

CHAPTER 3

RESEARCH METHODOLOGY

This section explains the research design and methods used to explore how the ToPhonetics website supports students' autonomous pronunciation learning. It outlines the approach for collecting and analyzing data, as well as the selection process for participants. The methodology was designed to provide insights into students' experiences and interactions with the tool in a real-world context.

This chapter describes the research methods that were used to explore how the ToPhonetics website supported students' autonomous learning in improving their pronunciation skills. The methodology was grounded in Phil Benson's (2011) framework of learner autonomy, which highlights students' control over their learning processes, strategies, and content choices. This framework guided the entire research process, from designing the instruments to collecting and analyzing the data.

3.1 Research Design

This study employed a descriptive case study design to investigate how students use the ToPhonetics website to support their autonomous pronunciation learning. A descriptive case study enables an in-depth examination of a phenomenon within its real-life context, particularly when the boundaries between the phenomenon and its context are not clearly defined (Yin, 2014). This design is suitable for this research because it aims to provide a detailed and contextualized understanding of students' autonomous learning experiences with a specific digital tool. According to Stake (1995), case study research enables the exploration and understanding of the complexity of real-life events in depth, thereby capturing the richness and nuances of real-world experiences. In supporting this design, Benson's (2011) framework of autonomous learning was adopted as a guiding lens, influencing the development of interview questions, participant selection, and the thematic analysis process. This framework allowed the researcher to explore how students managed their learning, regulated their cognitive processes, and selected

content independently when using the ToPhonetics website for pronunciation practice.

3.2 Research Setting and Participants

The study was conducted in the English Education Department at a university in Tasikmalaya, West Java, Indonesia. Specifically, the research took place within a course focused on pronunciation skills, where students were provided with tools such as the ToPhonetics website to support their learning. The study's duration spanned one semester, allowing sufficient time for students to engage with the tool and for the researcher to gather meaningful insights into their use of ToPhonetics as part of their autonomous learning process.

This study involved three participants from the university's English Education Department. The selection criteria for these participants were as follows: they had prior experience using the ToPhonetics website, aimed to improve their English pronunciation, and were willing to participate in the study. Additionally, the participants were open to engaging in autonomous learning practices and committed to utilizing the ToPhonetics website to enhance their pronunciation skills throughout the semester. Furthermore, the participants provided sufficient information to address the research questions effectively. Three participants were selected based on purposive sampling. Although the number is limited, it is considered adequate in qualitative research due to the study's focused nature and the need for in-depth, detailed data. According to Creswell (2012), a small number of participants is acceptable when the goal is to explore individual experiences and reach data saturation.

Regarding ethical considerations, the participants were fully informed about the research's purpose, process, and scope. Informed consent was obtained from all participants prior to the commencement of the study, ensuring they understood the voluntary nature of their participation. Their participation did not affect their academic performance or course grades in any way, and their privacy was respected throughout the study. All identifying information was kept confidential, and pseudonyms were used to refer to the participants in any documentation or reporting of the findings.

Participants were informed about the purpose, procedures, and voluntary nature of their participation. They provided informed consent before the study began and were made aware that they could withdraw at any time without academic penalty. Anonymity and confidentiality were ensured by assigning pseudonyms to all participants during data analysis and reporting.

3.3 Data Collection

This study employed a qualitative approach to collect data, aligning with the characteristics of exploratory research that aims to understand students' experiences in depth. Specifically, a case study method was adopted to investigate how students autonomously used the ToPhonetics website to support their pronunciation learning. This approach enabled the researcher to examine the phenomenon in its real-life context, focusing on a detailed and contextualized understanding rather than generalization.

Data were collected through semi-structured interviews, which provided the flexibility to explore key themes while allowing participants the freedom to express their thoughts openly and candidly. This method was chosen because it supports the collection of rich, descriptive data that reflects the participants' personal experiences, perceptions, and behaviors. The interviews were conducted online via Google Meet due to the participants' accessibility and scheduling constraints. Each interview lasted approximately 20–30 minutes, allowing enough time for in-depth responses while ensuring participants remained comfortable and focused.

The interview questions were guided by Benson's (2011) framework of autonomous learning, which emphasizes three key dimensions: learning management, cognitive regulation, and content selection. The questions were designed to reveal how students managed their pronunciation learning, regulated their learning behaviors, and made decisions about the content they engaged with while using the ToPhonetics website.

To deepen the insights gained during the interviews, stimulated recall was integrated into the process. Participants were asked to reflect on specific instances of using the website, including which features they utilized, how they practiced pronunciation, and their feelings while viewing screenshots or being prompted with

related questions. Although live screen recordings were not used, these visual aids helped participants recall their experiences in detail.

All interviews were scheduled in advance at times convenient for the participants to ensure minimal disruption to their academic routines. The data collected through these methods provided comprehensive insights into how the use of ToPhonetics supported learners' autonomy in pronunciation practice, aligned with the theoretical framework of autonomous learning.

