

Short Paper

Evaluation of Social Services Information System using DeLone & McLean IS Success Model

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Date received: February 24, 2024 Date received in revised form: February 19, 2025; May 15, 2025 Date accepted: May 24, 2025

Recommended citation:

Viernes, MJP. M., Larosa, MA. A., & Natividad, R. L. (2025). Evaluation of Social Services Information System using DeLone & McLean IS success model. International *Journal of Computing Sciences Research, 9, 3759-3781.* https://doi.org/10.25147/ijcsr.2017.001.1.248

Abstract

Purpose—Social service organizations help disadvantaged people but face challenges managing increasing data. Manual tasks like searching files and updating paperwork are time-consuming, causing delays and reducing support quality. Report generation is also difficult without a centralized database.

Method—This applied research used a systems design approach to develop the Social Services Information System (SSIS) for a private social service organization. The system digitizes workflows, automates client profiling, and ensures secure, centralized data access. Its effectiveness was assessed using a quantitative method. Fifty purposively selected respondents—health workers, social workers, and internal staff—completed a survey based on the DeLone & McLean IS Success Model.



Results—The analysis showed positive results across all Delone and McLean IS Success Model dimensions, with a total mean of 4.34 and a standard deviation of 0.62.

Conclusion—Working with social and health workers to change their processes is a valuable challenge and learning opportunity for IS researchers. The SSIS was effective, reliable, and user-friendly, improving communication and productivity for social workers, medical staff, and internal personnel.

Recommendations—The system helps users provide better services, make informed decisions, and improve client outcomes. It streamlines workflows, reduces administrative work, and boosts the organization's overall effectiveness. Systems are valuable only when properly used, maintained, and regularly updated.

Research Implications—IS researchers had the opportunity to work with an NGO with limited IT resources. Future projects should focus on community impact. Data security and governance are essential to protecting sensitive information. Researchers should also use the Delone and McLean IS Success Model to evaluate their solutions' organizational impact.

Keywords – technology adoption, social services, socio-medical profiling, business performance improvement, Delone & McLean IS Success Model

INTRODUCTION

In his 2001 work "Is Social Work a Profession?", Abraham Flexner (2001) examines the professionalization of social work, addressing its development, principles, and challenges. He discusses the balance between scientific knowledge and humanistic values in solving social issues and emphasizes the importance of ethics, skills, and continuous education. Flexner advocates for a profession that integrates practical interventions with advocacy, stressing the need for adaptability in response to evolving societal demands. Social work, according to Flexner, is a profession focused on addressing societal needs with a combination of knowledge, ethics, and action.

In the Philippines, the people are fortunate to have social work, and the Department of Social Welfare and Development's (DSWD) history is over a century already. The Public Welfare Board (PWB) was created after the war in 1915. Under numerous administrations, it was previously called by other names such as the Department of Health and Public Welfare, Bureau of Public Welfare, President's Action Committee on Social Amelioration (PACSA), Department of Social Services and Development (DSSD), Ministry of Social Services and Development (MSSD) and through the Executive Order No. 123, January 30, 1987, was reorganized and renamed the Department of Social Welfare and Development (DSWD) (DSWD, n.d.; National Council on Disability Affairs, 1987). In the 2024 1st Version of DSWD's Citizen Charter publication, the mandate of the DSWD is stated as:

"The Department of Social Welfare and Development (DSWD) is the primary government agency mandated to develop, implement, and coordinate social protection and poverty-reduction solutions for and with the poor, vulnerable and disadvantaged."

DSWD's satellite offices are installed nationwide to oversee the operations of their department's services to the country.

Numerous private Social Welfare Development Agencies (SWDA) (DSWD, 2023) are authorized by the government and have valid registration and licenses to operate and serve the Filipino population. To name a few among them are the following:

- ABS-CBN Foundation, In the Service of the Filipino
- ADD Foundation International, Inc.
- Alagang Kapatid Foundation, Inc.
- GMA Kapuso Foundation, Inc.
- Caritas Manila, Inc.
- The Salvation Army Social Services, Inc.
- World Vision Development Foundation, Inc.
- Young Men's Christian Association of Pangasinan
- etc.

Those are just some of the many DSWD-accredited private Social Welfare Development Agencies (SWDAs) published on their website (DSWD-accredited List of Private SWDAs (2023)).









In the Service of the Filipino

Figure 1. Some SWDAs logo

Social services organizations, whether the local community in scope, municipal or provincial, or even at the international level, are non-governmental, non-profit,

philanthropic, and duly registered organizations that provide free help to the needy. One of these SWDAs is ADDFII, which provides legal assistance and moral reformation to inmates, legal and financial assistance to OFWs and their families, and free public medical and dental services in urban areas in rural areas, urban areas, and the provinces nationwide. Most beneficiaries are indigent, elderly, bedridden, homeless, orphaned, and disadvantaged (ADD Foundation International Incorporated, (n.d.)).

