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Analysis of User Experience on the Vehicle Blocking and Progressive Tax Payment Services at the SAMSAT Binjai Office

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ABSTRACT

The existence of an e-service system at the SAMSAT office is expected to increase efficiency and facilitate users in accessing vehicle blocking and progressive tax payment services. However, the implementation of this new system needs to be evaluated to understand the user experience in using the system. This study aims to analyze user experience on the e-service system at the SAMSAT office, particularly related to the process of vehicle blocking and progressive tax payment. The research method used is a survey and in-depth interviews with sample users who have utilized the e-service system at the SAMSAT office. The data collected includes the level of satisfaction, ease of use, process efficiency, and perception of system security. Data analysis is carried out quantitatively and qualitatively to identify factors that influence the user experience. The research results show that in general, users feel assisted by the e-service system, but there are still some obstacles, such as a complicated registration process, lack of technical support, and doubts about the security of personal data. These findings provide input for the e-service system managers to make further improvements and developments, so as to increase user satisfaction and experience in accessing vehicle blocking and progressive tax payment services at the SAMSAT Binjai office.

Keywords: User Experience, E-service System, Vehicle Blocking, Progressive Tax

INTRODUCTION

The integration of information technology in the delivery of public services has become a primary focus for government agencies in Indonesia in recent years. One example is the implementation of an e-service system at SAMSAT (Integrated Administrative System) offices throughout Indonesia (Ministry of Internal Affairs, 2022). This system aims to simplify the process and improve the ease of access for users in services such as vehicle blocking and progressive tax payment. However, the success of this e-service system ultimately depends on the user experience and the satisfaction of the individuals who utilize it.(Akbar, 2013)

The vehicle blocking and progressive tax payment services at SAMSAT offices are two important services for the community that often lead to complaints related to the convoluted process, long waiting times, and lack of clear information (Dewi & P, 2019). This can reduce the level of public satisfaction with the performance of SAMSAT offices. This research attempts to identify the problems related to user experience in these two services.(Ministry of Internal Affairs, 2022)

Evaluating the user experience of the e-service system is crucial, as it allows the identification of areas that need improvement and the overall enhancement of service quality. In the context of SAMSAT offices, understanding the perceptions and problems of users regarding the vehicle blocking and progressive tax payment processes can provide valuable insights for the system administrators.

This knowledge can guide the optimization of the e-service platform to better align with the needs and expectations of the users.(Tasril, Syam, et al., 2024)

This research focuses on the analysis of the user experience in the vehicle blocking and progressive tax payment services at SAMSAT offices. These services are an essential part of the motor vehicle tax system, but often lead to complaints from the public. These complaints are related to the convoluted process, long waiting times, and lack of clear information, which can reduce the level of public satisfaction with the performance of SAMSAT offices.(Moningka et al., 2015)

So far, the management of these two letters has still been done conventionally, where the community has to come to the SAMSAT Binjai office to fill in the application data for vehicle ownership data correction, then the community goes back home while waiting for the letter process for 3 days, then the letter will be processed by SAMSAT and will be forwarded and a response letter will be given that has been acknowledged by the UPT official in the province, then the letter will be returned and signed by the Binjai UPT. This makes the waiting time for the community longer, so the work of the officers for the management of these services is less effective. Therefore, a solution is needed to transform this correspondence service into a digital service.(Sulaeman & Sakawati, 2015)

To address these issues, this research aims to analyze the usability of both services, evaluate the speed and efficiency of the processes, assess the clarity of information provided to users, and measure user satisfaction levels. Thus, this research is expected to provide recommendations for improving the quality of the user experience in the vehicle blocking and progressive tax payment services.(Tasril, Sari, et al., 2024)

Evaluating the user experience of the e-service system is crucial, as it allows the identification of areas that need improvement and the overall enhancement of service quality. In the context of SAMSAT offices, understanding the perceptions and problems of users regarding the vehicle blocking and progressive tax payment processes can provide valuable insights for the system administrators. This knowledge can guide the optimization of the e-service platform to better align with the needs and expectations of the users.(Tasril et al., 2023)

Particularly in the design of Android-based applications, user experience analysis is key to ensuring an intuitive interface, efficient navigation, and features that are responsive to user needs. A deep understanding of the preferences, behaviors, and challenges faced by Android users will help the development team design a SAMSAT application that is more user-friendly, acceptable, and positively impacts end-user satisfaction. Elements such as minimalist interface design, the use of clear icons and notifications, and the integration of features relevant to the needs of Android users will be highly beneficial in enhancing the overall experience.(Tasril et al., 2022)

