

Evaluation of User Experience of UPN “Veteran” Jakarta Student Academic Information System Using User Experience Questionnaire

Muhammad Daryl Dianry Bakri¹, Muhammad Dwiky Fahreza², Muhammad Halin Saputra Nugraha³, Muhammad Mizan Murazaki Sani⁴

^{1,2,3,4}Sains Informasi, Universitas Pembangunan Nasional Veteran Jakarta, Jakarta, Indonesia

Email: 2310414041@mahasiswa.upnvj.ac.id, 2310414043@mahasiswa.upnvj.ac.id
2310414074@mahasiswa.upnvj.ac.id 2310414077@mahasiswa.upnvj.ac.id

Received: 21 June 2024 Revised: 03 January 2025 Accepted: 05 January 2025

Abstract

User experience (UX) is the experience that users get when using a software product. One of the keys to software success is to focus on the emotions and needs of users when using the product. This relates to the design of a digital product and website regarding several things such as navigation and ease of use, so UI / UX is very necessary to make it easier for users to use and navigate through a digital product. This article will provide research results regarding the user experience evaluation of the UPN "Veteran" Jakarta student academic information system using a user experience questionnaire. Because the use of technology is increasingly widespread, the importance of user experience (UX) in product development is also increasing.

Keywords: Academic Information System; User Experience; Information science; User Experience Questionnaire

INTRODUCTION

Academic Information System (SIKAD) acts as the main pillar for higher education institutions in managing student data, lecture schedules, and various other academic administration processes. At UPN "Veteran" Jakarta, the Academic Information System is an important component in the educational ecosystem that supports student activities and academic management efficiently. According to Dedi Setiawan (2021), Complete feature integration and good technical supports are very important to increase SIKAD user satisfaction. However, as technology evolves and user demands increase, evaluating the User Experience (UX) of SIKAD becomes crucial to ensure optimal usage and user satisfaction. UX evaluation is a systematic approach to understanding user experience in using a system. In the context of SIKAD for UPN "Veteran" Jakarta students, UX evaluation is key to identifying needs, problems, and improvement opportunities that can improve the quality of academic services. By deeply understanding how users interact with SIKAD, institutions can adopt relevant and appropriate improvements.

Factors such as user interface (UI), system performance, feature availability, and ease of navigation are important parts of SIKAD's UX evaluation. According to Hidayat (2020), ease of use and usability factors have a significant effect on SIKAD user satisfaction. According to Mochamad Yamin (2023), SIKAD plays an important role in improving the performance of academic administration and facilitating access to information for the entire academic community. Although this system has become an integral part of academic activities, its success also depends on how well it can be accessed and utilized by users, namely students, lecturers, and administrative staff. Recognizing the importance of UX evaluation, this article aims to investigate the user experience of SIKAD among UPN "Veteran" Jakarta students. By thoroughly collecting and analyzing data, this article is expected to provide valuable insights for the development and improvement of the system to be more responsive to user needs.

The academic information system provides various features designed to support the smooth study of students at UPN "Veteran" Jakarta. According to Fauzi (2020), System reliability and access speed are the main factors in SIAKAD user satisfaction. With the advancement of information technology, the Academic Information System (SIAKAD) provides an efficient and integrated solution to manage various aspects of academic administration, from student enrollment, curriculum management, to academic assessment and reports. According to Nurhayati (2018), good SIAKAD implementation can improve the efficiency of academic administration. This system not only improves the accuracy and efficiency of data processing, but also provides easy access to information for the entire academic community, including students, lecturers, administrative staff, as well as other services such as access to various pages related to UPN "Veteran" Jakarta.

Software products are designed with specific purposes in mind, so their success can be evaluated based on how users interact and utilize them. With a deeper understanding of student satisfaction levels, it is hoped that educational institutions can identify and implement innovations capable of improving the overall academic experience. Therefore, this research will provide significant benefits to UPNVJ and other higher education institutions committed to optimizing and improving the effectiveness of academic information systems for students.