Most SWDAs strive to offer nationwide programs at no cost, managing and storing the increasing volumes of client data has become a significant challenge. Currently, they rely on outdated methods for recording client profiles, which include a manual collection of personal information by social workers through interviews and inputting it onto printed info sheets. These paper-based information sheets are then stored in cabinets, consuming valuable workspace and leading to time-consuming and costly processes. In addition to the records management challenges, there could also be some bureaucratic system challenges for its staff (Internal and Social Workers), which could affect the efficiency of service delivery. Manual data collection, multi-tiered reviews, and administrative burdens lead to delays and errors. To address these challenges, a digital transformation is essential.

Digital transformation is essential for SWDAs to enhance efficiency and improve service delivery. Implementing the Social Services Information System (SSIS) addresses data collection, management, and service delivery challenges. Evaluating the SSIS using the DeLone and McLean IS Success Model examines its impact on various dimensions of success and provides insights into its effects on achieving SWDA objectives. The SSIS streamlines processes, improves data management, and contributes to operational efficiency, enhancing service delivery and support for their clientele.

Through initial interviews with SWDA's Internal Staff and Social Worker, specific problem areas have been identified, including time-consuming client profile retrieval, excessive paperwork in profiling, slow service delivery due to delays in providing remarks and recommendations, lack of a secure, centralized database, difficulty in generating reports, and the risk of misplaced or disorganized records. The study seeks to develop a Web-based Social Services Information System (SSIS) to address the technological needs. The main objectives are to create an efficient SSIS for internal staff, social workers, and medical practitioners to handle client profile recording and assessment effectively and design a user-friendly web-based system accessible even to non-tech-savvy users. The SSIS system will streamline client profile recording, retrieval, and service delivery while providing a secure, centralized database for easy access. Additionally, the SSIS will automate report generation, benefiting social workers, medical practitioners, and the SWDA's organization. Evaluation will be done using the DeLone and McLean Model of Information Systems Success to assess the individual, organizational, and net benefits of the SSIS system to social workers and the organization as a whole. By addressing these challenges and developing an effective SSIS, the study aims to enhance the efficiency and effectiveness of the organization's services and data management processes. Moreover, the study's results and system will significantly benefit clients, Barangay Health Centers,

local government units, social workers, physicians, and internal staff. Additionally, future researchers can use this study as a reference for further development and enhancement of the system.

LITERATURE REVIEW

Information Systems play a vital role in Digital Transformation by developing reliable ERP models. ERP systems provide unified business applications covering various operational functions. However, digital transformations require more than just a reliable ERP. Creating intelligent information systems involves adding additional features and tasks addressing the "why, what, and how" aspects. This comprehensive approach enables efficient operations, adaptability, and innovation. Information Systems play a vital role in Digital Transformation by developing reliable ERP models. ERP systems provide unified business applications covering various operational functions. (Metawa, Elhoseny, and Mutawea, 2022).

Profiling Patterns in Healthcare System

Khin-Whai Chan, et al. (2020) their study aim to comprehend better the patterns that the employee healthcare data presented. Potential solutions for enabling employers to provide preventative and reactive actions to help sustain medical expenditure can potentially be proposed through the study and comprehension of the trends in the history of past medical claims. The survey of profiling patterns in the healthcare system has implications for the Social Services Information System (SSIS). By analyzing healthcare data within the SSIS, patterns, and trends in medical claims can be identified, providing valuable insights for proactive interventions and cost management. Integrating the findings into the SSIS enables social service agencies to make informed decisions and develop targeted strategies for optimizing healthcare resources and improving client outcomes. Analyzing profiling patterns in the healthcare system within the context of the SSIS enhances the system's ability to support data-driven decision-making and facilitate efficient and effective healthcare service delivery.

Barangay Health Center Management System (BHCMS)

The researchers from the University of Cebu (Antasuda, Barrientos, Cabalhub, and Doroy, 2020) worked with Barangay Basak, Lapu-Lapu, Cebu City, to prepare a systems analysis and design document for their software project to develop a Barangay Health Center Information system (BHCMS) that offers a faster and more organized way to record patients' medical information. The BHCMS provides reliable and secure medical records. The core users of BCHMS are health workers, doctors, nurses, midwives, and–indirectly–the patients (clients), primarily to manage their medical or health records. Similarly, SSIS' core functionalities are related to the design of this type of software.

