INTEGRATED SYSTEM FOR ZAMBOANGA PUERICULTURE CENTER: A HUMAN RESOURCE MANAGEMENT

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ABSTRACT

This capstone project outlines the design, creation, and assessment of an Integrated Human Resource Management System (HRMS) specifically developed for the Zamboanga Puericulture Center. The system consolidates and automates essential HR functions such as employee profiling and accounts management, leave and credit tracking, shift scheduling, job and employment history, management of 201-files, payslip access, and secure file uploads, with the goal of minimizing manual tasks, enhancing data accuracy, and improving accessibility for administrators, HR personnel, and employees. Utilizing an Waterfall methodology, the team created a web-based prototype, documented system artifacts (including ERD, DFD, architectural design, and use cases), and conducted planning for development, testing, and deployment. The evaluation of the system utilized the Post-Study System Usability Questionnaire (PSSUQ) in addition to functional testing; The findings indicated a high level of user satisfaction regarding the system's usefulness, the quality of information, and the interface quality. Functional evaluations verified consistent performance in areas such as account setup, sign-in, profile administration, leave management, file uploads, and oversight by administrators. The research shows that the HRMS successfully streamlines human resource processes, shortens processing times and minimizes errors, while enhancing transparency and the security of records. Suggested actions include complete integration into everyday operations, routine maintenance and software updates, training for users and managing transitions, adding PDF report generation, and collecting ongoing feedback to inform continual improvements.

Keywords: Human Resource Management System, PSSUQ, Usability Evaluation, User Satisfaction, System Usefulness, Information Quality, Interface Quality, System Implementation, Zamboanga Puericulture Center

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INTRODUCTION

Overseeing employees is crucial for any organization as it aids in maintaining an orderly work environment. As organizations expand, it becomes increasingly challenging to log and monitor employee information. This is why numerous companies are now adopting computerized systems to streamline their operations.

Human Resource Management (HRM) systems are designed to assist in maintaining employee records, handling leave requests, and organizing schedules or job roles. These systems minimize errors, conserve time, and provide swift access to information. The Zamboanga Puericulture Center has at least 20 employees, and HR functions are still performed manually. Therefore, implementing an effective HR system is essential for their daily activities.

At present, the Zamboanga Puericulture Center struggles with its human resources operations. Executing data entry and managing leave requests manually is time-consuming and can often result in mistakes. The absence of a centralized system makes it challenging for the HR personnel to update and retrieve employee information. This leads to an increased workload and impacts the overall efficiency of the center.

In order to address these challenges, the research suggests creating a comprehensive human resource management system designed specifically for the Zamboanga Puericulture Center. By digitizing and automating essential HR functions, the system aims to decrease processing time, enhance record accuracy, and make HR responsibilities easier for both staff and management. This will act as a centralized platform for effectively monitoring and managing employee-related activities.

The system is designed to incorporate functionalities like employee profiling, account management, logging history, job monitoring, leave applications, salary modifications, scheduling, and an administration module for system supervision and setup. These capabilities aim to streamline HR activities, reduce mistakes, and enhance daily operations. Through this, the Zamboanga Puericulture Center can attain more streamlined and efficient HR management.

1.1 Project Context

The Zamboanga Puericulture Center continues to rely on a manual Human Resource Management process that utilizes paperwork, spreadsheets, and outdated computer applications with limited capabilities. This reliance results in a slow and ineffective way to manage employee information like profiles and records. Due to the absence of an integrated system, HR personnel find it difficult to access, update, and ensure the accuracy of employee data.

As the organization keeps growing, depending solely on manual processes is becoming increasingly challenging. Human resources staff must enter and retrieve information manually, which consumes excessive time and often leads to mistakes. Even basic tasks such as leave requests, job updates, and salary changes require more time to complete. Additionally, employees struggle to verify crucial information regarding their responsibilities, schedules, and records due to the absence of automation.

These issues have led to greater complications, such as duplicated data, insufficient data security, slow processing times, and challenges in adhering to labor regulations. In the absence of a centralized system, the likelihood of having outdated or incomplete records increases, resulting in additional administrative burdens and potential legal complexities. Furthermore, the HR team dedicates a significant portion of their time to repetitive tasks rather than concentrating on more critical functions that could enhance employee satisfaction and contribute to the institution's growth.

In order to address these challenges, our capstone project suggests creating an Integrated System for the Zamboanga Puericulture Center. This system aims to automate human resources processes, enhance the precision and availability of data, and lessen the burden on HR personnel. Through the implementation of this system, the organization will be able to manage its employees more effectively and comply with labor regulations more efficiently.

The suggested system will feature an intuitive dashboard that offers various capabilities, including employee profiles, account administration, logging history, job monitoring, leave application management, career history, a personal data sheet, activity monitoring, and departmental scheduling. These functionalities will assist in streamlining HR responsibilities, minimizing delays, facilitating quicker decision-making, and enhancing the overall management of human resources at the Zamboanga Puericulture Center.

1.2 Purpose and Description

The Zamboanga Puericulture Center's Integrated System is designed to enhance and modernize the Human Resource Management processes within the organization. Currently, HR activities are carried out using manual methods that are time-consuming and susceptible to mistakes. This initiative seeks to transform outdated practices into an automated system that consolidates all employee information in a single location. With this new system, data will be more precise, secure, and readily accessible.

The initiative will support HR staff, administrators, and the center's employees. HR professionals will experience reduced workloads and will be able to handle employee records more effectively. Employees will also gain advantages as they can conveniently access their own information, while the administration will enhance workforce management and ensure adherence to labor regulations.

The primary advantage of this system lies in its ability to automate processes and ensure precision. In contrast to manual techniques, it minimizes data duplication, lowers the likelihood of errors, and offers a secure environment for managing employee data. Additionally, it is capable of producing reports and accelerating HR activities, ultimately enhancing overall productivity.

The Integrated system aims to deliver a single digital platform for HR staff to oversee employee profiles, job information, and schedules. Concurrently, it offers employees convenient access to their work-related information and enhances communication between them and HR staff.

1.3 Objectives

1.3.1. General Objectives

This study aims to develop an Integrated System for Zamboanga Puericulture Center to improve Human Resource Management (HRM) by automating employee data processes, enhancing data accuracy, and ensuring secure access to information. The system will primarily focus on improving the management, security, and accessibility of employee-related data.

1.3.2 Specific Objectives

The specific objectives of this study are as follows.

1. To gather the information about the Human Resources Management of Zamboanga Puericulture Center and to record the daily tasks.
2. To analyze the data gathered of the daily task records of the Human Resources

Management at Zamboanga Puericulture Center.

3. To design into data model paradigm (ERD, DFD, etc.) and its user interface for the Human

Recourses Management at Zamboanga Puericulture Center

4. To develop the manual documentation through web-based platform for the Human Recourses Management at Zamboanga Puericulture Center

5. To test and evaluate the system in terms of ease of use, reliability, and efficiency in handling HR processes.

1.4 Scope and Limitations

1.4.1Scope of the Study

The Integrated Human Resources Management System is designed to effectively handle employee records at the Zamboanga Puericulture Center. It automates key HR. tasks such as strong employee details, monitoring leave credits, and arranging work schedules for both hospital and school administrative staff. By digitizing those processes, the system ensures accurate and well-organized record-keeping, minimizes manual workload, and improves communication between administrators and employees.

Here's a quick overview of the important features:

1. Employee Information Management
   - Keeps track of personal data, educational background, employment history, and training records.
2. Leave and Credit Tracking
   - Facilitates digital submission of leave requests, approval processes, and monitoring of leave credits.
3. Shift Scheduling
   - Organizes work schedules for hospital and school based on institution-assigned shifts:
     - Hospital staff: 7:00 AM – 3:00 PM, 3:00 PM – 11:00 PM, 11:00 PM – 7:00 AM
     - Administrative: 8:00 AM – 5:00 PM
     - School: 7:00 AM – 4:00 PM
4. Employee Dashboard and Profiling
   - Provides a simple and interactive interface for accessing employee records and real-time updates.

5. Secure and Organized Record-Keeping
    - Maintains digital employment records with access limited to authorized staff.
6. Employee Features
    - View personal profile and employments records
    - Manage account settings
    - Submit leave requests
    - Check leave balances and leave status
    - View login history
    - Access 201 File / DTR
    - Personal Data Sheet
    - View official schedules
7. Admin Features
    - Create system/HR accounts
    - Create employee accounts
    - Approve and disapprove leave requests
    - Manage departments
    - Manage job titles
    - View employee career paths
    - Activate or deactivate HR accounts
    - View login history
    - Manage employee 201 File
    - Manage employee salary accounts
    - Manage employee leave credits
    - Personal Data Sheet
    - View official schedules
8. HR Features
    - Create employee accounts
    - Leave recommendation
    - Department management
    - Job title management
    - View employee career path
    - Manage employee accounts
    - Scheduling template

- View log history
- Manage employee 201 File
- Personal Data Sheet
- Manage account salary

1.4.2 Limitation of the Study

1. Confidentiality of Salary Records
   - Information regarding employee compensation is viewable only by authorized HR staff.
2. Predefined User Roles
   - The system supports a limited set of roles, such as Admin, HR, and employees

1.5 Significance of the Study

The Integrated Human Resource Management System represents a major step forward in optimizing HR processes, especially for the Zamboanga Puericulture Center. With a growing number of organizations adopting digital solutions to enhance efficiency and productivity, the launch of this system is both appropriate and timely. Conventional, manual HR approaches tend to be inefficient, susceptible to human errors, and at risk of data breaches. By implementing an automated and centralized platform, this initiative tackles these issues, ensuring that employee data remains accurate, secure, and easily accessible for both administrators and staff.

This research will directly affect major stakeholders:

- HR Staff will enjoy a streamlined and more effective process for dealing with employee records, and documentation.
- Administrators will enjoy enhanced workforce management, improved compliance monitoring, and quicker decision-making through immediate HR information.
- Employees will find it easier to access personal records, promoting transparency and minimizing dependence on paperwork.
- Future Researcher will be able to use this research as a guide when building comparable HR systems or when investigation digital transformation within non-profit or health-focused institutions. It can be used as a starting point to enhance HR processes and implement new technologies that increase organizational efficiency.

In addition to improving organizational efficiency, this project also plays a role in advancing academic and technological aspects of HR management. It will act as a significant resource for upcoming researchers and developers who seek to improve HR systems in comparable organizations. Furthermore, it will offer valuable insights into optimal practices regarding data security, accessibility, and automation within HR management.

The results of this research go beyond just boosting productivity. By decreasing the need for manual input, the system reduces human mistakes, improves data security, and boosts employee satisfaction. It allows HR professionals to concentrate on strategic decision-making instead of administrative duties. In the end, this project aids in creating a more efficient and productive workforce, enabling the Zamboanga Puericulture Center to uphold high standards in managing employee records and overall HR functions.

