

CHAPTER III

RESEARCH METHOD

A. Research Design

This study adopts a mixed-methods approach by integrating Multimodal Critical Discourse Analysis (MCDA) and psycholinguistic experiments to analyze the use of language in Palestinian cartoons. MCDA is employed to examine how the visual and linguistic elements in Palestinian cartoons represent socio-political ideologies and shape specific discourses. This analysis includes text, images, colors, typography, and other visual elements to identify patterns of multimodal communication within a social and political context. Meanwhile, psycholinguistic experiments are applied to observe how participants respond to linguistic and visual stimuli from Palestinian cartoons under controlled conditions. With this approach, the study not only explores the meaning structures in multimodality but also empirically tests its impact on individual language processing.

Multimodal Critical Discourse Analysis (MCDA) is a method that broadens the scope of critical discourse analysis by incorporating various semiotic resources in Palestinian cartoons, such as images, colors, visual composition, and text. This approach emphasizes how these elements construct social representations and ideologies in communication. According to Joy et al. (2024), MCDA enables a deep analysis of meaning construction that goes beyond linguistic aspects. Vratsanos & Group (2024) argue that this method is relevant in uncovering power relations and ideologies in visual representations. Kenalemang-Palm & Eriksson (2023) add that MCDA is grounded in social semiotics, which highlights multimodal interaction in message delivery. In the context of this research, MCDA will be used to identify how Palestinian cartoons construct socio-political narratives and how their multimodal elements can be adapted in language learning to enhance students' understanding of multimodal communication.

The psycholinguistic experiment in this study aims to test how individuals process language in the multimodal context found in Palestinian cartoons. According to

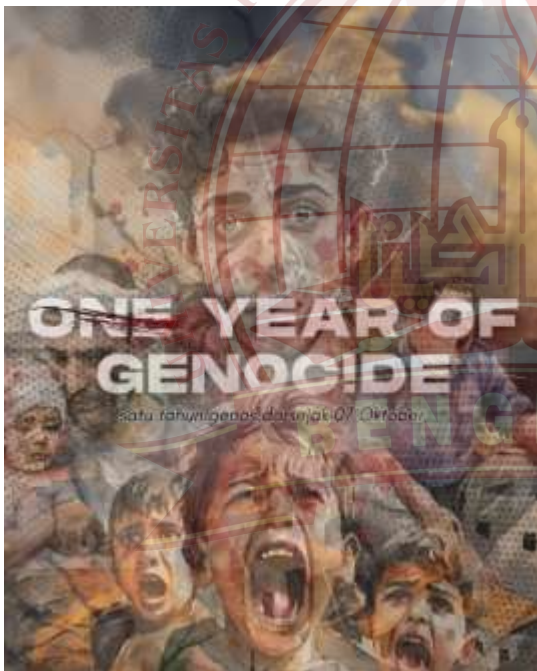
Fauzi & Nurjannah (2024), the experimental method allows for a deeper understanding of language acquisition and processing. Salsabila & Setiyawan (2024) emphasize that psycholinguistic experiments involve controlling variables to analyze participants' responses to specific linguistic stimuli. Putrayasa et al. (2024) highlight that these experiments help test causal relationships in language processing. In this study, experiments are conducted to identify the impact of visual and linguistic elements in Palestinian cartoons on audience perception and understanding, particularly in the context of language learning.

The mixed methods approach in this study combines qualitative and quantitative analysis to provide a more comprehensive understanding of language use in Palestinian cartoons. Creswell & Hirose (2019) explain that this method was developed in response to the need for integration between quantitative and qualitative research. Iriyadi (2024) notes that the mixed-method approach uses triangulation techniques for data validation. In the context of this research, MCDA is used for qualitative analysis of ideological representations in Palestinian cartoons, while the psycholinguistic experiment provides quantitative data that can be analyzed statistically. Thus, this approach ensures deeper and more verified research results.