Computerized Social Services Information System (CSSIC)

Implementing computerized information systems in social services is often regarded as a purely technical endeavor, which can lead to challenges and potential failures. This review examines the literature on implementing information technology (IT) in social services, focusing on the issue of aligning the technical nature of IT with the humanistic orientation of social work. Methods for mitigating problems arising from this dissonance are discussed, emphasizing the concepts of social change, involvement, and empowerment. The Computerized Social Services Information System focuses on social services and how it can solve the dissonance between information technology and social services. It is trying to create harmony between the two subjects. The system needs the combined effort of medical and social services to profile clients (Berman and Phillips, 2018). The CSSIC and the SSIS are information systems that store and handle data on social services. The CSSIC is concerned with integrating information technology and social services. The CSSIC is concerned with integrating information technology and social services. The CSSIC is concerned with integrating information technology and social services. The CSSIC is concerned with integrating information technology and social services. The CSSIC is concerned with integrating information technology and social services. The CSSIC is concerned with integrating information technology and social services. The CSSIC is concerned with integrating information technology and social services. The CSSIC is more targeted and less expensive, whereas the SSIS is more versatile and complete. The optimum system for a single organization will be determined by its unique requirements.

SSIS is custom-designed for beneficiary social service organizations, however, it might not dynamically fit other SWDA's environment and would require some adjustment. SSIS is customized to accommodate the unique needs and workflows of social workers, medical practitioners, and barangay personnel, making it highly specialized for this sector. The system includes a Client Profile Status feature that provides real-time updates on the status of client profiles. This feature is essential for tracking the progress of client cases and ensuring timely interventions, which may only be standard in some similar systems. The SSIS incorporates inbox and push notifications through SMS, streamlining user communication within the system. This real-time communication feature can significantly improve the coordination of social services. Monthly reports, including the total number of profiles, progress reports on clients' cases, and analytical reports, are integral to the SSIS. These reports offer valuable insights and data analysis capabilities to aid decision-making and program evaluation. However, the most significant distinction lies in its development. This tailored approach allows the system to be finely tuned to meet the organization's distinctive requirements, workflows, and objectives. While other existing systems may offer similar features and objectives, the combination of SSIS's specialized features and customization for the organization's precise needs make it stand out as the ideal solution for providing adequate social services.

The DeLone and McLean Information Systems Success Model

In 2003, Delone and McLean after they first published their IS Success Model in 1992, published "...A Ten-Year Update", reflecting on their initial work, its development, and the appreciation of practitioners and fellow researchers as their model was refined as years went by. Their model was based on the theoretical and empirical IS research in the 70s. Its objective is to measure IS success or effectiveness by critically analyzing IS investment's

value and efficacy within its environment. IS success consists of multidimensional and interdependent criteria, which consist of independent variables (System Quality, Information Quality, and Service Quality) and dependent variables (System Use, User Satisfaction, and Net Benefits (which initially were Individual Impact and Organizational Impact)). Delone and McLean encourage the industry and the academe to refine the model further by using it in real-life IS implementation and hoping to reduce the complex multidimensional attributes that define IS success.

A study from the University of Jordan in 2013 investigates the applicability of the DeLone and McLean IS Success Model in the context of web portals, focusing on their effectiveness in enhancing individual-level outcomes, particularly job performance. Unlike prior studies that often combined the constructs of 'Use' and 'Intention to Use,' their research treats them as distinct, enabling a clearer understanding of relationships such as those between system quality, information quality, and service quality with intention to use; the links between use and user satisfaction; and the connections between user satisfaction, intention to use, and job performance. Additionally, they examined job performance benefits by breaking them into four key areas: productivity, task innovation, customer satisfaction, and management control. Their research implies that the decision-makers were provided with insights to evaluate the benefits and costs of implementing portal technologies. It also offers guidance on improving employee acceptance, usage, and support to ensure the technology meets their needs effectively. More than measuring perceptions alone is required; conducting a needs assessment survey before implementing portal technology is more effective. Understanding user requirements and expectations is crucial, as these factors directly influence satisfaction and perception (Debei, M., Jalal, D., and Lozi, E, 2013)

In a 2017 study, Ojo employed a survey research design, where a structured questionnaire was administered to 442 health information management personnel in five teaching hospitals in Nigeria. The questionnaire served as the primary tool for data collection. The model's constructs were validated using structural equation modeling, which allowed for the analysis of relationships and dependencies among the variables. The study highlights the importance of system quality and its use as a critical indicator of hospital information system success. Consequently, it is crucial to develop hospital information systems that are user-friendly, versatile, and functional to fulfill their intended objectives (Ojo, 2017). The validation of the DeLone and McLean Information Systems Success Model in the context of hospital information systems reinforces the importance of considering system quality and its use as an essential factor in achieving success. By incorporating these insights into the development and implementation of the SSIS, DSWAs can enhance their efficiency, optimize data management, and ultimately improve the overall effectiveness of their programs in providing timely and practical assistance to clients.