1.6 Definition of Terms

Authentication and Access Control – A security feature requires users to input a mail code, along with a username and password, to prevent unauthorized individuals from accessing confidential employee data before logging in.

Database Management System (DBMS)– A tool used to safely store and organize employee records so that they can be easily updated and retrieved when needed.

Data Security—Protective measures that ensure employee information stays private and is protected from hacking, loss, or unauthorized modifications.

Employee Profile Module—A section of the HRMS where all employee-related information, such as personal details, job positions, and salary records, is stored and can be accessed conveniently.

Employee Profiling—The process of collecting and managing detailed information about each employee, including work history, position, and performance records.

Human Resource Management System (HRMS)—A digital platform used to manage employee records and streamline HR processes, helping to make tasks more organized and efficient.

Leave Request—A formal request made by an employee to take time off from work, which goes through a review and approval process in the system.

Log History—A recorded list of actions performed in the system by users, used to monitor activity and maintain transparency and security.

Shift Scheduling—The system feature that allows assigning predefined work hours for different types of staff, such as hospital staff, administrative, and school personnel

System Administrator—The person responsible for managing and maintaining the HRMS, ensuring that it runs smoothly and securely**.**

User Account Management—A system feature that allows authorized personnel to create, edit, and manage system user accounts and access levels.

CHAPTER II

REVIEW OF RELATED LITERATURE, STUDIES AND SYSTEMS

This chapter presents literature that introduces Human Resource Management Systems (HRMS) and the employee profile module, among others. It also discusses various frameworks and expert opinions that help organizations manage and maintain employee data.

2.1 Related Literature/Studies

2.1.1 The influence of Human Resource Management Information System (HRMIS) Application towards Employees Efficiency and Satisfaction

According to Harun (2020) investigated the direct relationship between the use of an HRMIS and both employee efficiency and satisfaction within an organization. The study found a significant positive influence, indicating that the application of a dedicated HRMIS acts as a vital tool for improving the execution of human resource functions, which in turn leads to employees feeling more satisfied with their work and becoming more efficient in their roles. For the Zamboanga Puericulture Center, this finding suggests that implementing an integrated HR system could similarly reduce the administrative burden on health workers and staff, allowing them to focus more on patient care and service delivery, directly enhancing overall job satisfaction and service efficiency.

2.1.2 A systematic review of human resource management systems and their measurement

Lepak (2021) conducted a systematic review to synthesize existing research on human resource management systems (HRMS) and critically evaluate the various methods used to measure their effectiveness and impact. The review helps establish a comprehensive understanding of HRMS components and highlights the importance of using appropriate metrics like system usage, perceived ease of use, and strategic alignment to truly assess their value. For the Zamboanga Puericulture Center, this provides a framework for how to properly measure the success of their new integrated system, ensuring that its implementation is assessed not just on cost, but on its tangible benefits to the organization and its human capital.

2.1.3 Future research on human resource management systems in Asia

Budhwar and Debrah (2020) provided a perspective on the future direction of research regarding human resource management systems (HRMS) within the diverse context of Asia,

emphasizing the need to account for unique cultural and institutional factors in technology adoption. They suggest that successful HRMS implementation must be sensitive to local practices and regulatory environments, rather than simply adopting Western models. This foreign perspective is critical for the Zamboanga Puericulture Center, as it underscores the importance of designing or choosing an integrated system that is specifically tailored to the local Philippine public sector requirements and the cultural dynamics of their staff.

2.1.4 The effects of human resource management systems on economic performance: An international comparison of US and Japanese plants

Ichniowski and Shaw (2021) conducted an international comparative study examining how different human resource management systems impact the economic performance of manufacturing plants in the US and Japan. The research highlighted that integrated systems of high-performance work practices rather than individual practices in isolation are what significantly drive higher productivity and financial results. This foundational finding suggests that for the Zamboanga Puericulture Center, the integrated system should not just automate individual tasks like payroll, but must be designed to interconnect all HR functions from recruitment to training to maximize the strategic organizational benefits.

2.1.5 Human resource management systems and organizational performance

Katou and Budhwar (2020) empirically investigated the direct linkage between the design and implementation of human resource management (HRM) systems and overall organizational performance across different sectors. Their findings generally support the notion that a well-configured HRM system is a vital contributor to organizational success. This study reinforces the fundamental rationale behind the Zamboanga Puericulture Center’s project: that investing in an integrated system is a strategic decision intended to improve not only HR administration but also the entire center's operational effectiveness and service quality.

2.1.6 Effects of human resource management systems on employee proactivity and group innovation

Lee, Pak, Kim, and Li (2019) explored the effects of human resource management systems (HRMS) on behavioral outcomes, specifically employee proactivity and the capacity for group innovation. They found that certain system characteristics and practices encourage employees to take initiative and contribute creatively. For a public health institution like the

Zamboanga Puericulture Center, which must constantly adapt its services, this means the integrated system should include features like robust communication channels and transparent performance feedback that motivate staff to be more proactive in suggesting service improvements and innovations.

2.1.7 A conceptual review of human resource management systems in strategic human resource management research

Liao, Chung, and Harden (2023) provided a comprehensive conceptual review, positioning human resource management systems (HRMS) as a central element in Strategic Human Resource Management (SHRM) research. They emphasized that HRMS allows HR functions to shift from transactional roles to strategic roles by providing data-driven insights for decision-making. This conceptual grounding is essential for the Zamboanga Puericulture Center, confirming that their integrated system should be viewed as a strategic asset that supports the center's long-term goals for public health service delivery, not just an administrative tool.

2.1.8 Data mining techniques for better decisions in human resource management systems

Ranjan, Goyal, and Ahson (2020) discussed the application of data mining techniques within human resource management systems (HRMS) to extract meaningful patterns and insights for improved decision-making. They highlighted how analyzing large volumes of HR data like turnover rates, training effectiveness, and performance history can lead to more accurate predictions and strategic workforce planning. For the Zamboanga Puericulture Center, this research suggests that the integrated system should be robust enough to collect and analyze data that informs critical decisions, such as anticipating staffing needs or identifying skill gaps among the health personnel.

2.1.9 Human resource management with 'Asian' characteristics: a hybrid people-management system in East Asia

Zhu, Warner, and Rowley (2020) examined the distinct features of Human Resource Management (HRM) with "Asian" characteristics, noting the emergence of hybrid people-management systems that blend global best practices with local cultural values and institutional frameworks. This study is highly relevant to the Zamboanga Puericulture Center, as it reinforces the idea that their integrated system, while leveraging modern technology, must ultimately be

culturally resonant and operationally suitable for a public service organization in the Philippines, combining technology with the local work ethic.

2.1.10 A Study of Information Systems in Human Resource Management (HRM)

The (2020) study provided an overview of the role and benefits of Information Systems within Human Resource Management (HRM), detailing how these systems can support various functions like payroll, recruitment, and performance management. This research serves as a foundational reference for the Zamboanga Puericulture Center, outlining the basic functionalities and organizational improvements that the new integrated system is expected to deliver, such as increased data accuracy and more streamlined administrative processes across the different departments of the center.

2.1.11 Acceptance of Human Resource Information Technology in Nigeria

The (2023) study focused on the factors influencing the acceptance of Human Resource Information Technology (HRIT) by employees in Nigeria, highlighting that user acceptance is often critical to the successful implementation of any new system. Factors like perceived ease of use, system compatibility with existing workflows, and management support were found to be key determinants. This finding is crucial for the Zamboanga Puericulture Center, suggesting that a successful integrated system project must include comprehensive training and change management strategies to ensure the staff readily adopt the new technology.

2.1.12 Effectiveness of Human Resource Information System Through Employee Satisfaction and the System Usage

The (2022) research examined the relationship between the effectiveness of a Human Resource Information System (HRIS) and employee satisfaction, mediated by the frequency of system usage. The study found that a system is perceived as effective when employees use it regularly and report higher job satisfaction as a result of the convenience it provides. For the Zamboanga Puericulture Center, this implies that the integrated system should be user-friendly and relevant to daily tasks to encourage high usage, which will ultimately translate to the center achieving the desired level of system effectiveness.

2.1.13 Human Resource Information System: A Review of Previous Studies

The (2020) review synthesized a large body of literature on the Human Resource Information System (HRIS), summarizing the key functionalities, the historical evolution of the concept, and the most common benefits and challenges reported in prior research. This comprehensive review provides a robust academic foundation for the Zamboanga Puericulture Center's project by helping to identify proven best practices and anticipate potential implementation pitfalls based on the global experience with HRIS adoption.

2.1.14 Information systems support to the human resource management in universities

The (2020) study specifically investigated how information systems provide support to human resource management within the unique environment of universities, which share certain organizational complexities with public institutions. The research focused on how the system facilitates academic-specific functions like tenure tracking and faculty development. For the Zamboanga Puericulture Center, this is relevant because it demonstrates how an integrated system can be successfully adapted to support specialized public service functions beyond basic administration, such as managing continuing medical education or staff accreditation.

2.1.15 The Impact of Information Technology (IT) on Human Resource Management (HRM)

The (2020) paper discussed the broad and transformative impact of Information Technology (IT) on the entire field of Human Resource Management (HRM), detailing how IT has enabled the shift from manual processes to strategic, data-driven management. The study emphasizes that IT has fundamentally changed how HR services are delivered and how HR decisions are made. This general finding underscores the potential for the integrated system to fundamentally modernize the operations of the Zamboanga Puericulture Center, moving their HR function into a more strategic role.

2.1.16 The Implementation of Human Resource Management Information System

The (2020) paper focused on the practical steps and considerations involved in the implementation process of a Human Resource Management Information System (HRMIS), including the need for a phased approach, proper system customization, and rigorous testing. The research provides a practical guide to implementation success. This is directly applicable to the

Zamboanga Puericulture Center's project, offering crucial insights into the planning and execution phases required to successfully roll out their new integrated HR system without disrupting essential public health services.

2.1.17 The implementation of human resources information system and it's benefit for organizations

The (2021) study explored the specific benefits realized by organizations following the implementation of a Human Resources Information System (HRIS), noting improvements in administrative efficiency, data accessibility, and internal communication. The paper also addressed the return on investment derived from these benefits. For the Zamboanga Puericulture Center, this provides a clear articulation of the expected value proposition of their integrated system, justifying the project's cost by demonstrating its potential to save time, reduce errors, and improve organizational communication.

