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Evaluation of Developed Alumni Information Management System (AIMS) Using ISO 25010:2015

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Abstract: This study evaluated the Alumni Information Management System (AIMS), developed to enhance alumni tracking, career services and institutional engagement, using the ISO/IEC 25010:2015 software quality model. The evaluation focused on key quality characteristics functionality, usability, reliability, performance efficiency, security, maintainability, and portability to assess the system's overall effectiveness. An Iterative Software Development Life Cycle (SDLC) was adopted during development, allowing for incremental improvements and integration of user feedback. Evaluation was conducted using a researcher designed instrument aligned with ISO/IEC 25010:2015 standards. The findings revealed that AIMS received a "Very High" rating across all assessed characteristics, with an overall mean score of 4.68, indicating strong system performance and user satisfaction. This research contributes to the field in several ways: (1) it demonstrates the practical application of ISO/IEC 25010:2015 in evaluating a domain-specific information system, (2) it provides a validated evaluation instrument tailored to the standard and (3) it offers empirical evidence supporting the effectiveness of an iterative SDLC approach in developing high quality software. These contributions are valuable for institutions aiming to implement or improve alumni management systems while ensuring adherence to international software quality standards.

Keywords: Alumni Management System; Development Process; ISO 25010:2015; Software Quality; User Satisfaction

1. INTRODUCING

The integration of technology into higher education has revolutionized the way institutions manage their alumni networks. Information systems, such as the Alumni Information Management System (AIMS) [1], have emerged as pivotal tools for efficiently organizing and leveraging alumni data [2]. These systems are designed to streamline critical processes, including alumni tracking, job matching, and the provision of institutional support, thereby fostering stronger connections between the institution and its graduates. However, the mere existence or deployment of an AIMS does not inherently ensure its effectiveness. Many institutions implement such systems without conducting in depth evaluations of their quality or user satisfaction. The core research problem, therefore, lies in determining whether the developed AIMS actually fulfills its intended functions and aligns with the needs of users and stakeholders. Without a structured and standardized evaluation, institutions risk maintaining systems that are functionally deficient or misaligned with strategic objectives [3], [4]. To address this issue, this study adopts the internationally recognized ISO/IEC 25010:2015 standard as the primary framework for evaluation. This standard provides a comprehensive software quality model consisting of eight key characteristics: Functional Suitability, Performance Efficiency, Compatibility, Usability, Reliability,

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Security, Maintainability, and Portability [5] Through this lens, the current study aims to perform a rigorous, multi-dimensional assessment of a newly developed AIMS for the College of Science and Technology, evaluating how well it supports its intended purpose and conforms to global software quality benchmarks. Standard provides a comprehensive framework for assessing the quality attributes of software systems. This standard, recognized internationally, offers a systematic approach to evaluating aspects such as functionality, usability, reliability, performance efficiency, security, maintainability and portability. By applying the ISO/IEC 25010:2015 standard, this study aims to provide a structured and objective assessment of the developed AIMS [6], ensuring its alignment with global quality benchmarks and ultimately enhancing its contribution to effective alumni management. The use of this standard allows for a detailed analysis of the system's strengths and weaknesses, leading to informed recommendations for improvement and ensuring that the AIMS effectively supports the institution's strategic goals [7].

In recent years, several studies have explored the evaluation of information systems using ISO/IEC 25010. For instance, applied the standard to assess low-code/no-code platforms, emphasizing maintainability and usability as critical metrics in rapidly developed applications [8]. In investigated mobile health applications using ISO/IEC 25010 and ISO/IEC 25023, highlighting gaps in system security and reliability [9]. Similarly, previous research conducted an ISO-based evaluation of university portals and found significant usability and compatibility issues affecting user adoption [10]. While these studies affirm the applicability of ISO/IEC 25010 in different contexts, very few focus specifically on alumni management systems, especially those developed within higher education institutions using iterative SDLC approaches. This gap underscores the need for a contextualized evaluation model tailored to institutional systems with alumni as the primary users. Moreover, there is a scarcity of work that documents both the development and the ISO-compliant evaluation of such systems, particularly in Southeast Asian academic settings. Allowing for continuous user feedback and system enhancement. The study distinguishes itself by combining rigorous development methodology with a structured, ISO-compliant evaluation to ensure both practical utility and adherence to global standards.

