CHAPTER III
RESEARCH METHODOLOGY

A. Research Design.

This study employs a quantitative descriptive research design to investigate language anxiety and its impact on user communication experiences in educational Free4Talk. According to (Creswell, 2014) states that quantitative approach allows researchers to collect numerical data and analyze it using statistical methods, providing objective and generalizable findings. (Adiwijaya, 2021) states that the descriptive research method is used to systematically describe the phenomenon of language anxiety without manipulating variables Quantitative descriptive research is particularly suitable for studying psychological constructs such as anxiety, as it enables researchers to measure and analyze various dimensions of the phenomenon using structured instruments.

By applying this research design, the study aims to provide a detailed depiction of language anxiety among Free4Talk users. This approach is beneficial because it allows for the identification of patterns, trends, and relationships within the dataset. Furthermore, (Gay, et al. 2011) states that descriptive research is often used in educational and psychological studies to explore human behavior in natural settings, making it well-suited for an investigation into virtual language learning anxiety.

B. Population and Sample of the Research.

The population of this study consists of users of the Free4Talk platform who engage in English language learning. Given the broad scope of the population, a sampling technique is applied to select representative respondents.

A sample size of 30 participants is selected using convenience sampling, a non-probability sampling method where respondents are chosen based on availability and willingness to participate. (Chuah and Cham, 2020) say that this sample size aligns with the recommendations for pilot studies or small-scale research in social sciences.

The sample consists of participants from different linguistic and cultural backgrounds to account for diverse language learning experiences and anxiety levels Additionally, previous research suggests that virtual language learners often experience higher anxiety levels due to the absence of non verbal cues and immediate feedback, making Free4Talk an ideal platform for studying this phenomenon.

C. Research Instrument.

The research instrument used in this study is a modified Foreign Language Classroom Anxiety Scale (FLCAS), initially developed by Horwitz as cited in (Anandari, 2015). The instrument is adapted to assess the specific anxiety experienced in virtual communication environments, particularly on Free4Talk.

The questionnaire initially consisted of 30 items. However, based on the validity test, only 22 items were found to be valid, while the remaining 8 items were invalid and therefore excluded from the analysis. with The responses range from:

1. Strongly Disagree (1)
2. Disagree (2)
3. Neutral (3)
4. Agree (4)
5. Strongly Agree (5)

The questions assess different dimensions of language anxiety, including communication apprehension, fear of negative evaluation, and anxiety specific to digital learning environments. The following are the 30 questionnaire items as they appeared before undergoing the validity assessment :

Table 3.1
Questionnaire Before Validity Test

No	Question	Likert scale				
1	I feel nervous when I have to speak English with strangers on Free4Talk.	1	2	3	4	5
2	I worry about making mistakes when I speak English on Free4Talk.	1	2	3	4	5
3	I feel anxious before joining a Free4Talk session	1	2	3	4	5

4	I feel embarrassed when I cannot express my thoughts in English.	1	2	3	4	5
5	My heart races when I start speaking English during a Free4Talk session.	1	2	3	4	5
6	I get self-conscious about my English pronunciation.	1	2	3	4	5
7	I am afraid that others will judge my English skills.	1	2	3	4	5
8	I avoid speaking in Free4Talk sessions due to fear of embarrassment.	1	2	3	4	5
9	I get anxious when I have to speak spontaneously in English.	1	2	3	4	5
10	I feel relaxed when speaking English on Free4Talk	1	2	3	4	5
11	I find it hard to focus when I feel anxious to speaking English.	1	2	3	4	5
12	I feel more anxious when native speakers are present.	1	2	3	4	5
13	I get nervous when I realize others are more fluent than me.	1	2	3	4	5
14	I worry too much about grammar when I speak.	1	2	3	4	5
15	I feel tense even when speaking about familiar topics in English.	1	2	3	4	5

16	I find it difficult to express my ideas clearly during Free4Talk sessions.	1	2	3	4	5
17	I actively participate in group discussions on Free4Talk.	1	2	3	4	5
18	I understand others well in Free4Talk conversations.	1	2	3	4	5
19	I lack confident when using English in Free4Talk.	1	2	3	4	5
20	I enjoy the opportunity to practice English with diverse users.	1	2	3	4	5
21	I can respond quickly when someone asks me a question	1	2	3	4	5
22	My vocabulary is sufficient to express myself in Free4Talk sessions.	1	2	3	4	5
23	I learn new words and expressions from other users.	1	2	3	4	5
24	I feel that my communication skills have improved through Free4Talk.	1	2	3	4	5
25	I find it easy to build rapport with others on the platform.	1	2	3	4	5
26	I feel that others understand me when I speak in English.	1	2	3	4	5
27	I am confident asking questions and giving opinions in English.	1	2	3	4	5

28	I hesitate to start conversations in Free4Talk.	1	2	3	4	5
29	I can adjust my language depending on who I'm speaking with.	1	2	3	4	5
30	I feel comfortable communicating even in unfamiliar topics.	1	2	3	4	5

a. The Validity of The Instrument.

To analyze the validity of the items, the researcher used Bivariate Correlation through SPSS Statistics 25 program. If the Pearson correlation of the item is higher than the $rtable$, it means that the item is significantly correlated to the total score, which indicates that the item is valid. The $r\ table$ with N(31), the significance level of 0.05 (2-tailed) is 0.355. Raw data can be found in the appendix (See Appendix 2)

Pearson Product-Moment Correlation Formula :

$$r_{xy} = \frac{n\sum xy - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

The results of the calculation reveal that the Pearson correlation of some , which indicates that 22 of the items are valid but 8 of the items are not valid. So 22 items will be used for this study.

b. The Reability of The Instrument.