IS Success of Public Services in Interorganizational Networks

DeLone and McLean's Information Systems Success Model is useful for the study by Bianchi and Trimigno (2019) of the University of Foggia because it provides a structured framework for evaluating the quality and effectiveness of information systems particularly in complex, socially engaged environments like integrated home care networks for elderly patients in Lecce, Italy. The digital social health record system improved availability, security, and integrity by enabling cloud-based access for social health professionals.

Their research findings offer practical insights for healthcare and municipal managers aiming to optimize information flows and service integration in long-term care. Governance plays a crucial role in IS success. Defining roles, responsibilities, and shared ICT tools led to better data flows and more effective decision-making.

DeLone and McLean's model provided the theoretical exercise to assess both the technical and organizational dimensions of the information system in Lecce's home care network. It allowed the researchers to systematically evaluate how improvements in data systems contribute to performance and how governance is essential to realizing those benefits in inter-organizational settings.

METHODOLOGY

Applied research is a type of research that aims to address real-world problems. Businesses, government agencies, and NGOs often conduct it. Applied research can be used to develop new products and processes, improve existing ones, or find new ways to use current ones. Since the researchers seek to provide practical solutions for the client's existing problems/issues by developing SSIS, this justifies adopting an applied research design to be used in this study's processes or systems (Hassan, 2022).

This study employs quantitative research methods to gather precise data and present findings quantitatively. It also adopts an applied research approach, with the primary objective of developing a Social Service Information System (SSIS) to address real-world problems. By utilizing quantitative methods, the study aims to collect reliable data for successfully implementing the SSIS, leading to enhanced efficiency and improved service delivery. Additionally, the research seeks to overcome bureaucratic barriers that may hinder the client organization's progress. Adopting an applied research design is crucial in effectively addressing the client's challenges and developing a practical solution using the SSIS.

Researchers evaluate the respondents' attitudes toward using the system using a five-point Likert scale (Strongly Disagree = 1, Disagree = 2, Fair = 3, Agree = 4, and Strongly Agree = 5). The measure of central tendency is the statistical procedure employed after the researchers organized the data in the respondents' results.

To ensure the reliability and internal validity of the findings, the data collected from the survey undergo a reliability analysis. This analysis determines whether the data gathered from the respondents aligns with the reliability of the SSIS. The researchers employed Cronbach's Alpha to validate the data's internal consistency (Frost (n.d.)). Furthermore, Spearman's rank correlation coefficient was used to examine potential relationships between the dimensions of the IS success model. Spearman's rank-order correlation is a nonparametric statistical method alternative to the Pearson product-moment correlation. It quantifies the strength and direction of the association between two variables that have been ranked, denoted as ρ or rs.

DeLone and McLean IS Success Model

The study utilized the IS success model to assess its effectiveness and measure its impact on various dimensions of success. The IS success model provides a comprehensive framework for evaluating the success of information systems in organizations. By applying this model, the researchers aimed to examine the relationship between the SSIS and factors such as system quality, information quality, user satisfaction, and perceived usefulness. This approach allowed them to determine the extent to which the SSIS met the desired objectives and contributed to the overall success of the social service delivery.



Figure 2. IS Success Model

Note. This image was from Seungbae S. & Sangho L. (2019). Development of Evaluation System for Defense Informatization Level: A Literature Review. in Journal of Media Information System. 2382-7632. 10.33851/JMIS.2019.6.4.271

The D&M (DeLone and McLean) model is widely recognized as a suitable framework for measuring IS's (Information System) success. IS scholars have extensively utilized it to understand and assess the various components of IS success. Each dimension of success in the model aligns with specific variables used to describe an information system's performance. The dimensions of success identified in the D&M model include:

- 1. **System quality:** Refers to the desirable characteristics of an information system, such as ease of use, flexibility, reliability, and response times.
- 2. **Information quality:** This focuses on the desirable characteristics of system outputs, such as management reports and web pages, including relevance, accuracy, completeness, timeliness, and usability.
- 3. **Service quality:** Evaluates the quality of support provided to system users by the IS department and IT support personnel, including factors like responsiveness, accuracy, reliability, technical competence, and empathy.
- 4. **System use** Measures how staff and customers utilize an information system's capabilities, including the frequency, appropriateness, and purpose of use.
- 5. **User satisfaction:** Assesses users' satisfaction with the reports, websites, and support services the system provides.
- 6. **Net benefits:** Examines the overall positive impact of the information system on individuals, groups, organizations, industries, and nations, such as improved decision-making, productivity, sales, cost reductions, profits, and economic development.

The D&M model provides a comprehensive framework for evaluating the success of information systems based on these dimensions. It offers researchers and practitioners a structured approach to assessing IS's effectiveness and impact in achieving desired outcomes.