METHOD

This study uses a quantitative approach with a population of active students of the Information Science study program class 2023 UPN "VETERAN" Jakarta, which is estimated at 78 people. The research sample was taken randomly from several study programs as many as 19 people. Data was collected through an online questionnaire distributed through Google Forms, consisting of closed and open questions. Respondents were asked to fill out the survey honestly and give their opinions on evaluating and improving the user experience of the UPN "Veteran" Jakarta Student Academic Information System in their academic activities. Data from the questionnaire was analyzed using data reduction, data presentation, and conclusion drawing methods.

According to Sinambela (2020) quantitative research is a type of research that uses numbers in processing data to produce structured information. According to Sugiyono (2018; 13) quantitative data is a research method based on positivistic (concrete data), research data in the form of numbers that will be measured using statistics as a calculation test tool, related to the problem under study to produce a conclusion.

The UEQ (User Experience Questionnaire) method is a tool used to measure the user experience of a product or service, especially software products or applications. UEQ is designed to collect user feedback on various aspects of their interaction with the product. The following is an explanation of the UEQ method, UEQ structure. The UEQ consists of a questionnaire with 26 items divided into six main scales :

1. **Attractiveness** : Assesses the overall attractiveness of the product.
2. **Perspiciuity** : Assesses how easily users understand and learn to use the product.
3. **Efficiency** : Assess how efficient the product is in helping users complete tasks.
4. **Dependability** : Assess how reliable the product is, including aspects of trust and safety.
5. **Stimulation** : Assess whether the product provides a pleasant and motivating experience.
6. **Novelty** : Assesses how innovative and creative the product is.

Rating Scale, Each item is measured using a 7-point bipolar scale, where the user chooses one of seven points between two opposing adjectives (e.g., "complex" vs "simple").

UEQ Usage Process

1. **Preparation** : Determine the product or feature you want to evaluate.
Make sure the user who will provide feedback has sufficient experience with the product.
2. **Questionnaire Distribution** : Distribute the UEQ questionnaire to a representative sample of users. This can be done online or through a physical questionnaire.

3. **Data Collection** : Collect answers from users. Try to get a sufficient number of respondents to get statistically significant results.
4. **Data Analysis** : Calculate the average score for each scale. Higher scores indicate a more positive user experience.
5. **Interpretation of Results** : Analyze the results to understand the strengths and weaknesses of the product. This can be used for further improvement and development.

Advantages of UEQ

1. **Comprehensive** : Measures various aspects of user experience, thus providing a comprehensive picture.
2. **Fast and Efficient** : The questionnaire is relatively short and easy to fill out, so it does not require a long time from the user.
3. **Benchmarking** : UEQ results can be compared with a benchmark database of other products that have been evaluated using the same method.

UEQ Usage Example. A company is developing a new mobile application and wants to know how their early users experience it. They can use UEQ to collect feedback from a group of beta users. Once the users fill out the questionnaire, the company can analyze the data to identify areas where the app works well and areas that require improvement. Overall, UEQ is a useful tool for measuring and understanding user experience, allowing developers to make data-driven decisions in an effort to improve their products.

RESULT AND DISCUSSION

The user experience (UX) evaluation of the UPNVJ student academic information system was carried out by distributing questionnaires via Google form to all active UPNVJ students and from various study programmes. From the questionnaire distributed, 19 respondents have filled out the questionnaire.

The following is a discussion of the questionnaire regarding the evaluation of user experience (UX) on the UPNVJ student academic information system (SIKAD):

Attractiveness. Overall impression of the product. Do users like or dislike it?

