

CHAPTER I

INTRODUCTION

1.1 Background of the Study

The rapid advancement of technology in education has significantly transformed the way teachers deliver learning materials and how students engage with them. Among various technological innovations, Augmented Reality (AR) has emerged as an effective medium to bridge the gap between abstract concepts and real world experiences. AR allows students to visualize and interact with digital objects in real environments, thereby enhancing understanding, motivation, and engagement (Azuma, 2020). In the context of English Language Teaching (ELT), AR based media provide opportunities for learners to explore linguistic content more interactively, especially when learning descriptive texts that rely heavily on visual imagination and detail oriented observation (Khalid & Abdulla, 2023).

Classroom observations in Indonesian high schools reveal that English learning often remains teacher centered and textbook oriented, which limits students opportunities to engage actively. Many students find it difficult to describe objects, places, and people in detail using English because students worksheet are presented in static forms, such as printed worksheets and textbook exercises, which fail to stimulate visual imagination or authentic exploration (Sari & Putri, 2022). As a result, students tend to memorize rather than internalize language structures and vocabulary.

To address these challenges, integrating Inquiry-Based Learning (IBL) with Augmented Reality is a promising solution. Inquiry-Based Learning, as formulated by Roger Bybee (1997) through the 5E Learning Cycle Model Engage, Explore,

Explain, Elaborate, and Evaluate encourages students to construct knowledge through active exploration and questioning. The 5E model aligns well with 21st-century education principles and the Pancasila Learning Profile, which emphasize critical thinking, creativity, and independence (Kemendikbudristek, 2021). When combined with AR media, IBL not only provides an interactive platform for students to observe and describe objects in English but also promotes meaningful inquiry as they ask questions, test ideas, and draw conclusions based on their observations.

Previous studies have shown that AR based media can significantly improve students engagement and comprehension in language learning (Huang et al., 2021; Kurniawan, 2023). Students exposed to AR content demonstrate better retention of vocabulary and stronger descriptive skills because they can visualize real objects through digital simulations. Similarly, studies on Inquiry Based Learning reveal its positive impact on students' critical thinking and problem-solving abilities (Rahmatiah, 2022). Thus, combining these two approaches can create a learning experience that is interactive, inquiry driven, and visually engaging, which is especially effective for descriptive text learning.

The researcher obtained preliminary data through classroom observation during the PLP 2 program and analysis of students' writing tasks. The findings indicated that students' writing ability, particularly in writing descriptive texts, was still below the minimum standard of competence. The results of the writing assessment showed that only 54% of the students achieved the minimum passing grade, while the remaining students scored below the required standard. Many students had difficulties generating ideas, organizing their thoughts, selecting

appropriate vocabulary, and using correct grammar when describing an object. They also struggled to develop detailed descriptions because they lacked clear guidance in the writing process. The researcher found that these writing problems were influenced by several factors, including the students, the teachers, the instructional materials, and the teaching methods.

The first factor comes from the students. Many students lacked confidence in writing and were afraid of making mistakes. They often did not know how to begin their writing or how to structure a descriptive paragraph. Their limited vocabulary made it harder for them to describe objects clearly and accurately.

The second factor relates to the teachers. English teachers still relied on traditional teaching methods, where they explained the material and provided examples from the textbook without guiding students through writing steps or giving opportunities for exploration. As a result, students became passive, less motivated, and dependent on the teacher's explanation. The third factor is related to the instructional materials. The only learning material used in class was the printed textbook, accompanied by the teacher's explanation on the whiteboard. There were no additional supporting materials such as structured guidelines, practice tasks, or worksheets that could help students develop writing skills step by step. Without proper scaffolding, students found it difficult to construct descriptive sentences and paragraphs effectively.

Below are the pictures of students' worksheet and textbook used in teaching and learning process:

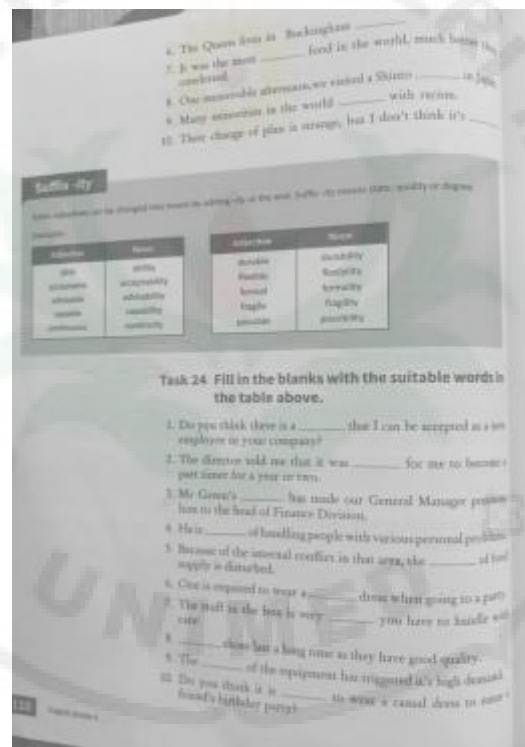
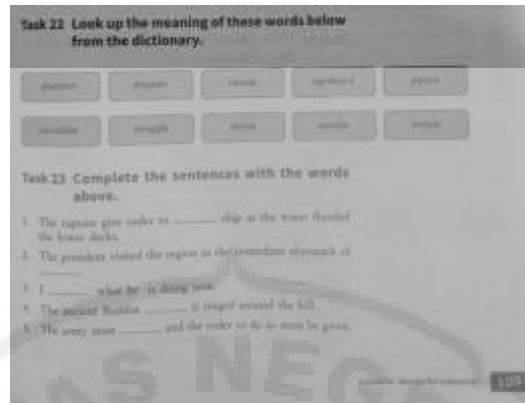


Figure 1. 1 Students' Worksheet

The worksheet was taken from the textbook English Course for SMA/MA Grade X, which follows the *Kurikulum Merdeka*. However, the writing activities provided in the worksheet were still very limited and did not effectively support students in developing their descriptive writing skills. The writing tasks were not aligned with the characteristics of Descriptive Text, which ideally require students to observe and describe an object or picture in detail. Instead of presenting visual

stimuli such as pictures, objects, or scenes that students could describe, the worksheet mostly contained general questions and grammar focused tasks.

As a result, students were not guided through essential stages of descriptive writing, such as generating ideas based on visual input, selecting relevant adjectives, organizing information, and composing coherent descriptive paragraphs. This shows a clear gap between the principles of *Kurikulum Merdeka*, which encourages contextual, creative, and student centered learning, and the actual quality of the worksheet, which remains conventional and lacks visual and contextual support needed for effective descriptive writing.

This research, therefore, aims to develop students worksheet based on Inquiry-Based Learning (IBL) approach using an Augmented Reality for teaching Descriptive Text Grade X Students. The integration of AR and IBL is expected to make learning more student centered, inquiry oriented, and visually immersive, fostering students descriptive skills, creativity, and curiosity.

1.2 Problem of the Study

Based on the background and preliminary data above, researcher forms problem of study as below:

“How to develop students’ worksheet based on Inquiry-Based Learning using Augmented Reality for teaching descriptive text to grade X students?”

1.3 Objective of the Study

Based on problem of study, researcher forms objective of study as below:

“To develop a students’ worksheet based on the Inquiry-Based Learning using Augmented Reality for teaching descriptive text to grade X.”

1.4 Scope of the Study

The scope of this study is limited to the development of a students' worksheet based on Inquiry-Based Learning (IBL) using Augmented Reality (AR) for teaching Descriptive Text specifically focusing on objects and places to Grade X students in senior high school. This research focuses only on the stages of designing, developing, validating, and revising the worksheet as part of the Research and Development (R&D) process. The Augmented Reality component is used only to support students' observation and idea generation processes by providing visual objects that can be accessed through QR codes embedded in the worksheet. Furthermore, the final product developed in this study will also be presented in the form of a flipbook with AR elements, designed to guide students through the stages of Inquiry-Based Learning (Engage, Explore, Explain, Elaborate, and Evaluate).

1.5 Significance of the Study

The findings of this research are expected to provide benefits for various parties as follows:

a. **Theoretical Significance**

This study contributes to the theoretical development of English language teaching by integrating Inquiry-Based Learning (IBL) with Augmented Reality (AR) in the design of a students' worksheet. It provides insights into how inquiry-based worksheet activities supported by AR visuals can enhance students' ability to generate ideas, observe details, and write effective descriptive texts.

b. **Practical Significance**

- a) For Teachers: The developed worksheet serves as an innovative instructional material that supports teachers in implementing inquiry-based activities. It provides structured guidance that helps students explore objects, analyze details, and construct descriptive paragraphs more systematically.
- b) For Students: The AR-supported worksheet helps students actively observe and interact with visual objects, which stimulates idea generation and improves descriptive writing performance. The structured inquiry stages encourage students to write more confidently and creatively.
- c) For Researchers: This study offers a reference for future research on developing inquiry-based worksheets enhanced with AR elements for language learning. It may inspire further studies on technology-supported writing instruction and materials development.
- d) For Educational Institutions: The findings can support schools in integrating digital-based learning and student-centered approaches in line with the *Kurikulum Merdeka* and *Profil Pelajar Pancasila*, particularly in promoting creativity, critical thinking, and independent learning.