CHAPTER I

INTRODUCTION

1.1 Research Background

In the era of digitalization and increasingly advanced technology, it has a substantial influence on various industrial sectors in Indonesia, one of which is education. The integration of AI in education has gained global attention due to its potential to improve learning efficiency. AI-powered tools, such as intelligent tutoring systems, automated assessments, and personalized learning platforms, allow students to learn at their own pace while receiving immediate feedback. According to Statistics Indonesia (2022), the education sector ranks second in AI adoption among medium and large enterprises in Indonesia, with a usage rate of 12.96%. This highlights the growing implementation of AI-driven learning methods in higher education institutions across the country.

Despite its widespread adoption, the use of AI in education still has some challenges, namely not all students can fully utilize AI-based learning tools due to different levels of digital literacy and adaptability. This is also seen at Batanghari University Jambi, especially among students of the English Education study program. There is a tendency that students in the early semesters face more difficulties in adjusting to this technology compared to students in the late semesters, who already have more academic experience and exposure to technology. This difference suggests that semester level can affect how students understand and respond to the use of AI in the teaching-learning process. In addition, other challenges such as limited access to technology and lack of adequate

training are also barriers to the implementation of AI in the campus environment based on five pshychological constructs.

In higher education, AI has been integrated into various learning approaches, including English language learning.However, many of those studies do not break down perceptions into key measurable aspects. This research adopts five perception constructs used by Khairuddin et al.(2024): engagement interactions, satisfaction, academic performance, and behavioral intention. Besides that, Various studies emphasize how technology can enhance student participation, boost academic achievement, and create more tailored learning experiences (Tarisayi, 2024; Sarwar, 2024; He, 2023; Yusuf, 2023). According to Songsiengchai et al. (2023), the integration of artificial intelligence (AI) tools in the English learning curriculum showed a significant positive impact on students' English proficiency. Then according to Ibrahim et al. (2024) The advancement of AI technology specifically designed for students is an important milestone in creating a more efficient and personalized learning experience. This technology is designed to assist students by providing immediate responses to their tasks, without being limited by geographic location.

In addition, there are not many studies that compare how students in early semesters feel towards AI compared to those in higher semesters, even though they have different levels of experience and exposure to the technology. This study aims to fill this gap by looking at how English Education students at Batanghari University, who are in the even semester, think about AI-based learning. This will help us to better understand how being in a particular semester affects how they see

AI in learning based on five constrcuts: Engagement, Interaction, Satisfacation, perceived academic performance, and Behavioral intemntion. Therefore, system transparency and user training are needed to help them understand AI's limitations (Passi & Vorvoreanu, 2022), further exploration is needed to understand factors influencing students' perceptions, including their technological background and digital literacy levels.

Some students have difficulty in understanding how AI works, resulting in less than optimal utilization. In addition, the fast development of technology can make it overwhelming for them to adapt to an AI-based learning environment. These challenges might be different depending on the semester, depends on Kuh et al. (2006) Students in higher semesters typically have more academic exposure and experience using technology compared to lower semester students, wich may influence how they perceive AI-based learning. Considering this, this study aims to examine how English Education students in Batanghari University especially in even semester perceive AI-based learning based on five pshychological constructs. Specifically, this study explores how students perceive the role of AI in their learning at the university level and whether there is a relationship between their perceptions and the level of AI utilization in their academic level.

1.2 Formulation of the Research

Based on the problem limitation and problem identification above, in the research analysis of students' perceptions on the effectiveness of AI-based learning among english students at Batanghari University. So it can be formulated into a problem formulation as follow:

a. Do English Education students perceive the AI-based learning based on five construct?
b. Do significant difference in perceptions based on semester level in Batanghari University?

1.3 Identification of Problem

The rapid integration of Artificial Intelligence (AI) into education presents both opportunities and challenges. While AI has the potential to support learning, not all students can adapt easily, raising questions about its preceive students experience in educational settings. Even though AI-based learning has many benefits, how well it works can change based on how much students know about academics and technology. Since Kuh et al. (2006) say students in higher semesters typically have more academic exposure and experience using technology compared to lower semester students, wich may influence how they perceive AI-based learning., they might have different views on AI-based learning. This study wants to find out if such differences exist among students in the even semesters of the English Education program at Batanghari University. Therefore, more research is needed to understand how students feel about AI in learning and if their views affect how it's used in the university. To understand these dynamics, this study will aplly a validated quistionnaire based on five dimensions of perception proposed by Khairuddin et al.(2024).

1.4 Limitation of the Research

The researcher defines the problem in this research based on the background that has been describes. The problem can be expressed as follows:

a. This study focuses only on English Education students enrolled in even semester at a single university, which limits the generalizability of the findings to students from other academic programs or institutions.
b. This study has a relatively small population size, as this study included approximately 30 participants from even semesters. This limited population size could affect how broadly the findings can be applied, as well as reduce the statistical power of the analysis conducted. Furthermore, it can make it difficult to find significant differences between students from different semester levels.
c. This research only measures student' perceptions of AI-based learning through quissionaires,without asses an actual academic or learning performance.
d. The research relies on students' responses collected through questionnaires, the items of questionnaires are based on five validated constructs: engagement, interaction, satisfaction, academikc performance, and behavioral intention.
e. The study is conducted within a specific period, meaning it does not examine how students' perceptions of AI-based learning might change over time as the technology evolves.

1.5 Objective of study

The research is expected to provide benefits to:

a. To explore how students perception of AI-based learning effectiveness through five key construct : engagement, interaction, satisfaction, academic performance, and behavioral intention

b. To analyze whether there is a significant difference in the perceived of AI-based learning differ across semester level.

1.6 Definition of Key Terms

Key Terms used in this research, there are the definition of Key Terms:

a. **AI-Based Learning Tools**: These are digital tools that use AI to support students in their studies. Examples include ChatGPT, Grammarly, Google Bard, Microsoft Copilot, and other AI-powered applications that help students understand and complete their coursework.

b. **Students' Perceptions:** This refers to how students feel or think about using AI in their learning process. Some may find it helpful and efficient, while others may feel confused or uncertain about its effectiveness.

c. Engagement : The degree to wich students actively participate and involve themselves in AI-based learning processes.

d. Interaction: The quality of communication and responsiveness between students and the AI-based tools.

e. Satisfaction: The students' level of contentment and acceptence of AI as a supportive learning.

f. **Academic Performance**: The perceived effect of AI-based learning on students' academic output, not actual grades.

g. **Behavioral Intention** : The willingness the students' motivation and continue using AI in the future.