The primary users in the architecture are the Secretary, Unit Officer, Unit Coordinator, Area Coordinator, Sector Coordinator, Social Worker, Supervisor, Doctor-Coordinator, Doctor-specialist, Admin, and Superadmin. The SSIS system architecture is designed to cater to the needs of Internal Staff, Medical Practitioners, and Social Workers.

The SSIS architecture provides a collaborative platform for these various user roles, enabling efficient communication, streamlined information management, and improved service delivery within the social services sector.

Social Services Information System (SSIS) User Interface

The social services information system (SSIS) user interface (UI) is vital in facilitating efficient and user-friendly interaction between users and the system. With its intuitive design and functionality, the SSIS UI enables users to effectively navigate through the system, record and retrieve client information, generate reports, and perform various social and medical service delivery tasks.





Faster and Systematic Recording

The SSIS eliminates manual and paper-based methods by providing a digital solution. It allows Social Workers and Internal Staff to input and access client data securely and centrally. Standardized templates and forms ensure consistency and accuracy in recording client information.

The figure above displays the "Add Client Profiles" page, accessible only to authorized users such as social workers and the local secretary. Before adding client profiles, a privacy notice is presented to obtain the client's consent. Users cannot proceed to the next page unless they click the toggle button labeled "I Accept." Additionally, the image above showcases the client information.

Searching and Retrieval of Client Profiles

The SSIS includes a search functionality that enables users to quickly locate specific client profiles by entering the client's name. Filtering options based on division, district, and locale further refine search results, saving time and improving accuracy. The system efficiently scans the client profiles and presents search results matching the Client Name entered. After thorough analysis and trials, it was determined by the researchers that it

takes 2 to 3 seconds to search or filter for a Client Profile with 10,000 Client Profiles in the database. Figures 5 and 6 show the user interface for Search functionality and Filter Options.

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| First Name | | | Sex | | | Division | | | |
| First Nat | ne | | Male | | ~ | Select Division | | ~ | |
| Middle Na | ne | | Height (cm) | | | District | | | |
| Middle N | ame | | Height | | | Select District | | ~ | |
| Last Name | | | Weight (kg) | | | Locale | | | |
| Last Nar | 10 | | Weight | | | Select Locale | | ~ | Change Photo |
| Birthdate | | | Age | | | Baptism Date | | | |
| dd/mm, | 7777 | Ð | Age | | | dd/mm/yyyy | | | |
| Phone Nur | nber | | Occupation | | | | | | |
| 0912345 | 6789 | | Occupation | | | | | | |
| Address | | | | | | | | | |
| Street A | Idress, Barangay, City, Province, Zip Co | de | | | | | | | |

Figure 4. Add Client Profile User Interface

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| O) List of Client Profiles | Add New Profi | iles | | | | | |
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| Inbox | | Client's Name | Gender | Contact Number | Locale | Actions | |
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Figure 5. Search Bar UI

| 📚 ADDFII | | | | | | ٩. |
|----------------------------|-------------------------|---|---------------------------|----------------|--------------|---------------------------------------|
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| | 1 | Sarah White Brown | Female | 6505556789 | Apalit 13 | 🔁 Edit 💿 View 🔁 View Report 🍈 Archive |
| | 1 | Jenny Jenner Jones | Female | 6395553456 | Apalit 6 | 🔁 Edit 💿 View 🎦 View Report 🍈 Archive |
| | 1 | Reid Brown White | Male | 6285555678 | Apalit 3 | 🔁 Edit 💿 View 🗅 View Report 🍵 Archive |
| | 1 | Mary Peter Poter | Female | 6175551234 | San Esteban | G Edit © View 🗅 View Report 🔞 Archive |
| | 1 | Romeo Thomas Juliet | Male | 6065559012 | Macabebe | 🖂 Edit 💿 View 🔁 View Report 🍵 Archive |
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Figure 6. Filter Option UI

Streamlining Remarks and Recommendations

Figure 7 shows the Add Remarks User Interface. The system streamlines the process of providing remarks and recommendations in client profiles. Authorized users can conveniently input comments; others can view and build upon previous remarks. An inbox and notification feature facilitates communication and timely updates among ADDFII staff.

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Figure 7. Add Remarks UI

Secured Centralized Database

The SSIS uses a secured centralized database server to store client profiles, eliminating data inconsistencies and duplication. Automated processes reduce manual

data entry and ensure secure storage for future access. Figure 9 provides an overview of the system architecture.



Figure 9. System Architecture of the SSIS Database

Role-Based Access Control

Role-based access control ensures effective access control and confidentiality of client data. Different user roles have specific access privileges and responsibilities based on their roles within ADDFII.

| 📚 addfii | | | | 1 |
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| Dist of Client Profiles | Add New User | | | |
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Figure 10. List of User Interface

Audit Logs

Figure 11 displays the Audit Log Interface, where the administrators track and monitor user activities, ensuring accountability and transparency.