2.1.18 The Role of Human Resource Information Systems (HRIS) in Strategic Human Resource Management (SHRM)

The (2020) paper examined how a Human Resource Information System (HRIS) serves as a critical enabler for Strategic Human Resource Management (SHRM), allowing HR to move from simply processing transactions to providing strategic insights that align the workforce with organizational goals. The research highlights the system's capacity to support complex decision-making through accurate reporting. This perspective is vital for the Zamboanga Puericulture Center, as it frames the integrated system not as a departmental tool, but as an organizational instrument that helps the center's leadership make strategic decisions about staffing and talent management.

2.1.19 The Role of the Human Resources Information System in the Practice of Human Resources Management Strategies: A survey of the views of a sample of teaching staff at the faculties of Cihan University-Erbil

The (2022) study specifically surveyed teaching staff within a university setting to gauge their views on the role of the Human Resources Information System (HRIS) in supporting strategic HRM practices. This research is relevant due to its focus on public sector employees in an academic environment, which shares similarities with the Zamboanga Puericulture Center's staff who are often highly educated public servants. The findings likely highlight the need for the

system to be perceived as transparent and fair in supporting strategic practices like performance management and career development.

2.1.20 The Value of Human Resource Information Systems in Human Resource Management

The (2021) paper explored the overall value proposition of Human Resource Information Systems (HRIS) within the broader scope of Human Resource Management, focusing on how HRIS contributes to the firm's competitive advantage and efficiency. The study emphasizes that the true value lies in the system's ability to transform raw data into actionable information. This final piece of research confirms for the Zamboanga Puericulture Center that their new integrated system's success will be measured by its ability to add demonstrable, strategic value to the center's operations and its critical function in public health.

2.1.21 Sustainable Human Resource Practices and Framework in the Selected Philippine State Universities and Colleges (SUCs): A Case Study" (local)

Estrellado (2024) conducted a case study focusing on the long-term, ethical, and effective Human Resource (HR) practices and framework implemented in selected State Universities and Colleges (SUCs) in the Philippines. This research is relevant to the Zamboanga Puericulture Center because it examines how public institutions, which are often constrained by civil service rules, can adopt sustainable HR policies like merit-based promotions, continuous professional development, and employee welfare programs to maintain a high-quality, committed workforce. The findings provide a model for public sector entities on how to build a resilient HR structure, which is crucial for a health facility like the Center to ensure consistent service delivery over time.

2.1.22 Investigating human resource practices and its impact on employee performance in selected banks in the Philippines

Dela Cruz and Cabaluna (2022) examined the relationship between various Human Resource (HR) practices and their positive impact on employee performance within selected banking institutions in the Philippines. This study's insights particularly on how effective training, fair compensation, and clear performance appraisal systems drive employee effectiveness and productivity are highly applicable to the Zamboanga Puericulture Center. The Center, while a health facility, can adopt similar high-impact HR practices from the formalized

corporate sector to ensure its nurses, doctors, and support staff are motivated, skilled, and performing their duties with maximum efficiency, directly translating to better patient care.

2.1.23 Implementation of Electronic Human Resource Management (E-HRM): Its Effectiveness and Challenges

Bonifacio and Martir (2022) assessed the practical implementation of Electronic Human Resource Management (E-HRM) systems, analyzing both their measured effectiveness in streamlining processes and the common challenges encountered during adoption. For the Zamboanga Puericulture Center, which is looking to implement an Integrated System for HR Management, this study is vital as it provides a realistic view of the E-HRM journey. It highlights that while an integrated system will improve the speed and accuracy of administrative tasks (like scheduling and payroll), the Center must proactively manage issues like data security, user training, and initial resistance to new technology for the system to be successful.

2.1.24 An expanded model of the factors affecting the acceptance and effectiveness of electronic human resource management systems

Stone and Lukaszewski (2020) developed a theoretical model that expands on the factors determining the successful acceptance and overall effectiveness of Electronic Human Resource Management (E-HRM) systems. This model is crucial for the Zamboanga Puericulture Center's integrated system project because it moves beyond just the technology's quality to emphasize user acceptance. The system's success depends not only on its technical capability but also on employees' perception of its usefulness and ease of use, coupled with strong management support and proper strategic alignment with the Center's operational goals.

2.1.25 Human Resource Management Practices: Drivers for Stimulating Corporate Entrepreneurship in Large Companies in the Philippines

Edralin (2020) investigated how specific Human Resource Management (HRM) practices stimulate corporate entrepreneurship or innovation from within in large Philippine companies. While the Puericulture Center is not a corporation, the principle of stimulating initiative and innovation is valuable. The study suggests that HR practices that encourage risk-taking, reward proactive problem-solving, and provide employee autonomy are key. The integrated system should therefore include features that support and track employee suggestions for process improvement, fostering a culture of continuous improvement in public health service delivery.

2.1.26 Contribution of Demographics and Human Resource Management Practices to Work Values of Employees in the Philippines

Llenares (2020) explored how both employee demographics and formal Human Resource Management (HRM) practices contribute to shaping the work values of Filipino employees. For the Zamboanga Puericulture Center, understanding this link is important for building a mission-aligned workforce. The research indicates that deliberate HRM practices, such as transparent promotion policies and recognition, are powerful tools that can transcend differences in employee backgrounds to instill core values like public service, professionalism, and dedication values essential for a healthcare institution.

2.1.27 Human Resource Management Practices

The (2021) research in the *International Journal of Multidisciplinary: Applied Business and Education Research* focus on the positive correlation between robust, integrated Human Resource Management (HRM) practices and improved organizational outcomes in a Philippine context. This directly supports the Zamboanga Puericulture Center's goal for implementing an integrated system, as the study provides empirical validation that strategic investment in HR systems and functions (like recruitment, performance monitoring, and consistent training) leads to measurable benefits in operational efficiency and service quality, justifying the investment in the new system.

2.1.28 The relationship of human resources management roles and practices and organization effectiveness.

The (2022) study systematically analyzed the link between the evolving roles and practices of Human Resource (HR) management and the overall effectiveness of an organization. This reinforces the necessity for the Zamboanga Puericulture Center's integrated system, emphasizing that its HR function should be strategic, not just administrative. The research finds that when HR practices are consistently implemented and viewed as strategic enablers such as using the integrated system to analyze staffing needs and optimize staff deployment, they significantly boost the Center's ability to achieve its service goals efficiently.

2.1.29 Human resource management systems and firm performance

Ferguson and Reio (2025) provided an analysis of how advanced Human Resource Management Systems (HRMS) influence firm performance by enabling strategic decision-making. For the Zamboanga Puericulture Center, this means the integrated system is more than just a digital filing cabinet. The study shows that a proper HRMS is a strategic asset that provides real-time data on staffing capacity, training needs, and productivity, allowing the Center's management to make data-driven decisions that ultimately improve the speed and quality of public health service delivery.

2.1.30 Electronic human resource management system: The main element in capacitating globalization paradigm

Nivlouei (2020) investigated the critical role of the Electronic Human Resource Management (E-HRM) system in helping organizations navigate the complexities of the globalization paradigm. While the Zamboanga Puericulture Center operates locally, the principle of using E-HRM for standardization and efficiency still applies. The study confirms that an integrated system enables the Center to standardize its internal HR policies, ensure consistent application of rules (essential in the public sector), and easily manage staff records and compliance, which are all fundamentals for a well-functioning public service body.

2.1.31 Electronic human resource management system: The main element in capacitating globalization paradigm

The study (2020) further highlighted the foundational necessity of the Electronic Human Resource Management (E-HRM) system in providing the technological infrastructure required for modern, complex operations. This reiterates to the Zamboanga Puericulture Center that the integrated system is a prerequisite for modernizing its entire HR and operational structure. It provides the necessary platform to handle diverse employee data, facilitate self-service functions for staff like viewing pay slips, leave requests, and ensure that HR management is consistent, transparent, and aligned with current technological standards.

2.1.32 Human Resource Management Practices in the Philippines

Roman (2021) offered a comprehensive review of the prevailing Human Resource Management (HRM) practices across Philippine industries, discussing the local regulatory

environment and cultural adaptations. This work provides the Zamboanga Puericulture Center with local context and best practices for its new integrated system. It ensures that the system's modules especially those for compensation, benefits, and labor relations are designed to comply with Philippine labor laws and Civil Service Commission rules while also being culturally relevant to the Center's Filipino workforce.

2.1.33 Human resource management practices: Drivers for stimulating corporate entrepreneurship in large companies in the Philippines

Tork (2020) investigated how strategically designed Human Resource Management (HRM) practices can be implemented to foster internal innovation, or "intrapreneurship," in large Philippine firms. For the Puericulture Center, this means the integrated system should support performance metrics and recognition programs that encourage employees to propose innovations in patient flow, service delivery, or health protocols. The study validates that by consciously aligning HR policies, the Center can use its workforce to drive continuous, mission-relevant improvements.

2.1.34 Sustainable Human Resource Practices and Framework in the Selected Philippine State Universities and Colleges (SUCs): A Case Study

Ambong (2024) presents a detailed case study on the sustainable HR practices and the structural framework adopted by selected Philippine State Universities and Colleges (SUCs), public institutions with governance structures similar to the Puericulture Center. The research outlines how these entities maintain administrative resilience and high service quality through long-term HR strategies, such as effective succession planning and continuous employee welfare. The integrated system for the Center can therefore be designed to monitor and manage these long-term sustainability metrics effectively.

2.1.35 Contribution of demographics and human resource management practices to work values of employees in the Philippines

Seera (2020) analyzed the dual influence of employee demographics and formal Human Resource Management (HRM) practices on shaping the core work values of Filipino employees. This finding strongly advises the Zamboanga Puericulture Center that its integrated system must be used to consistently apply fair and equitable HR policies. The study confirms that consistent, transparent HRM, supported by the new system, is key to cultivating essential values like

commitment to public service and professionalism, overriding individual differences to align the workforce with the Center's mission.

2.1.36 Developing technological capability through human resource management: case study from the Philippines

Del Prado and Rosellon (2024) used a Philippine case study to highlight the fundamental role of Human Resource Management (HRM) in successfully building an organization's technological capability. For the Zamboanga Puericulture Center, this means the successful adoption of the integrated system depends entirely on HR. The study mandates that the integrated system project must be coupled with strategic HR practices like mandatory technological training, skill-based recruitment for digital literacy, and performance metrics that reward the effective use of the new system by staff.

2.1.37 A look into the role of human resource management in corporate governance and risk management: The Philippine experience

Mendoza et al., (2021) examined the expanding role of Human Resource Management (HRM) in corporate governance and enterprise risk management within the Philippine business context. This is highly relevant to the Zamboanga Puericulture Center as a public service entity, as the integrated system must incorporate features for risk management and compliance. The study emphasizes that HR is responsible for managing risks like talent shortages and ethical misconduct, tasks that the new system must support through automated compliance checks, ethical training tracking, and robust succession planning modules.