Apakah antarmuka SIKAD mudah dipahami dan digunakan?
19 responses

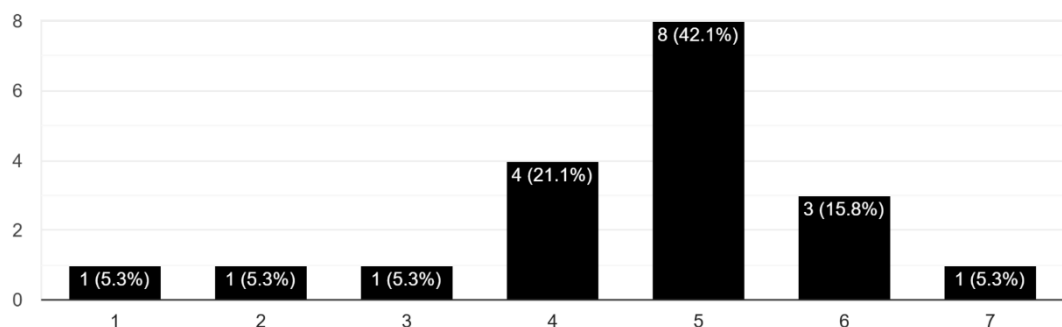


Figure 1. Question about the SIKAD interface to understand and use

This question uses a scale from 1 (very difficult to understand) to 7 (very easy to understand). The majority of respondents gave a positive assessment on the ease of understanding and using the SIKAD interface. There were only three respondents who rated it on a scale below 4. This shows that the interface in SIKAD can be easily understood and used.

The interface of SIAKAD is needed to make it easier for students to understand and use it, such as to find information and navigate. It is also needed so that students can be sure that students can take advantage of all the features offered by SIAKAD easily and comfortably.

Perspicuity

Is it easy to get to know the product and learn how to use it?

Seberapa lengkap fitur yang tersedia di SIAKAD untuk memenuhi kebutuhan akademik Anda?

19 responses

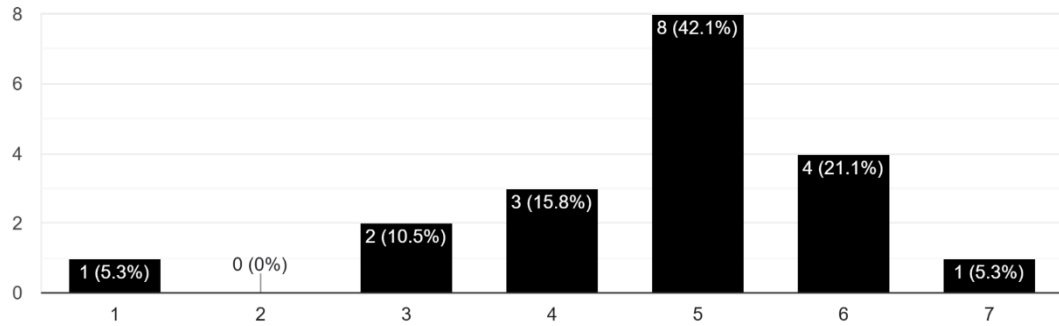


Figure 2. Question about how complete the features available in SIAKAD are to fulfill academic needs

This question uses a scale from 1 (very incomplete) to 7 (very complete). The majority of respondents gave a positive assessment of the completeness of the features available in SIAKAD to fulfill students' academic needs. The majority of students gave a positive assessment but there were still negative assessments from a few respondents. This analysis provides an explanation that the features available in SIAKAD are sufficient to meet the academic needs of UPNVJ students. But because there are still negative responses, this can still require improvement and improvement of existing features in the UPNVJ student academic information system. The completeness of the features available in SIAKAD is very necessary to meet the academic needs of students so that students are facilitated in finding information and in using SIAKAD.

Efficiency

Can users complete their tasks without unnecessary effort? Does the product react quickly?

Sejauh mana SIAKAD membantu Anda dalam mengelola dan mengakses informasi akademik?

19 responses

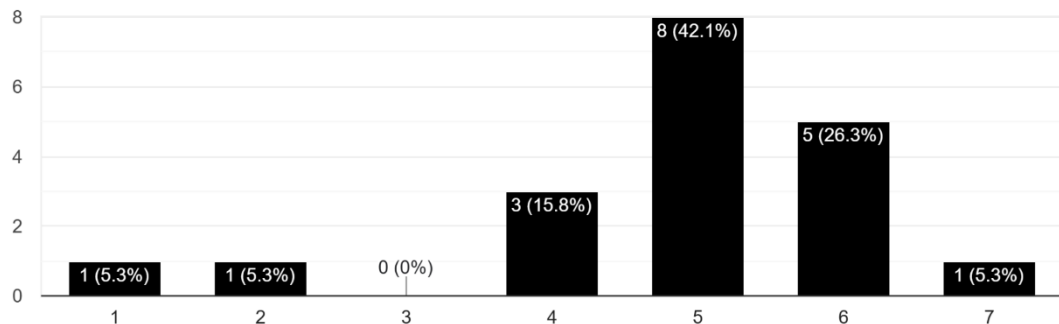


Figure 3. Question about the extent to which SIAKAD can help manage and access academic information

