CHAPTER 3
RESEARCH METHODOLOGY

This chapter presents the methodology used in this study. It describes seven parts of the research procedures: research design, setting and participants, data collection, data analysis, research steps, and the research schedule.

A. Research Design

This study employed a qualitative narrative inquiry design, which allowed researchers to capture participants' lived experiences and focus on the meanings they constructed from their personal stories. Narrative inquiry enables the researcher to capture how individuals make meaning of their experiences through stories, emphasizing personal perspectives and subjective interpretations rather than treating experiences as isolated events (Riessman, 2008). This design is particularly suitable for this research because the focus is not only on *what* vocabulary was learned through gameplay, but also on *how* the learning process unfolded through repeated interactions, habits, and experiences within the game. Since Conrad's engagement with the game developed gradually from initial exposure to more confident communication, his learning cannot be separated from the sequence of events and experiences that shaped it. A narrative approach makes it possible to trace these developments, such as how specific in-game interactions, voice chats, and routines contributed to his vocabulary growth over time.

In line with Barkuizen (2021), this study analyzed the participant's story using narrative analysis, identifying themes from the narrative while maintaining the story's coherence and temporal flow. This approach is appropriate because the data collected consisted of personal accounts of gameplay experiences, reflections, and specific moments of language use, which are best understood as a connected story rather than fragmented data. By preserving the chronological structure, the researcher was able to see patterns such as repeated exposure to certain vocabulary, shifts in confidence, and the role of interaction in reinforcing learning. This would be difficult to capture using methods that break data into isolated categories, as the

meaning of Conrad's vocabulary acquisition is closely tied to the continuity and context of his experiences. In line with this, Webster and Mertova (2007) highlighted that narrative inquiry is an effective method for examining complex human experiences that cannot be fully understood through quantitative measures. Therefore, this design enables the researcher to uncover rich, nuanced insights into vocabulary acquisition in a game-based learning context.

Following Clandinin and Connelly's (2000) framework, this study applied the three-dimensional narrative inquiry space, comprising interaction, continuity, and situation. The interaction dimension explored both the personal and social aspects of the participant's experience. The continuity dimension focused on the temporal aspect of experience, examined how vocabulary knowledge developed over time through repeated encounters and gradual accumulation, and reflected Meara's (1980) concept of incremental vocabulary growth. The situation dimension addressed the specific places and contexts where learning occurred, both within the virtual world of Grow a Garden and the participant's physical environment, aligning with Gee's (2008) notion of situated meaning in game-based learning.

B. Research Setting and Participants

The participant of this research, Conrad (pseudonym), is a 21-year-old undergraduate student in the Faculty of Computer Science at a local university in Cirebon, West Java, Indonesia. Conrad did not have continuous or intensive exposure to structured English learning. He primarily used Bahasa Indonesia in his daily communication, making English his foreign language. Nevertheless, he developed his own informal pathway for language improvement through digital engagement, particularly through online gaming. This makes his case important to study, especially for non-English-major students, as it reflects a common reality in which adult learners rely less on formal instruction and more on autonomous, interest-driven environments. Focusing on a 21-year-old learner, rather than a child, is particularly significant because adult learners are expected to have more developed cognitive, metacognitive, and self-regulation skills, allowing them to consciously process, reflect on, and reuse newly encountered vocabulary. This

provides deeper insight into how informal digital environments support not only incidental learning but also strategic language development among mature learners.

Since Grow a Garden reached its peak popularity in March 2025, Conrad had been an active and enthusiastic player. His interest in the game has gone beyond entertainment and has become a meaningful space for him to interact with English naturally. He played the game 2–7 times per week, for approximately 7 hours. Through the gameplay, Conrad frequently encountered vocabulary related to daily tasks, gardening tools, interaction commands, and collaborative activities. He learned these words not in isolation but in authentic contexts, which helped him retain and apply them more effectively. In addition, his frequent use of in-game voice chat with peers has pushed him to negotiate meaning, reuse terms, and adapt quickly to real-time English communication. These interactions have significantly contributed to his vocabulary acquisition and to his overall confidence in using English.

Although platforms like Roblox are often associated with younger users, studying an adult participant challenges the assumption that such platforms are only suitable for children. Instead, it highlights that digital games can remain relevant and pedagogically valuable across age groups, particularly for university students who are already familiar with technology and can engage more critically with language input. This argument is supported by Hung et al. (2018), whose systematic review found that university students were the most frequently selected participants in digital game-based learning research, likely because higher-education learners are considered frequent and experienced gamers.

