

The background of the page is a repeating pattern of the Universitas Muhammadiyah Surabaya logo. The logo is a green pentagon with a central sun-like emblem, surrounded by the text 'UNIVERSITAS MUHAMMADIYAH SURABAYA'.

CHAPTER III

RESEARCH METHODOLOGY

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3.1 Research Design

This study employs a qualitative case study design to investigate how Kahoot is implemented in an English classroom for young learners at the elementary school. A qualitative approach is appropriate when the goal of the research is to explore participants' practices and experiences within their natural setting, and when the phenomenon being studied is complex and context-dependent (Creswell, 2014). Since this study seeks to understand how and why a teacher makes specific instructional decisions in applying Kahoot, qualitative inquiry provides the depth and flexibility needed for such an exploration.

More specifically, this research adopts a case study as its qualitative tradition. Yin (2018) defines case study research as an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and the context are not clearly distinct. This design is well-suited to educational research because it allows the researcher to examine instructional practices as they actually occur in a specific school setting, capturing nuances that survey-based approaches would likely miss. The case study also supports the use of multiple data collection methods, including observations, interviews, and documentation, which together produce a rich and comprehensive picture of the phenomenon.

The choice of case study is further justified by the nature of the research questions, which seek to describe and understand a specific real-world situation rather than to test a hypothesis or measure variables. The bounded case in this study is defined as the English teaching and learning practice at the fourth-grade class of the elementary school, with the English teacher as the primary unit of analysis. According to Yin (2018), a case study is particularly powerful when it allows the researcher to investigate how and why something happens in a specific context, which is exactly the purpose of this research.

This study also draws on the concept of instrumental case study, as described by Stake (1995), where the case itself is studied not as an end in itself, but to gain a broader understanding of the phenomenon of Kahoot implementation in elementary English classrooms. By focusing on one teacher and one class, the researcher can collect detailed and specific data that offer insights applicable to similar contexts. The qualitative case study design therefore provides the most suitable framework for achieving the objectives of this study.

3.2 Research Location

This study is conducted at Muhammadiyah 4 Elementary School, which stands for Sekolah Dasar Muhammadiyah 4 Surabaya. It is an elementary school operated under the Muhammadiyah organization and is located in the city of Surabaya, East Java Province, Indonesia. The school delivers instruction from Grade 1 through Grade 6, following the national curriculum (Kurikulum Merdeka), with English as a subject taught in the upper grades. Muhammadiyah 4 Elementary School is situated in an urban area and serves students from various family backgrounds in the surrounding community.

The school was selected as the research site for several important reasons. First, Muhammadiyah 4 Elementary School has already integrated digital technology into its classroom instruction, making it a relevant and appropriate context for studying Kahoot implementation. Second, the English teacher at this school actively uses digital game platforms such as Quizizz and Kahoot in teaching, which aligns directly with the focus of this study. Third, the researcher was granted access to conduct observations and interviews at the school, which ensures the feasibility and ethical compliance of the research process.

From a contextual standpoint, the school represents a typical urban elementary school in East Java where teachers are beginning to adopt technology-based strategies but still face challenges related to classroom management and resource limitations. Studying this school provides meaningful insights that are relevant not only to Muhammadiyah

4 Elementary School itself, but also to other similar institutions facing comparable circumstances in integrating Kahoot into English instruction. The context of an urban school in Surabaya also adds a specific and underrepresented perspective to the broader literature on Kahoot in Indonesian EFL settings.

3.3 Research Subject

The research subject of this study is one English teacher at Muhammadiyah 4 Elementary School who actively implements Kahoot in the fourth-grade class. The participant was selected through purposive sampling, a non-probability sampling technique in which individuals are intentionally chosen based on their direct relevance to the research questions and their capacity to provide rich and informed data (Creswell, 2014). In qualitative case study research, the goal is not statistical representativeness but the depth and quality of insights that the participant can contribute.

The teacher was chosen because she is the only English teacher assigned to the fourth-grade class at Muhammadiyah 4 Elementary School and has direct experience implementing Kahoot in the classroom. As a single teacher working with a single class, the data collected will be focused and detailed, which aligns with the in-depth nature of case study methodology. The teacher serves as the primary informant, as the study centers on her instructional planning, teaching strategies, and reflections on using Kahoot.

In addition to the teacher, the fourth-grade students at Muhammadiyah 4 Elementary School also form part of the research context. The students are observed as part of the classroom setting in order to understand how they respond to and engage with game-based learning activities. While the students are not the primary research subjects, their behavior, participation, and interaction with the teacher and the digital platforms provide important contextual data that enrich the analysis. Ethical considerations, including the privacy and well-being of the students, are carefully maintained throughout the data collection process.