2.1.38 Human resource management in Japanese enterprises in the Philippines: Issues and problems

Amante (2021) investigated the specific management issues and problems arising from the application of Human Resource Management (HRM) practices within Japanese-owned enterprises in the Philippines. While the context is corporate and foreign, the core relevance for the Puericulture Center is the study of cultural integration and employee relations. The findings can help the Center anticipate and manage potential cultural or generational friction during the integrated system rollout, ensuring that the new digital processes respect local customs and maintain a harmonious working environment.

2.1.39 Human resource management practices and organizational outcomes in the accommodation facilities in central Philippines

Tayco (2022) established a positive correlation between effective Human Resource Management (HRM) practices and desirable organizational outcomes within accommodation facilities in the Central Philippines. This provides sector-agnostic evidence for the Zamboanga Puericulture Center that high-commitment HRM practices such as effective training, fair pay, and a clear career structure are universally beneficial. The Center's integrated system should therefore automate and manage these high-commitment practices to directly improve service quality, staff retention, and patient satisfaction, mirroring the success observed in the hospitality sector.

2.1.40 The best practice model" and the Japanese human resource approach in the Philippines

Andante (2023) provided a comparative analysis of the universal "best practice model" of Human Resource Management (HRM) against the culturally specific Japanese approach as adapted in the Philippines. This study is essential for the Zamboanga Puericulture Center as it designs the philosophical foundation of its integrated system. It advises the Center to not merely copy generic HR software features but to customize the system to reflect the unique local context perhaps emphasizing career stability and holistic employee development over purely transactional performance metrics, combining global efficiency with local cultural expectations.

2.2 Foreign and Local Related System

2.2.1 Toward developing human resource management systems for knowledge-intensive teamwork

Jackson et al., (2021) focus on designing specialized Human Resource Management (HRM) systems required for managing employees engaged in knowledge-intensive teamwork, where collaboration, innovation, and expertise sharing are paramount. The research details how HR systems must go beyond standard administrative tasks to include practices that facilitate cross-training, team-based rewards, and conflict resolution, thereby nurturing a culture of shared knowledge. For the Zamboanga Puericulture Center this underscores that the Integrated System must include modules that support the collaborative nature of clinical teams, ensuring easy communication and shared access to patient care protocols, which is crucial for high-quality public health services.

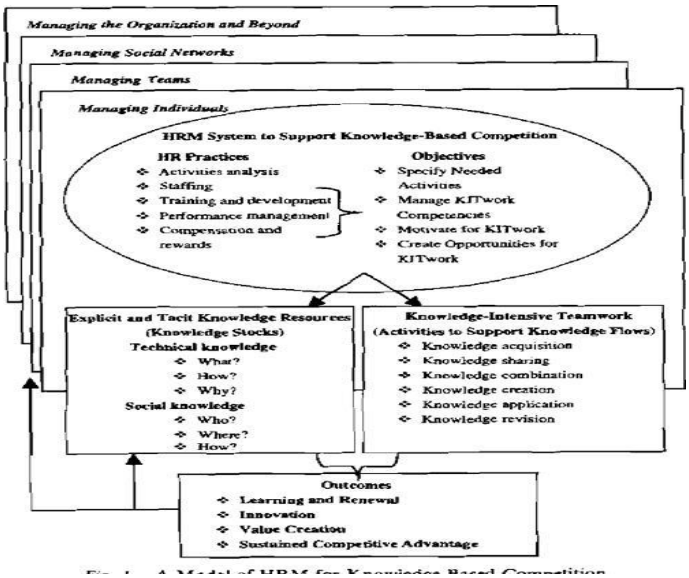

Figure 2.1 Toward developing human resource management systems for knowledge-intensive teamwork

2.2.2 Clarifying the construct of human resource systems: Relating human resource management to employee performance

Jiang et al. (2021) contributed to the theoretical understanding of Human Resource Systems by clarifying their structural components and empirically linking them to employee performance. They emphasize that an HR system is not merely a collection of isolated practices but an integrated, coherent structure designed to elicit specific employee behaviors. The study stresses that internal consistency across practices, such as making sure training aligns with performance appraisal criteria, is essential for maximizing impact. The Zamboanga Puericulture Center must ensure its Integrated System's HR component is internally coherent, meaning the recruitment module, for instance, should select staff whose competencies are directly supported by the system's training and evaluation features.

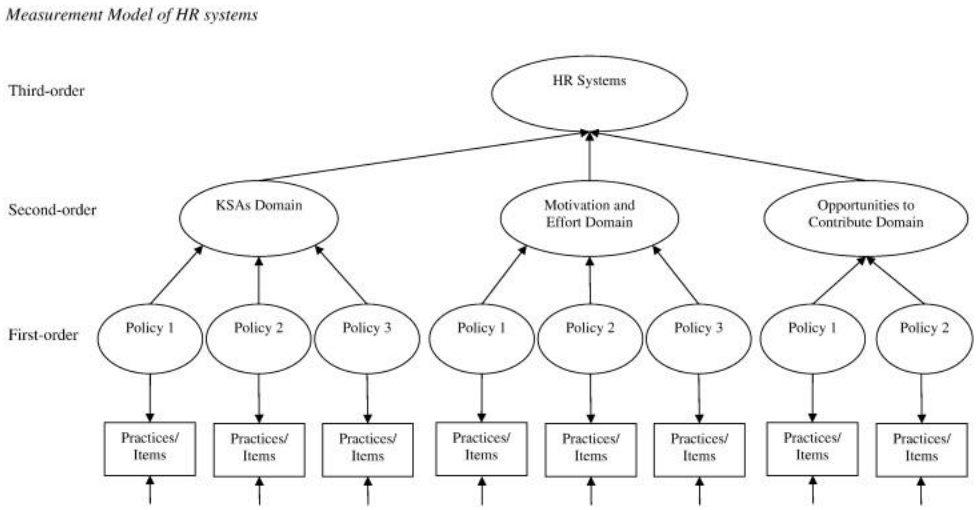

Figure 2.2 Clarifying the construct of human resource systems: Relating human resource management to employee performance

2.2.3 Human resource management systems, intellectual capital, and organizational performance

Youndt (2024) explored the pathways through which Human Resource Management (HRM) systems influence organizational performance by focusing on the mediating role of intellectual capital the knowledge, experience, and relational assets of the workforce. The dissertation found that investing in development-focused HR systems is key to building intellectual capital, which in turn drives organizational success. For the Zamboanga Puericulture Center, this research emphasizes that the Integrated System's value extends beyond efficiency; it must strategically manage the knowledge base of its medical and administrative staff, ensuring that training records and best practice guides are central to the system to maintain high clinical standards.

Figure 2.3 Human resource management systems, intellectual capital, and organizational performance

2.2.4 The effective human resource management system in transitional China: A hybrid of commitment and control practices

Su and Wright (2023) investigated the most effective form of Human Resource Management (HRM) system in a dynamic environment like transitional China, proposing a successful model that incorporates a hybrid of both commitment-focused and control-focused practices. The study suggests that systems must maintain employee loyalty (commitment) while ensuring adherence to standards (control). The Zamboanga Puericulture Center can apply this by designing an Integrated System that uses commitment practices like career planning modules to foster staff dedication, while simultaneously utilizing control practices like rigorous time-and-attendance tracking to ensure accountability in public health service delivery.

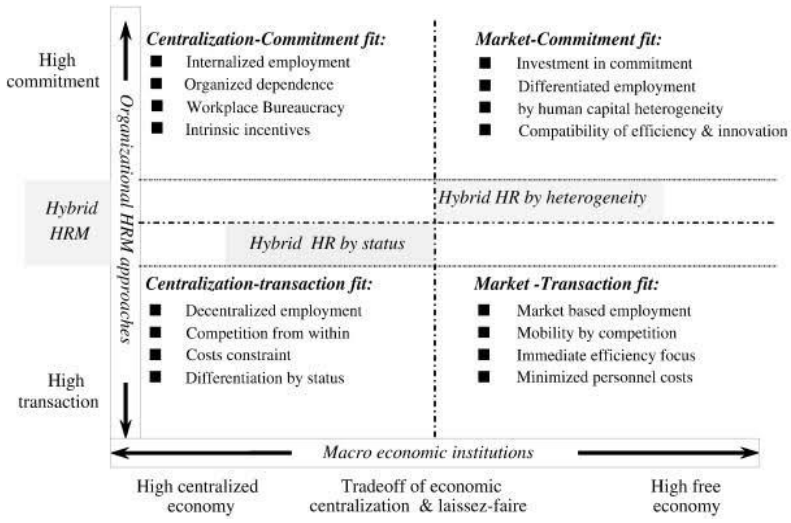

Figure 2.4 The effective human resource management system in transitional China: A hybrid of commitment and control practice

2.2.5 Human resource management in Australia: Strategy people performance

Kramar and De Cieri (2025) provide a comprehensive textbook analysis of Human Resource Management (HRM) in Australia, focusing on the strategic alignment between people, performance, and organizational strategy. This work emphasizes that HR practices must be strategically integrated to enhance a firm's competitive advantage rather than just administering policies. This framework is essential for the Zamboanga Puericulture Center as it designs its Integrated System; the system must not just process payroll, but must strategically support the center's core mission of providing efficient maternal and child health services by optimizing staff deployment and skill development.

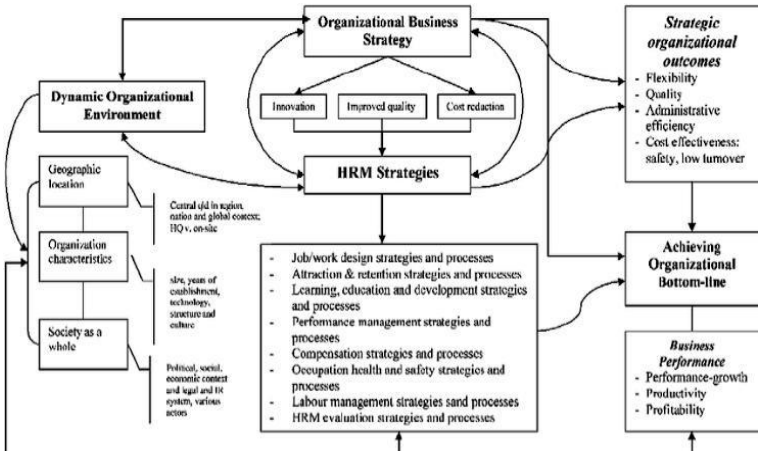

Figure 2.5 Human resource management in Australia: Strategy people performance

2.2.6 Using theory on authentic leadership to build a strong human resource management system

Gardner et al., (2020) propose a theoretical link between authentic leadership (transparent, ethical, and value-driven) and the successful development of a strong Human Resource Management (HRM) system. A strong HR system, characterized by clarity and consistency, reinforces the trust established by authentic leaders, leading to better outcomes. The Zamboanga Puericulture Center should view its Integrated System as a tool that institutionalizes ethical and transparent management, ensuring that all staff interactions within the system, such as performance feedback and resource allocation, reflect the center's values of public service and fairness.