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| Dashboard | Audit Logs | | | | |
| O) List of Client | | | | | |
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| 🖂 Inbox | Isabella Ross Cooper | Reid Brown White | Archive - Closed | Jun. 13, 2023 | |
| Audit Logs | Melissa Williams Murphy | Reid Brown White | 🖂 Edit | Jun. 13, 2023 | |
| 🖂 Archive 🗸 | Tiana Tucker Harrison | Maximilian Dixon Harper | Archive - Expired | Mar. 22, 2022 | |
| | Tiana Tucker, Harrison | Maximilian Dixon Harper | Archive - Closed | Mar. 21, 2022 | |
| | Tiana Tucker Harrison | Maximilian Dixon Harper | Archive - Terminated | Mar. 20, 2022 | |
| | Tiana Tucker Harrison | Maximilian Dixon Harper | 🖂 Edit | Mar. 19, 2022 | |
| | Tiana Tucker Harrison | Sophia Harris Ellis | Archive - Expired | Mar. 18, 2022 | |
| | Tiana Tucker Harrison | Sophia Harris Ellis | Archive - Closed | Mar. 17, 2022 | |
| | Tiana Tucker, Harrison | Sophia Harris Ellis | Archive - Terminated | Mar. 16, 2022 | |
| | Tiana Tucker Harrison | Sophia Harris Ellis | 🕑 Edit | Mar. 15, 2022 | |
| | | | Showing 1 to 10 of 54 items (1 2 3 4 5 6) | | |

Figure 11. Audit Logs User Interface

General, Comprehensive, and Progress Report

The figure below shows the General Reports Dashboard. It provides an overview of client profiles categorized by their status, including "On-going," "Terminated," "Expired," and "Closed." The report includes graphs and charts visually presenting profiling information, such as age group, medical category, gender, and membership. This feature enables effective management and monitoring of client profiles, facilitating efficient service delivery and informed decision-making.



Figure 12. General Report

Comprehensive reports contain detailed client information, including enrollment dates, endorsement dates, client names, ages, locales, districts, medical diagnoses, medical categories, assigned doctor specialists, profile statuses, and last updated data. Social workers, board members, doctors, and admins have access to generate these reports. The comprehensive reports provide valuable insights for social workers, enabling a holistic understanding of clients' situations. They also offer management and administrators an overview of client progress and service delivery, facilitating monitoring, evaluation, and data-driven decision-making for program improvement.

| 📚 ADDFII | | | | | | | 1 |
|---------------|-------------------------------|--------------------------------------|----------------------------|------------------|---|-----------------------|------------------------|
| Dashboard | Add Report Progress Report | | | | | | |
| List of Users | Client Personal Information | | | | | | |
| inbox | Name: Taylor Alison Swift | | Division: Central Division | | Assigned Doctor: George Cooper Douglas | |) |
| Audit Logs | Gender: Female | | District: District 1 | | Assigned Doctor's Contact Number: 36668 | 5066 | 19 A |
| 🖂 Archive 🗸 | Age: 33 | | Locale: Apalit 6 | | | | A Contraction |
| | Birth Date: 1989-12-13 | 51 | Baptism Date: | | | | |
| | | | | | | | |
| | Dote | Name | | Means Of Contact | Case Notes | Remarks | Attachment |
| | May. 31, 2023 | Ma. Ariela Larosa | | 0912345678 | cvab | sdgb | No Uploaded Attachment |
| | May. 30, 2023 | Maria Jesa Patricia Miralles Viernes | | 955620746 | lorem ipsum dolor met | lorem ipsum dolor met | View Attachment |
| | | | | | | | |
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| | | | | | | | |

Figure 13. Progress Report

Figure 13 shows the progress report interface, where users can add reports about the status of the patient's condition or the services delivered. This is where they can maintain detailed and up-to-date client profiles.

RESULTS

Using purposive sampling, the researchers aimed to ensure that the selected participants could provide valuable insights and contribute meaningfully to the study's findings. The total number of respondents in the study was 50, comprising social workers, health workers, nurses, doctors, and IT experts. There were a total of 78% female respondents and 22% male respondents. Among the respondents, 34% were social workers, 30% were health workers, 12% were nurses, 8% were doctors, and the remaining 16% were IT experts. The respondents across these professional backgrounds varied in age, representing a diverse range of age groups. Additionally, it was observed that most respondents across these professional backgrounds had experience ranging from 2 to 5 years.

