



## Analysis of the Need for Development of a Virtual Space for Student Guidance and Counseling

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### Abstract

Received : November 10, 2023  
Revised : April 28, 2024  
Accepted : April 30, 2024

This research aims to develop an innovative virtual space for academic guidance as a means of increasing student competency. The development method involves interactive design and the integration of information technology to create an engaging and effective learning environment. In addition, this research will evaluate the impact of using this virtual space on improving students' academic skills, as well as analyzing their perceptions and experiences during the guidance process. It is hoped that the results of this research can make a significant contribution to the development of innovative academic guidance methods and support increasing student competence in this digital era.

**Keywords:** development, virtual space, guidance and counseling

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**How to Cite:** Wahyuni, S., Zamroni, Rizka Apriani, & Fajarianto, O. (2024). Analysis of the Need for Development of a Virtual Space for Student Guidance and Counseling. *JTP - Jurnal Teknologi Pendidikan*, 26(1), 270-277. <https://doi.org/10.21009/jtp.v26i1.40085>

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## INTRODUCTION

In the era of Industrial Revolution 4.0 and society 5.0, innovation in the field of education is becoming increasingly important to prepare students to face ever-growing global challenges. One crucial aspect of education is academic guidance services, which play a vital role in improving student academic achievement and welfare. However, with technological developments and changes in societal paradigms, adjustments are needed in the provision of academic guidance services so that they remain relevant and effective.

The State University of Malang has identified that the use of communication technology such as the Academic Information System (SIKAD) can help facilitate interaction between academic supervisors (PA) and students. However, there are obstacles in implementing this technology, such as limited features available and a lack of interactivity in academic guidance services. This shows the need to develop an academic guidance information system that is more sophisticated and responsive to the needs of PA students and lecturers.

In order to meet student expectations and needs, the development of a website-based academic guidance system is the proposed solution. This system, known as "e-Tutoring", is designed to provide easy access, two-way communication, a track record of tutoring activities, and integration with communications technologies such as WhatsApp. Through e-Tutoring, it is hoped that the academic guidance process can become more efficient, interactive and integrated with student needs in this digital era.



With this background, this research aims to analyze the development of the e-Tutoring system as an innovation in academic guidance services at the State University of Malang. Through an information technology-based approach, it is hoped that this system can make a positive contribution in improving the quality of academic guidance services, strengthening relationships between PA lecturers and students, as well as improving student academic achievement in the ever-growing digital era.

## **METHODS**

This study uses a development research approach to design and implement an e-Tutoring system as an innovation in academic guidance services at the State University of Malang. The stages of developing an e-Guidance system include needs analysis, system design, implementation, evaluation and dissemination of results.

1. Needs analysis
  - a. A needs survey was conducted on students from various departments at the Faculty of Education, State University of Malang. Survey respondents consisted of 39 students from five departments who participated in this research.
  - b. Data on student needs related to academic guidance services, including expectations and obstacles experienced in interactions with academic supervisors, is collected and analyzed to form the basis for developing an e-Tutoring system.
2. System planning:
  - a. Based on an analysis of student needs, the e-Tutoring system is designed to facilitate two-way communication between PA lecturers and students, providing easy access, track records of guidance activities, and integration with communication technology such as WhatsApp.
  - b. The proposed e-Tutoring system features are based on student expectations to increase effectiveness, interactivity, and connectedness in academic guidance services.
3. Implementation:
  - a. The e-Tutoring system was developed based on a website by taking into account student needs and expectations as well as interactive design principles.
  - b. The implementation phase involves software development, functionality testing, and integration with existing information technology infrastructure within the State University of Malang.
4. Evaluation:
  - a. The evaluation was carried out to measure the effectiveness and success of implementing the e-Tutoring system in improving the quality of academic guidance services, strengthening relationships between PA lecturers and students, and improving student academic achievement.

- b. Student responses and experiences while using the e-Tutoring system are also evaluated to improve and perfect the system according to the feedback received.
5. Dissemination of Results:
- a. The results of research and evaluation of the e-Tutoring system will be disseminated through scientific publications, seminars and discussion forums to share findings and experiences in developing innovative academic guidance services.

The aim of disseminating the results is to make a positive contribution to the development of innovative academic guidance methods and support increasing student competence in the digital era.

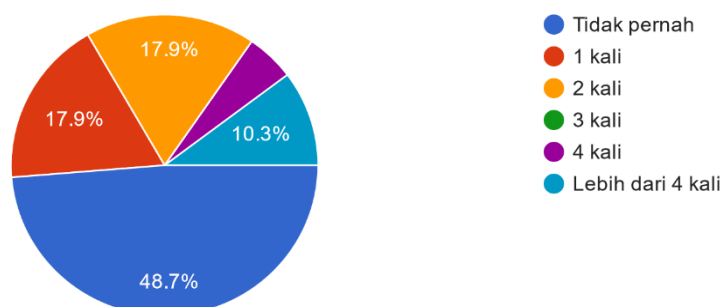
## RESULTS & DISCUSSION

The development of a virtual academic guidance space begins with conducting a needs analysis through a survey. The respondents involved in this needs survey were students from departments within the Faculty of Education, State University of Malang. The respondents selected in this research were 39 students from five departments as explained in table 1 below:

**Table 1.** Respondents

No	Department	Number of Respondents
1	Guidance and Counseling (BK)	8
2	Educational Technology (TEP)	17
3	Out-of-School Education (PLS)	11
4	Primary School Teacher Education (PGSD)	1
5	Special Education (PLB)	2
<b>Total</b>		<b>39</b>

It is known that the intensity of students contacting and meeting academic supervisors to consult and obtain guidance within a period of six months (one semester) is still not running optimally. This is known from data which shows that the majority of 48.7% of students have never met their PA lecturer for guidance or consultation. 17.9% of students also only had guidance with a PA lecturer once, and 17.9% of students only had guidance with a PA lecturer twice. Only 5.1% of students have carried out intensive guidance and consultation, and 10.3% of students have made good use of guidance opportunities with PA lecturers beyond the established guidance meeting standards. This condition can be seen in Figure 1 below:



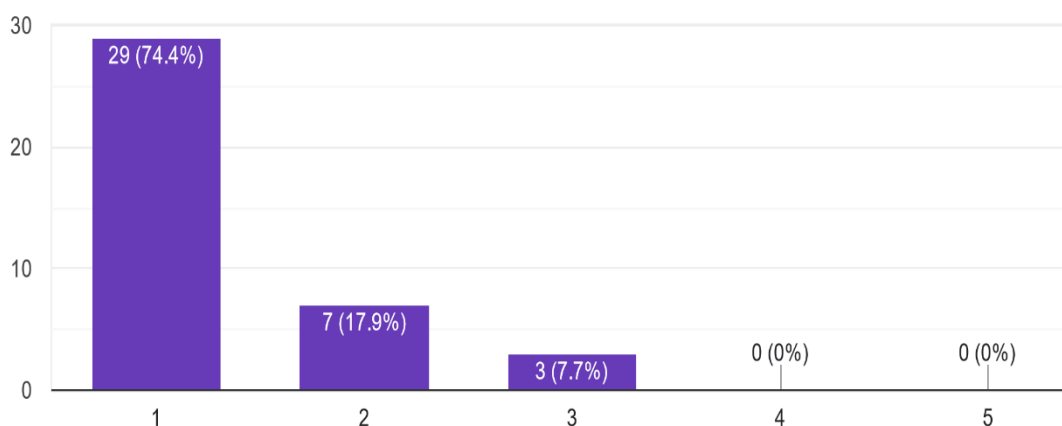
**Figure 1.** Intensity of Students Consulting PA Lecturers

Several reasons were given by students related to their inactivity in conducting consultations and guidance with PA lecturers. Based on the survey results, it is known that 30.7% of students still experience problems in conducting consultations and obtaining academic guidance from PA lecturers. Another 6.3% said they had no problems conducting consultations and receiving academic guidance from PA lecturers. Several reasons that have been identified for the obstacles experienced by students include: (1) the distance from where students live far from campus, (2) PA lecturers who are continuing their studies to the next level, (3) inadequate time availability for PA lecturers. providing guidance, (4) obstacles to meeting lecturers directly in their work rooms, and (5) limitations in communication media such as WA which makes messages less effective.

The level of density of lecturers' schedules and duties in carrying out Higher Education Tri Dharma activities has the potential to ineffectively provide academic guidance services by PA lecturers to students. A lecturer has the task of being an educator and instructor in carrying out guidance and teaching activities, both in class and outside of class. Apart from that, lecturers also have the task of carrying out research and community service. Not to mention several other tasks that lecturers must carry out, such as additional official duties and self-development activities such as workshops, seminars and training that lecturers must attend. If these conditions are not paid attention to, academic guidance service activities by PA lecturers face-to-face or offline will not run smoothly. The use of communication technology devices such as WA which is expected to help overcome interaction obstacles between PA lecturers and students also in reality reaps obstacles. Some examples, for example, PA lecturers do not immediately reply to messages from students because there are so many messages coming into the application. Therefore, an academic guidance information system is needed that can accommodate these needs according to conditions in the field so that the guidance process can run smoothly.

So far, the State University of Malang has prepared a feature for advisory services or academic guidance by PA lecturers to students through SIAKAD. It's just that the features available at SIAKAD are still very simple and not yet

interactive, so they are not interesting, not understood and not used by students in carrying out academic consultation and guidance activities with PA lecturers. The survey results obtained information that as many as 74.4% of students did not use the "Student Guardianship" menu feature in SIAKAD to consult on lecture matters (academic and non-academic) with PA lecturers. They only use it to ask PA lecturers for KRS approval every semester. 17.9% also only sometimes use this feature, and a small portion, 7.7, also rarely use it. There was no information found that students often and always use the "Student Guardianship" menu feature in SIAKAD to consult on lecture matters (academic and non-academic) with PA lecturers. This is as explained in Figure 2 below:

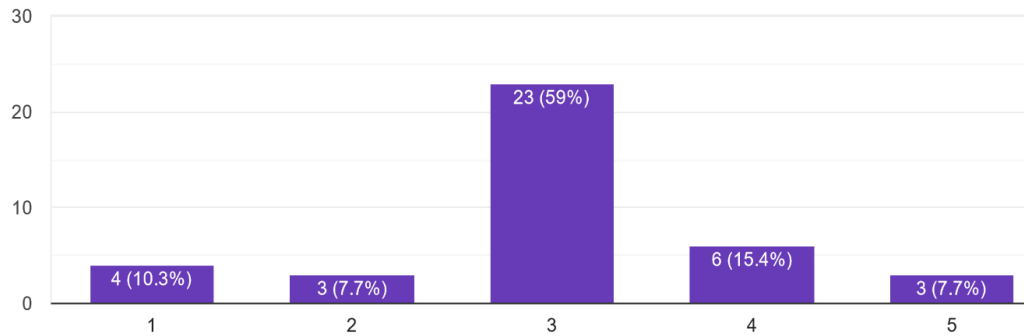


**Figure 2.** Use of Advisory Features in SIAKAD

Students' assessment of the "Student Guardianship" menu feature in SIAKAD for consulting on lecture problems (academic and non-academic) with PA lecturers is still not optimal as explained in Figure 3. Most of the 59% of students assess the guidance service feature as adequate but still not optimal. . As many as 7.7% of students rated the guidance service features as very inadequate, and even 10.3% of students rated them as very inadequate. Only 7.7% of students considered that the guidance service features were very adequate, while 15.4% considered them adequate. Students' less than optimal assessment of the guidance service features at SIAKAD is due to its too minimal use for students in carrying out academic guidance. Students simply cannot convey any messages to PA lecturers, except that only lecturers can give one-way messages to students and are not interactive. Therefore, usage of this feature is also very low among students.

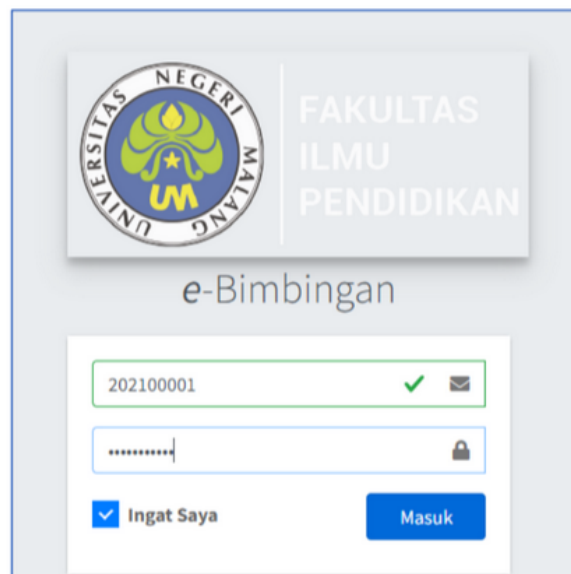
Several hopes were identified from students regarding the form of an academic guidance system in order to obtain convenience and benefits from PA lecturer services. Various hopes expressed by students include (1) a system that allows two-way communication between PA lecturers and students, (2) an online system in the form of an application that makes it easier for students to contact lecturers and get fast responses from PA lecturers, (3) features that provide personal consultations and discussions fellow guidance groups, (4) an online system that allows consultations to be carried out from different places, (5) a system that can record the history of guidance and consultation service activities between PA

lecturers and students, (6) a system that is integrated with cell phones and WA, (7) a system that can maintain the privacy of student data, (8) a system that facilitates routine and periodic guidance schedules such as once every 2 weeks or once a month, (9) a website-based system, and (10) a system that is implemented in a hybrid manner.



**Figure 3.** Student Assessment of the Advisory Features at SIAKAD

Based on a needs analysis carried out on students from various departments within the Faculty of Education, State University of Malang, a website-based academic guidance system was developed. The online academic guidance system, which was then called "e-Guidance", was developed to answer these needs and become a solution to solve the problems and obstacles experienced by PA lecturers and students so far in carrying out academic guidance activities. e-Tutoring is a website-based academic guidance media that was developed to accommodate the features expected by students to make it easier for them to carry out consultation and guidance activities with PA lecturers. The appearance of the e-Guidance system can be seen in Figure 4 below:



**Figure 4.** Front view of the e-Tutoring System

## CONCLUSION

The development of the e-Tutoring system as an innovation in academic guidance services at Malang State University aims to increase effectiveness and interactivity in the guidance process. By involving analysis of student needs, this system is designed to facilitate two-way communication, easy access, and integration with modern communication technology.

The implementation of the e-Tutoring system is expected to improve the academic guidance process, strengthen relationships between PA lecturers and students, and improve student academic achievement. Evaluation of implementation results will provide valuable insight into the development of innovative academic guidance methods.

It is hoped that the dissemination of the results of this research will provide inspiration for other educational institutions in adopting innovative academic guidance services that are responsive to technological developments and the demands of the times. Thus, the development of the e-Tutoring system is a progressive step in improving the quality of higher education and preparing students to face global challenges in the digital era.

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