Evaluating the Usability of a Mobile Student Information System Using the System Usability Scale (SUS)

[1]Kerrovin B. Aguilar., [1]Carl Justin M. Bongalon., [2]Joben L. Sarmiento., [2]Erlito M. Albina

[1]School of Computer Studies, Arellano University - JAS Campus Pasay, Philippines

[2]Adviser, School of Computer Studies, Arellano University - JAS Campus Pasay, Philippines

DOI: https://doi.org/10.51244/IJRSI.2026.1313CS037

Received: 12 October 2026; Accepted: 17 October 2026; Published: 28 October 2026

ABSTRACT

This study measured the usability levels of a mobile Student Information System by utilizing the System Usability Scale. The data-gathering process involved 53 individuals selected through purposive sampling, and the tool combined the ten SUS statements with fifteen additional items and open-ended questions. The researchers observed that the SUS score averaged 55.71, below the standard threshold of 68 and indicating a Grade D categorization. Participants gave lower ratings to design consistency and simplicity, while the integration of functions and ease of operation received the highest marks. Learners appreciated the convenience of the Student Information System but requested dark mode, clearer labels, and a return button within the enrollment sequence. Because the authors applied a modified scoring formula during the analysis, they believe comparisons with standard benchmarks must be handled with caution.

Keywords: System Usability Scale, mobile student information system, usability evaluation, user interface design, student perception, human-computer interaction

INTRODUCTION

Mobile Student Information Systems (MSIS) have become an essential tool that enables students to access vital academic information at any time and from anywhere. With the widespread adoption of mobile devices, students can conveniently check their grades, class schedules, announcements, and other services related to their educational process. A mobile system with an intuitive, easy-to-understand interface can maximize efficiency and user satisfaction. Conversely, a poorly designed system can cause frustration, inefficiency, confusion, and reduced interest in using MSIS. Moreover, conducting a usability assessment is pivotal to ensure the product meets customers' expectations and needs. The usability assessment of the Mobile Student Information System will be conducted using the System Usability Scale (SUS). The method is simple, straightforward, valid, and reliable because it has been used successfully in numerous studies. Using the SUS will allow me to determine how easy the system is to learn and operate and whether it suits most students. Therefore, the study results will highlight the system's strengths and weaknesses and provide recommendations for improving MSIS.

LITERATURE REVIEW

This paper argued that mobile usability testing research has grown fragmented, with terminology and methods shifting from study to study. Reviewing approaches such as questionnaires, observation, and think-aloud, the author synthesized a general framework for matching data-collection choices to what a study wants to learn [5]. A systematic review of mobile usability research found that expectations shift by app category [12]. Analyzing 205 documents on mobile UX published between 2015 and 2023, this review found health, learning, and shopping apps dominate the literature [7]. A mobile student services application tested across higher education institutions scored within the acceptable usability range on SUS, although navigation-related statements lagged behind basic content viewing [6]. An institutional administrative system evaluated with SUS scored below initial user benchmarks, validating previous feedback regarding cluttered visual architecture [24]. An administrative platform designed for technical staff landed in acceptable territory on SUS, but several embedded functions