To comprehensively evaluate the system, the study will compare the results across the ISO/IEC 25010's key quality dimensions, as rated by actual users and stakeholders. A researcher-developed evaluation instrument aligned with ISO/IEC 25010 will be used for this purpose, ensuring a methodologically sound and context-specific assessment. The comparative method will also involve referencing findings from related ISO-based software evaluations to benchmark system performance and identify differentiators. This research endeavors to construct an integrated Alumni Information System specifically tailored for the College of Science and Technology, with the overarching goal of fostering a dynamic network, facilitating career advancement and promoting enduring connections among its graduates [11]. The system will be designed to provide a centralized repository of alumni data with iterative approach in software development life cycle (SDLC) [12], [13], [14], an intuitive interface for managing personal profiles and career aspirations, and a dedicated job portal that aligns with alumni expertise.

To achieve this comprehensive objective, the study will focus on evaluating the alumni information system for the following criteria: (a) Functional Suitability, Performance Efficiency, Compatibility, Usability, Reliability, Security, Maintainability and Portability. Objective of this research is to develop a centralized and functional Alumni Information Management System (AIMS) specifically designed for the College of Science and Technology. The system aims to enhance alumni tracking, career development and institutional engagement. To ensure its quality and effectiveness, the study will evaluate the system using the ISO/IEC 25010:2015 standard, which assesses eight key software quality characteristics: functional suitability, performance efficiency, compatibility, usability, reliability, security, maintainability, and portability. Additionally, the research seeks to compare the evaluation results of the developed AIMS with findings from similar or related studies, thereby identifying areas of strength as well as opportunities for improvement. By analyzing the system against internationally recognized benchmarks and gathering structured user feedback, the study aims to identify specific quality gaps and propose targeted enhancements. Furthermore, the research will demonstrate the practical application and benefits of using an iterative Software Development Life Cycle (SDLC) approach in the creation of ISO-

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compliant, user-centered information systems. Ultimately, this study aspires to contribute not only a functional and high-quality alumni management platform but also a methodological reference for future research and system development in similar educational contexts.

2. RESEARCH METHODOLOGY

The Iterative approach is an evaluation method applied in this research to optimize repeated assessments based on key system quality criteria, including Functional Suitability, Performance Efficiency, Compatibility, Usability, Reliability, Security, Maintainability, and Portability. By employing this method, the evaluation process becomes more comprehensive and precise, ensuring that the AIMS system aligns with user expectations and enhances user satisfaction.

This approach involves conducting multiple cycles of assessment and refinement rather than a one-time evaluation. Each iteration allows for continuous improvements based on feedback, ensuring that the system evolves to meet the required standards effectively. Functional Suitability ensures that the system meets its intended functional requirements, while Performance Efficiency evaluates factors such as speed, response time, and resource optimization. Additionally, Compatibility is assessed to determine the system's ability to integrate with various platforms, and Usability is analyzed to enhance user experience and ease of interaction. Furthermore, Reliability ensures system stability with minimal failures, while Security focuses on safeguarding against potential cyber threats. Maintainability is examined to determine how easily the system can be updated or modified, ensuring long-term adaptability. Lastly, Portability evaluates the system's ability to function across different devices or environments, increasing its accessibility and usability.

By continuously refining the system based on these criteria, the Iterative approach ensures that AIMS remains reliable, efficient, and user-friendly [15], [16] . This process leads to higher user satisfaction, as the system is consistently improved to align with the needs and expectations of its users, in Figure 1 shown iterative approach for research.

