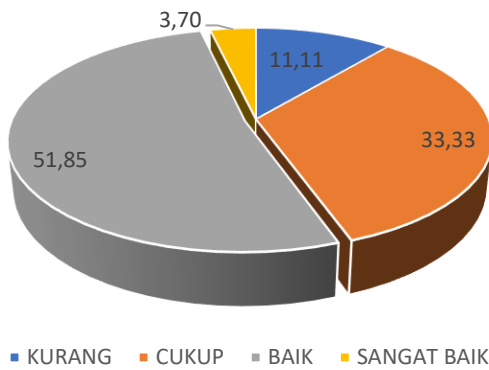


Chart 1: Respondent Perception Graph of Duolingo Application

Based on Chart 1 above, 3.70% of respondents have a very good perception of using the Duolingo application, 51.85% have a good perception, then 33.33% have a fair perception and 11.11% have a poor perception. There were no respondents with unfavourable perception criteria.

N	b_1	b_2	b_3	b_4	b_5	b_6	b_7	b_8	b_9	b_10	b_11	b_12	b_13	b_14	b_15
1	2	3	2	2	2	4	5	2	3	2	2	3	4	4	5
2	4	5	4	4	4	4	2	4	5	4	4	4	4	2	3
3	2	2	3	3	3	3	2	2	2	3	3	3	3	2	3
4	3	3	3	4	4	4	4	3	3	3	4	4	4	4	4
5	2	3	3	4	4	3	3	2	3	3	4	4	3	3	3
6	3	3	3	1	3	3	3	3	3	3	1	3	3	3	3
7	5	5	4	4	4	4	5	5	5	4	4	4	4	5	5
8	3	3	2	4	3	3	2	3	3	2	4	3	3	2	2
9	4	4	4	3	5	4	4	4	4	4	3	5	4	4	4
10	4	2	4	3	2	4	4	4	2	4	3	2	4	4	4
11	4	4	4	4	5	5	5	4	4	4	4	5	5	5	5
12	4	4	4	4	4	5	4	4	4	4	4	4	5	4	4
13	4	4	4	3	4	5	4	4	4	4	3	4	5	4	4
14	4	4	4	5	4	4	5	4	4	4	5	4	4	5	5
15	3	4	4	3	5	5	4	3	4	4	3	5	5	4	4
16	4	4	5	4	4	4	5	4	4	5	4	4	4	5	5
17	3	4	4	3	3	4	5	3	4	4	3	3	4	5	5

18	4	4	5	4	4	5	5	4	4	5	4	4	5	5	5
19	2	3	4	5	2	4	4	2	3	4	5	2	4	4	4
20	4	4	5	4	4	4	5	4	4	5	4	4	4	5	5
21	3	2	5	3	4	4	4	3	2	5	3	4	4	4	4
22	3	4	5	4	5	4	4	3	4	5	4	5	4	4	4
23	4	5	4	5	4	5	5	4	5	4	5	4	5	5	5
24	4	3	2	2	3	4	4	4	3	2	2	3	4	4	4
25	3	5	4	4	4	5	4	3	5	4	4	4	5	4	4
26	3	2	5	5	4	4	5	3	2	5	5	4	4	5	5
27	3	2	4	4	5	3	4	3	2	4	4	5	3	4	4
28	4	5	4	5	4	5	5	4	5	4	5	4	5	5	5
29	4	3	2	2	3	4	4	4	3	2	2	3	4	4	4
30	3	5	4	4	4	5	4	3	5	4	4	4	5	4	4
31	3	2	5	5	4	4	5	3	2	5	5	4	4	5	5

Table 3: Students' Questionnaire Result.

The results of the validity and reliability test of the questionnaire items above using the SPSS v.26 application can be seen in Tables 2 and 3. The validity test was carried out using the Pearson product-moment correlation test, the r_{xy} value of the SPSS v.26 program output will be compared with the r table value for $N=27$ and $\alpha=5\%$ is 0.381.

No. item	r_{xy}	label	Result
1	0,595	0,381	Valid
2	0,640	0,381	Valid
3	0,736	0,381	Valid
4	0,589	0,381	Valid
5	0,606	0,381	Valid
6	0,721	0,381	Valid
7	0,718	0,381	Valid
8	0,614	0,381	Valid
9	0,679	0,381	Valid
10	0,704	0,381	Valid
11	0,597	0,381	Valid
12	0,590	0,381	Valid
13	0,721	0,381	Valid
14	0,783	0,381	Valid
15	0,724	0,381	Valid

Table 4: Perception Questionnaire Validity Test Results

Cronbach's Alpha	Enquiry Result	Result
0,910	0,60	Reliable

Table 5: Perception Questionnaire Validity Test Results

The first respondent from student who had used Duolingo. The respondent said that the layout in Duolingo is interesting and fun. The respondent also said that some terms of content and difficulty in Duolingo were relevant and helpful. Because of that, the respondent said that Duolingo helped writing and listening skills and the respondent does not use another app.

The second respondent the student had used Duolingo. The respondent is in line with the first respondent about Duolingo's attractive and interesting layout. Next, the respondent also agrees with the first respondent about the layout in Duolingo. The respondent said that Duolingo was attractive. The respondent also said Duolingo improve English

skills because by using Duolingo, the respondent can find new vocabulary. In the last question, the respondent said do not want to use another application.

The result from the interview both respondents said that Duolingo was attractive and relevant to their English course. The first respondent said that Duolingo helped to learn writing and listening skills and the second respondent said Duolingo helped to find new vocabulary. For the closing statement, both said that they did not want to use another application. From this finding, the researcher concluded that questionnaires and interviews support each other.

CONCLUSION

This study aimed to understand students' perceptions of the Android-based Duolingo application as a tool for learning English, focusing on skills such as speaking, listening, and vocabulary. After using Duolingo for one semester, most students reported enjoying the application and found it to be an interesting and effective tool for learning English. Statistical analysis of the questionnaire results revealed that 51.85% of students had a positive perception of Duolingo. This positive feedback is largely because students found the app engaging, fun, and challenging, resembling a game they could play anytime and anywhere. Direct interviews further supported these positive perceptions.

A minor issue identified was limited internet access for some students, but this was not a significant barrier as internet access is generally considered a daily necessity. Future research could explore the use of similar English learning applications in different educational institutions, given the positive feedback from this study. As Duolingo has proven to be an interesting tool for studying English, it is suggested that the app's developers continue to improve its features to maximize its benefits. English lecturers and teachers are encouraged to incorporate Duolingo into their teaching methods to enhance students' English language skills.

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