scored lower due to ambiguous visual labeling [22]. A public-facing institutional mobile application scored in the average acceptability range among mandatory users: functional, but without much delight [3]. Using the Technology Acceptance Model, researchers tested a learning application against student performance and found that students who rated it useful and easy to use tended to perform better [9]. A usability evaluation of the university's LMS using the PACMAD framework scored well on learnability but worse on error tolerance [2]. A mobile system evaluated using SUS combined with task completion metrics found transactional functions scored lower than simple information browsing [1]. Evaluating a student mobile service using SUS, researchers converted numerical scores into standardized adjective ratings and percentile ranks to interpret user satisfaction [20]. A heuristic evaluation and cognitive walkthrough of a hospital information system found that the former surfaced more issues, while the latter was better at catching problems tied to how quickly a first-time user could learn the system [19]. A team of HCI researchers built an enhanced version of SUS tailored to learning management systems, since a generic ten-item scale might miss what matters in that context [10]. This study tested SUS's psychometric properties on a child-rearing app co-designed for low- and middle-income countries, since scales validated mostly on Western, English-speaking users don't always transfer elsewhere [15]. Rather than treat a SUS score as a final verdict, this study evaluated its diagnostic capabilities by mapping an academic portal's lowest-scoring items to concrete interface fixes [13]. Testing Nielsen's generic heuristics against the newer, mobile-specific SMART method on a ride-hailing application, a panel of experts found SMART caught more issues and was better at flagging medium and high severity problems [16]. In a heuristic evaluation of Duolingo and Lingualia based on a usability model for adult learners, the app covering more of the seven key components earned higher satisfaction ratings [14]. A university's web-based academic information system evaluated with WEBUSE found navigation and content organization its weakest points [18]. A related follow-up study combined a SUS survey of that same application with data mining and clustering techniques, finding that less experienced mobile users rated the app lower than their more experienced counterparts [8]. A digital academic repository designed through user-centered principles earned a 'Good' rating and Grade B on SUS following task-based usability evaluations [25]. SUS survey responses from university students evaluating an online academic portal disaggregated core feature modules rather than analyzing them solely as an aggregate score [21]. A Mapua-based research team combined structural equation modeling with a neural network to rank what shapes Filipino users' perception of a mobile mental health application's usability, finding visual design and how accessible the app felt mattered more than the technical factors researchers expected, [23]. A graduate student management information system went through a user-centered redesign starting with student interviews, and the thirty students who rated the prototype afterward valued interface consistency most, ahead of speed or visual polish [17]. A university student mobile application evaluated with cognitive walkthrough alongside a SUS survey reached a 94 percent task effectiveness rate with fast completion [11]. Undergraduates surveyed on a university mobile application using SUS, interpreted through familiar adjective and letter grades, saw slow loading screens and unclear menu labels pull the score down even though the rating still counted as acceptable [4].

METHODOLOGY

A. Research Design

The study used a mixed-methods design: a quantitative SUS survey for an overall usability score and open-ended questions so respondents could explain specific difficulties in their own words.

B. Respondents of the Study

The respondents were students of institutions that use a mobile SIS for core academic and administrative services. Prior use of the mobile SIS was required, since unfamiliar users could not rate its usability.

C. Sampling Technique

The study used purposive sampling of students who were using or had recently used their school's mobile SIS. Researchers recruited them through student group chats and campus organizations, where they shared the survey link with a brief explanation of the study.

D. Research Instrument

The instrument was the ten-item SUS, rated from strongly disagree to strongly agree, followed by open-ended questions on what respondents appreciated most and what changes they suggested, and a few items on personal information such as year level.

E. Data Gathering Procedure

The survey was administered through Google Forms and opened with an informed consent statement. Responses were exported for analysis once data collection closed.

F. Statistical Treatment of Data

Each SUS item contribution was the scale position minus 1. Because all ten statements were worded so that agreement was favorable, we applied this formula to every item instead of reversing negatively worded items, as the standard SUS does. We summed the contributions, multiplied by 2.5, and graded the mean score using the system from previous SUS studies. We analyzed demographics by frequency and percentage, and grouped open-ended responses by theme and compared them with the SUS results.

G. Ethical Considerations

Participation was voluntary, and respondents could withdraw at any time. We collected no names or identification numbers, and reported responses only in summary form.

H. User Interface Design Storyboard

CampusHub is the working name of the mobile Student Information System interface, which was designed in Figma. Figure 1 shows its three main tasks in the order a student would use them, with the screens numbered.

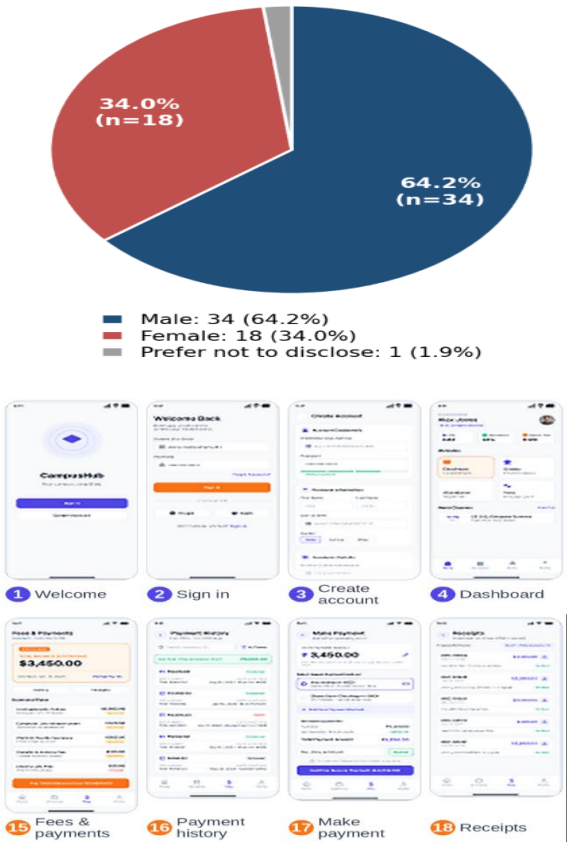


Figure 1. User interface storyboard of the mobile Student Information System (CampusHub). Source: Figma design file, https://www.figma.com/design/GwNQFUus3zcGAd6e1LGcNz/Mobile-Student-Information-System--Community-.