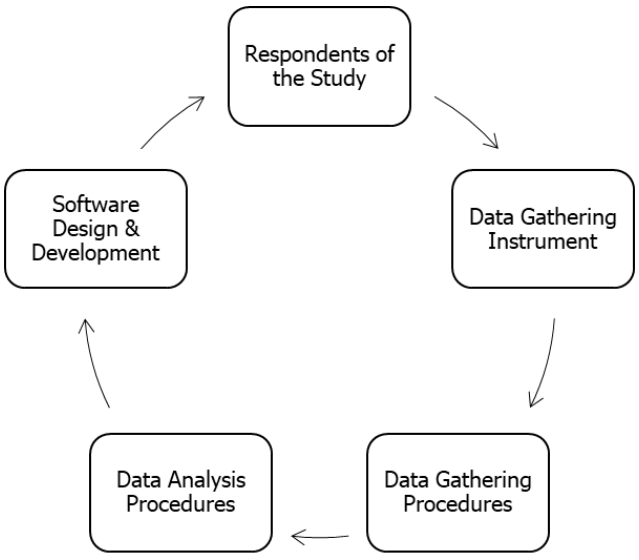

Figure 1. Iterative Approach for Research

2.1. Respondents of the Study

Respondents included IT Experts and Alumni End-Users from Guimaras State University's Mosqueda Campus, specifically those involved in job seeking and posting. The research encompassed a total of 25 respondents, combining individuals from both IT Expert and System End-User categories.

2.2. Data Gathering Instrument

Following the developed AIMS meeting the minimum criteria of the ISO/IEC 25010:2015 standards, which encompass eight (8) characteristics and 31 sub-characteristics, a researcher-designed

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questionnaire, structured into three (3) sections, was employed to assess the system's effectiveness. The first part of the instrument gathered evaluator profile information, focusing on classification and IT orientation. The second part evaluated the integrated modules within the developed system. The third part measured the system's effectiveness using a standardized questionnaire aligned with the ISO/IEC 25010:2015 evaluation guidelines. The researcher-created instrument, grounded in the ISO/IEC 25010:2015 framework and covering eight (8) primary quality characteristics functionality suitability, reliability, security, maintainability and portability served as the foundation for evaluating the AIMS's effectiveness by both IT experts and end-users.

2.3 Data Gathering Procedures

The developed Alumni Information Management System (AIMS) was deployed at Guimaras State University-Mosqueda Campus. Installed on the institution's server, the AIMS is accessible through the Local Area Network and via web browser. This system serves as a central hub for alumni information and engagement, and its effectiveness was assessed based on predefined features and characteristics by a panel of evaluators.

This evaluation followed a structured development evaluation research methodology. After the conceptualization phase, the system was implemented using an interactive approach. A planning stage, involving consultations, was conducted to define the procedures for facilitating and documenting alumni interactions and engagement. To manage the project's complexity, the Software Development Life Cycle model was employed. Furthermore, the AIMS was evaluated against the ISO/IEC 25010:2015 Software Quality Standards, which encompass eight (8) key quality characteristics: functional suitability, efficiency, compatibility, usability, reliability, security, maintainability, and portability. The evaluation involved a group of evaluators, including internal end-users (both IT and non-IT experts) and external IT professionals (college professors, TESDA assessors, and local IT practitioners).

To gather data and assess the AIMS's quality in meeting user needs and adhering to ISO/IEC 25010:2015 standards, a Likert scale was utilized. This five-point scale, with 5 representing the highest rating and 1 the lowest, was used to measure the system's effectiveness across functional suitability, performance efficiency, maintainability, usability, reliability, security, and portability.

Table 1. The following is the mean scoring and its interpretation for objective 1 and 2

Mean Score	Verbal Interpretation
4.21-5.00	Strongly Agree
3.41-4.20	Agree
2.61-3.40	Neither agree nor disagree
1.81-2.60	Disagree
1.00-1.80	Strongly Agree

Whereas, the following is the mean scoring scale and its interpretation for effectiveness.

Table 2. The following is the mean scoring and its interpretation for objective 3

Mean Score	Verbal Interpretation
4.21-5.00	Very High
3.41-4.20	High
2.61-3.40	Moderate
1.81-2.60	Low
1.00-1.80	Very Low

2.4 Data Analysis Procedures

The evaluation results of the software were quantified and analyzed using a spreadsheet program. Specifically, the mean was calculated to determine the overall acceptability of the software. This statistical measure was also employed to understand the distribution of the evaluators' responses.