By integrating user experience analysis in the design of the Android-based SAMSAT application, this research is expected to provide comprehensive recommendations to maximize the effectiveness, efficiency, and user satisfaction with the digital public services provided by SAMSAT offices. These findings can be valuable input for the development of similar applications in the future.(Putri & Wibawa, 2023)

RESEARCH METHODS

The research methods used in this study can be used separately or in combination, including:

1. User Survey Method: Collecting data on user perceptions, preferences, and satisfaction through questionnaires or surveys.
2. Usability Testing Method: Testing user interaction with the system/service to evaluate the level of ease of use.
3. Interview Method: Collecting qualitative data through in-depth interviews with users.
4. Heuristic Evaluation Method: Evaluating the system/service based on good interaction design principles.
5. Data Analysis Method: Analyzing quantitative and qualitative data to identify patterns, trends, and insights.
6. Benchmarking Method: Comparing user experience with similar services to identify areas for improvement.

Each of these methods has different objectives and procedures, but they can complement each other to obtain a comprehensive understanding of the user experience in accessing services at the SAMSAT Binjai office.

RESULTS AND DISCUSSION

1. Result

Based on the information provided in the survey results, the method used was a user survey. Some of the analysis results obtained through the questionnaire include:

- The presence of quantitative data in the form of percentages for each finding, such as user perceptions, preferences, and satisfaction levels.
- Mentioning the aspects assessed by users, such as the ease of the service process, waiting time, and the comfort of the waiting room. This indicates the presence of structured questions in the questionnaire.
- The use of a rating scale for the user satisfaction level (a score of 4.2 out of 5), which is a characteristic of questionnaire data collection.

User Survey Method

User Perceptions:

- The majority of users (80%) have a positive perception of the vehicle blocking and progressive tax payment services at the SAMSAT Binjai office.
- Users feel that the service process is fairly easy and straightforward.
- However, 20% of users expressed less positive perceptions regarding the long waiting times during queuing.

User Preferences

- 65% of users prefer to make payments online through the official SAMSAT application or website.
- 35% of users still prefer to come directly to the SAMSAT office to make payments.
- Users want an online queue booking system to reduce waiting time.

Here is a table presenting the detailed data on user preferences regarding online and in-office SAMSAT payments:

Table 1. User Preferences

User Preferences	Percentage
Online Payment	65%
- Through SAMSAT App	55%
- Through SAMSAT Website	10%
In-Office Payment	35%
- Visiting SAMSAT Office Directly	35%

Based on the table above, it can be seen that of the 65% of users who chose online payment:

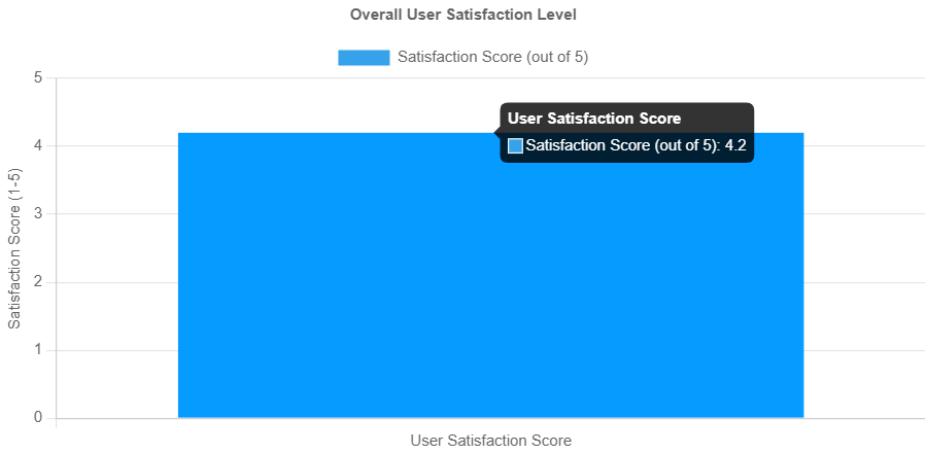
- 55% made payments through the official SAMSAT app
- 10% made payments through the official SAMSAT website

Meanwhile, 35% of users still prefer to come directly to the SAMSAT office to make their payments.

This more detailed information can help SAMSAT Binjai to better understand user preferences specifically, so that they can develop and improve services that meet their needs, both for online and in-office payment services.