Onboarding (Screens 1–3**).** Screen 1 is the welcome screen, where the student chooses to sign in or create an account. Returning students use the sign-in screen (Screen 2), and new students complete the sectioned create-account form (Screen 3).

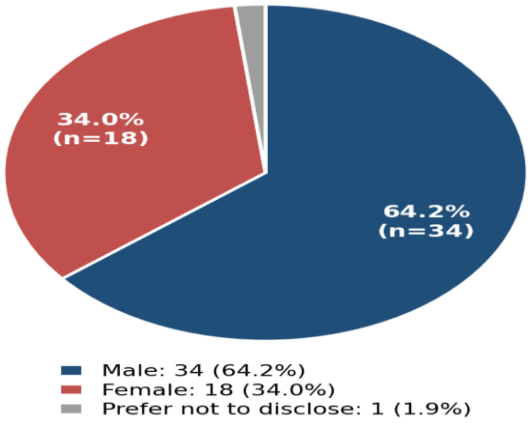
Home (Screen 4). The dashboard greets the student by name and shows quick summary figures, with shortcuts to enrollment, grades, attendance, and fees. A bottom navigation bar keeps the main areas one tap away**.**

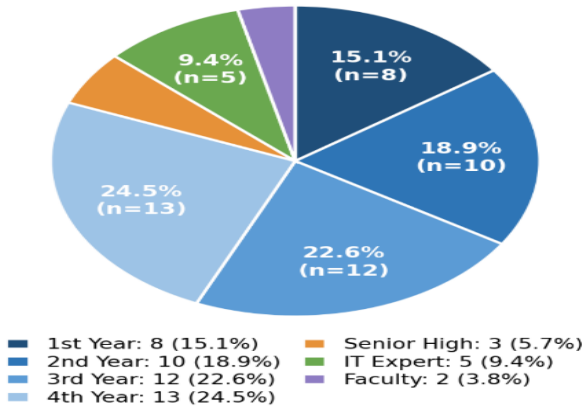
Fees and Payments (Screens 15–18). The fees screen, Screen 15, shows the outstanding balance and lists each charge. The student can review past payments on Screen 16, pay through the chosen method on Screen 17, and keep receipts on Screen 18.

RESULTS AND DISCUSSION

A. Demographic Profile of Respondents

The table summarizes the sex, year level, and prior mobile SIS experience of the 53 respondents. Most respondents were male, and third- and fourth-year students made up close to half the sample. Forty of the 53 respondents (75.5%) had used the system before.





B. Overall System Usability Scale Score

Mean Ratings and Sus Score Contributions Per Item

#	SUS Statement	Rating	Contrib.
1	Would use it frequently	3.28	2.28
2	Simple and straightforward	3.09	2.09
3	Easy to use	3.30	2.30

4	No technical support needed	3.28	2.28
5	Functions well integrated	3.34	2.34
6	Consistent in design	3.06	2.06
7	Quick to learn	3.23	2.23
8	Comfortable to use	3.19	2.19
9	Confident using/navigating	3.28	2.28
10	Little prior learning needed	3.23	2.23

The mean SUS score across all 53 respondents was 55.71 (SD = 9.29, median = 57.50), with scores from 25.00 to 75.00. Design consistency (item 6, M = 2.06) and simplicity (item 2, M = 2.09) contributed the least.

C. Distribution of Usability Grades

Distribution of Sus Scores by Grade Band

Grade	**Score Range**	**f**	**%**
B (Very Good)	74.1 - 77.1	1	1.9
C (Good)	65.0 - 71.0	4	7.5
D (OK)	51.7 - 62.6	34	64.2
F (Poor)	Below 51.7	14	26.4

Most respondents, 34 of 53 (64.2%), scored in Grade D and 14 (26.4%) in Grade F. This fits Chapter II, where a mobile SIS used by a captive student population is rated functional rather than delightful.

D. Supplementary Usability Dimensions

Beyond the ten SUS statements, the instrument had fifteen additional items on visual design, navigation, performance and task completion, and trust and satisfaction, rated directly without reversed scoring.