This research focus on one class and one teacher, with observations conducted across a minimum of four meetings in the same classroom. Focusing on a single teacher and class allows for more consistent and detailed data collection over time. Multiple observation sessions also ensure that the data captured are representative of the teacher's typical instructional practice rather than reflecting a single, potentially atypical lesson.

3.4 Data Sources

3.4.1 Primary Data

The primary data in this study are obtained from two main sources. The first is the teaching and learning process observed directly in the classroom, which provides real-time evidence of how the teacher implements Kahoot during English lessons at the elementary school. The second is the results of the teacher's interview, which captures her explanations, reflections, and perspectives on the use of Kahoot in practice. Together, these two sources produce the most direct and relevant data needed to answer the research questions about implementation, materials, and challenges.

3.4.2 Secondary Data

The secondary data in this study consist of documentation collected during the research process. This includes the teacher's lesson plans, teaching materials used in game-based activities, screenshots or printouts of digital game platforms such as Quizizz and Kahoot, and other instructional resources related to the English lessons observed. These documentary sources serve a supporting and triangulation function, allowing the researcher to verify and enrich the data obtained from observations and interviews. According to Creswell (2014), combining multiple data sources in qualitative case study research strengthens the credibility and trustworthiness of the overall findings.

3.5 Research Instrument

In this study, three instruments are used to collect data, each aligned with a specific research question. The first instrument is an observation guide, used to answer Research Question 1 about how Kahoot is implemented in the classroom. The second instrument is a documentation checklist, used to answer Research Question 2 about the teaching materials the teacher uses, including lesson plans, digital game platforms, and supporting instructional resources. The third instrument is a semi-structured interview guide, used to answer Research Question 3 about the challenges the teacher faces when implementing Kahoot. All instruments were developed based on the theoretical framework discussed in Chapter II, which covers Kahoot principles, TPACK, and young learner characteristics.

3.5.1 Observation Guide

The observation guide is used to systematically record what happens during English lessons at the elementary school, specifically to answer the first research question about how Kahoot is implemented. The guide covers key aspects of the lesson including how the teacher opens and introduces the game activity, how she facilitates student participation during gameplay, how she manages the classroom, and how she closes and connects the game to the lesson objectives. This instrument is adapted from the classroom observation framework by Susanto (2016), which is designed to document EFL instructional practices in structured settings. The observation is conducted across a minimum of four meetings in the same fourth-grade class to ensure the data reflect the teacher's typical instructional pattern.

3.5.2 Documentation Checklist

The documentation checklist is used to collect and examine the teaching materials the teacher uses in her Kahoot-based English lessons, directly addressing the second research question. The documents collected include the teacher's lesson plans (RPP), the digital game platforms and content used such as Quizizz and Kahoot game sets,

worksheet or task materials given to students, and any other instructional resources related to the lessons observed. By examining these documents, the researcher is able to understand how the teacher plans and organizes game-based activities in relation to the curriculum and learning objectives. This documentary evidence complements the observation data and helps provide a fuller picture of the materials dimension of Kahoot implementation.

3.5.3 Semi-Structured Interview Guide

The semi-structured interview guide is used to collect in-depth information from the English teacher about the challenges she experiences when implementing Kahoot, which corresponds to the third research question. Semi-structured interviews are widely used in qualitative inquiry because they combine a clear thematic focus with the flexibility to explore participants' answers more deeply as the conversation develops (Rusli et al., 2022). The interview questions are organized around three main areas: the teacher's understanding and preparation of Kahoot activities, her experience during implementation in the classroom, and the difficulties or obstacles she has encountered in practice. The interview is recorded with the participant's consent and later transcribed for analysis.

3.6 Research Procedure

3.6.1 Preliminary Study

Before the formal data collection begins, a preliminary study is conducted to establish the research context and ensure the instruments are appropriate for the setting. This stage consists of two activities. First, an initial classroom observation is carried out at the elementary school to gather basic information about the school environment, the fourth-grade class, and the English teacher's general instructional approach. During this visit, the researcher also notes the digital tools and gadgets the teacher currently uses in the classroom, such as projectors, student smartphones or tablets, and platforms accessed through the internet. Second, a preliminary interview is conducted informally with the English teacher to

explore her familiarity with Kahoot, the kinds of games she has used, and her initial reflections on using technology in her lessons. The information gathered during this stage is used to refine the observation guide, documentation checklist, and interview questions before the main data collection begins.