This study will use a quantitative experimental design to test hypotheses about language processing in a multimodal context. According to Siroj et al. (2024), quantitative research aims to test the relationships between variables using statistical analysis. Jailani (2024) adds that this method allows for objective measurement of linguistic phenomena. In this study, the variables measured include response speed, comprehension accuracy, and the relationship between multimodal elements and linguistic perception. With this approach, the study contributes to the development of linguistic and multimodal studies, providing empirical insights into the connection between visual communication in Palestinian cartoons and human language processing.

B. Data Source

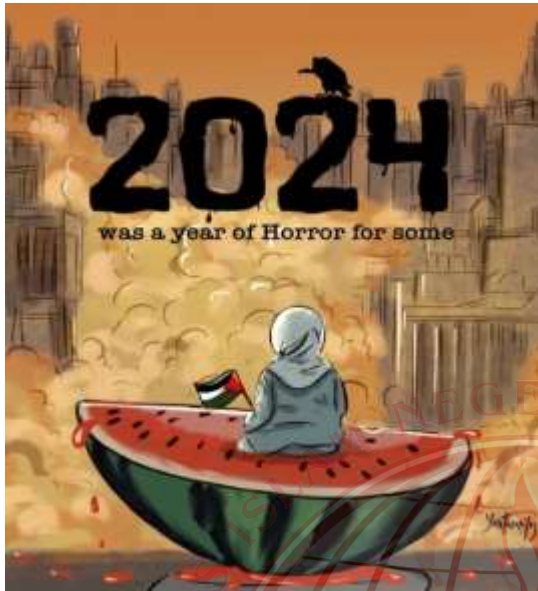
The data sources in this study consist of six cartoons about Palestine obtained from a collection of popular Palestinian cartoons on Instagram from 2024 to early 2025. The selection of these cartoons is based on their high spread and interaction on the platform, which reflects public opinion and the evolving socio-political dynamics. The analysis is conducted using visual, narrative, and semiotic approaches to examine the representation of Palestinian issues in digital cartoon media. Thus, this study aims to identify the meanings contained in these cartoons and evaluate their impact on the construction of public opinion on social media. The five cartoons that serve as the data sources are as follows:



Picture 1. Cartoon 1 Source: Instagram @bybenefiko October 7, 2024



Picture 2. Cartoon 2 Source: Instagram @arie_masrii November 8, 2024



Picture 3. Cartoon 3 Source: Instagram
@youtoonify december 31,2024



Picture 4. Cartoon 4 Source: Instagram
flyers_for_falasin March 6, 2025



Picture 5. Cartoon 5 Source: Instagram
@arie_masrii November 20, 2024



Picture 6. Cartoon 6 Source: Instagram
@flyers_for_falastin February 19, 2025

Next, to analyze the psycholinguistic implications of multimodal features in Palestinian cartoons and their impact on audience perception and understanding in the context of language learning, this study focuses on fourth-semester English Language Teaching students at the State Islamic University (UIN) Fatmawati Sukarno Bengkulu. Of the four available classes this semester, Class 4B was selected as the research sample. This class consists of 18 students, with seven male students and 10 female students. The selection of this class is based on various academic and methodological considerations to ensure the validity and relevance of the research findings.

One of the main reasons for choosing class 4B is the relatively balanced academic ability of the students. The students in this class have fairly uniform linguistic competence, allowing the researcher to obtain more representative data. This uniformity is essential in identifying how multimodal features in Palestinian cartoons contribute to language understanding without the influence of overly dominant external variables. Therefore, this class is considered an ideal choice to measure the effectiveness of multimodal features in enhancing students' linguistic comprehension objectively and systematically.

In addition, the factors of student participation and active engagement in the learning process are essential considerations. The students in this class show high enthusiasm in discussions and media-based activities, including the use of cartoons in language learning. Active participation allows for a deeper analysis of how the visual, audio, and text elements in Palestinian cartoons can influence students' perception and linguistic understanding. With active involvement, the study can explore the extent to which multimodal features can effectively strengthen language concept comprehension.