According to Gee (2008), what makes this context worth studying is not the game itself, but the learning conditions it creates, such as repetition, meaningful interaction, immediate feedback, and low-anxiety communication spaces. These elements are strongly supported by Krashen's (1989) theories of language acquisition, particularly those emphasizing input, interaction, and engagement. Therefore, rather than being seen as a limitation, the use of a game like Grow a Garden highlights how informal digital platforms can function as legitimate learning spaces even for adult learners. However, it is also important to

acknowledge that this learning is incidental and context-specific; it may not entirely replace structured learning, but it can significantly support vocabulary development when combined with learners' motivation and consistent engagement.

Prior to data collection, all ethical considerations were clearly communicated to Conrad by completing a consent form. He received a thorough explanation of the study's purpose, process, and potential outcomes. He understood that participation was voluntary and that he could withdraw at any time.

C. Data Collection

The data collection method used in this research was a semi-structured interview, which provided participants with flexibility to share detailed experiences while ensuring focus on the research question (Kallio et al., 2016). This flexible approach enabled the researcher to explore participants' lived experiences in depth and to clarify emerging ideas through follow-up questions. To ensure trustworthiness, this study applied member checking to enhance credibility, used a consistent interview procedure to ensure dependability, based interpretations on the participant's responses to support confirmability, and provided detailed contextual descriptions to address transferability.

The interview questions were developed based on Gee's (2008) game-based learning constructs that emphasize engagement, interaction, situated meaning, and reflection. The questions explored how the participant's motivation, collaboration, and problem-solving experiences in Grow a Garden contributed to the participant's natural learning of English vocabulary.

The interview was conducted in Indonesian to ensure participant comfort and understanding. It was audio-recorded with the participant's consent, and the recordings were transcribed and translated for analysis. Follow-up questions probed deeper into the experiences of vocabulary acquisition through the Grow a Garden game. To enhance the study's trustworthiness, peer debriefing was conducted throughout the research process. The researcher regularly discussed the interview data, transcription, coding process, and emerging themes with the thesis supervisor. These discussions provided opportunities to review interpretations, consider

alternative perspectives, and minimize potential researcher bias, thereby strengthening the credibility of the findings.

D. Data Analysis

This research used the Miles et al. (2014) interactive model to analyze the data, which involved three stages: data condensation, data display, and conclusion drawing. These stages interacted dynamically throughout the research process rather than being applied in a linear sequence (Miles et al., 2014, p.14). Each step is described in detail below.

1. Data Condensation

Data condensation refers to the process of selecting, focusing, simplifying, abstracting, and transforming raw data into more meaningful units (Miles et al., 2014). In this stage, the researcher carefully reviewed the transcribed interview to highlight relevant segments reflecting the participant's experiences with vocabulary acquisition through Grow a Garden on Roblox. The steps in data condensation include:

1.1 Transcription and Familiarization

The interview was fully transcribed verbatim. The researcher read the transcript multiple times to gain an overall understanding of the participant's story and to identify meaningful units aligned with Gee's (2008) indicators.

1.2 First-Cycle Coding (Structural Coding)

During the first cycle, the researcher applied structural coding to the interview transcripts. Structural coding was used to label or categorize data according to broad topics or research questions (Saldaña, 2009, p.48). This method helped the researcher identify and group information related to participant's experiences, learning processes, and perspectives during gameplay. Using this approach, the data were structured into meaningful categories for further analysis in the second coding cycle.