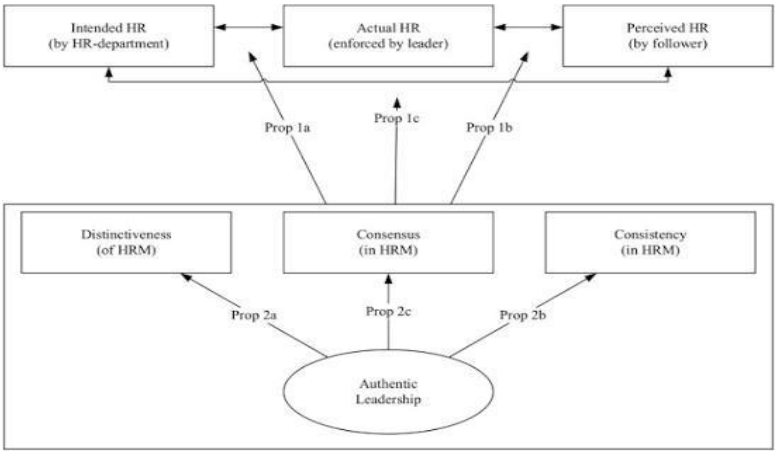

Figure 2.6 Using theory on authentic leadership to build a strong human resource management system

2.2.7 Design and interactive performance of human resource management system based on artificial intelligence

Gong et al. (2022) focused on the design and interactive performance of Human Resource Management (HRM) systems integrated with Artificial Intelligence (AI), highlighting how AI can enhance efficiency through automated recruitment screening, personalized training recommendations, and predictive staffing needs. The study emphasizes the improvement in the system's interactive quality, making it more intuitive and effective for users. For the Zamboanga Puericulture Center, incorporating concepts into the Integrated System could mean automating the tedious scheduling of nurses and midwives based on projected patient demand or using AI to suggest relevant professional development courses to staff.

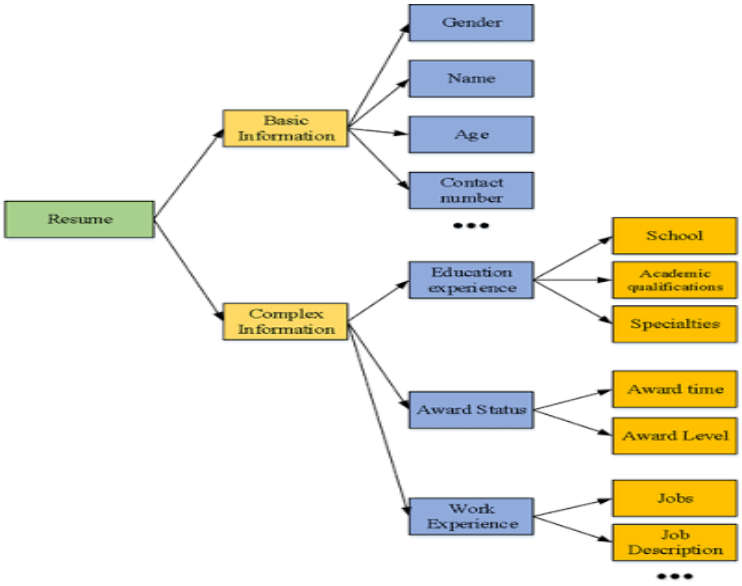

Figure 2.7 Design and interactive performance of human resource management system based on artificial intelligence

2.2.8 Internal commitment or external collaboration? The impact of human resource management systems on firm innovation and performance

Zhou et al., (2020) examined two contrasting strategic focuses for Human Resource Management (HRM) systems: one emphasizing internal commitment (loyalty and skills of current staff) and another on external collaboration (partnerships and outsourcing). The study investigated how each focus affects firm innovation and performance, suggesting that the most effective system depends on the organizational context. The Zamboanga Puericulture Center can use this insight to strategically design its Integrated System; for instance, the system might focus internally on staff development while also having modules to manage external collaboration with community health workers or partner hospitals.

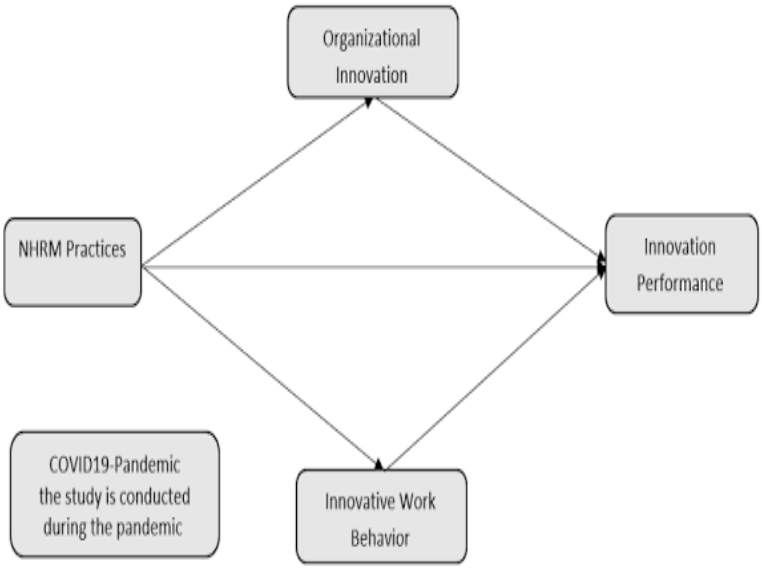

Figure 2.8 Internal commitment or external collaboration? The impact of human resource management systems on firm innovation and performance

2.2.9 Open-Source Software for Accomplishing a Human Resource Management Porta

The Academia.edu work (2023) details how Open-Source Software can be utilized to create a cost-effective and flexible Human Resource Management Portal (HRMP), capable of handling tasks like job application tracking, CV submission, and employee self-service. The benefit of open source lies in its customization and reduced licensing fees. This is highly relevant to the Zamboanga Puericulture Center, a public health institution often working with budget constraints; using open-source technology for the front-end of their Integrated System can significantly reduce development costs while providing the necessary flexibility to adapt the system to specific local government requirements.

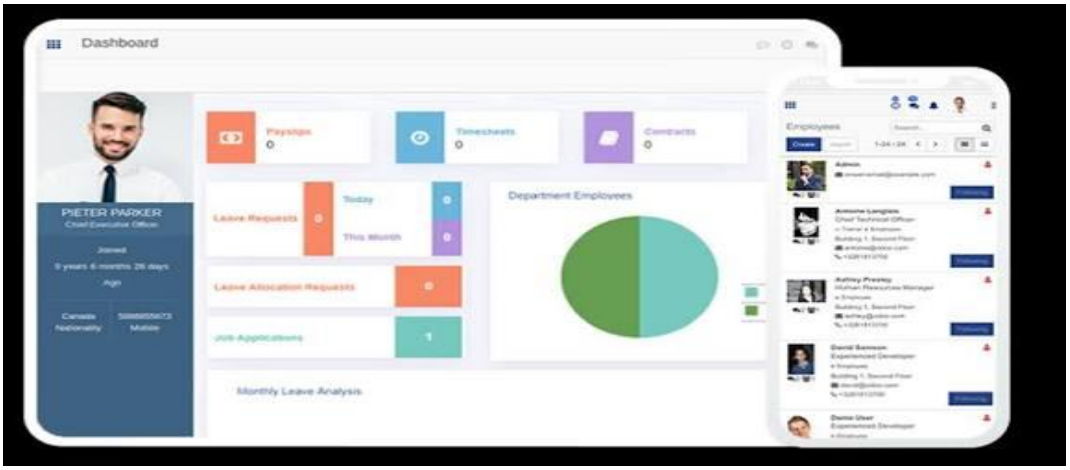

Figure 2.9 Open-Source Software for Accomplishing a Human Resource Management Portal

2.2.10 Development of Human Resource Information System: The Managerial Implication

The Academia.edu article (2021) discusses the broader managerial implications arising from the development of a Human Resource Information System (HRIS), moving beyond technical specifications to examine the impact on organizational structure, HR roles, and decision-making quality. The study argues that HRIS transforms HR from an administrative unit into a strategic partner by providing data-driven insights. For the Zamboanga Puericulture Center, this means their Integrated System will not just automate paper forms, but will empower the Center's management to make better, faster decisions regarding staff deployment, training investments, and long-term workforce planning for the public health facility.

Figure 2.10 Development of Human Resource Information System: The Managerial Implications

2.2.11 Design and implementation of human resource management system based on B/S mode

Chen and Cui (2022) focus on the design and implementation of a Human Resource Management System (HRMS) based on the Browser/Server (B/S) mode, which is the architecture where the application is accessed via a web browser (like Google Chrome or Safari). This model is crucial for providing easy, decentralized access to the system without installing software on every computer. For the Zamboanga Puericulture Center, utilizing a B/S mode for their Integrated System is vital, as it allows medical and administrative staff to easily access critical HR and patient data from any networked computer or mobile device within the clinic, improving efficiency and data accessibility.

Figure 2.11 Design and implementation of human resource management system based on B/S mode

2.2.12 The effects of a gamified human resource management system on job satisfaction and engagement

Silic et al. (2020) empirically investigated how incorporating gamification elements (like points, badges, and leaderboards) into routine Human Resource Management (HRM) system processes impacts employee attitudes, finding significant positive effects on job satisfaction and engagement. The mechanism involves leveraging intrinsic motivation through play. The Zamboanga Puericulture Center can use this principle to enhance its Integrated System's training modules or wellness challenges, turning mandatory compliance or professional development into a more engaging, rewarding, and less tedious experience for the healthcare staff.