3.4 Data Analysis

The data were analyzed using thematic analysis. Thematic analysis is a method for analyzing data that enables the identification, analysis, and reporting of patterns (themes) within qualitative data. According to Braun and Clarke (2006), thematic analysis organizes and describes the data set in rich detail in the simplest way possible. Thematic analysis provided a flexible and valuable research tool, which potentially offered a rich and detailed, yet complex, account of the data. It was easy to use, making it a suitable option for beginner researchers who may not have experience with more complicated qualitative methods. It also allowed flexibility in choosing a theoretical framework. Unlike other analysis methods tied to specific theories, thematic analysis could be applied to any theory the researcher decided to use. The thematic analysis included six steps that assisted the researcher in examining the data, such as:

3.4.1 Familiarizing with the data

In this stage, the researcher took steps to become acquainted with the data. First, the interview recordings were transcribed, after which the researcher repeatedly reviewed the data to develop a deep understanding of its content. During this process, initial thoughts on emerging patterns and noteworthy aspects were also recorded.

3.4.2 Generating Initial Codes

During this phase, the researcher developed initial codes to pinpoint significant portions of the data. Different colors were used for each code, and the corresponding data segments were highlighted based on these colors. This approach enabled the researcher to organize data

efficiently and group it under the same codes. Table 3.1 below illustrates the process of generating these initial codes.

Table 3. 1 Generating Initial Codes

Utterances	Initial codes
<i>"biasanya belajarnya itu setelah fresh banget setelah mata kuliah pronunciation tersebut atau kalau misalnya setelah menemukan kata baru terus gak tau gimana cara pengucapan saya langsung nyari."</i>	Self-Initiated Learning
<i>"Oke kalau target sebenarnya gak ada ya karena mungkin pada saat itu setiap minggu ada mata kuliah tersebut jadi mungkin targetnya itu hanya misalnya kaya misalnya hari ini nih kita di mata kuliah pronunciation tersebut udah belajar ini ini ini."</i>	Learning Routine
<i>"..saya juga merasa bahwa saya perlu belajar pronunciation yang baik dalam menggunakan bahasa Inggris."</i>	Internal Motivation
<i>"Lebih ke latihan berulang-ulang sih sambil dengerin yang dari ToPhonetics itu."</i>	Repetitive Practice
<i>" Yang kedua saya menggunakan audio dari HP saya sendiri. Jadi setiap saya ingin menilai apakah kemampuan saya itu berkembang atau tidak melalui rekaman dari HP saya sendiri. Nanti setelah saya rekam, saya dengarkan dan saya dengarkan lagi gitu loh agaimana cara pengucapan yang benar lewat ToPhonetics situ sendiri."</i>	Self-Monitoring
<i>"mengulang beberapa kali juga pernah terus abis itu membandingkan dengan model native"</i>	Repetition and Native Comparison
<i>"sambil diulang sambil didengerin lagi, sambil diulang sampai yakin gitu."</i>	Repetition Until Confidence
<i>"Oke, saya pernah memilih kedua maksudnya bukan memilih saya pernah mempelajari dua aksen tersebut British dan American, sebenarnya saya lebih prefer ke American. "</i>	Accent Exploration
<i>" Jadi setelah misalnya kita cari kata focus ya atau focuses. Nah, saya lihat phoneticsnya, setelah saya lihat phoneticsnya saya tekan play si suara dari ToPhonetics itu sendiri."</i>	Audio Modeling for Listening Practice
<i>"Saya lebih sering menggunakan audio dari American ya. Karena menurut saya pribadi aksen American itu lebih mudah diucapkan di</i>	Accent Preference

<i>lidah saya dibandingkan dengan aksen British seperti itu."</i>	
<i>" Saya lebih ke kata yang sering saya gunakan sih di dalam percakapan sehari-hari."</i>	Content Selection
<i>"yang pastinya feedback dari dosen itu sangat berpengaruh gitu ya maksudnya feedback dari dosennya sangat berpengaruh bagaimana saya kemampuan pronunciation saya."</i>	Instructor Feedback
<i>"kadang juga suka ada teman yang mengoreksi gitu ya, gimana cara pronunciation kata tersebut."</i>	Peer Feedback
<i>"kalau untuk dari toponetiknya sendiri hmm enggak ya feedback dari toponetiknya karena ToPhonetics sendiri itu enggak ngasih feedback cuma kayak ngasih tau, oh ini loh cara pronunciationnya yang benar itu seperti ini."</i>	Automated Feedback
<i>"Karena menurut saya ToPhonetics itu lebih easy to access gitu ya lebih ringkas lebih cepat daripada harus membuka kamus manual seperti itu. Jadi lebih efisien waktu lebih memudahkan saya dalam mencari ToPhonetics yang belum saya ketahui seperti itu."</i>	Tools Accessibility

The interview data revealed various insights into the ToPhonetics website, which supports students' autonomous learning by facilitating pronunciation. In total, the researcher identified 22 initial codes that represent these different aspects. These codes, along with their frequencies, are presented below.