The overall IS success model dimensions, along with their mean and standard deviation, are as follows: System Quality with a mean of 4.43 and SD of 0.59. Information Quality with a mean of 4.35 and SD of 0.64. Service Quality with a mean of 4.27 and SD of 0.63. System Use with a mean of 4.27 and SD of 0.59. User Satisfaction with a mean of 4.26 and SD of 0.65. Lastly, net benefits have a mean of 4.48 and an SD of 0.61. With all the IS

Success Model Dimensions taken into account, the total mean of 4.34 and SD of 0.62 are calculated and further support the interpretation of "Strongly Agree".

| IS Success Model Dimension | Mean | Standard Deviation | Interpretation |
|-------------------------------|------|-----------------------|----------------|
| System Quality | 4.43 | 0.59 | Strongly Agree |
| Information Quality | 4.35 | 0.64 | Strongly Agree |
| Service Quality | 4.27 | 0.63 | Strongly Agree |
| System Use | 4.27 | 0.59 | Strongly Agree |
| User Satisfaction | 4.26 | 0.65 | Strongly Agree |
| Net Benefits | 4.48 | 0.61 | Strongly Agree |
| AVERAGE | 4.34 | 0.62 | Strongly Agree |

Table 1. IS Success Model Dimensions Mean, SD, and Interpretation

The results of the analysis indicate significant correlations among all dimensions. Information Quality showed a moderate positive correlation with System Use (r = 0.638, p<0.001) and a strong correlation with User Satisfaction (r = 0.511, p<0.001). This suggests that higher levels of Information Quality are associated with increased System Use and User Satisfaction. Similarly, System Quality had a significant influence on System Use (r = 0.648, p<0.001) and User Satisfaction (r = 0.635, p<0.001), indicating a strong positive correlation and highlighting the crucial role of System Quality in influencing User Satisfaction and System Use. Additionally, Service Quality demonstrated a moderate positive correlation with both System Use (r = 0.560, p<0.001) and User Satisfaction (r = 0.591, p<0.001), suggesting that higher levels of Service Quality are likely to lead to increased system use and greater user satisfaction.

The correlation between System Use and User Satisfaction was significant (r = 0.651, p<0.001), indicating a strong positive correlation between the two variables. This suggests that as System Use increases, User Satisfaction increases as well. Furthermore, System Use was also strongly correlated with Net Benefits (r = 0.618, p<0.01), suggesting that increased system use is associated with more excellent net benefits. Moreover, User Satisfaction significantly influenced Net Benefits (r = 0.540, p<0.001), indicating a moderately strong positive correlation between User Satisfaction and Net Benefits. This implies that Net Benefits also tend to grow as User Satisfaction increases. Most importantly, the independent variables (Information Quality, System Quality, and Service Quality) play a significant factor in the Information System's success; therefore, the software development team should focus on these aspects primarily.

| Correlation of the 6 Critical Dimensions | r | df | p-value | Remarks |
|---|-------|----|---------|-----------|
| Information Quality positively influences System Use. | 0.638 | 48 | p<0.001 | Supported |
| Information Quality positively influences User Satisfaction | 0.511 | 48 | p<0.001 | Supported |
| System Quality positively influences System Use | 0.648 | 48 | p<0.001 | Supported |
| System Quality positively influences User Satisfaction | 0.635 | 48 | p<0.001 | Supported |
| Service Quality positively influences System Use | 0.560 | 48 | p<0.001 | Supported |
| Service Quality positively influences User Satisfaction | 0.591 | 48 | p<0.001 | Supported |
| System Use positively influences User Satisfaction | 0.651 | 48 | p<0.001 | Supported |
| System Use positively influences Net Benefits | 0.618 | 48 | p<0.001 | Supported |
| User Satisfaction positively influences Net Benefits | 0.540 | 48 | p<0.001 | Supported |

Table 2. DeLone and McLean Hypotheses Testing Result

DISCUSSION

Developing a web-based Social Service Information System (SSIS) has emerged as a transformative solution to address the diverse challenges faced by foundations engaged in social service management. Through extensive research and development, the researchers have successfully created an efficient and effective system that streamlines data management, enhances service delivery, and improves overall operational efficiency. In this section, the researchers highlight the achievements, impact, and critical lessons learned throughout the project.

Assessing the Effectiveness and Usability of the SSIS:

To determine the effectiveness and usability of the SSIS, the researchers used the IS Success Model and conducted surveys among the system users. The results of the study affirmed the positive impact of the ADDFII SSIS on various aspects:

1. Efficient Data Retrieval and Enhanced Usability:

The search and filter functions embedded in the SSIS proved highly effective in facilitating efficient data retrieval and enhancing the system's overall usability. Users could access information swiftly and effortlessly, improving productivity and user satisfaction.

2. Streamlined Processes and Improved Efficiency:

The SSIS successfully streamlined and automated numerous processes, improving efficiency, timeliness of service delivery, and accuracy in generating reports. The system optimized resource allocation and significantly enhanced operational efficiency by eliminating manual paperwork and reducing the time required to access and update client profiles.