Table 1. First-Cycle Coding

No.	Interview Excerpt	Indicator	Structural Code
1.	"I became motivated by social media and other people, which made me interested. I really like trading-type games because they feel satisfying."	Motivation	Social-Media Driven Gameplay Motivation
2.	"I keep myself updated on TikTok and also join the community, so it motivates me to keep understanding and keep up."		Community Trend Motivation
3.	"It makes me want to keep playing because I want to keep interacting with other players."		Social Interaction Motivation
4.	"It really influences me because constant repetition makes me truly understand the meaning of the vocabulary even without consciously knowing the definition."	Learning Context	Repetition-Based Vocabulary Exposure
5.	"It is also useful on social media because I often see foreign reels on Instagram and sometimes comment there."		Cross-Platform Language Exposure
6.	"…The icons next to item names really help me learn vocabulary."	Situated Meaning	Visual Icon-Supported Meaning Making
7.	"I just need to click without being afraid of making mistakes because there is no real penalty in the game."		Risk-Free Action Exploration
8.	"The buttons contain English words, and when I click them, there is an action, so from there I understand unfamiliar English vocabulary."		Action-Based Vocabulary Understanding
9.	"When interacting on other platforms, other games, or with other players, my English becomes more fluent for communication."	Interaction	Communication Practice through Gameplay Interaction
10.	"Among players, there is a lot of interaction, such as trading, asking for fruits, and exchanging pets. Developers also inform us about fruit stock or item stock."		Transaction Player Interaction

11.	“I use it to communicate with foreign players, usually to ask for fruit and vice versa. And in the international community, I use it to chat about the game, ask for tips, and share information with others.”		Global Player Interaction Practice
12.	“In some events there are parts that feel very challenging because I am afraid of falling behind, especially when events have time limits.”	Enjoyment	Challenge-Driven Enjoyment
13.	“I only use basic vocabulary because I am not very proficient yet, but they still understand me, which makes the game fun.”		Enjoyment through Successful Communication
14.	“It feels so cool to learn the language; there are many new words. It is fun.”		Positive Emotional Engagement with Learning
15.	“During the game, I mostly guess the meanings, then I usually check them using AI after playing.”	Reflection	AI as a Learning Support Tool
16.	“Some players use slang, and I try to remember it and check the meaning on social media after playing, like “bussin”, “brainrot”, or “no cap”.”		Social Media as a Source of Slang and Meaning

Table 2. List of Structural Codes and Their Frequency

No.	Structural Code	Frequency
1.	Social-Media Driven Gameplay Motivation	2
2.	Community Trend Motivation	1
3.	Social Interaction Motivation	6
4.	Repetition-Based Vocabulary Exposure	10
5	Cross-Platform Language Exposure	6
6.	Visual Icon-Supported Meaning Making	6
7.	Risk-Free Action Exploration	3
8.	Action-Based Vocabulary Understanding	6
9.	Communication Practice through Gameplay Interaction	11
10.	Transaction Player Interaction	3
11.	Global Player Interaction Practice	6
12.	Challenge-Driven Enjoyment	1
13.	Enjoyment through Successful Communication	1
14.	Positive Emotional Engagement with Learning	1
15.	AI as a Learning Support Tool	2
16.	Social Media as a Source of Slang and Meaning	1

1.3 Second-Cycle Coding (Pattern Coding)

After the initial codes are generated, the researcher categorizes the code groups into themes using pattern coding. This process condenses extensive data into a smaller number of meaningful analytical units (Miles et al., 2014, p.86). As Saldaña (2009) stated, pattern coding and/or focused coding are used as an initial analytic strategy to categorize the coded data.

Table 3. Second-Cycle Coding

First-Cycle Code	Theme
Social-Media Driven Gameplay Motivation	Social Exposure Drives Gameplay Motivation
Community Trend Motivation	
Social Interaction Motivation	
Repetition-Based Vocabulary Exposure	Vocabulary Acquisition through Repetition and Contextual Exposure
Cross-Platform Language Exposure	
Visual Icon-Supported Meaning Making	Meaning Construction through Visual and Interactive Gameplay
Risk-Free Action Exploration	
Action-Based Vocabulary Understanding	
Communication Practice through Gameplay Interaction	Authentic Language Practice through Player Interaction
Transaction Player Interaction	
Global Player Interaction Practice	
Challenge-Driven Enjoyment	Enjoyment Sustains Vocabulary Acquisition
Enjoyment through Successful Communication	
Enjoyment Engagement with Learning	
Curiosity-Driven Vocabulary Checking	Curiosity-Driven Reflection Strengthens Vocabulary Acquisition

2. Data Display

The next step is data display, which involves organizing and visualizing the condensed data to make patterns and relationships clear. Miles et al. (2014, p. 108) describe data display as a systematic visual representation of information that facilitates the process of drawing conclusions and making decisions.