Another factor supporting the selection of class 4B is the availability of time and class schedules that align with the research needs. The schedule of this class allows for the optimal implementation of the research intervention without interfering with other academic processes. Additionally, the flexible schedule supports the continuity of the

research over a specific period, enabling more in-depth longitudinal analysis of the impact of multimodal features on students' language understanding. This consistency in scheduling also ensures the involvement of research subjects in every phase of the study.

Finally, gender variation in class 4B also serves as an essential factor in the selection of the research sample. Although female students are the majority, the presence of male students still provides diversity of perspectives in analyzing how multimodal features in Palestinian cartoons influence language perception and comprehension. This variation allows for further exploration of differences in cognitive patterns and linguistic responses based on gender within the context of multimodal-based learning. Thus, this study can offer more comprehensive insights into the effectiveness of multimodal features in supporting language learning.

C. Research Instrument

In this study, the researcher employed various instruments to collect data. For qualitative data, the researcher used semi-structured interviews, classroom observations, and documentation. These instruments were designed to gain an in-depth understanding of the phenomenon under investigation and to explore the participants' perspectives and experiences in greater detail. Meanwhile, for quantitative data, the researcher used questionnaires as the data collection tool. These quantitative instruments were systematically designed to measure aspects relevant to the focus of the study, namely the use of language in Palestinian cartoons, with an emphasis on multimodal critical discourse analysis and psycholinguistics.

1. Semi-structured Interview

In this study, the researcher analyzed the use of language in Palestinian cartoons by incorporating various multimodal elements, including both visual and linguistic components. Through interviews with university students, the researcher collected data on their opinions, experiences, and perceptions regarding the messages conveyed in the cartoons. The interviews consisted of nine questions designed to

explore the impact of language and imagery on viewers' understanding of the social and political issues presented. The data gathered included the influence of language used in the cartoons on language acquisition and multimodal critical discourse analysis, their level of engagement in understanding the context, as well as their emotional and cognitive responses to the narratives. Using a multimodal critical discourse analysis approach, this study aims to reveal how Palestinian cartoons serve not only as tools of social critique but also as media that shape identity and collective awareness.

The interview consisted of nine questions developed based on three leading indicators, with each indicator represented by three questions. The first indicator is that the audience can understand the content and message conveyed through the cartoons in the learning process. The second indicator is that the audience can demonstrate empathy or an emotional reaction to the message delivered in the cartoon. The final indicator is that the audience can understand the context of language use in the cartoon. All questions were designed to obtain relevant and in-depth data to support the research analysis. Through these interviews, the researcher was able to gain deep insights into the dynamics of learning that cannot be captured quantitatively. The interview instrument framework can be seen in (Appendix 4).

The interview instrument used in this study was developed based on the framework, with questions designed to gather comprehensive information. Each question was tailored to align with the research focus to ensure the collection of valid and relevant data. The full interview instrument is presented in Appendix 5. Although the interview instrument did not undergo formal validation, the questions were developed based on appropriate literature and practical experience in the field of education, including content from the article Nation, P. State of the Nation: An Interview with Paul Nation, to generate accurate and representative data.

2. Analysis Visual

In this study, visual analysis was conducted based on the visual grammar framework by Kress and van Leeuwen (2006). This analysis consists of four aspects, each comprising one to three indicators. The first aspect is visual composition, with indicators including layout, perspective, and framing. This study aims to examine the arrangement of visual elements in Palestinian cartoons, including whether there is a central focus, the viewpoint used, and whether the elements in the cartoon are isolated or interconnected. The second aspect is color, with indicators such as color dominance and color contrast. The goal is to identify which colors are dominant, their symbolic meanings, and whether certain colors are used to highlight specific elements. The third aspect is symbols and iconography, with indicators including the use of symbols and their symbolic meanings. This aims to determine whether certain symbols (e.g., flags, traditional clothing) are used and how these symbols reflect ideological or socio-political messages. The fourth aspect is gesture and expression, with indicators including facial expressions and body language. This focuses on what facial expressions are portrayed in the cartoon, the emotions conveyed, and how posture and gestures are used to communicate messages.

