CHAPTER I

INTRODUCTION

1.1 Background

In today's digital age, universities are required to optimize technology-based services in order to improve efficiency and student satisfaction. In the education sector, universities are striving to improve the quality of their education by developing electronic services. Education needs to be designed to provide quality and more equitable services, so that it can meet the needs of students and support national development. (Revika & Handayani, 2022). However, the reality on the ground shows that academic services still face obstacles such as delays in information, manual administrative systems, and a lack of transparency, which have an impact on student dissatisfaction (Regita, 2023).

With the development of technology in the context of academic services, to overcome these problems, service automation has been introduced to improve the efficiency and quality of services through the implementation of Chatbot-based applications. These chatbots are designed to provide fast, responsive academic information services that can be accessed at any time without depending on the operating hours of administrative staff. Chatbots are computer programs that can talk to people through text conversations. Chatbots can assist users or facilitate conversations by performing tasks such as answering questions and providing suggestions (Fitria & Simbolon, 2023).
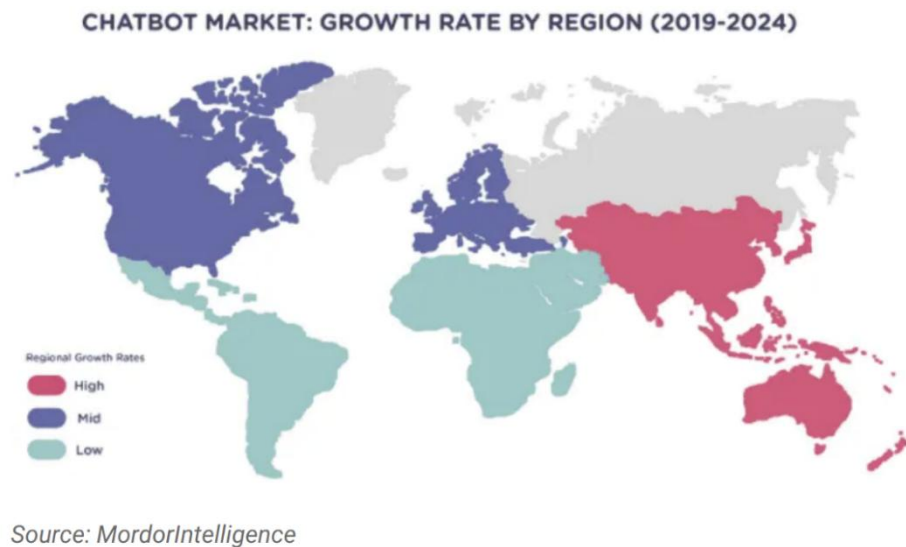
CHATBOT MARKET: GROWTH RATE BY REGION (2019-2024)

Regional Growth Rates
- High
- Mid
- Low

Source: MordorIntelligence

Figure 1.1 Chatbot Market Growth Map

Source : Mordor Intelligence, 2021

Based on the Chatbot market growth map from 2019 to 2024 (Figure 1.1), There are significant differences in the adoption of this technology in different parts of the world. Asia, particularly Indonesia, has seen very rapid growth. According to Shetty, (2024) Educational institutions are increasingly adopting chatbots to streamline administrative processes and enhance the student experience. The use of chatbots in the education sector has significantly improved operational efficiency and student engagement, making it a strategic solution to problems such as slow service and limited online services (Shetty, 2024). With Chatbot automation, educational institutions can provide responsive, personalized, and 24/7 services.

Automating services with Chatbots enables real-time responses to routine questions about class schedules and administration, thereby reducing the

workload of academic staff. Choosing the right platform, such as Discord, supports Chatbot implementation. Discord is a communication app that has gained popularity for its ability to provide text, voice, and video-based interaction spaces. Although initially popular among gamers, Discord has now evolved to support general communication, as researched by Wahyuningsih & Baidi (2021) and optimize online learning activities, with responsive access for teachers and students (Ramadhan & Albaekani, 2021).

Optimal academic services are essential for creating a positive learning experience for students. These services include providing academic information, managing course administration, and offering counseling. According to Prahesti et al. (2021) academic services are educational services that directly target students as the primary customers. Good services can enhance student satisfaction and loyalty, as demonstrated by the research of Subandi & Tarigan (2022).