Table 4. Data Display Matrix

Theme	First-Cycle Code	Interview Excerpt
Social Exposure Drives Gameplay Motivation	Social-Media Driven Gameplay Motivation	"I became motivated by social media and other people, which made me interested. I really like trading-type games because they feel satisfying."
	Community Trend Motivation	"I keep myself updated on TikTok and also join the community, so it motivates me to keep understanding and keep up."

	Social Interaction Motivation	"It makes me want to keep playing because I want to keep interacting with other players."
Vocabulary Acquisition through Repetition and Contextual Exposure	Repetition-Based Vocabulary Exposure	"It really influences me because constant repetition makes me truly understand the meaning of the vocabulary even without consciously knowing the definition."
	Cross-Platform Language Exposure	"It is also useful on social media because I often see foreign reels on Instagram and sometimes comment there."
Meaning Construction through Visual and Interactive Gameplay	Visual Icon-Supported Meaning Making	"…The icons next to item names really help me learn vocabulary."
	Risk-Free Action Exploration	"I just need to click without being afraid of making mistakes because there is no real penalty in the game."
	Action-Based Vocabulary Understanding	"The buttons contain English words, and when I click them, there is an action, so from there I understand unfamiliar English vocabulary."
Authentic Language Practice through Player Interaction	Communication Practice through Gameplay Interaction	"When interacting on other platforms, other games, or with other players, my English becomes more fluent for communication."
	Transaction Player Interaction	"Among players, there is a lot of interaction, such as trading, asking for fruits, and exchanging pets. Developers also inform us about fruit stock or item stock."
	Global Player Interaction Practice	"I use it to communicate with foreign players, usually to ask for fruit and vice versa. And in the international community, I use it to chat about the game, ask for tips, and share information with others."
Enjoyment Sustains	Challenge-Driven Enjoyment	"In some events there are parts that feel very challenging because I am afraid of falling

Vocabulary Acquisition		behind, especially when events have time limits."
	Enjoyment through Successful Communication	"I only use basic vocabulary because I am not very proficient yet, but they still understand me, which makes the game fun."
	Enjoyment Engagement with Learning	"It feels so cool to learn the language; there are many new words. It is fun."
Curiosity-Driven Reflection Strengthens Vocabulary Acquisition	AI as a Learning Support Tool	"During the game, I mostly guess the meanings, then I usually check them using AI after playing."
	Social Media as a Source of Slang and Meaning	"Some players use slang, and I try to remember it and check the meaning on social media after playing, like "bussin", "brainrot", or "no cap"."

3. Conclusion-Drawing and Verification

In the conclusion-drawing and verification stage, the researcher systematically analyzed the coded interview data to identify overarching patterns in vocabulary acquisition during gameplay. According to Miles et al. (2014), "Conclusions are verified as the analyst proceeds; the meanings emerging from the data must be tested for plausibility and confirmability" (p.275). After completing data condensation and data display, the researcher reviewed all coded segments and grouped similar codes into broader conceptual categories. These categories were then refined into six major themes that explained how vocabulary acquisition occurred during the play of Grow a Garden on Roblox.

The researcher repeatedly compared the emerging themes with the original interview transcript to ensure that each theme was directly grounded in the participant's statements. This process involved rereading the transcript multiple times and cross-checking whether the themes accurately represented Conrad's experiences. When ambiguities appeared, the researcher returned to the raw data to clarify meanings. This iterative process ensured that the conclusions were derived from the participant's narrative.

Verification was conducted continuously throughout the analysis. First, the researcher checked the representativeness of each theme by confirming that it was supported by multiple excerpts rather than a single isolated statement. Second, the researcher weighed the evidence by examining the consistency and emphasis of particular patterns in Conrad's responses.

Additionally, member checking was conducted by sharing summarized interpretations with the participant to confirm whether the findings accurately reflected his experiences. The participant affirmed that the interpretations corresponded with his actual gameplay experiences, thereby strengthening the credibility of the conclusions.

E. Research Schedules

This research was conducted at a university in Tasikmalaya, West Java, Indonesia. Meanwhile, this research was conducted from September 2025 to June 2026.

Table 5. Research Timeline

Description	Sept/ 2025	Oct/ 2025	Nov/ 2026	Jan/ 2026	Feb/ 2026	Mar/ 2026	Apr/ 2026	May/ 2026	Jun/ 2026
Research Proposal Writing									
Research Proposal Examination									
Data Collection									
Data Analysis									
Report									
Thesis Seminar Result									
Thesis Examination									