CHAPTER 3
RESEARCH METHODOLOGY

This chapter presents the methodology employed to conduct the study. It describes five main parts of research procedures, namely research design, setting and participants, data collection, data analysis, and research schedule.

A. Research Design

The type of research for this study is a qualitative study with a descriptive design, using a case study approach. This method is sensitive enough to investigate phenomena in natural environments through a combination of data (Baxter & Jack, 2008). Such a methodology allows the researcher to not only consider the problem in one way, but in multiple ways, such as to ascertain different aspects under examination. According to Yin (2014), a case study is an empirical investigation that investigates contemporary phenomena in the real-life context in which they occur. Cohen et al. (2017) argue that the context of case study research is unique and dynamic, which allows complex and evolving interactions to be analyzed. Case description This case study report seeks to describe and evaluate the phenomenon being studied by considering the purpose of the report by providing a comprehensive description (Silverman & Marvasti, 2008). Thus, this design can be used in the current survey to investigate EFL students' perceptions of the Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) of QuillBot in academic writing.

This qualitative study is relevant to this study, as it can provide an opportunity for the researcher to investigate in depth EFL students' responses to the use of QuillBot in the context of their academic writing. Therefore, this study does not only focus on the final product, but also aims to observe the process that students experience in writing (e.g., what difficulties students face and what they learn from using the tool). As their perceptions of the usefulness and ease of use of the paraphrasing tool may be shaped by the social and academic environment in which they work, it is also important to consider the context in which students find themselves. By examining students' experiences, this study aims to explore EFL

students' perceptions of the Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) of QuillBot in academic writing.

B. Research Setting and Participant

This is a classroom action research conducted in a critical discourse analysis (CDA) course at a university in Tasikmalaya, West Java; as it requires students to write a research paper as a final exam. In addition, QuillBot has been a commonly reported paraphrasing tool used by EFL students in this course to help with their academic writing, supporting its applicability to the research.

Data collection and methodology Data for this study was collected through self-administered semi-structured interviews online and offline (using Zoom and WhatsApp tools) for 10-20 minutes each. Using a purposeful sampling procedure, we selected three students to participate. The criteria for selecting participants were: 1) seventh semester English Department students at a university in Tasikmalaya; 2) QuillBot as another reference for academic writing in composing research articles in the CDA course; and 3) achieved an A grade in the CDA course. This is largely relevant to the purpose of this study, which is to investigate EFL students' perspectives on the Perceived Usability (PU) and Perceived Ease of Use (PEOU) of QuillBot in the context of academic writing.

C. Data Collection

Data Collection Method In this study, data collection was analyzed based on the semi-structured interview method. Semi-structured interviews allow respondents to answer all questions with predetermined themes freely. This method was chosen because it allows participants to speak freely and honestly about their views and experiences. Sugiyono (2013) states that semi-structured interviews are used to collect data but limit the research themes to use free answers.

The questions are open and flexible to allow participants to reflect on the attitudes and reasons underlying their answers, thus providing deeper insights into the issues discussed. The interview guide was created with reference to the Technology Acceptance Model (TAM) as its application is intended to explain how a technology is adopted and used by users (Mugo et al., 2017). More precisely,

TAM is designed to explain and predict user acceptance of an information technology system. In short, TAM is a model for understanding users' perceptions of technology. So we utilize this model for a more in-depth description of the student experience.

The interviews were conducted at one university in Tasikmalaya or at other locations mutually agreed upon by the participants. All interview sessions were documented using a voice recorder to ensure the accuracy and reliability of the data obtained.

The researcher referred to the five stages of the interview process from Adams (2015), namely:

1. Selecting participants and arranging interviews

At this stage, the researcher selects three students as participants and arranges the interview schedule to ensure smooth implementation.

2. Composing questions and interview guides

The Technology Acceptance Model (TAM) by Davis (1989) is used as the foundation for developing the interview questions, including two key aspects: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU).

3. Starting the interview

Before the interview began, the researcher provided a brief explanation of the research title, objectives, and other related matters. For participants who took part in the interview online, a consent form was first sent via WhatsApp, then the participants filled it out and returned it. After that, the interview began with the researcher asking questions and the participants providing answers. Interviews were recorded using a mobile phone and the Zoom application, and participants were encouraged to share their experiences openly.

4. Polishing interview techniques

The interviews were conducted in Indonesian language to help participants express themselves comfortably. Each interview lasted between 15 and 30 minutes, with flexible timing and location based on participants’ availability.