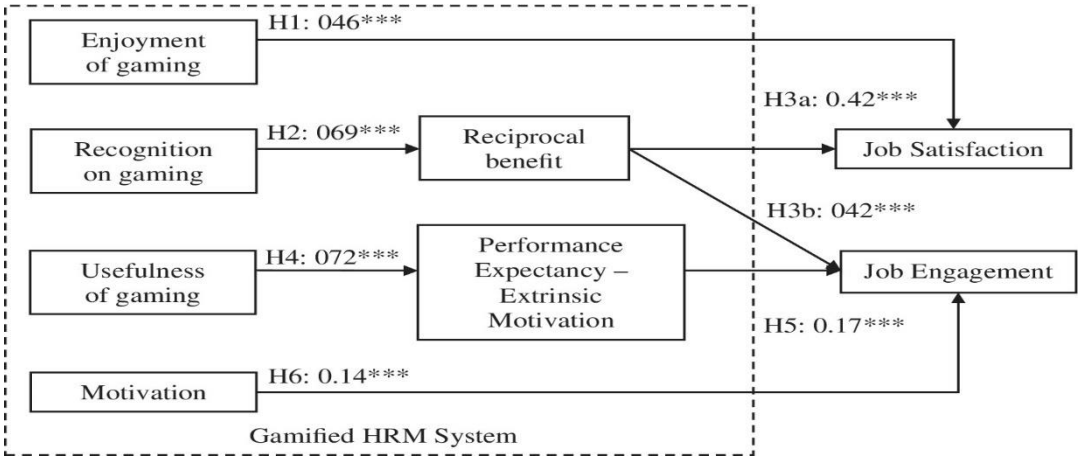

Figure 2.12 The effects of a gamified human resource management system on job satisfaction and engagement

2.2.13 Design and implementation of electronic human resource management system for Duhok Polytechnic University

Abdulraheem et al., (2020) detail the real-world design and implementation of an Electronic Human Resource Management System (E-HRMS) for Duhok Polytechnic University, providing a complete technical case study from a non-Western academic institution. The project outlines the practical steps and modules required for successful system deployment, including payroll, recruitment, and performance management. This serves as a strong, practical reference for the Zamboanga Puericulture Center for its Integrated System, offering insights into the technical and logistical challenges of implementing an E-HRMS in a public institutional setting.

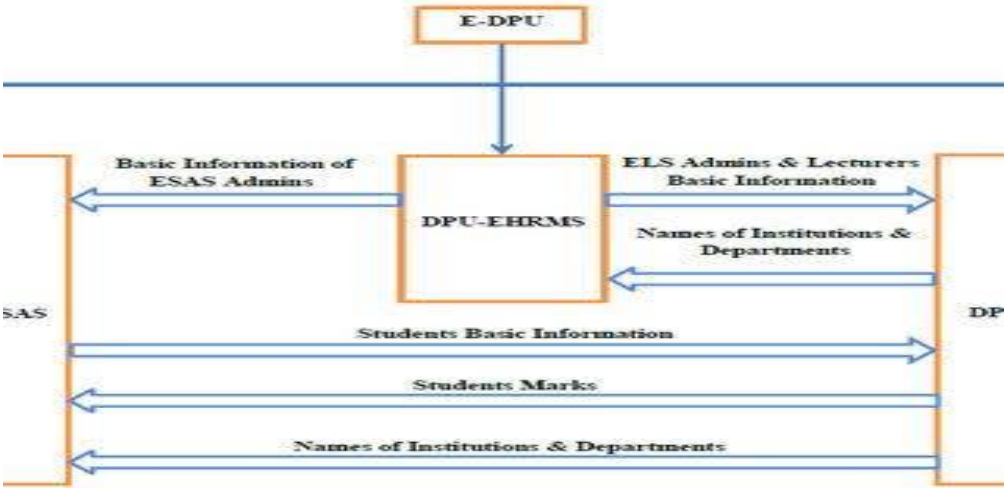

Figure 2.13 Design and implementation of electronic human resource management system for Duhok Polytechnic University

2.2.14 Human resource management system development at smart university

Berdnikova et al. (2020) discussed the strategic development of a Human Resource Management (HRM) system within the context of a "Smart University," where digital technology and data analytics are fully leveraged to create an efficient and personalized working environment. The system focuses on automated data collection and service delivery. The Zamboanga Puericulture Center can adapt this concept by designing its Integrated System to be "smart" by automating notifications for staff certifications, dynamically adjusting resource allocation based on real-time patient traffic, and providing staff with personalized, self-service HR functions.

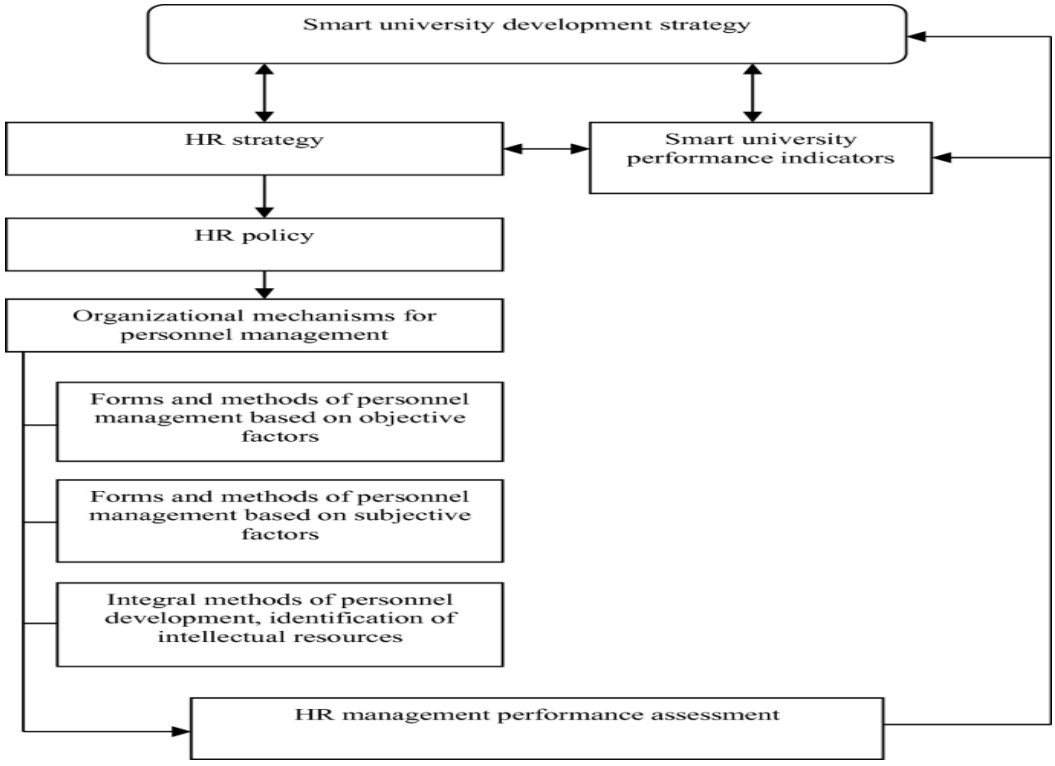

Figure 2.14 Human resource management system development at smart university

2.2.15 Design and development of human resource management computer system for enterprise employees

Wang, Li, and Li (2021) outlined the structured design and development process for a Human Resource Management computer system specifically targeted at enterprise employees, emphasizing modularity, user-friendliness, and comprehensive functionality like training, attendance, performance. The research uses a systematic approach to ensure the final system meets all user and managerial requirements. For the Zamboanga Puericulture Center, this

provides a clear, step-by-step methodology for ensuring that all modules of their Integrated System from employee health records to payroll are systematically developed to be interconnected.

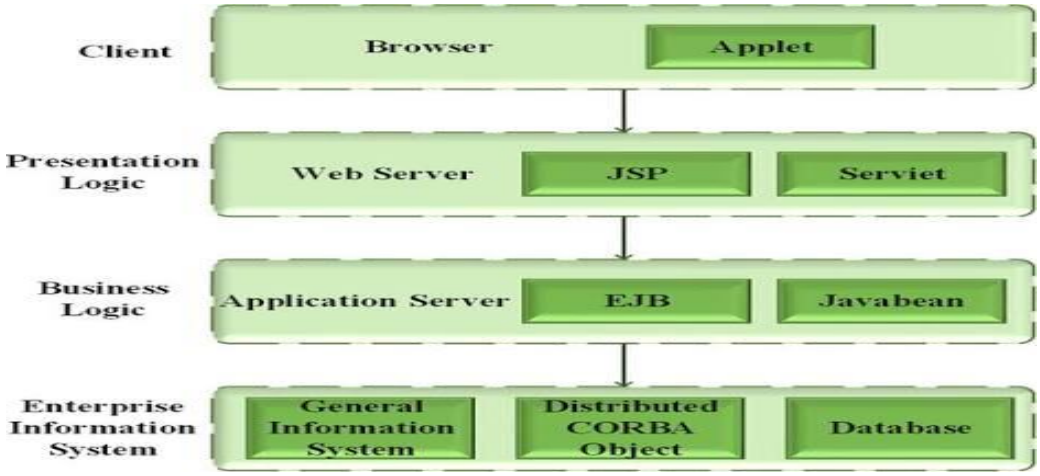

Figure 2.15 Design and development of human resource management computer system for enterprise employees

2.2.16 SAS-HRM: secure authentication system for human resource management

Ehkan et al., (2023) proposed and demonstrated SAS-HRM, a Secure Authentication System designed specifically for Human Resource Management (HRM), emphasizing the critical need for strong data security and controlled access in systems handling sensitive personnel information. The research focuses on technical security protocols to prevent unauthorized access. Given that the Zamboanga Puericulture Center's Integrated System will handle highly confidential medical and personnel data, this study is paramount, underscoring the necessity of embedding a robust, multi-layered security and authentication system to protect privacy and comply with data law

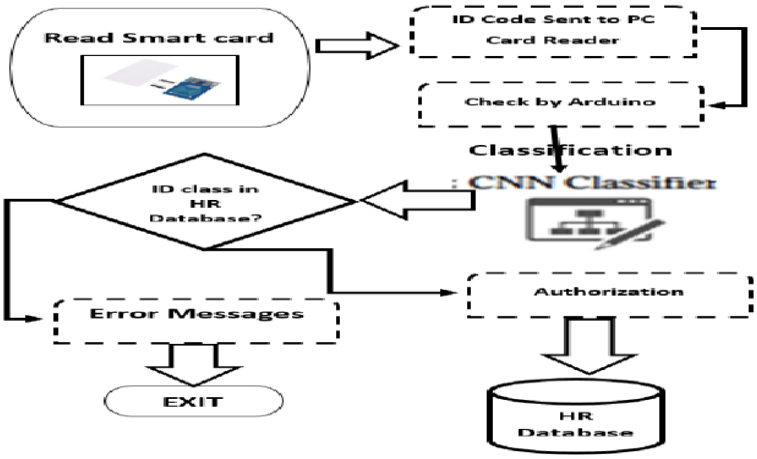

Figure 2.16 SAS-HRM: secure authentication system for human resource management

2.2.17 Design and implementation of electronic enterprise university human resource management system

Shukur et al. (2021) provided a detailed account of the design and implementation of an electronic Enterprise University Human Resource Management System (E-UHRMS), detailing the technical architecture and modular breakdown of a large-scale system for an educational institution. The focus is on integrating administrative and academic staff functions within one cohesive platform. This serves as a highly relevant case for the Zamboanga Puericulture Center, demonstrating how a comprehensive Integrated System can successfully merge HR functions (staffing, compensation) with core operational functions (scheduling, patient service delivery) typical of a public-sector entity.