This question uses a scale from 1 (very bad) to 7 (very good). The majority of respondents gave a positive assessment of the extent to which SIAKAD helps students manage and access academic information. This shows that students feel satisfied in managing and accessing academic information in SIAKAD, but because there are still negative responses, SIAKAD still has shortcomings in helping students to manage and access SIAKAD academic information.

The extent to which SIAKAD can assist students in managing and accessing academic information is very important because this will provide and add insight for UPNVJ students.

Dependability. Does the user feel in control of the interaction? Is it safe and predictable

Bagaimana penilaian Anda terhadap keamanan dan privasi data yang disimpan di SIAKAD?

19 responses

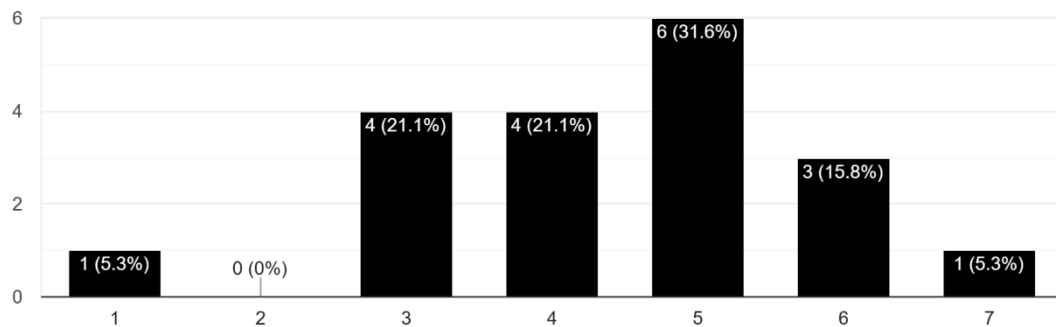


Figure 4. Question regarding the assessment of the security and privacy of data stored in SIAKAD

This question uses a scale from 1 (very bad) to 7 (very good). The majority of respondents gave a positive assessment of the security and privacy of data stored in SIAKAD. But there are some students who feel that the privacy of the data stored in SIAKAD is not safe. This analysis shows that although the majority of students feel that security and privacy in SIAKAD are good enough, there are still some students who feel that the security and privacy of their data is not safe. This indicates that SIAKAD still needs improvement and improvement in the security and privacy of student data in SIAKAD.

The security and privacy of student data stored in SIAKAD is very important for students to protect the information, security, and privacy of student data and this will make students feel comfortable if their personal information is safe and secure.

Stimulation. Is it interesting and motivating to use the product? Is it fun to use?

Seberapa puas Anda secara keseluruhan dengan SIAKAD?

19 responses

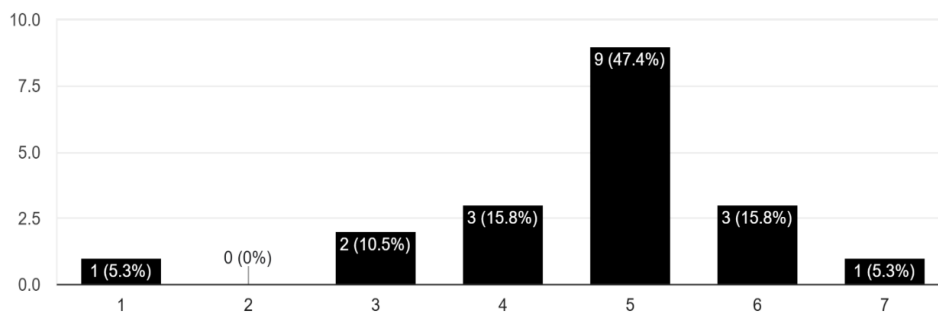


Figure 5. Question on how satisfied overall with SIAKAD

This question used a scale from 1 (very dissatisfied) to 7 (very satisfied). The majority of students gave positive ratings on the overall level of satisfaction with SIAKAD. There are only a few students who give a negative assessment, which means that students are quite satisfied with the overall features of SIAKAD. However, SIAKAD still requires improvement or enhancement because there are still respondents who are not satisfied with the overall features of SIAKAD. The overall level of student satisfaction with SIAKAD is one of the important aspects because it provides an overview of the level of user satisfaction, helps identify areas for improvement, evaluates system performance, and acts as an indicator of success.