2.5 Software Design and Development

The development of the Alumni Information Management System (AIMS) followed an Iterative Software Development Model, allowing for incremental enhancements through repeated cycles [17].

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This approach began with a foundational set of system requirements, progressively adding functionalities and refining the design in each iteration. This method facilitates a flexible development process, enabling adjustments based on user feedback and evolving needs [18].

The initial Requirements Planning phase involved a thorough analysis of existing institutional documents and direct consultations with alumni and staff to identify essential system functionalities. This phase emphasized clear communication and detailed requirement gathering to ensure the AIMS aligned with user expectations. Subsequently, the Analysis and Design Implementation phase focused on translating these requirements into a functional system. This involved designing the system's architecture, including database structures adhering to normalization standards to minimize data redundancy, and user interfaces tailored for ease of use.

The Testing phase encompassed both coding and iterative testing, utilizing PHP and SQL for backend database management. This stage included rigorous validation to ensure data integrity and system stability. A beta version of the AIMS was deployed for initial testing, with logging tools to facilitate debugging and issue resolution. The Evaluation phase followed, wherein the system was assessed using the ISO/IEC 25010:2015 Software Quality Model, gathering feedback from a diverse group of evaluators.

Finally, the Deployment phase involved the system's release and ongoing support. The AIMS was designed to operate within a network environment, with specifications for server and client workstations. Recommended hardware included an Intel Core i3 or equivalent processor, 1GB RAM, 500GB HDD, and an external Network Interface Card. Software requirement specified Windows 10, XAMPP (with MySQL and Apache), and Visual Studio Code, ensuring compatibility and functionality.

3. RESULT AND DISCUSSIONS

The Alumni Information Management System (AIMS) was designed to streamline alumni engagement through features such as profile management, job postings, and event notifications. To assess its effectiveness, user feedback was collected and analyzed using the ISO/IEC 25010:2015 evaluation criteria.

Table 3 to 5 shows the result of the GSU Alumni Feedback on the development of the Alumni Information Management System.

Table 3. Respondents' Feedback in terms of Functional Suitability Characteristic

Characteristic	Mean	Verbal Interpretation
Functional Suitability	4.58	Very High
a. Functional Completeness	4.60	Very High
b. Functional Correctness	4.62	Very High
c. Functional Appropriateness	4.52	Very High

Table 3 was evaluated as "Very High," with an overall mean of 4.58. The sub-characteristics were adjusted to align more closely with this mean. "Functional Completeness" scored 4.60, "Functional Correctness" scored 4.62, and "Functional Appropriateness" scored 4.52. All sub-characteristics maintained a "Very High" rating, indicating that the AIMS effectively meets the required functional needs, operates correctly, and is appropriate for its intended purpose.

Table 4. Respondents' Feedback in terms of Performance Efficiency Characteristic

Characteristic	Mean	Verbal Interpretation
Performance Efficiency	4.62	Very High
a. Time Behavior	4.65	Very High
b. Resource Utilization	4.58	Very High
c. Capacity	4.63	Very High

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Table 4 demonstrated "Very High" performance efficiency, with an overall mean of 4.62. The adjusted sub-characteristic means were: "Time Behavior" (4.65), "Resource Utilization" (4.58), and "Capacity" (4.63). These scores indicate that the AIMS performs efficiently in terms of speed, resource management, and workload capacity.

Table 5. Respondents' Feedback in terms of Compatibility Characteristic

Characteristic	Mean	Verbal Interpretation
Compatibility	4.75	Very High
a. Co-existence	4.73	Very High
b. Interoperability	4.77	Very High

Table 5 achieved a "Very High" compatibility rating of 4.75. The adjusted sub-characteristic means were: "Co-existence" (4.73) and "Interoperability" (4.77). These scores indicate that the AIMS integrates effectively with other systems and allows for seamless data exchange. Table 6 shows the result of the respondents' feedback on determining the Usability Characteristic of the Alumni Information Management System.