The visual instrument used in this research was developed based on the visual grammar framework of Kress and van Leeuwen (2006). Each aspect was tailored to fit the focus of the study to ensure valid and relevant data collection. The visual analysis instrument can be found in Appendix 1.

3. Analysis Linguistik

This study employed linguistic analysis, which consists of three aspects, each comprising two to three indicators. The first aspect is word choice and diction, with indicators including word types and connotations. This aims to determine whether the words used are formal, informal, satirical, or metaphorical, and whether the words carry positive, negative, or neutral connotations. The second aspect is metaphor and symbolism, with indicators such as the use of metaphors and linguistic symbolism.

This aims to identify whether metaphors are used in the text, how they relate to socio-political issues, and whether certain repeated terms or phrases carry specific symbolic meanings. The third aspect is rhetorical strategies, with indicators including irony or satire, repetition and emphasis, and emotional appeals. This aspect focuses on whether elements of irony or satire are present in the text and how they are used, whether certain words or phrases are repeated to reinforce specific meanings, and whether the text attempts to evoke emotional responses from the audience.

The linguistic analysis instrument used in this study was tailored to the research focus to ensure the collection of valid and relevant data. The linguistic analysis instrument can be found in Appendix 2.

4. Questionnaire

A questionnaire using a Likert scale or closed-ended questions was used in this study to measure the extent of language use in Palestinian cartoons through the lens of multimodal critical discourse analysis and psycholinguistics. This instrument was designed to generate numerical data that could be statistically analyzed, enabling the researcher to identify relationships between the variables in the study. The results of this questionnaire provided valuable information that helped illustrate the impact of the multimodal critical discourse analysis and psycholinguistic approach to language use in Palestinian cartoons. Thus, the questionnaire served as an effective data collection tool for gaining deeper insights into the learning process and outcomes.

This research questionnaire consists of 20 questions divided into eight leading indicators, each containing 2 to 3 questions. The first indicator is the ability to identify key visual elements, which aims to identify critical visual elements in Palestinian cartoons that play a significant role in the context of multimodal critical discourse analysis and psycholinguistics. The second indicator is interpreting the meaning of symbols, colors, and character positioning, which focuses on interpreting visual elements such as symbols, colors, and character placement in Palestinian cartoons to

understand the deeper messages intended by the cartoonist. The third indicator is identifying the function of language in narrative or dialogue, which aims to understand how language is used to convey messages, build character, and create relevant social contexts. The fourth indicator assesses the relationship between text and image in conveying messages, focusing on how these two elements complement each other in meaning-making within the framework of multimodal critical analysis. The fifth indicator is personal reactions to the content of the cartoons, which aims to evoke empathy and social awareness. Seeing representations of the Palestinian struggle through cartoons can trigger deep reflection on justice, human rights, and the impact of conflict. The sixth indicator is connecting the cartoon's message with the socio-political context, which seeks to express opposition to power structures and initiate discussion on important issues such as justice, human rights, and public policy. The seventh indicator is relevance and benefit of multimodality for language understanding, which emphasizes the significance of language, especially in complex communication contexts like cartoons or other visual media. The eighth indicator is how structure and multimodality affect comprehension, which aims to enhance individuals' ability to analyze and interpret complex messages across various contexts. Each question was designed to extract relevant data in alignment with the focus of its respective indicator. Through this questionnaire, the researcher gained in-depth insights into learning dynamics that can be quantitatively measured. The questionnaire instrument framework can be found in Appendix 3.

Furthermore, the questionnaire used in this study consists of several questions formulated based on the framework. These questions are designed to gather in-depth information, with each question tailored to align with the research focus to ensure the validity and comprehensiveness of the data obtained. The questionnaire instrument used can be found in Appendix 3.