5. Analyzing and reporting semi-structured interviews

This stage involved checking the results obtained and ensuring the accuracy of the data. The collected data was then transcribed and analyzed using thematic analysis.

D. Data Analysis

In this study, the method used to analyze the data was thematic analysis. This method played an important role in qualitative studies because it helped researchers explore the meaning of transcribed interview data and identify patterns or themes that were relevant to the phenomenon being studied. Terry et al. (2018) stated that thematic analysis was useful when researchers wanted to explore qualitative data in detail to find certain patterns in a phenomenon and explain the researcher's perspective. Therefore, this method was very suitable for study on EFL students' perceptions of the use of QuillBot in academic writing.

The researcher adopted the Thematic Analysis method from Braun and Clarke (2006). Braun and Clarke (2006) defined thematic analysis as a way to identify, analyze, and report patterns (themes) that emerged in data. King (2004) along with Braun and Clarke (2006) also stated that this technique was very effective in exploring the views of various participants, exploring similarities and differences in views, and producing findings that might have been unexpected. The stages of thematic analysis consisted of six steps according to Braun and Clarke (2006):

1. Familiarization

At this stage, the procedure began with listening to the interview recordings, transcribing the data, reading, and rereading the transcripts in depth. This stage was aimed to familiarize oneself with the data and recognize the main patterns or themes that emerged. The researcher read the transcripts repeatedly to thoroughly understand the context and identify potential relevant themes.

2. Generating Initial Codes (Coding)

This stage involved identifying all relevant data from the complete data set that could answer the research question. The researcher highlighted codes related to the research objectives using a coloring method to distinguish each aspect conveyed by

the participants. This stage aimed to organize the data systematically by marking important parts that were related to the focus of the research.

Table 3.4.3. Generating Initial Codes

Data Item	Codes
QuillBot adalah alat berbasis kecerdasan buatan yang dirancang untuk membantu pengguna terutama saya, spesifically saya melakukan parafrase teks secara otomatis. fungsinya yang tidak hanya terbatas pada parafrase tetapi juga mencakup fitur lain seperti grammar checker, AI checker, dan citation generator.	QuillBot's Purpose (QP) Comprehensive Features (CF)
QuillBot juga memiliki beberapa fitur untuk parafrase yang bisa disesuaikan dengan kebutuhan. Beberapa fiturnya yaitu mode standard, ada mode fluency, ada mode formal, ada mode academic, ada mode simple dan banyak lainnya. Namun, mode-mode ini yang tersedia untuk pengguna secara gratis hanya mode standard dan fluency, sementara itu fitur-fitur lainnya atau mode-mode lainnya hanya dapat diakses oleh pengguna yang berlangganan atau pengguna yang premium. Selain itu, QuillBot juga memiliki keterbatasan pada jumlah kata yang dapat diproses dalam sekali penggunaan, terutama untuk akun yang gratis seperti itu.	Paraphrasing Features (PF) Feature Limitation (FL)
Saya Sering Sekali menggunakan QuillBot, saya rutin menggunakannya, terutama dalam penulisan artikel penelitian untuk mata kuliah CDA. QuillBot membantu mempercepat proses tersebut dengan	Frequency of Use (FU) Improvement in Writing Quality (IWQ)

Data Item	Codes
menghasilkan parafrase yang tidak hanya akurat tetapi juga sesuai dengan konteks akademik yang saya butuhkan. QuillBot memungkinkan saya untuk mengolah teks dalam jumlah besar dalam waktu singkat.	Time Efficiency (TE)
QuillBot membantu saya memahami kembali ide-ide dari sumber asli dengan cara yang lebih sederhana. Dengan memecah struktur kalimat yang rumit dan memberikan alternatif parafrase, saya dapat menulis ulang ide tersebut tanpa kehilangan esensi atau makna utamanya. Hal ini tidak hanya mengurangi risiko plagiarisme	Ability to Avoid Plagiarism (AAP)
Namun, untuk memastikan kualitas akhir tulisan, saya biasanya melakukan revisi manual terhadap hasil parafrase dari QuillBot. Ini membantu saya menyesuaikan teks dengan gaya penulisan saya sendiri, sekaligus memastikan bahwa tidak ada kesalahan interpretasi dalam hasil parafrase.	Manual Refinement (MR)
QuillBot mempermudah proses penulisan artikel penelitian saya melalui kecepatan dan fleksibilitasnya. Alat ini memungkinkan saya untuk memparafrase teks secara cepat, bisa dibilang dalam hitungan detik seperti itu, sehingga saya dapat menghemat waktu yang biasanya dihabiskan untuk menulis ulang kalimat secara manual.	Writing Simplification (WS)
Fitur seperti grammar checker juga memberikan nilai tambah, karena memastikan bahwa teks saya bebas dari kesalahan tata bahasa. Hal ini mengurangi apa ya.. bisa dibilang revisi di akhir	Grammar Enhancement (GE)