Mean Ratings on Supplementary Usability Dimensions

Dimension	**Items**	**Mean**	**% Max**
Visual Design and Layout	5	3.28	82.0
Navigation and Findability	2	3.43	85.8
Performance and Task Completion	4	3.41	85.3
Trust, Satisfaction, Continued Use	4	3.40	85.0

All four dimensions were rated between 82.0 and 85.8 percent of the maximum, higher than the SUS score suggests. Because these items were scored directly, part of the gap likely reflects the scoring formula in Chapter III.

E. Usability Score by Respondent Profile

Mean Sus Score by Prior Experience and Sex

Variable	Category	n	Mean
Experience	Yes	40	56.88
	No	13	52.12
Sex	Male	34	54.19
	Female	18	60.00
	Not disclosed	1	30.00

Respondents with prior SIS experience scored higher (M = 56.88) than those without (M = 52.12). Female respondents scored higher (M = 60.00) than male respondents (M = 54.19). Year-level scores ranged from 52.71 (3rd Year) to 62.50 (Faculty), and none reached the benchmark of 68.

F. Qualitative Findings from Open-Ended Responses

Thirty-two respondents answered what they appreciated most, and twenty-two what they would change. Convenience came up most. Several praised the clean layout, the compact button placement, and the speed of checking grades. On suggestions, four respondents asked for a dark mode, the most repeated request. Others asked for larger, bolder text, a better color palette, a back button in the enrollment flow, and automatic email reminders.

CONCLUSIONS

A. Summary of Findings

The mobile SIS received a mean SUS score of 55.71, below the 68 benchmark and in Grade D. Students rated design consistency and simplicity lowest. Navigation, performance, trust, and visual design were rated between 82.0% and 85.8% of the maximum. In the open-ended answers, students most often praised the app's convenience and mainly asked for dark mode, clearer labels, and a back button in the enrollment flow.

B. Conclusions

The mobile SIS is not yet usable, and the problem is its interface design, not what the system does. Earlier studies found the same pattern, where inconsistent design, weak navigation, and unclear labels lowered usability. This means design fixes can raise usability without rebuilding the system.

C. Recommendations

Developers should standardize buttons, icons, colors, and labels across all screens; simplify the enrollment and payment flows; add a back button; and offer dark mode, adjustable text size, and a higher-contrast color palette. The institution should give new users a short in-app walkthrough and repeat the SUS evaluation after each major update, using this study's score of 55.71 as the baseline.

D. Limitations

The study had only 53 respondents chosen through purposive sampling, so the findings may not apply to all students. The SUS statements were scored without reversing the negatively worded items, so any comparison with the benchmark should be made carefully.

E. Future Research

Future studies should use the standard SUS scoring, a larger and more balanced sample of students, and task-based testing to show where users struggle.