3. Centralized Database and Easy Profile Management:

The SSIS provided a centralized database for storing and managing client profiles. Authorized users could easily access and update client profiles, including adding remarks and recommendations. This digital approach eliminated the need for manual paperwork handling, reducing administrative burdens and enabling quick access to necessary information.

4. Addressing Challenges and Meeting User Needs:

The positive perception of the SSIS among respondents indicates that the system successfully addresses the challenges faced by ADD Foundation Inc. and effectively meets its users' needs. The system's comprehensive functionalities have empowered users to overcome obstacles, improve service quality, and drive positive outcomes for the individuals served.

CONCLUSIONS AND RECOMMENDATIONS

The development of the web-based Social Service Information System (SSIS) has successfully addressed the challenges faced by the foundation, significantly improving the management of social service information. By utilizing the methodologies and assessing the system with the help of the I.S. Success model, the researchers have created an efficient, user-friendly, and impactful system. The implementation of the SSIS represents a significant step toward digital transformation and improved socio-medical profiling for ADD Foundation Inc. The findings and insights gained from this study can provide valuable guidance for the organization in optimizing system usage, enhancing user satisfaction, and maximizing the benefits derived from SSIS. Ultimately, the SSIS has empowered ADD Foundation Inc. to provide timely and high-quality services, benefiting both the organization and the individuals it serves

GUIDANCE FOR OPTIMIZATION AND FUTURE INITIATIVES

To assess the effectiveness and usability of the SSIS, the researchers used the IS Success Model and conducted surveys among the system users. The results of the study affirmed the positive impact of the SSIS on various aspects:

The study findings and recommendations provide valuable guidance to a private SWDA for optimizing the usage of the SSIS, enhancing user satisfaction, and maximizing the system's benefits. These insights can inform system enhancements, training initiatives, and support mechanisms, enabling the organization to improve its socio-medical profiling process and drive a positive impact for both the organization and the individuals it serves.

Furthermore, the development of the web-based Social Service Information System (SSIS) has successfully addressed the challenges faced by the foundation, significantly improving the management of social service information. Using RAD methodology and the Laravel framework, the researchers have created an efficient, user-friendly, and impactful system. The SSIS has streamlined processes, enhanced efficiency and accuracy, and positively impacted service quality. The lessons learned from this project emphasize the importance of careful planning, collaboration, adaptability, attention to detail, and continuous learning. Ultimately, the SSIS has empowered a private SWDA to provide timely and high-quality services, benefiting both the organization and the individuals it serves.

ACKNOWLEDGEMENT

We express our sincere gratitude to all who contributed to this research project. First and foremost, we thank God for His guidance and for giving us strength throughout. We also appreciate La Verdad Christian College's scholarships and exceptional instructors, the ADD Foundation International Incorporated (ADDFII), and study participants for their unwavering support and cooperation, and for providing us access to resources and data for the successful completion of this project. We also want to acknowledge the support of our Capstone Adviser, Ma'am Raquel Umabalin, and our panelists, Dr. Sharene Labung, Mr Pablo Buan, and Mr Richard Javier, for their invaluable insights and guidance. Lastly, we are also grateful to our group mates, Jean Veras, Daniel John Saballa, and Jared Galzote, our family, and friends for their unwavering support and encouragement. This capstone project would not have been possible without everyone involved's collective effort, support, and collaboration. Thank you for the opportunity to work alongside such remarkable people and organizations.

FUNDING

The study was carried out independently without any financial assistance from any institutions.

DECLARATIONS

Conflict of Interest

The researchers declare no conflict of interest.

Informed Consent

Data privacy notices and consent forms were provided before collecting the client's information to ensure that they understood and consented to the processing of their personal information.

Ethics Approval

This research project has received approval from the Bachelor of Science in Information Systems Program faculty at La Verdad Christian College, Apalit, Pampanga. The approval covers all study aspects, including research design, informed consent procedures, and data collection methods. This ensures that the research adheres to ethical principles, prioritizes the well-being and rights of participants, and maintains confidentiality.

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Authors' Biography

Jesa Viernes, a recent graduate in Information Systems, stands out as a budding researcher and dynamic professional. Armed with a fresh perspective and academic excellence, she has swiftly transitioned into the role of Junior Project Manager. She has contributed notably to managing her teammates and leading their capstone documentation. With a commitment to staying abreast of the latest technological trends, she aims to contribute significantly to the field by integrating her academic knowledge with hands-on project management experience.

Ma. Ariela A. Larosa is a recent Bachelor of Science in Information Systems program graduate. She collaborated with her fellow undergraduate student scholars on their capstone project. In addition to her academic pursuits, she also serves as an Admin in Mechatrends Contractors Corporation, applying her expertise to real-world challenges.

Mr. Romack L. Natividad's research interests include Information Systems, Model-Based Software Engineering, and Intelligent Systems. He holds a masters degree in Information Technology.