ABSTRACT

Effective communication is essential for the success of public services, particularly in higher education, to ensure user satisfaction and support academic processes. Although online information systems are available at Telkom Institute of Technology Purwokerto (ITTP), the user experience remains suboptimal, especially in providing interactive academic support. The Faculty of Informatics faces challenges related to efficiency and limited working hours in delivering academic services. This study proposes the development of a chatbot using Natural Language Processing (NLP) via the Dialogflow platform and adopts the Rapid Application Development (RAD) methodology to ensure iterative and user-centered implementation. The chatbot was designed to answer common academic inquiries such as thesis defense procedures, graduation requirements, student status, and academic letters. Results show that the chatbot successfully responded to approximately 85% of questions accurately, with an average response time of less than two seconds. A user satisfaction survey yielded an average score above 4 on a 5-point Likert scale, indicating a positive reception. The system also helped reduce the workload of administrative staff by handling routine questions automatically and allowed students to access information anytime via Telegram. The chatbot not only improves service efficiency but also enhances the student experience by providing faster, more accessible academic support. Continuous evaluation and user feedback are used to guide future improvements, including integration with other academic services and the addition of more interactive features. This research demonstrates the potential of chatbot systems in optimizing academic information services in higher education institutions.

Keywords: *Chatbot, Faculty of Informatics, Academic Services, Natural Language Processing (NLP) and Public Services*