REFERENCES

1. P. Weichbroth, "Usability Testing of Mobile Applications: A Methodological Framework," Applied Sciences, vol. 14, no. 5, p. 1792, 2024.
2. Z. Huang and M. Benyoucef, "A systematic literature review of mobile application usability: addressing the design perspective," Universal Access in the Information Society, vol. 22, no. 3, pp. 715-735, 2023.
3. G. Lu, S. Qu and Y. Chen, "Understanding user experience for mobile applications: a systematic literature review," Discover Applied Sciences, vol. 7, p. 587, 2025.
4. R. S. Al-Maroof, K. Alhumaid and I. Akour, "Evaluating mobile governance and student service applications using the System Usability Scale," Computers in Human Behavior Reports, vol. 9, 2023.
5. E. Vlachogianni and N. Tselios, "Perceived usability and user experience evaluation of complex institutional platforms: A SUS-driven inquiry," Education and Information Technologies, vol. 27, no. 6, pp. 8415-8438, 2022.
6. H. Alshurafat, W. M. Masadeh and A. Al-Sartawi, "Evaluating technical system interfaces through usability metrics: Labeling and functional clarity," International Journal of Information Management Data Insights, vol. 3, no. 1, 2023.
7. M. Z. I. Lallmahomed, N. W. Rahayu and C. H. Chiu, "Usability evaluation of mandatory institutional mobile applications using SUS," IEEE Transactions on Engineering Management, vol. 69, no. 5, pp. 2310-2322, 2022.
8. H. Hidayat, Z. Zainuddin, M. Anwar, H. K. Saputra, A. P. Muji, Syukhri and I. R. Jasril, "The Impact of the Learning Mobile Application on Student Performance Using the Technology Acceptance Model," International Journal of Information and Education Technology, vol. 14, no. 5, pp. 657-667, 2024.
9. M. A. Faudzi, Z. C. Cob, R. Omar and S. A. Sharudin, "Evaluating learning management system based on PACMAD usability model: brighten mobile application," International Journal of Advanced Computer Science and Applications, vol. 13, no. 5, pp. 614-621, 2022.
10. Martin and G. Bressler, "Transactional vs. informational usability in academic mobile systems: A SUS and task completion study," Computers & Education, vol. 194, 2023.
11. J. Sauro and J. R. Lewis, "Standardized Usability Questionnaires: Evaluating the System Usability Scale in higher education," ACM Transactions on Computer-Human Interaction, vol. 29, no. 4, pp. 1-28, 2022.
12. M. Farzandipour, E. Nabovati and M. Sadeqi Jabali, "Comparison of usability evaluation methods for a health information system: Heuristic evaluation versus cognitive walkthrough method," BMC Medical Informatics and Decision Making, vol. 22, p. 157, 2022.
13. Y. Thamilarasan, R. R. Raja Ikram, M. Osman, L. Salahuddin, W. Y. W. Bujeri and K. Kanchymalay, "Enhanced System Usability Scale using the Software Quality Standard Approach," Engineering, Technology & Applied Science Research, vol. 13, no. 5, pp. 11779-11784, 2023.
14. Q. Khan, I. B. Hickie, V. Loblay, M. Ekambareshwar, I. U. M. Zahed, A. Naderbagi, Y. J. C. Song and H. M. LaMonica, "Psychometric evaluation of the System Usability Scale in the context of a childrearing app co-designed for low- and middle-income countries," Digital Health, vol. 11, p. 20552076251335413, 2025.
15. J. R. Lewis, "Measuring usability: The System Usability Scale (SUS) item-level diagnostic capabilities in higher education portals," Journal of Usability Studies, vol. 18, no. 2, pp. 75-89, 2023.
16. F. Firmansyah and A. Riskinanto, "Review of Nielsen versus SMART in Heuristic Evaluation of Online Transportation Application," E3S Web of Conferences, vol. 483, p. 03007, 2024.
17. Ling Mei Yin, A. S. B. Hashim and M. B. M. Ariffin, "Usability Heuristic Evaluation of Mobile Learning Applications Based on the Usability Design Model for Adult Learners," International Journal of Advanced Computer Science and Applications, vol. 15, no. 12, 2024.
18. F. Agustina, R. Annisa, N. Ansori, W. Findiastuti and I. D. Aisyah, "Usability Evaluation of Academic Information System Using the WEBUSE Method: A Study on University of Trunojoyo Madura Web Portal," in 2022 IEEE 8th Information Technology International Seminar (ITIS), 2022.

19. M. Afif, "Examining the usability of mobile applications among undergraduate students using SUS and data mining techniques," International Journal of Data and Network Science, vol. 8, no. 3, pp. 1801-1814, 2024.
20. R. Santos and M. Tan, "Design thinking and usability evaluation of digital academic repositories," Journal of Academic Librarianship, vol. 50, no. 2, 2024.
21. K. Williams and S. Patel, "Feature-level System Usability Scale analysis in university learning platforms," Interactive Learning Environments, vol. 31, no. 8, pp. 5120-5135, 2023.
22. N. Yuduang, A. K. S. Ong, N. B. Vista, Y. T. Prasetyo, R. Nadlifatin, S. F. Persada, M. J. J. Gumasing, J. D. German, K. P. E. Robas, T. Chuenyindee and T. Buaphiban, "Utilizing structural equation modeling-artificial neural network hybrid approach in determining factors affecting the perceived usability of a mobile mental health application in the Philippines," International Journal of Environmental Research and Public Health, vol. 19, no. 11, p. 6732, 2022.
23. F. Purnamasari and N. S. Ashaari, "User centered design approach to redesign graduate student management information system," Data Science: Journal of Computing and Applied Informatics, vol. 2, no. 2, pp. 110-114, 2018.
24. K. G. Tileng, L. Rosita, H. Mardhiana and Christian, "Usability testing on student mobile application in university using cognitive walkthrough method," in Proceedings of the 2023 8th International Conference on Information Systems Engineering, 2024.
25. M. H. Afif, "Assessing students' perceptions of mobile applications usability using System Usability Scale," Journal of Computer Science, vol. 19, no. 1, pp. 11-19, 2023.