Novelty. Is the product design creative? Does the design attract users?

Seberapa puas Anda dengan dukungan teknis yang tersedia ketika mengalami masalah dengan SIAKAD?

19 responses

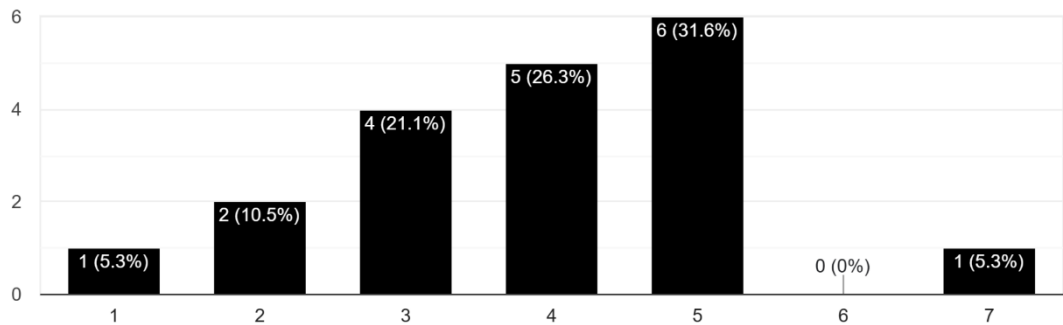


Figure 6. Question about how satisfied you are with the technical support of SIAKAD

This question used a scale from 1 (very poor) to 7 (very good). Respondents had different perspectives on the level of satisfaction with the technical support available when experiencing problems with SIAKAD. There were seven students who responded below scale 4, but the number of students who responded above scale 4 was also the same, namely seven respondents. This analysis shows that technical support really needs to be improved for students when experiencing problems with SIAKAD so that students can overcome what they face effectively.

Technical support in SIAKAD is needed to help students who are experiencing problems with SIAKAD. With technical support, the problems faced by students can be facilitated and corrected.

Bagaimana pendapat Anda tentang kecepatan akses dan respon SIAKAD?

19 responses

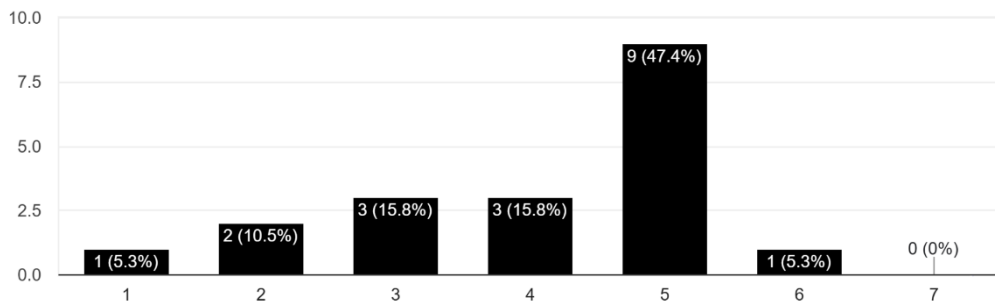


Figure 7. Question about opinion on the speed of access and response of SIAKAD

This question uses a scale from 1 (very bad) to 7 (very good). The majority of respondents gave a positive assessment of the speed of access and response to SIAKAD. There were nine students giving a scale rating of 4 but there were only a few students giving scale ratings of 6 and 7. This shows that improvement is still needed in the speed of access and response to the UPNVJ student academic information system so that students can be more comfortable using SIAKAD and so that it does not drain students' time.