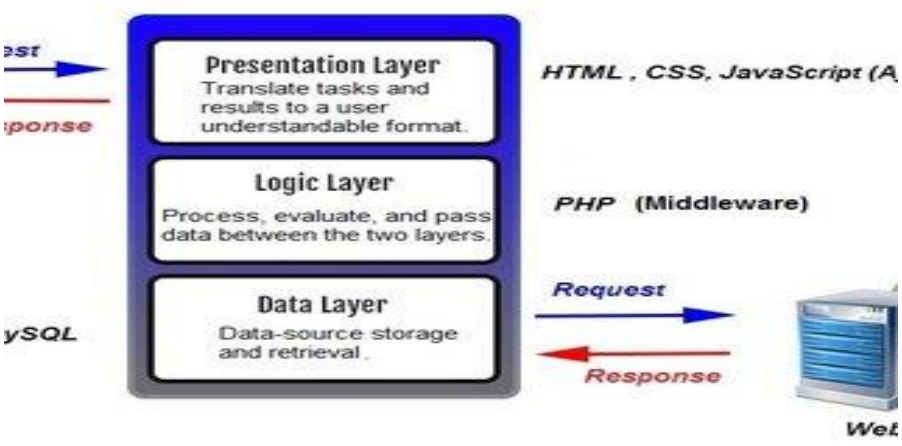

Figure 2.17 Design and implementation of electronic enterprise university human resource management system

2.2.18 Design and implementation of E-human resource management system for IT company

Jawad (2020) documented the design and implementation process for an E-Human Resource Management System (E-HRMS) tailored for an Information Technology (IT) company, focusing on features important for a knowledge-based, project-driven environment, such as performance tracking against project milestones. The study demonstrates how an E-HRMS can be customized for a specific industry's needs. For the Zamboanga Puericulture Center, this highlights the importance of customizing the Integrated System to the unique requirements of a public health facility, ensuring the system prioritizes metrics like patient load and service quality over traditional corporate metrics.

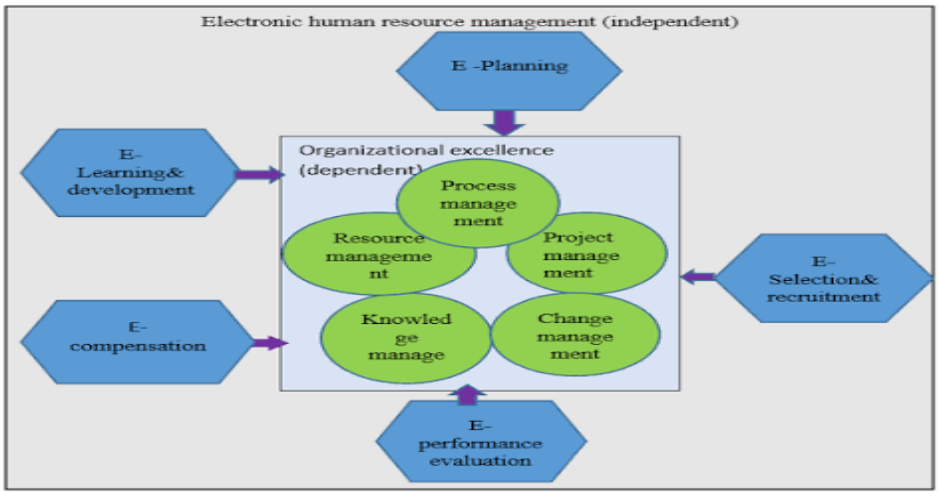

Figure 2.18 Design and implementation of E-human resource management system for IT company

2.2.19 A systematic review of human resource management systems and their measurement

Boon et al., (2019) conducted a thorough systematic review of Human Resource Management (HRM) systems, focusing critically on their construct definition and the various ways they have been measured in academic research. The review emphasizes the importance of accurately defining what constitutes an "HRM system" and ensuring measurement tools capture both the intended design and the actual implementation by managers. The Zamboanga Puericulture Center can use this review to guide its evaluation phase, ensuring that the performance metrics used to measure the success of its Integrated System are reliable and accurately reflect the system's impact on HR and service delivery.

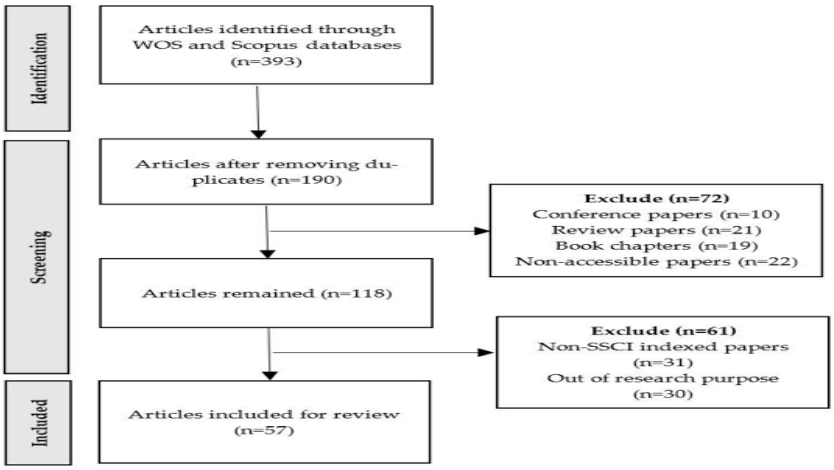

Figure 2.19 A systematic review of human resource management systems and their measurement

2.2.20 Human resource management systems for knowledge-intensive teamwork

The (2024) study revisited the development of Human Resource Management (HRM) systems tailored for knowledge-intensive teamwork, underscoring the continuous need for HR practices to evolve to support collaborative, expert-driven workforces. This research emphasizes that the system must dynamically allocate resources and reward shared problem-solving to drive innovation. For the Zamboanga Puericulture Center, this reinforces the necessity of designing the Integrated System to support the core, knowledge-intensive function of the medical staff, such as facilitating real-time consultations among doctors and nurses or tracking complex training records for specialized public health programs.

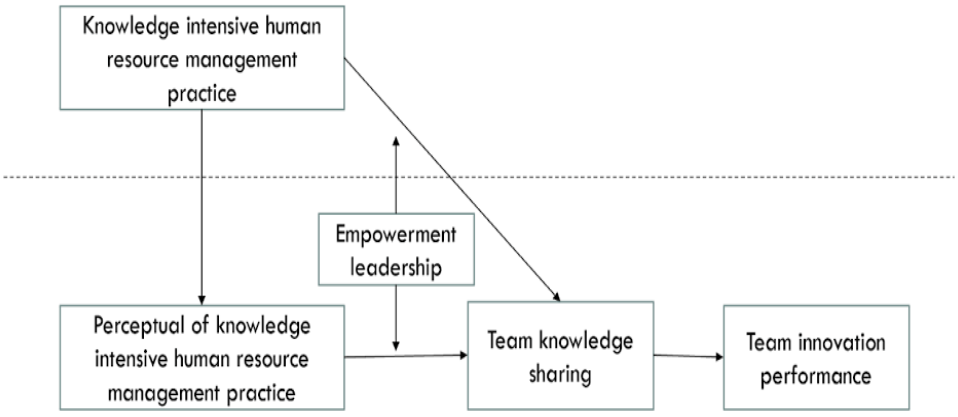

Figure 2.20 Human resource management systems for knowledge-intensive teamwork

2.2.21 Human resource management systems and the performance of US manufacturing businesses (foreign)

Chinos (2021) investigated the causal relationship between the adoption of sophisticated Human Resource Management (HRM) systems specifically those involving modern work practices, compensation, and training and the resulting productivity of U.S. manufacturing businesses. The study provided strong empirical evidence that firms implementing a system of complementary HR practices achieve significantly higher levels of performance compared to those that implement practices in isolation. For the Zamboanga Puericulture Center, this suggests that simply implementing one new HR module, like an e-leave system, won't be as effective as integrating a complete system that ties together attendance, performance review, and training to boost overall service delivery.

Figure 2.21 Human resource management systems and the performance of US manufacturing businesses

2.2.22 Human resource management systems and organizational performance: an analysis of the Spanish manufacturing industry

Rodríguez and Ventura (2021) analyzed the impact of Human Resource Management (HRM) systems on organizational performance within the Spanish manufacturing industry, reinforcing the "systemic" view that practices must be internally consistent and mutually reinforcing to yield positive results. The research found that a synergistic approach to HR, where recruitment, training, and reward systems are aligned, significantly contributes to competitive advantage and improved financial outcomes. This principle is vital for the Zamboanga Puericulture Center; the success of their Integrated System will depend on how well its various

components like scheduling, patient record management, and staff training work together to optimize operations.

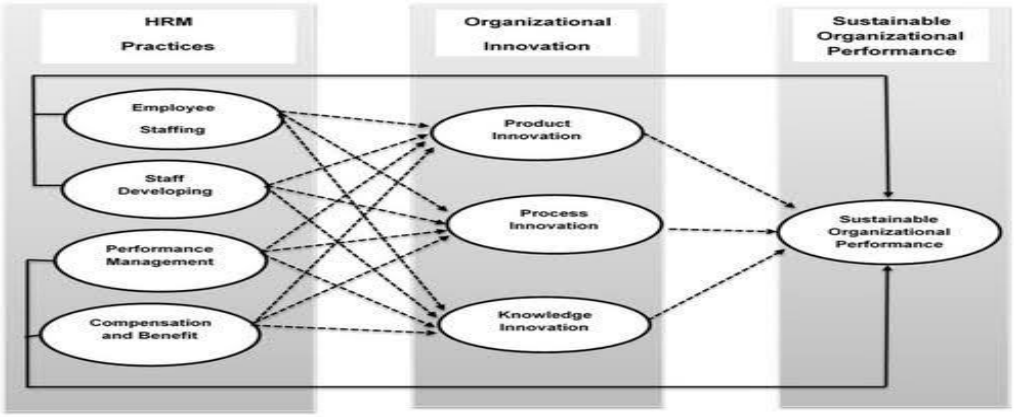

Figure 2.22 Human resource management systems and organizational performance: an analysis of the Spanish manufacturing industry

2.2.23 Design and Development of Human Resource Information System (HRIS) For Private HEIS

The Academia.edu research (2021) focuses on the practical design and development of a Human Resource Information System (HRIS) specifically tailored for Private Higher Education Institutions (HEIs). The study outlines the methodology and architectural components necessary to create a functional system for managing academic and non-academic staff data, payroll, and benefits. For the Zamboanga Puericulture Center, this resource offers guidance on the crucial initial phase of system development, ensuring their Integrated System is designed with modules like staff scheduling, professional credential tracking, and efficient patient data management to streamline their distinct operational needs.