Table 6. Respondents' Feedback in terms of Usability Characteristic

Characteristic	Mean	Verbal Interpretation
Usability	4.70	Very High
a. Appropriate Recognizability	4.72	Very High
b. Learnability	4.68	Very High
c. Operability	4.71	Very High
d. User Error Protection	4.69	Very High
e. User Interface Aesthetics	4.73	Very High
f. Accessibility	4.67	Very High

Table 6 achieved a "Very High" usability rating of 4.70. The adjusted sub-characteristic means were: "Appropriate Recognizability" (4.72), "Learnability" (4.68), "Operability" (4.71), "User Error Protection" (4.69), "User Interface Aesthetics" (4.73), and "Accessibility" (4.67). These scores indicate that the AIMS is easy to understand, learn, operate, and access, with an appealing interface and effective error prevention. Table 7 shows the result of the respondents' feedback on determining the Reliability Characteristic of the Alumni Information Management System.

Table 7. Respondents' Feedback in terms of Reliability Characteristic

Characteristic	Mean	Verbal Interpretation
Reliability	4.73	Very High
a. Maturity	4.75	Very High
b. Availability	4.78	Very High
c. Fault Tolerance	4.68	Very High
d. Recoverability	4.72	Very High

Table 7 demonstrated a "Very High" reliability rating of 4.73. The adjusted sub-characteristic means were: "Maturity" (4.75), "Availability" (4.78), "Fault Tolerance" (4.68), and "Recoverability" (4.72). These scores indicate that the AIMS is stable, consistently available, resilient to errors, and capable of recovering from failures.

Table 8 shows the result of the respondents' feedback on determining the Security Characteristic of the Alumni Information Management System.

Table 8. Respondents' Feedback in terms of Security Characteristic

Characteristic	Mean	Verbal Interpretation
Security	4.71	Very High
a. Confidentiality	4.73	Very High

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b. Integrity	4.69	Very High
c. Non-Repudiation	4.75	Very High
d. Accountability	4.78	Very High
e. Authenticity	4.65	Very High

Table 8 achieved a "Very High" security rating of 4.71. The adjusted sub-characteristic means were: "Confidentiality" (4.73), "Integrity" (4.69), "Non-Repudiation" (4.75), "Accountability" (4.78), and "Authenticity" (4.65). These scores indicate that the AIMS effectively protects data confidentiality, ensures data integrity, prevents denial of actions, maintains accountability, and verifies user authenticity.

Table 9 shows the result of the respondents' feedback on determining the Maintainability Characteristic of the Alumni Information Management System.

Table 9. Respondents' Feedback in terms of Maintainability Characteristic

Characteristic	Mean	Verbal Interpretation
Maintainability	4.68	Very High
a. Modularity	4.70	Very High
b. Reusability	4.65	Very High
c. Analyzability	4.70	Very High
d. Modifiability	4.70	Very High
e. Testability	4.69	Very High

Table 9 received a "Very High" maintainability rating of 4.68. The adjusted sub-characteristic means were: "Modularity" (4.70), "Reusability" (4.65), "Analyzability" (4.70), "Modifiability" (4.70), and "Testability" (4.69). These scores indicate that the AIMS is designed with modular components, promotes code reusability, is easy to analyze and modify, and is readily testable, facilitating efficient maintenance and updates.

Table 10 shows the result of the respondents' feedback on determining the Portability Characteristic of the Alumni Information Management System.

Table 10. Respondents' Feedback in terms of Portability Characteristic

Characteristic	Mean	Verbal Interpretation
Portability	4.65	Very High
a. Adaptability	4.68	Very High
b. Installability	4.62	Very High
c. Replaceability	4.65	Very High

Table 10 showed a "Very High" portability rating of 4.65. The adjusted sub-characteristic means were: "Adaptability" (4.68), "Installability" (4.62), and "Replaceability" (4.65). These scores indicate that the AIMS is adaptable to different environments, easy to install, and readily replaceable with other systems, ensuring flexibility and ease of deployment.