The speed of access and response in SIAKAD is important and necessary so that students are not required to wait for a very long time to access the information needed by students. The speed of access and response can help students access information more quickly and efficiently in using time.

Seberapa mudah Anda menemukan informasi yang Anda butuhkan di SIAKAD?

19 responses

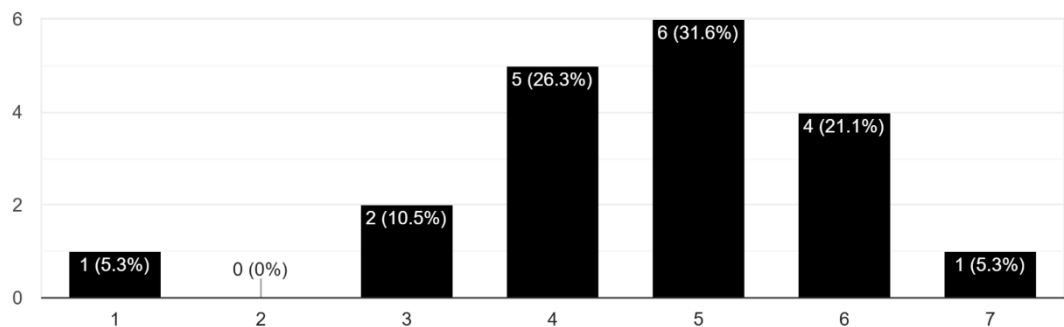


Figure 8. Question about how easy it is to find the information needed in SIAKAD

This question uses a scale from 1 (very difficult) to 7 (very easy). The majority of respondents gave a positive assessment of the ease of finding the information needed in SIAKAD. Although the majority gave a positive assessment, there were still responses that students still had difficulty finding the information needed in SIAKAD. This analysis indicates that the majority of students do not have difficulty finding the information needed in SIAKAD, but improvements and improvements are still needed in the academic information system for UPNVJ students.

The ease of finding information in SIAKAD is one of the important things to make it easier for students to find the information needed by students.

CONCLUSION

The results of this evaluation show that the majority of students find the system easy to use to find the information they need and the features are quite complete. However, there are some students who still experience difficulties in accessing information and feel that some features need to be improved. The speed of access and response of SIAKAD is considered adequate, but still needs improvement to be more responsive. Technical support received mixed ratings, indicating that improvements in technical support services are needed. Most students felt that SIAKAD helped them manage and access academic information, although there were some concerns regarding data security and privacy. The user interface was rated as easy to understand and use, however there are areas that need improvement to enhance the overall user experience.

Based on the evaluation results, here are some suggestions for improving SIAKAD:

1. **Improved Information Accessibility:**
 - a. Optimize navigation and information structure so that students can find information more quickly and easily.
 - b. Provide clear guidelines or tutorials to help students who still have difficulty accessing information.
2. **Feature Enhancement:**
 - a. Evaluate and develop features that are frequently used by students to ensure adequate functionality.
 - b. Add relevant new features according to student needs and feedback received.
3. **Speed and Responsiveness Improvement:**
 - a. Upgrade technical infrastructure to speed up system access and response time.
 - b. Perform regular maintenance and server optimization to ensure optimal performance.
4. **Improved Technical Support Services:**
 - a. Provide a responsive and easily accessible technical support team, for example through live chat, email, or hotline.
 - b. Conduct regular training for the technical support team to improve their service quality.
5. **Data Security and Privacy:**
 - a. Enhance security measures to protect students' personal data.
 - b. Conduct regular security audits and ensure the system is always updated with the latest security patches.
 - c. Educate students on the importance of data security and how to maintain their privacy.
6. **User Interface Improvement:**
 - a. Conduct periodic surveys to get feedback on user experience and identify areas that need improvement.
 - b. Improve the interface design to make it more intuitive and user-friendly, possibly by involving professional UX/UI designers.