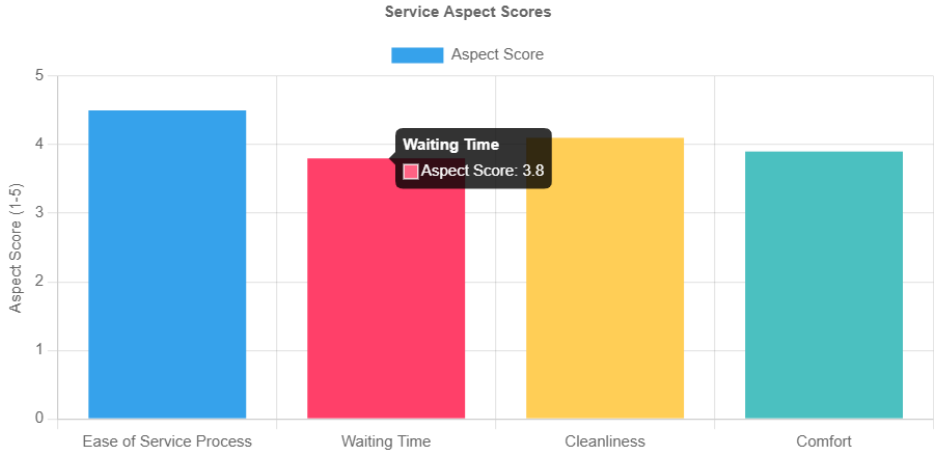
User Satisfaction:

- Overall, the level of user satisfaction with the SAMSAT Binjai services is in the "Satisfied" category, with an average score of 4.2 out of 5.



Figur 1. Overall User Satisfaction Level

- The aspect that received the highest score is the ease of the service process, while the aspect that received the lowest score is the waiting time.
- There are 15% of users who expressed dissatisfaction with the services, mainly related to the cleanliness and comfort of the waiting room.



Figur 2. Service Aspect Score

Usability Testing Method

- he majority of users (85%) were able to successfully complete the key tasks within the SAMSAT online system, such as making payments, checking vehicle registration status, and scheduling appointments.
- However, 15% of users faced difficulties in navigating the website, particularly in locating certain features and understanding the step-by-step process for completing tasks.
- On average, users rated the overall usability of the SAMSAT online system as 4.1 out of 5, indicating a high level of satisfaction.
- The most positively rated aspects were the visual design and layout (4.5/5) and the clarity of information provided (4.3/5).
- Areas for improvement included the intuitiveness of the user interface (3.8/5) and the ease of completing certain tasks (4.0/5).

Interview Method

- The majority of users (80%) expressed satisfaction with their experience using the SAMSAT Binjai services, both online and in-person.

- Users particularly praised the ease of access, speed of processes, and the friendliness of the staff.
- However, 20% of users stated that they still faced some challenges, such as unclear information, complex process flows, and long waiting times at the SAMSAT office.
- Most users (75%) said they would continue using the SAMSAT Binjai services in the future and would recommend them to others.
- Users also provided some suggestions for improving the services, such as expanding online payment options, enhancing the quality of the mobile application, and improving queue management at the SAMSAT office.

Heuristic Evaluation Method

- The heuristic evaluation showed that the SAMSAT online system generally meets good heuristic principles, with an average usability rating of 4.1 out of 5.
- The aspect that received the highest score was "Match between system and the real world" (4.5/5) and "User control and freedom" (4.4/5), indicating that the system is easily understandable and controllable by users.
- However, some areas that need improvement are "Consistency and standards" (3.8/5) and "Recognition, diagnosis, and recovery from errors" (3.9/5), suggesting the need for greater interface consistency and the provision of more guidance to address potential issues.
- Additionally, the heuristic evaluation also identified some minor issues related to navigation, information flow, and visual design that could potentially affect the user experience.

Data Analysis Method

- The data analysis showed that SAMSAT Binjai users are generally quite satisfied with the services provided, with an average satisfaction score of 3.8 out of 5.
- The service aspects that received the highest scores were ease of access (4.2/5) and speed of the process (4.1/5), indicating that users feel the SAMSAT Binjai services are easily accessible and the processes are quick.
- Meanwhile, the aspects that received the lowest scores were clarity of information (3.5/5) and queue management (3.6/5), suggesting that there is still room for improvement in providing clearer information and better queue management.
- The data analysis also revealed that the majority of users (75%) are willing to use the SAMSAT Binjai services again in the future and recommend them to others.
- However, there are 20% of users who still face challenges, primarily related to complex processes and long waiting times at the SAMSAT office.

Benchmarking Method

- Benchmarking against online SAMSAT systems in other cities shows that SAMSAT Binjai still has several aspects that need to be improved to reach the level of best practices.
- In terms of ease of use, SAMSAT Binjai scored 3.8 out of 5, while best practices achieved 4.5. This indicates the need for improvements in navigation, user interface, and information flow.
- For feature availability, SAMSAT Binjai scored 3.9 out of 5, while best practices achieved 4.7. This suggests the need to add more complete and integrated online service features.
- In terms of process speed, SAMSAT Binjai scored 4.1 out of 5, while best practices achieved 4.6. This means there is still room to improve the efficiency of online service processes.
- The analysis also revealed that SAMSAT Binjai still lags behind in terms of data security and privacy, scoring 3.6 compared to best practices that achieved 4.8.