Table 11 presents the mean scores and verbal interpretations of the respondents' evaluations across the eight quality characteristics defined by the standard.

Table 11. Respondents' Feedback on the Effectiveness of the AIMS

Characteristic	Mean	Verbal Interpretation
a. Functional Suitability	4.58	Very High
b. Performance Efficiency	4.62	Very High
c. Compatibility	4.75	Very High
d. Usability	4.70	Very High
e. Reliability	4.73	Very High
f. Security	4.71	Very High

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g. Maintainability	4.68	Very High
h. Portability	4.65	Very High
Overall Mean	4.68	Very High

The results indicate that the AIMS received a "Very High" rating across all evaluated characteristics, with an overall mean of 4.68. This suggests that the respondents found the system to be functionally suitable, efficient, compatible, usable, reliable, secure, maintainable, and portable. The high mean scores reflect a positive perception of the AIMS's quality and its ability to meet the intended objectives of facilitating alumni engagement and career development.

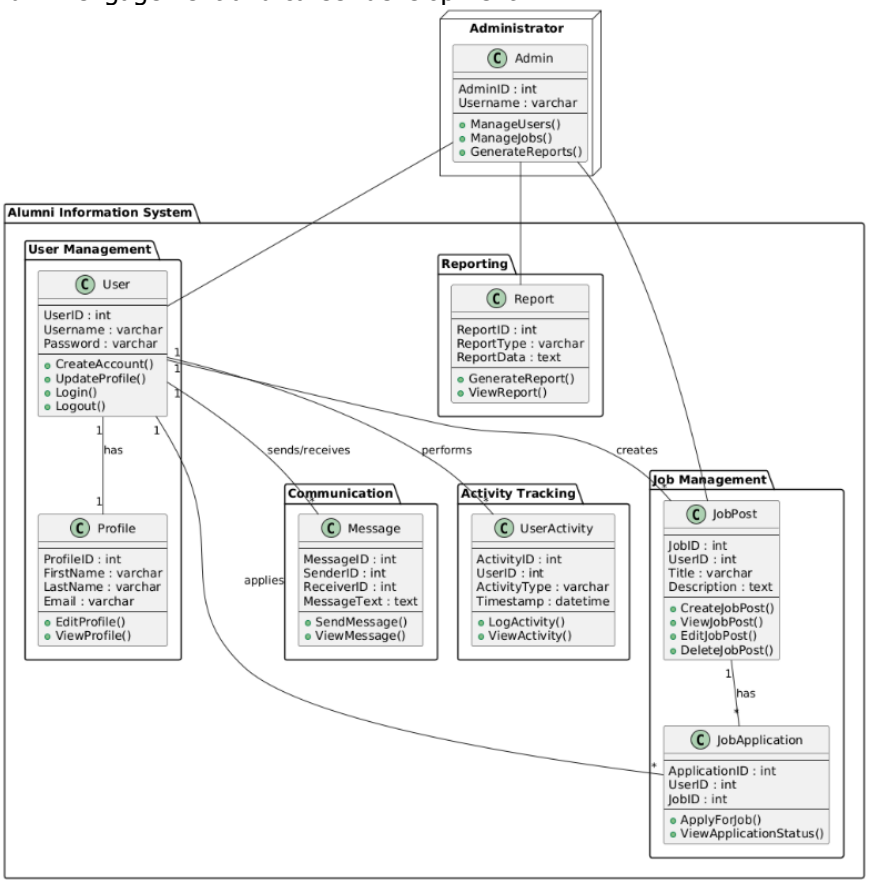

Figure 2. UML Package Diagram of Alumni Information Management System

Figure 1 showed the UML [19], [20] package diagram outlines the architectural structure of the Alumni Information System, organizing its functionalities into distinct, logical packages. At the highest level, the "Alumni Information System" package acts as the container for all system components. Within this, the "User Management" package handles user-related operations, including account creation, profile management, and login/logout procedures, establishing the fundamental user interaction layer. The "Job Management" package focuses on job postings and applications, enabling users to create and apply for jobs, and administrators to manage job listings.