5. Documentation

Additional data collection in this study includes various sources aimed at documenting the learning process as well as the development of student engagement and mastery of the multimodal critical discourse analysis and psycholinguistic approach. This additional data includes lesson notes that track the development of learning over time, video recordings of interview activities that capture student interactions during the activities, and questionnaire assignments completed by the students as evidence of the research outcomes. This data collection helps provide a more comprehensive picture of the effectiveness of tactile learning, enriches the analysis of primary data, and strengthens the validity of the research findings regarding student engagement and the use of language in Palestinian cartoons through multimodal critical discourse analysis and a psycholinguistic perspective.

D. Data Collecting Technique

Data collection in this study aims to answer the research questions deeply and comprehensively regarding the use of language in Palestinian cartoons through multimodal critical discourse analysis and a psycholinguistic perspective, using the main instruments, namely observation, interviews, questionnaires, and documentation, which were carried out with the following systematic steps:

1. Observing the learning process in the campus classroom during lessons, the observation was conducted to understand how lecturers and students use language in the context of discussions. The instrument used was an observation checklist that includes aspects such as interaction between the lecturer and students, the use of spoken and written language in discussions, student responses to the material being taught, and the data obtained involves an analysis of how language is used in the learning context, including the terms used to discuss cartoons, as well as how multimodal elements (such as images and text) contribute to students' understanding.
2. Scheduling interviews with students, the interviews were conducted either face-to-face or through online platforms to explore their views on language use and the

impact of cartoons. The instrument used was a semi-structured interview guide that included questions about the motivation behind the use of specific language, the influence of social and political context, and students' reactions to the cartoons. The data obtained includes the cartoonists' perceptions of the purpose and meaning behind Palestinian cartoons, as well as students' views on how the cartoons influence their understanding of the issues raised.

3. Documenting student activities through photos, videos, or notes and reviewing relevant documents related to the implementation of tactile learning in the classroom. The instruments used are learning documents, photos, and videos. The data obtained includes evidence of interview implementation, among other relevant findings.
4. Distributing questionnaires to students, the questionnaires are designed to collect data on their understanding of the messages conveyed and the use of language in the cartoons. The instrument used is a Likert-scale-based questionnaire that includes questions about the audience's knowledge of the theme, language use, and the emotional impact of the cartoons. The data obtained consists of the level of the audience's understanding of the message conveyed in the cartoons, as well as their opinions on the effectiveness of language use and multimodal elements in the cartoons.

The data obtained through the systematic steps and research instruments above can be presented in the following table:

Table 1. Instruments and Data Collected

Type of Data	Instrument	Data Obtained
Student Perceptions	Interview Guide	Views and Perceptions of Students
Level of Student Engagement	Questionnaire	Students' Opinions on the Response to Palestinian Cartoons
Evidence of Implementation	Documentation	Photos, Videos, and Learning Documents

E. Data Analysis

The collected data is analyzed using a systematic and structured method, which involves organizing, processing, and interpreting the data to produce relevant findings that support the study's objectives and research questions.

1. Quantitative Data

This study's quantitative data analysis is carried out methodically, evaluating student replies using a 4-point Likert scale. The Likert scale can be used for analysis to gauge student competency. Respondents using this scale are asked to answer a series of questions in a questionnaire that asks them to rate their agreement with each one. A clear image of the attitudes, opinions, and degree of engagement of the pupils is then acquired by calculating and analyzing the data collected from the questionnaire as percentages.

The first step is to assign scores to the respondents' answers on the questionnaire and interviews. Each response option on the Likert scale is given a specific weight: "Strongly Agree" (4), "Agree" (3), "Disagree" (2), and "Strongly Disagree" (1). The average score is calculated by multiplying the weight by the frequency of responses and then summing them for all items.

The percentage of student responses is calculated using the formula (Gay, 2012):

$$P = \frac{F}{N} \times 100$$

Explanation :

P: Percentage

F: Frequency of Responses

N: Total Number of Responses

After the data is tabulated, to make reading and comprehension easier, the tabulated data is displayed in a structured table. Following Creswell's (2004) criteria, the response percentages are evaluated using interpretive categories that have been adjusted to the Likert scale.