Data Item	Codes
proses penulisan.	
QuillBot memberikan banyak manfaat selain membantu menghindari plagiarisme. Salah satunya adalah peningkatan kosakata. Dengan memberikan alternatif kata dan frasa, seperti kalau kita parafrasenya tidak cukup sekali gitukan, di QuillBot ada replace, itukan memberikan kosa kata baru dan susunan kalimat baru seperti itu. QuillBot juga membantu saya memperluas pilihan kata saya dalam menulis. Karena apabila kita klik dalam salah satu kata, itu terdapat pilihan kata-kata yang lain seperti itu. Jadi kita bisa menyesuaikan seperti apa yang kita mau. Dan hal ini juga sangat berguna dalam penulisan akademik, di mana variasi kosakata diperlukan untuk menjaga kejelasan dan formalitas teks.	Vocabulary Enhancement (VE)
Kesan pertama saya menggunakan QuillBot ini sangat positif ya, karena QuillBot sangat membantu saya dalam proses penulisan. Saat itu, saya bisa dibilang sedang menghadapi tenggat waktu yang ketat karena waktu itu diberi waktu kurang lebih kalau tidak salah seingat saya satu minggu harus menulis full artikel dan saya juga harus banyak melakukan citation dari berbagai literatur gitu, jadi saya harus memparafrase kalimat-kalimat yang relevan dengan penelitian saya. Dan saya merasa bahwa alat ini sangat mudah digunakan, bahkan untuk pemula seperti saya seperti itu. Dalam beberapa menit, saya	Positive Responses (PR)

Data Item	Codes
sudah bisa menghasilkan teks yang dapat saya gunakan sebagai bagian dari artikel penelitian saya.	
saya biasanya mencoba menggunakan mode yang berbeda untuk mendapatkan hasil yang sesuai.	Mode Optimization (MO)
saya memecah teks menjadi bagian-bagian yang lebih kecil agar tetap dapat memanfaatkan si QuillBot ini, seperti itu.	Text Segmentation (TS)
Parafrase otomatis yang dihasilkan terkadang tidak menangkap makna atau konteks asli yang saya inginkan dari sumber yang saya pilih, seperti itu.	Paraphrase Relevance Issues (PRI)
Proses ini membutuhkan waktu dan keterlibatan aktif dari saya sebagai penulis yang menulis artikel penelitian tersebut.	Active Engagement (AE)
Proses revisi dan penyesuaian yang saya lakukan setelah menggunakan QuillBot justru membantu saya untuk lebih memahami isi teks yang saya parafrasekan.	Learning Support (LS)
saya merasa cukup ketergantungan gitu untuk melakukan parafrase dengan QuillBot. Meskipun ada revisi-revisi yang dilakukan oleh diri saya sendiri, namun saya merasa saya lebih mengandalakan alat itu terlebih dahulu	User Dependency (UD)

Table 3.4.2. Frequency of Codes

Initial Codes	Frequency
QuillBot's Purpose (QP)	3
Comprehensive Features (CF)	7
Paraphrasing Features (PF)	1
Feature Limitation (FL)	7
Frequency of Use (FU)	3
Improvement in Writing Quality (IWQ)	9
Time Efficiency (TE)	12
Ability to Avoid Plagiarism (AAP)	7
Manual Refinement (MR)	16
Writing Simplification (WS)	7
Grammar Enhancement (GE)	6
Vocabulary Enhancement (VE)	9
Positive Responses (PR)	3
Mode Optimization (MO)	1
Text Segmentation (TS)	3
Paraphrase Relevance Issues (PRI)	5
Active Engagement (AE)	12
Learning Support (LS)	5
User Dependency (UD)	4

3. Searching for Themes

At this stage, the researcher began to extract themes from the categorized data by grouping relevant initial codes into broader groups according to the focus of the research. The codes were combined based on their relevance to highlight important information that appeared repeatedly or was significant in the transcribed data. Next, the grouped data was analyzed in depth to identify the main themes that could explain or provide answers to the research questions.