The fact that although optimal academic services contribute to a positive learning experience, challenges in service delivery remain, especially in institutions with large numbers of students. UPN 'Veteran' Jawa Timur, as one of the universities that continues to grow, also faces challenges in ensuring efficient and responsive academic services. To gain a better understanding of how academic services in the Management Program at UPN 'Veteran' Jawa Timur are perceived by students, a pre-test survey was conducted among 39 students regarding their level of satisfaction with the services provided.
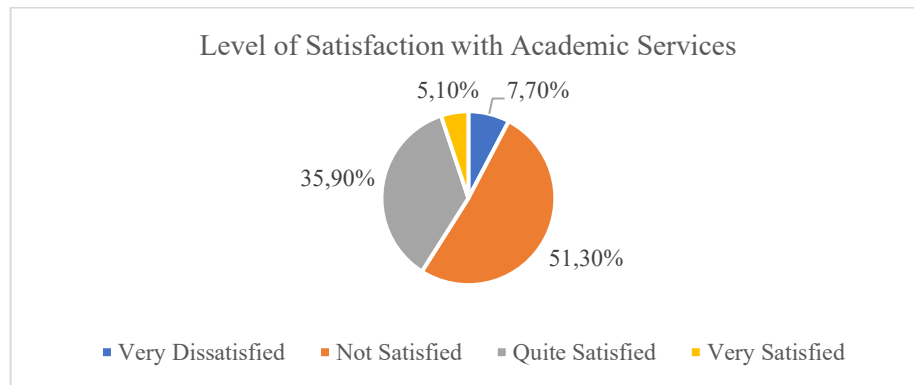
Level of Satisfaction with Academic Services

5,10%   7,70%

35,90%

51,30%

■ Very Dissatisfied   ■ Not Satisfied   ■ Quite Satisfied   ■ Very Satisfied

Figure 1.2 Diagram of Student Satisfaction Levels with Academic Services in the Management Study Program

Source : pre-test survey of management students

Based on the survey above, the level of satisfaction with academic services shows results that need improvement. 7.7% are very dissatisfied, 51.3% are somewhat dissatisfied, 35.9% are moderately satisfied, and only 5.1% are very satisfied. The main complaints include the limited quota for course registration forms (KRS) that fill up quickly, forcing students to constantly monitor the website, conflicting information, and unclear communication of administrative information.

This issue requires innovative solutions, such as the implementation of an application-based chatbot system designed to provide fast, accurate, and accessible services at any time. According to Pérez et al. (2020), educational Chatbots have successfully provided positive feedback to students. Furthermore, research by Chen et al. (2020) notes that Chatbot design can result in a more positive learning experience and better learning outcomes. By automating administrative tasks through Chatbots, administrators can focus more on resolving issues and meeting student needs.

Research on technology-based academic services has provided many benefits and satisfaction to students, as demonstrated in studies conducted by Wijayanto et al. (2024) and Dora & Asmar (2023). However, this contrasts with the actual situation in the academic services of the Management Program at UPN Veteran Jawa Timur, as evidenced by a survey conducted among students, which revealed that they are dissatisfied with the existing academic services. This aligns with the findings of studies by Revika & Handayani (2022) and Umniyya et al. (2023), the existing electronic academic services are not yet sufficiently satisfying for students, and improvements are needed to enhance student satisfaction.

This situation necessitates further evaluation, in which the E-ServQual theory will be used as a starting point to measure the quality of electronic services provided by the university to students. This is important to provide an overview of the quality of electronic services, such as efficiency, fulfillment of needs, system availability, and privacy, which require improvement. The data obtained from the E-ServQual analysis then serves as the basis for the Customer Satisfaction Index (CSI) method to calculate the overall level of student satisfaction and the Importance Performance Analysis (IPA) method to determine service improvement priorities. By using E-ServQual as the foundation, CSI and IPA analyses can be conducted in a more focused and targeted manner. Therefore, the researcher will conduct a study titled "Analysis of the Implementation of an E-ServQual-Based Chatbot in an Application to

Improve Academic Services in the Management Program at UPN 'Veteran' Jawa Timur.

1.2 Problem Statement

Based on the background described above, the problem formulation is whether academic services can be optimized through the implementation of an E-ServQual-based chatbot integrated with the Discord application to improve the efficiency, transparency, and responsiveness of administrative services in the Management Study Program at UPN "Veteran" Jawa Timur.

1.3 Research Objective

Developing academic services using the Discord application integrated with a chatbot that utilizes the concept of service science to optimize academic services at the Management Study Program of UPN "Veteran" Jawa Timur, in order to address issues such as delayed information, manual administrative processes, lack of transparency, and limitations of online services, thereby improving efficiency, accuracy, and student satisfaction.

1.4 Benefit of Research

The benefits of this research are :

1. For Management Study Programs

Provide the implementation of technology, especially Chatbot through Discord application, to improve the efficiency and effectiveness of academic services, as well as meet the needs of students optimally with a more responsive and personalized approach.

2. For Further Research

      With this research, it is expected to provide benefits regarding the e-servqual-based service innovation model and automation through the Discord application and the use of Chatbot to improve the quality of academic services, which includes aspects of speed, transparency, and accessibility. This research also provides strategic recommendations in prioritizing resources for service development that focuses on student satisfaction.