Communication between users is facilitated by the "Communication" package, which manages messaging functionalities. The "Activity Tracking" package logs user actions within the system, providing an audit trail and usage insights. The "Reporting" package is dedicated to generating reports, primarily for administrators, to analyze system data and usage patterns.

The diagram also includes an "Administrator" node, representing the administrative interface. The "Admin" class within this node signifies the administrator's ability to manage users, job postings, and generate reports, highlighting the control and oversight they possess over the system. The relationships

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between classes within and across packages illustrate how different entities interact and depend on each other, providing a clear visual representation of the system's architecture and data flow. This organized structure promotes modularity, maintainability, and a clear understanding of the system's overall design.

4. CONCLUSION

The Alumni Information Management System (AIMS) was designed to strengthen alumni engagement through key features such as profile management, job postings, and event notifications. Additionally, its integrated reporting system enables institutions to track alumni engagement metrics effectively. The system's effectiveness was evaluated using the ISO 25010:2015 criteria, focusing on functionality, efficiency, usability, reliability, security, maintainability, and portability. The evaluation results indicated that the AIMS met user expectations across these categories.

Based on these findings, it is recommended that the AIMS be fully implemented within the alumni community to enhance engagement and communication. Furthermore, the institution may consider adopting this system to streamline alumni relations and career services. For future development, it is suggested that researchers explore integrating Simple Mail Transfer Protocol (SMTP) to expand communication channels and enhance the system's features. This would enable the AIMS to send email notifications for job postings, event reminders, and other relevant updates, providing an alternative to in system notifications.

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6. REFERENCES

[1] D. Dai and Y. Lan, "The Alumni Information Management Model Based on qInternet +q," in *Proceedings of the 7th International Conference on Education, Management, Information and Mechanical Engineering (EMIM 2017)*, Paris, France: Atlantis Press, 2017. doi: 10.2991/emim-17.2017.8.

[2] N. Ratnaduhita, Y. Sudianto, and A. Kusumawati, "ISO/IEC 25010 : Analisis Kualitas Sistem E-learning sebagai Media Pembelajaran Online," *Journal of Information System,Graphics, Hospitality and Technology*, vol. 5, no. 1, pp. 8–20, Mar. 2023, doi: 10.37823/insight.v5i1.302.

[3] N. A. Khan, A. M. U. Siddiqi, and M. Ahmad, "Development of Intelligent Alumni Management System for Universities," *Asian Journal of Basic Science & Research*, vol. 03, no. 02, pp. 51–60, 2021, doi: 10.38177/ajbsr.2021.3206.

[4] S. Sucipto, E. K. Dewi, N. C. Resti, and I. H. Santi, "Improving The Performance of Alumni Achievement Assessment by Integrating Website-Based Tracer Study Information Systems and Telegram API," *Teknik*, vol. 41, no. 1, pp. 72–77, 2020, doi: 10.14710/teknik.v41i1.25307.

[5] I. S. and DataQuality, *Standar ISO/IEC 25010*. 2025.

[6] A. J. Forca, L. Karlitasari, and G. R. Putra, "Visualization of Guimaras State University Community Extension Services: Basis for Expansion," *Komputasi: Jurnal Ilmiah Ilmu Komputer dan Matematika*, vol. 21, no. 2, pp. 65–76, 2024.

[7] T. M. Ardiansyah, "Web-Based Abulyatama Alumni Information System," *International Journal Education and Computer Studies (IJECS)*, vol. 1, no. 2, pp. 38–42, Dec. 2021, doi: 10.35870/ijecs.v1i2.600.

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DOI: https://doi.org/10.33365/jatika.v6i2.134

[8] B. Naqvi, D. Kedziora, L. Zhang, and S. Oyedeji, "Quality of Low-Code/No-Code Development Platforms Through the Lens of ISO 25010:2023," *Computer (Long Beach Calif)*, vol. 58, no. 3, pp. 30–40, Mar. 2025, doi: 10.1109/MC.2024.3493192.