Table 3.4.3. Searching for Themes

No.	Initial Codes	Potential Sub-Themes
1	QuillBot's Purpose (QP)	Avoiding Plagiarism
2	Ability to Avoid Plagiarism (AAP)	
3	Improvement in Writing Quality (IWQ)	Improving Academic Writing
4	Grammar Enhancement (GE)	
5	Vocabulary Enhancement (VE)	
6	Writing Simplification (WS)	
7	Time Efficiency (TE)	Ease of Use in Academic Writing
8	Manual Refinement (MR)	
9	Active Engagement (AE)	
10	Learning Support (LS)	
11	Feature Limitation (FL)	Feature Limitations
12	Paraphrase Relevance Issues (PRI)	Paraphrase Relevance Issues
13	User Dependency (UD)	Dependency on QuillBot

4. Reviewing Themes

At this stage, the researcher expanded on the topics found in the previous step. These subthemes were examined by the researcher and reviewed from the code grouping to determine which ones were the most fitting for further investigation.

Table 3.4.4. Reviewing Themes

No.	Initial Codes	Sub-Themes
1	QuillBot's Purpose (QP)	Avoiding Plagiarism
	Ability to Avoid Plagiarism (AAP)	
2	Improvement in Writing Quality (IWQ)	Improving Academic Writing
	Grammar Enhancement (GE)	
	Vocabulary Enhancement (VE)	

No.	Initial Codes	Sub-Themes
	Writing Simplification (WS)	
3	Time Efficiency (TE)	Ease of Use in Academic Writing
	Manual Refinement (MR)	
	Active Engagement (AE)	
	Learning Support (LS)	
4	Feature Limitation (FL)	Feature Limitations
5	Paraphrase Relevance Issues (PRI)	Paraphrase Relevance Issues
6	User Dependency (UD)	Dependency on QuillBot

5. Defining and Naming Themes

At this stage, the researcher assigned appropriate categories to each sub-theme with a focus on challenges and solutions, while ensuring their relevance to the broader theme. This entails detailed analysis of patterns in the data to identify what the data represents, and themes are then given meaningful and descriptive titles that capture the feeling of the findings. The researcher also sought to ensure that the themes truly reflected the data and offered coherence for analysis and discussion elsewhere.

Table 3.4.5. Defining and Naming Themes

Sub-themes		Themes
1	Avoiding Plagiarism	Perceived Usefulness (PU) of QuillBot in Academic Writing
	Improving Academic Writing	
2	Ease of Use in Academic Writing	Perceived Ease of Use (PEOU) of QuillBot in Academic Writing
3	Feature Limitations	Perceived Challenges of QuillBot in Academic Writing
	Paraphrase Relevance Issues	
	Dependency on QuillBot	

6. Writing Up

At this stage, the researcher announced the findings of the study in terms of the extent of QuillBot's Usability, Ease of Use, and Challenges as an academic writing tool among university students.

Through the utilization of thematic analysis, this qualitative study has provided important insights into EFL students' perceptions of the usability and ease of use of the QuillBot paraphrasing tool, especially in terms of preventing plagiarism in academic writing. AnalysisIn addition, the findings provide a comprehensive picture of what university students think about the impact of the tool on academic writing tasks.

Participant confidentiality and privacy were respected in the analysis to maintain ethical integrity. Written informed consent was given to all participants including the purpose of the study and the confidentiality of their information. Participants' identities were anonymized and kept confidential and secured so that they could only be accessed by the authors. Category Description The analysis and reporting process involved obscuring or removing sensitive information.

To ensure the reliability of the findings, the researcher used member checks and source triangulation. Member checking involved participants reviewing and agreeing to preliminary results to determine whether the researcher's interpretations reflected the participants' experiences. Secondly, source triangulation was applied by comparing information from multiple participants (which was consistent with the orientation of this study as it investigated student perceptions). Through this approach, the researcher can recognize emerging patterns, minimize personal biases, and increase the certainty of the findings, which enhances the credibility and confirmation of the analysis results.

E. Research Schedule

This study was conducted in the 2024/2025 academic year, which started in September 2024 and continued as per the allocated time:

Table 3.5.4. Research Schedule

Description	Sept 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	Mei 2025
Thesis writing									
Thesis examination									
Data Collection									
Data Analysis									
Report									
Thesis Result Seminar									
Thesis Examination									