Table 3. 2 List of Initial Codes and Their Frequency

NO.	Initial Codes	Frequency
1.	Self-Initiated Learning	5
2.	Learning Routine	3
3.	Internal Motivation	3
4.	Repetitive Practice	3
5.	Self-Monitoring	3
6.	Repetition and Native Comparison	2

7.	Repetition Until Confidence	2
8.	Accent Exploration	1
9.	Audio Modeling for Listening Practice	2
10.	Accent Preference	1
11.	Content Selection	4
12.	Instructor Feedback	1
13.	Peer Feedback	1
14.	Automated Feedback	2
15.	Tools Accessibility	3

3.4.3 Searching for themes

At this step, the researcher is searching for potential themes within the data. The primary objective of this phase was to identify recurring patterns and meaningful connections among the various codes that had been previously identified. To do this, the researcher carefully reviewed and analyzed the codes, considering how they might relate to one another or fit under broader categories. Through this process, the codes were gradually sorted and grouped into larger, overarching themes that captured the key ideas and concepts emerging from the data. These themes served to provide a clearer and more organized understanding of the participants' responses.

Table 3. 3 Searching for themes

Initial Codes	Potential Themes
Self-Initiated Learning Internal Motivation	Learner Autonomy and Motivation
Learning Routine Tools Accessibility Content Selection	Learning Management and Strategy
Repetitive Practice Self-Monitoring Repetition and Native	Self-Regulated Practice

Comparison Repetition Until Confidence	
Audio Modeling for Listening Practice	Pronunciation Improvement Strategy
Accent Exploration Accent Preference	Personalized Learning Focus
Instructor Feedback Peer Feedback Automated Feedback	Learning Feedback

3.4.4 Reviewing themes

The next step is reviewing the potential themes. The researcher ensured that the data was accurately reflected and did not overlap with other themes. Some adjustments were made, including combining and separating themes, until a coherent thematic map was achieved.

Table 3. 4 Reviewing Themes

Initial Codes	Reviewed Themes
Learning Routine Tools Accessibility	Learning Management
Self-Initiated Learning Internal Motivation Repetitive Practice Self-Monitoring Repetition and Native Comparison Repetition Until Confidence Audio Modeling for Listening Practice	Self Regulation
Content Selection Accent Exploration Accent Preference Instructor Feedback Peer Feedback Automated Feedback	Content Selection

3.4.5 Defining and Naming Themes

At this point, the researcher analyzed the data within each theme to gain a deeper understanding of its essence and determine what aspects of the data each theme captures and represents. Finally, the themes were defined and named in a way that captured their essence

and distinguished them from other themes.

Table 3.5 Defining and Naming Themes

Themes	Description
Learning Management	Explains how students organize, plan, and manage their pronunciation learning using ToPhonetics, including setting routines, accessing tools, and receiving feedback to support their learning process..
Self-Regulation	Focus on students' internal motivation and monitoring strategies (e.g., repetition, self-recording).
Content Selection	Focus on students' choices of vocabulary and preferred Accents.

3.4.6 Final Report

In this final stage, the researcher compiled analysis results and selected participant excerpts that vividly illustrated the themes. The relationship between the analysis, the research question, and the existing literature was also presented.

3.5 Research Step

Step	Description
1	Identify the research problem and formulate the research question: <i>How does the ToPhonetics website support students' autonomous learning in improving their pronunciation?</i>
2	Conduct a literature review on autonomous learning, pronunciation improvement, and the use of technology-assisted tools like ToPhonetics.
3	Design the research methodology using a qualitative

approach and thematic analysis based on Braun and Clarke (2006).

- 4 Select participants who have used the ToPhonetics website for autonomous pronunciation learning.
- 5 Collect data through interviews with participants to gain insight into their experiences and perceptions.
- 6 Transcribe the interview data verbatim and familiarize yourself with the data by reading and re-reading the transcripts.
- 7 Generate initial codes by identifying meaningful data segments relevant to the research question.
- 8 Search for potential themes by grouping related codes that reflect similar concepts and patterns.
- 9 Review and refine themes to ensure they accurately represent the participants' experiences and answer the research question.
- 10 Define and name the final themes, then write the final report, presenting the themes with participants' quotes and connecting them to the research question and existing literature.

3.6 Research Schedule

The research time in question is the timetable for the implementation of the research as outlined in the form of a table, as follows:

Table 3. 6 Research Schedule

Description	Septem ber/202	okber/2 024	Novem ber/202	Decem ber/202	Januar y/2024	Februa ry/2025	March/ 2025
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Research Proposal Writing			
Research Proposal examination			
Data Collection			
Data Analysis			
Report			
Thesis Result Seminar			
Thesis Examination			

Table 1. Interview Guidelines