By implementing these suggestions, it is hoped that SIAKAD can provide a better experience for students and support the academic process more effectively

ACKNOWLEDGMENTS

The completion of this research cannot be separated from the support of Allah SWT and the author's supervisor who has helped launch this research. First of all, we would like to thank our supervisor, Dwi Fajar Saputra, M.M. We are grateful for all the input and direction he has given to this research. We also thank ourselves as writers who have tried to complete this research until the end. Finally, we would also like to thank the authors of scientific works whose work has become a source of our research, the success of this research was greatly helped by the sources we used

REFERENCES

- Annisa, Fara Della Nur., Jaya, Joy Nashar., Surmiati., "Evaluasi Pengalaman Pengguna Pada Aplikasi E-Wallet OVO
- Henim, Silvana Rasio., Sari, Rika Perdana., "Evaluasi User Experience Sistem Informasi Akademik Mahasiswa pada Perguruan Tinggi Menggunakan User Experience Questionnaire," Jurnal Komputer Terapan Vol. 6, No. 1, Mei 2020, 69 - 78

- Kusumo, Raden Herdjuno Pawenang., “Evaluasi User Experience Sistem Informasi Manajemen Tugas Akhir (SEKAWAN) Informatika Universitas Islam Indonesia Menggunakan Metode User Experience Questionnaire (UEQ),” *Jurnal AUTOMATA* Vol. 4, No. 4, 2023
- Putra, Sewindu., Kusrini., Kurniawan, Mei P., "Penerapan Metode UEQ dan Cooperative Evaluation to Evaluate User Experience Laporan Bantul," *Citec Journal*, Vol. 6, No. 1, Januari 2019
- Jamilah, Yulianti Siti., Padmasari, Ayung Candra., “Perancangan User Interface dan User Experience Aplikasi say.co,” *Jurnal Tanra* Vol. 9, No. 1, April 2022
- Rahman, Rizky Adytia Ivan Rahman., Dewi, Ratih Kartika., Az-Zahra, Hanifah Muslimah., “Perancangan User Experience Aplikasi Pembelajaran Digital Marketing Youtube Untuk UMKM Menggunakan Metode Human-Centered Design,” *Jurnal Pengembangan Teknologi Informasi dan Ilmu Komputer* Vol. 6, No. 4, April 2022, 1635-1644
- Sianturi, Riyanthi Angrainy., “Penerapan user Experience Design Pada Pengembangan Aplikasi Mobile Markopi,” *Jurnal Teknologi Informasi dan Ilmu Komputer* Vol. 8, No. 4, Agustus 2021
- Surahman, Maman., Widiyasono, Nur., Gunawan, Rahmat., “Analisis Usability dan User Experience Aplikasi Konsultasi Kesehatan Online Menggunakan System Usability Scale dan User Experience Questionnaire,” *Jurnal Siliwangi Sains dan Teknologi* Vol. 7, No. 1, 2021
- Wiwesa, Ngurah Rangga., “User Interface dan User Experience Untuk Mengelola Kepuasan Pelanggan.” *Jurnal Sosial Humaniora Terapan.*, Vol. 3, Iss. 2, Article 2, Juni 2021
- Yehdeya, Evangelions Felix., Primasari, Clara Hetty., “Analisis User Interface (UI) dan User Experience (UX) Sudut Elevasi Pemukul Gamelan Metaverse Virtual Reality Menggunakan User Centered Design (UCD),” *JIKO* Vol. 7, No. 1, Februari 2023
- Hinderks, A., Schrepp, M., Domínguez Mayo, F. J., Escalona, M. J., & Thomaschewski, J. (2019). Developing a UX KPI based on the user experience questionnaire. *Computer Standards and Interfaces*, 65.
- Schrepp, M., Hinderks, A., & Thomaschewski, J. (2017). Design and Evaluation of a Short Version of the User Experience Questionnaire (UEQ-S). *International Journal of Interactive Multimedia and Artificial Intelligence*, 4(6).
- Nugroho, A. W., & Supriyadi. (2023). Analisis User Experience Pada Website Sistem Informasi Tugas Akhir (SITA) Mahasiswa Menggunakan User Experience Questionnaire (UEQ). *Jurnal Sains Komputer & Informatika (J-SAKTI)*, 7(1).
- Lasawali, A. A., Irawan, A. S. Y., Mayasari, R., & Nugraha, B. (2022). User Experience Analysis with User Experience Questionnaire (UEQ) in Academic Information Systems. *Systematics*, 4(3).