Interpretation Score

Explanation: Interpretation Score Criteria

0% 20% = Very Weak

21% 40% = Weak

41% 60% = Enough

61% 80% = Strong

81% 100% = Very strong

The data that has been analyzed is presented in detail to provide a comprehensive understanding of the research findings.

2. Qualitative Data

A qualitative analytical strategy is used in this study's data analysis methodology. According to Uwe Flick in his book *"An Introduction to Qualitative Research"* (2018), qualitative research is an approach used to understand social phenomena and human behavior deeply and contextually. The following are some key points outlined by Flick regarding qualitative research :

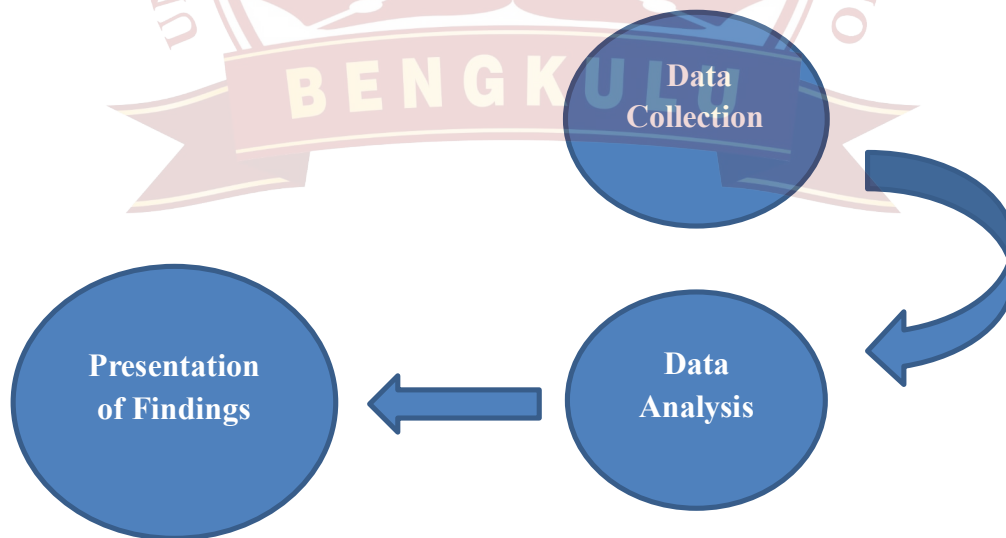


Figure 2. Data Analysis Technique

Data Analysis Technique: Iterative

The data analysis process in this study follows an iterative data analysis approach, which includes the following systematic stages:

1. Data Collection

The initial stage of this study begins with the data collection process, which is carried out flexibly and openly. The techniques used include in-depth interviews, participatory observation, and document study. The goal is to explore the meaning and subjective understanding of participants' experiences. This process is not rigid but can be adjusted based on the initial findings in the field.

2. Data Analysis

Once the data is collected, the analysis process is conducted systematically but with openness to change. A key characteristic of data analysis, according to Flick, is that it is iterative and reflective. The steps involved in the study are: reading and understanding the entire data, performing initial coding (labeling important information), developing categories and themes, and interpreting the meaning emerging from the data. This process can run concurrently with data collection (initial analysis) to enrich and deepen the understanding.

3. Presentation of Findings

The final stage is to compile the findings based on the analysis that has been carried out. The presentation is done narratively and contextually, reflecting the authentic voices of the participants and the researcher's understanding. It is presented in the form of thematic descriptions, direct quotes from participants, and the researcher's reflections on the data. This presentation of findings not only answers the research questions but also provides a deep insight into the phenomenon being studied.

To get precise and thorough results, each stage of this data analysis process is done carefully and iteratively. This procedure ensures that the analysis is conducted in a logical, sympathetic, and consistent manner, with each stage significantly enhancing our understanding of the topic under study.