The reliability of the research instrument is essential because it refers to the consistency of the instrument.

Cronbach's Alpha Formula :

$$\alpha = \frac{k}{k-1}\left(1 - \frac{\sum \sigma_{\text{item}}^2}{\sigma_{\text{total}}^2}\right)$$

To analyze the reliability, the writer used Cronbach's Alfa coefficient through IBM SPSS Statistics 25. The result of the reliability analysis is presented on the table below:

Reliability Statistics

Cronbach's Alpha	N of Items
.882	30

It reveals that the Cronbach's Alpha of the instrument is 0.882. According to Cohen, the alpha coefficient above 0.80 is categorized as Good Reliable. In other words, the research instrument is considered as reliable.

After the validity test was conducted, 22 items were found to be valid for use in the study. The following are the 22 valid questionnaire items :

Table 3.2

Questionnaire After Validity Test

No	Question	Likert scale				
1	I feel nervous when I have to speak English with strangers on Free4Talk.	1	2	3	4	5
2	I worry about making mistakes when I speak English on Free4Talk.	1	2	3	4	5
3	I feel anxious before joining a Free4Talk session	1	2	3	4	5
4	I feel embarrassed when I cannot express my thoughts in English.	1	2	3	4	5
5	I am afraid that others will judge my English skills.	1	2	3	4	5
6	I avoid speaking in Free4Talk sessions due to fear of embarrassment.	1	2	3	4	5
7	I get anxious when I have to speak spontaneously in English.	1	2	3	4	5
8	I find it hard to focus when I feel anxious about speaking English.	1	2	3	4	5
9	I feel more anxious when native speakers are present.	1	2	3	4	5
10	I get nervous when I realize others are more fluent than me.	1	2	3	4	5

11	I feel tense even when speaking about familiar topics in English.	1	2	3	4	5
12	I Find it difficult to express my ideas clearly during Free4Talk sessions.	1	2	3	4	5
13	I actively participate in group discussions on Free4Talk.	1	2	3	4	5
14	I lack confident when using English in Free4Talk.	1	2	3	4	5
15	I can respond quickly when someone asks me a question in English.	1	2	3	4	5
16	My vocabulary is sufficient to express myself in Free4Talk sessions.	1	2	3	4	5
17	I learn new words and expressions from other users.	1	2	3	4	5
18	I feel that others understand me when I speak in English	1	2	3	4	5
19	I am confident asking questions and giving opinions in English.	1	2	3	4	5
20	I hesitate to start conversations in Free4Talk.	1	2	3	4	5
21	I can adjust my language depending on who I'm speaking with.	1	2	3	4	5
22	I feel comfortable communicating even in unfamiliar topics.	1	2	3	4	5

D. Data Collecting Technique.

The data collection process is conduct through an online survey method, which is a widely used approach in quantitative research. Questionnaire will be distribute through Google Forms, ensuring accessibility for Free4Talk users worldwide.

The Researcher will open a room in Free4talk or just enter on or some room and then will talk to users and ask if they okay to do the survey and then ask them to fill the google form contain Questions.

The collected data is then will be prepare for analysis by checking for missing responses and outliers. Incomplete or inconsistent responses are removed to maintain the integrity of the dataset. Data screening is performed using SPSS software, ensuring that all entries meet the required standards for statistical analysis.

E. Technique of Data Analysis.

In this study, descriptive statistics is employed as the primary quantitative data analysis method to summarize and interpret numerical data related to language anxiety levels in Free4Talk users. Field as cites in (Siregar, 2022) states that descriptive statistics play a crucial role in quantitative research, as they help organize, simplify, and present data meaningfully. The statistical analysis is conducted using SPSS (Statistical Package for the Social Sciences), which ensures accuracy in calculations and efficient data processing.

One of the key statistical measures used in this study is the mean (M), which determines the average response for each survey question. The mean provides an overview of participants' general trends in language anxiety levels. Additionally, the median is calculated to identify the middle value in the dataset when responses are arranged in ascending or descending order. (Tarte, 2023) states that the median is particularly useful in cases where the dataset is skewed, as it is less affected by extreme values. Another important measure is the mode, which identifies the most frequently occurring response in the dataset. Unlike the mean and median, the mode is useful in detecting common perceptions and dominant opinions regarding language anxiety.

To assess the variability in participants' responses, this study calculates the standard deviation (SD), which measures how spread out responses are from the mean. States. low SD indicates that most responses are closely clustered, showing consistency in language anxiety levels, whereas a high SD suggests significant variability among participants. Furthermore, a frequency distribution analysis is performed to determine the percentage of participants selecting each response category, such as strongly agree, agree, neutral, disagree, and strongly disagree. This helps in understanding the prevalence of language anxiety factors among Free4Talk users by displaying how often each response occurs.

The use of descriptive statistics in this quantitative study is essential, as it enables researchers to summarize large datasets, identify patterns and trends, and provide clear, data-driven conclusions about language anxiety in digital language learning. By applying these statistical methods, the study offers meaningful insights into how Free4Talk users experience language anxiety, contributing to further research and practical applications in online language education.

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