- Saleh, A. M., Abuaddous, H. Y., Alansari, I. S., & Enaizan, O. (2022). The Evaluation of User Experience of Learning Management Systems Using UEQ. *International Journal of Emerging Technologies in Learning*, 17(7).
- Sari, Y., Novitasari, N., & Pratiwi, H. (2021). Evaluation of lambung mangkurat university student academic portal using user experience questionnaire (UEQ). *ILKOM Jurnal Ilmiah*, 13(1).
- Kusuma, A. A., & Indrati, A. (2022). User Interface Analysis on Open University Credit Transfer Applications Using User Experience Questionnaire (UEQ) and Heuristic Evaluation Methods. *International Research Journal of Advanced Engineering and Science*, 7(1).
- Juansyah, F., & Dwi Rosa Indah. (2023). APPLICATION OF DESIGN THINKING METHOD IN REDESIGNING THE UI/UX OF SIMAK (ACADEMIC INFORMATION SYSTEM) OF SRIWIJAYA UNIVERSITY BASED ON A MOBILE PLATFORM. *Jurnal Teknologi Informasi Universitas Lambung Mangkurat (JTIULM)*, 8(1).
- Salsabila, A. R., Suryanto, T. L. M., & Safitri, E. M. (2022). Evaluasi Pengalaman Pengguna Aplikasi SIMARIS UPN “Veteran” Jawa Timur Menggunakan Metode UEQ. *JURIKOM (Jurnal Riset Komputer)*, 9(6).
- Romli, M. A. (2021). Analisis dan Evaluasi Pengalaman Pengguna Menggunakan User Experience Questionnaire (UEQ) Pada Sistem Informasi Akademik Perguruan Tinggi. *Explore*, 12(1).
- Nachvak, M., Sadeghi, E., Mohammadi, R., Rezaei, M., Abdollahzad, H., & Soleimani, D. (2021). User Experience of NAVID E-learning System in the School of Nutrition and Food Technology of Kermanshah University of Medical Sciences, Iran (2020). *Educational Research in Medical Sciences*, 10(1).
- Tanjungan, G. (2022). Perancangan Pertanyaan Indikator User Experience Aplikasi SIMPONI Mobile Universitas Multi Data Palembang Menggunakan User Experience Questionnaire. *Jurnal.Mdp.Ac.Id*.
- Kuadey, N. A., Ankora, C., Adjei, L., Krampa, E., Bolatimi, S. O., Bensah, L., & Agbesi, C. C. M. (2024). Evaluating Students’ User Experience on Student Management Information Systems. *Advances in Human-Computer Interaction*, 2024.
- Listiyah, A. (2021). User Experience Analysis of E-Learning UIN Malang with User Experience Questionnaire (UEQ) Method: Case Study of Students of Library and Information Science Departmen. *Proceedings of the International Conference on Green Technology*, 11(1).
- Umar, R., Zakilah Ifani, A., Irbati Ammatulloh, F., & Anggriani, M. (2020). METHOMIKA: Jurnal Manajemen Informatika & Komputerisasi Akuntansi ANALISIS SISTEM INFORMASI WEB LSP UAD MENGGUNAKAN USER EXPERIENCE QUESTIONNAIRE (UEQ). *Manajemen Informatika*, 4(2).

- Purnamasari, I., Kristianingrum, V., & Voutama, A. (2023). Mobile Information Academic-Based UI/UX Design System Application Using the Design Thinking Method (Case Study: University of Singaperbangsa Karawang).
- Laksono, M. Q., Kusumawardani, S. S., & Ferdiana, R. (2020). Evaluating User Experience on E-learning using the User Experience Questionnaire (UEQ) with Additional Functional Scale.
- Wulanndari, N. D., & Sodik, A. (2023). Uji Usability Website Akademik Universitas XYZ Menggunakan User Experience Questionnaire (UEQ). SNESTIK Seminar Nasional Teknik Elektro, Sistem Informasi, Dan Teknik Informatika , 23(1).