3.6.2 Observation

Classroom observations are conducted across a minimum of four meetings in the fourth-grade English class at the elementary school. Each observation session focuses on how the teacher introduces, facilitates, and reflects on Kahoot activities during the lesson. Using the observation guide adapted from Susanto (2016), the researcher systematically records the teacher's instructional behavior, including how she opens the lesson, integrates the digital game platform, manages student interaction during gameplay, and connects the game activity to the lesson's language objectives. All sessions are recorded with the teacher's consent, and field notes are written after each session to capture additional details that may not be covered by the guide alone. Multiple observation sessions are conducted to ensure that the data collected reflect the teacher's consistent instructional practice rather than a single or atypical lesson.

3.6.3 Documentation

Documentation is collected during and after the classroom observation sessions to support and verify the data about teaching materials. The researcher collects the teacher's lesson plans (RPP) to understand how Kahoot activities are planned and integrated into the official curriculum. In addition, the researcher documents the digital game content used by the teacher, such as the question sets created on Quizizz or Kahoot, the vocabulary items covered, and any worksheets or task sheets given to students during or after the game sessions. Screenshots of the game platforms are also taken where possible to record the visual and structural features of the games used. According to Yin (2018), documentary evidence is an important data source in case study research

because it provides stable and concrete records that can be reviewed and cross-checked against other data sources.

3.6.4 Interview

A semi-structured interview is conducted with the English teacher after the observation sessions are completed. The interview is designed to explore the teacher's personal experience, challenges, and reflections regarding the implementation of Kahoot, which directly corresponds to the third research question. The interview is conducted in a relaxed and conversational setting to encourage the teacher to speak freely and share honest responses. The questions follow the semi-structured interview guide but allow the researcher to ask follow-up questions when the teacher raises points that need further clarification or elaboration. The interview is recorded using a voice recorder with the participant's consent, and a full transcript is prepared afterward. The transcript is then used as one of the main data sources in the analysis alongside the observation notes and documentation collected.

3.7 Data Analysis Technique

The data in this study are analyzed through a series of systematic steps that are carried out sequentially and continuously throughout the research process. These steps are adapted from the qualitative data analysis procedures outlined by Miles, Huberman, and Saldaña (2014) and Creswell and Poth (2018), and are designed to ensure that the findings are accurate, credible, and well-grounded in the data collected from the field.

3.7.1 Data Collection

The first step is data collection. During this step, the researcher gathers all raw data from the three instruments used in this study, namely classroom observation, semi-structured interview, and documentation. Observation notes are written after each session, the interview is recorded and transcribed verbatim, and all documentary evidence such as lesson

plans and game screenshots is collected and organized. This step produces the full body of data that serves as the foundation for subsequent analysis.

3.7.2 Data Coding

The second step is data coding. In this step, the researcher reads through all the collected data carefully and assigns codes to meaningful segments of information. Codes are short labels that represent the key ideas, actions, or patterns found in the observation notes, interview transcript, and documents. Coding allows the researcher to organize the data thematically and identify which segments relate to the implementation process, the teaching materials used, and the challenges encountered by the teacher.

3.7.3 Data Categorization

The third step is data categorization. After coding is complete, the researcher groups the codes into broader categories that correspond to the research questions of this study. For example, codes related to how the teacher introduces a game activity, manages classroom participation, and provides feedback are grouped under the category of Kahoot implementation. This step transforms the large volume of coded data into a more manageable and structured set of thematic categories that can be clearly analyzed and discussed.

3.7.4 Data Display

The fourth step is data display. In this step, the categorized data are organized and presented in descriptive narrative form. Drawing from the observation notes, interview transcript, and documentation, the researcher constructs a coherent account of what was observed and reported. The data display makes the findings accessible and allows patterns and relationships within the data to be clearly seen before interpretive conclusions are drawn.

3.7.5 Data Triangulation

The fifth step is data triangulation. In order to verify the accuracy and consistency of the findings, the researcher cross-checks information across all three data sources. Specifically, what is observed in the classroom is compared with what the teacher reports in the interview and what is documented in the lesson plans and game materials. Triangulation, as recommended by Creswell and Poth (2018), strengthens the credibility of the analysis by ensuring that findings are supported by multiple converging sources of evidence rather than a single data point.

3.7.6 Conclusion Drawing

The sixth and final step is conclusion drawing. In this step, the researcher interprets the patterns and meanings that emerge from the displayed and triangulated data and formulates conclusions that directly address each of the three research questions. The conclusions are verified by returning to the original data to ensure that interpretations are firmly grounded in the evidence collected from the field. This final step produces the substantive findings of the study regarding how Kahoot is implemented, what materials are used, and what challenges the teacher faces in practice.