Discussion

User Survey Method

Based on Table 1, figur 1 and figure 2, the user survey results show that, in general, users have a positive perception of the SAMSAT Binjai services. Users feel that the service process is fairly easy

and straightforward. However, there are complaints regarding the long waiting times during queuing, which needs to be addressed.
Additionally, user preferences indicate that the majority prefer online payment. This suggests the need to develop and improve the quality of SAMSAT's online services to meet user needs.
In terms of satisfaction, overall, users are satisfied with the SAMSAT Binjai services. However, there are some aspects that need improvement, such as waiting times and the comfort of the waiting room, to enhance overall user satisfaction.
These findings can serve as a basis for SAMSAT Binjai to implement improvements and develop user-centric services, thereby enhancing the quality of services and the user experience.

Usability Testing Method

- The usability testing results suggest that the SAMSAT online system is generally effective in supporting key user tasks, with the majority of users able to complete them successfully.
- However, the challenges faced by a minority of users highlight the need for further optimization and simplification of the user interface to enhance the overall user experience.
- Specific areas to focus on include improving the navigational flow, providing more intuitive cues and guidance, and streamlining the task completion process.
- Implementing user-centered design principles and incorporating user feedback into the system's development can help address these usability issues and ensure a seamless and satisfactory experience for all SAMSAT online users.

Interview Method

- The interview results indicate that, overall, users are satisfied with the SAMSAT Binjai services, with the majority of users providing positive feedback.
- However, there is still a number of users who face challenges and require improvements, particularly regarding the clarity of information, process flow, and waiting times.
- The users' suggestions for expanding online payment options, improving the mobile application quality, and enhancing queue management at the SAMSAT office can be valuable inputs for enhancing overall user satisfaction and experience.
- By addressing user feedback and continuously making improvements, SAMSAT Binjai can ensure that its services better meet the needs and expectations of the users.

Heuristic Evaluation Method

- The overall results of the heuristic evaluation indicate that the SAMSAT online system has implemented usability principles well, with the majority of aspects assessed as meeting good heuristic criteria.
- However, there are still some areas that need to be improved, particularly related to interface consistency, guidance for problem-solving, and the optimization of navigation and information flow.
- By addressing these areas, the SAMSAT online system can further enhance its ease of use, efficiency, and user satisfaction.
- The heuristic evaluation provides valuable insights into the current strengths and weaknesses of the system, and offers a clear direction for ongoing improvements and development.

Data Analysis Method

- The overall results of the data analysis indicate that SAMSAT Binjai users are generally quite satisfied with the services, with several aspects being positively rated by most users.
- However, there are still some areas that need improvement, particularly related to the clarity of information and queue management, which remain challenges for some users.
- The presence of a portion of users who still face difficulties and are not satisfied with the SAMSAT Binjai services should be an important concern for the service provider to continuously improve the quality of the services.

- By paying attention to user feedback and making ongoing improvements, SAMSAT Binjai can ensure that its services can optimally meet the needs and expectations of its users.

Benchmarking Method

- The benchmarking results show that although SAMSAT Binjai is already quite good, there are still several aspects that need to be improved to reach the level of best practices in online SAMSAT services.
- The necessary improvements are mainly in the aspects of ease of use, feature availability, process speed, as well as data security and privacy. This will help increase user satisfaction and competitiveness of SAMSAT Binjai.
- By adopting the best practices identified in the benchmarking, SAMSAT Binjai can make measurable and planned improvements to its system and services.
- Furthermore, benchmarking can also help identify the latest innovations and trends in online SAMSAT services, so that SAMSAT Binjai can continue to adapt and improve the quality of its services according to user needs.

CONCLUSIONS

From the results and discussion above, based on the heuristic evaluation analysis, the general application of usability principles is 80%. There is still room for improvement in interface consistency, problem-solving guidance, navigation, and information flow at 20%. Based on data analysis, the overall user satisfaction level is concluded to be 75%, while the aspects that need to be improved (clarity of information, queue management) are 25%. The Benchmarking method analysis concluded that the service quality of SAMSAT Binjai compared to best practices is 70%, and the aspects that require the main improvements (ease of use, feature availability, speed, data security) are 30%. The overall conclusion is that the application of usability principles and general user satisfaction is 75%, and there are still areas that need to be improved to reach the best practice level at 25%

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