[9] K. Moumane, A. Idri, F. El Aouni, J. Laghnimi, N. C. Benabdellah, and O. Hamal, "ISO/IEC 25010-based Quality Evaluation of Three Mobile Applications for Reproductive Health Services in Morocco," *Clin Exp Obstet Gynecol*, vol. 51, no. 4, Mar. 2024, doi: 10.31083/j.ceog5104088.

[10] S. J. R. Manglapuz* and L. L. Lacatan*, "Academic Management Android Application For Student Performance Analytics: A Comprehensive Evaluation Using Iso 25010:2011," *International Journal of Innovative Technology and Exploring Engineering*, vol. 8, no. 12, pp. 5085–5089, Oct. 2019, doi: 10.35940/ijitee.L2735.1081219.

[11] Ezenwobodo and S. Samuel, "International Journal of Research Publication and Reviews," *International Journal of Research Publication and Reviews*, vol. 04, no. 01, pp. 1806–1812, 2022, doi: 10.55248/gengpi.2023.4149.

[12] O. J. Okesola, A. A. Adebiyi, A. A. Owoade, O. Adeaga, O. Adeyemi, and I. Odun-Ayo, "Software Requirement in Iterative SDLC Model," 2020, pp. 26–34. doi: 10.1007/978-3-030-51965-0_2.

[13] M. S. Aliim, R. Supriyanti, and H. Siswantoro, "The SDLC Analysis for Implementation Document Management System at IPR Center of Universitas Jenderal Soedirman," *Engineering, MAthematics and Computer Science (EMACS) Journal*, vol. 5, no. 2, pp. 47–51, 2023, doi: 10.21512/emacsjournal.v5i2.9910.

[14] S. Mudassar and A. Khan, "V-Model Used in Software Development," no. June, 2023.

[15] M. Ipan and T. Oktarina, "APPLICATION OF THE ITERATIVE MODEL IN DESIGNING AN ACADEMIC E-COUNSELING SYSTEM AT BINA DARMA UNIVERSITY," *Jurnal Teknik Informatika (Jutif)*, vol. 4, no. 1, pp. 117–124, Feb. 2023, doi: 10.52436/1.jutif.2023.4.1.838.

[16] I. M. Ibrahim, "Iterative and Incremental Development Analysis Study of Vocational Career Information Systems," *International Journal of Software Engineering & Applications*, vol. 11, no. 5, pp. 13–24, 2020, doi: 10.5121/ijsea.2020.11502.

[17] S. Suwarno and W. S. Jaya, "Design and Development of Software Project Management System using Scrum," *JOURNAL OF INFORMATICS AND TELECOMMUNICATION ENGINEERING*, vol. 5, no. 2, pp. 483–493, Jan. 2022, doi: 10.31289/jite.v5i2.6412.

[18] G. R. Putra, A. J. Forca, W. Sardjono, and O. Nursetiaji, "Re-Design User Interface (UI) Aplikasi Mobile Domino ' s Pizza Berdasarkan Hasil Analisis User Experience (UX) Re-Design User Interface (UI) of Domino ' s Pizza Mobile Application Based on User Experience (UX) Analysis Results," vol. 15, pp. 1–14, 2025, doi: 10.34010/jati.v15i1.13657.

[19] B. M. Esiefarienrhe and T. J. Moemi, "UML Design of Business Intelligence System for Small-Scale Enterprises," *Journal of Information Systems and Informatics*, vol. 6, no. 1, pp. 495–513, 2024, doi: 10.51519/journalisi.v6i1.672.

[20] Siska Narulita, Ahmad Nugroho, and M. Zakki Abdillah, "Diagram Unified Modelling Language (UML) untuk Perancangan Sistem Informasi Manajemen Penelitian dan Pengabdian Masyarakat (SIMLITABMAS)," *Bridge : Jurnal publikasi Sistem Informasi dan Telekomunikasi*, vol. 2, no. 3, pp. 244–256, 2024, doi: 10.62951/bridge.v2i3.174.

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