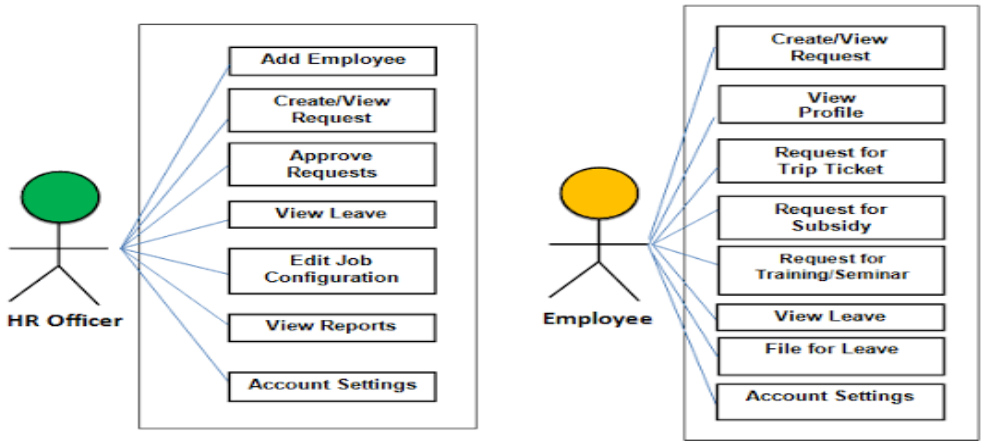

Figure 2.23 Design and Development of Human Resource Information System (HRIS) For Private HEIS

2.2.24 Human Resource Information Management System: Conceptual Overview

The Academia.edu work (2023) provides a conceptual and descriptive overview of a Human Resource Information Management System (HRIMS), highlighting its central role in automating and integrating routine HR functions such as record-keeping, payroll, and time and attendance tracking. The core argument is that digitalization moves HR from a purely administrative function to a more strategic role by providing readily available, accurate data for decision-making. The Zamboanga Puericulture Center can leverage this concept to ensure their Integrated System is designed to not only process staff payroll but also generate strategic reports on staff workload, overtime, and patient service times.

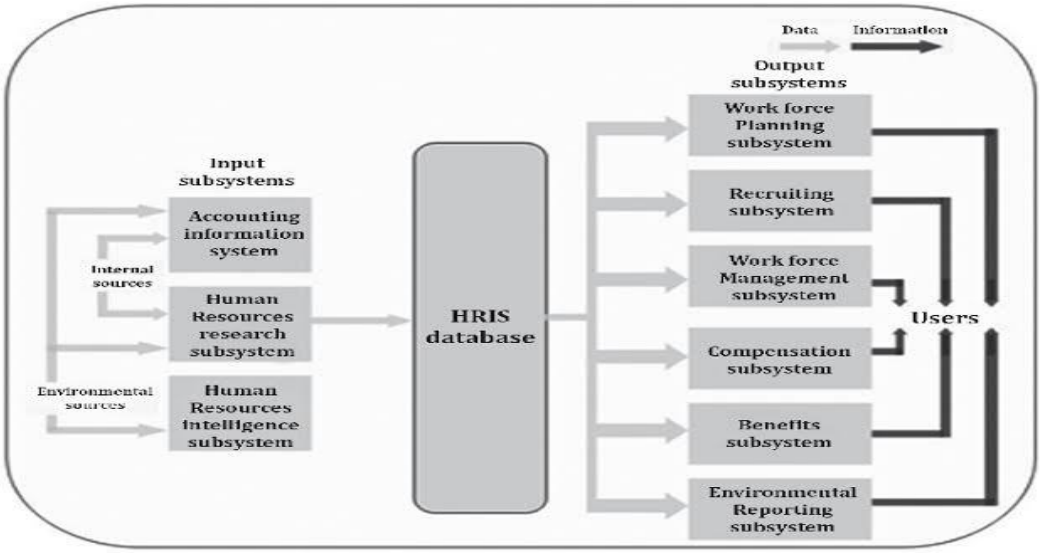

Figure 2.24 Human Resource Information Management System: Conceptual Overview

2.2.26 Human Resources Information System for a Local Philippine University: A Case Study

The Academia.edu paper (2020) presents a concrete case study on the development of a Human Resources Information System (HRIS) for the University of Cebu, focusing on the system's ability to manage employee data, tracking, and reporting within a local Philippine institutional context. The project addresses the specific challenges of managing personnel records and administrative processes common in large organizations. This local example is highly relevant to the Zamboanga Puericulture Center as it demonstrates successful system development tailored to a Filipino institution, providing a practical blueprint for their own HR and administrative module design

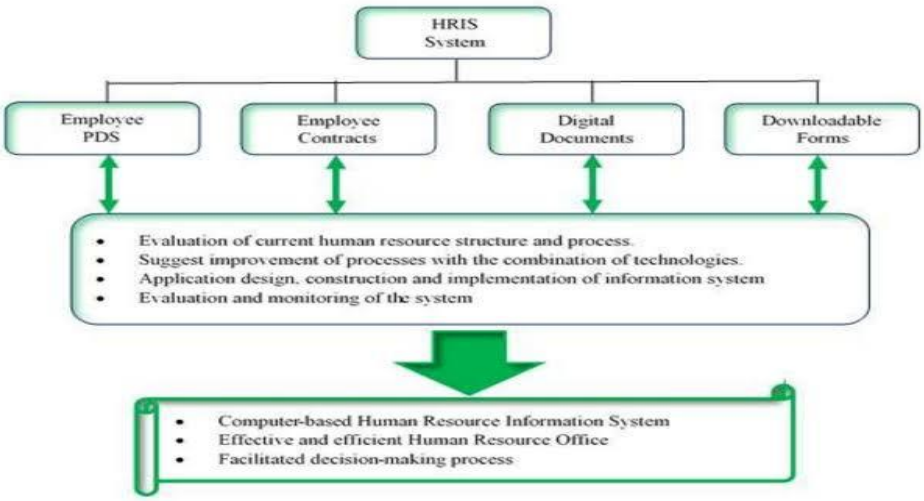

Figure 2.25 Human Resources Information System for a Local Philippine University: A Case Study

2.2.27 Human Resource Information Management System: Essential Features and Application

Navarro (2023) discusses the critical features and benefits of a Human Resource Information Management System (HRIMS), emphasizing its role in standardizing processes and improving data accuracy across an organization. The focus is on how an integrated system allows for efficient data retrieval and reduces the reliance on manual, paper-based operations. For the Zamboanga Puericulture Center, adopting such an HRIMS within their Integrated System is essential for reducing administrative errors in staff records and ensuring quick access to important personnel data during fast-paced operations, like clinic staff deployment or emergency scheduling.

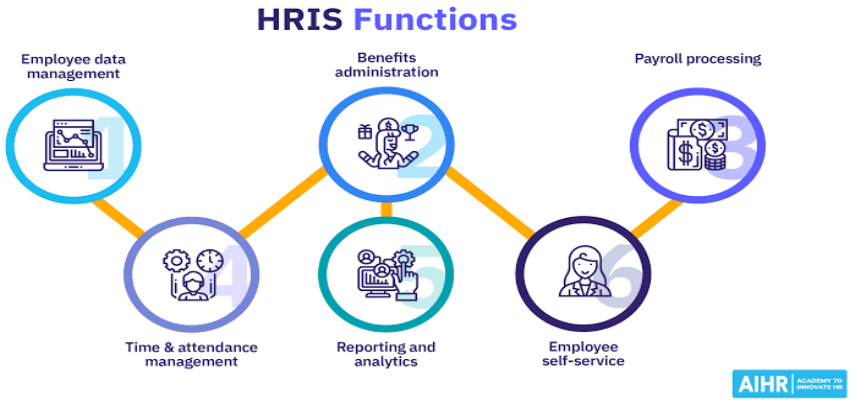

Figure 2.26 Human Resource Information Management System: Essential Features and Application

2.2.28 Human resource management systems for enterprise organizations: A review of Components and Functions

Zeebaree et al., (2019) conducted a comprehensive review of Human Resource Management Systems (HRMS) in enterprise organizations, identifying their main components, functions, and the technological landscape. The review establishes that modern HRMS are crucial for organizational success by enabling automated processes and providing robust data analytics for strategic workforce planning. This research serves as a theoretical foundation for the Zamboanga Puericulture Center, guiding them to select and integrate the best technological components into their system, ensuring it supports both routine HR tasks and strategic management objectives.

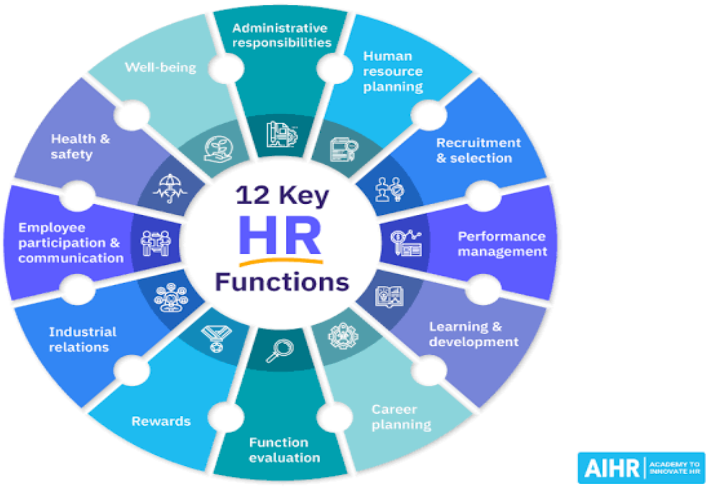

Figure 2.27 Human resource management systems for enterprise organizations: A review of Components and Functions

2.2.29 Human resource management systems and their role in the development of strategic resources: empirical evidence on knowledge and skill development

Ordóñez de Pablos (2023) empirically examined the role of Human Resource Management (HRM) systems in fostering the development of strategic resources namely, knowledge, skills, and innovative capabilities within firms. The study concludes that HRM systems focusing on advanced training, performance feedback, and employee participation are essential for building a competent and committed workforce that provides a competitive edge. The Zamboanga Puericulture Center can apply this by ensuring their Integrated System includes strong modules for managing and tracking employee training and skill acquisition, thereby developing their healthcare personnel into a strategic resource for improved patient care.

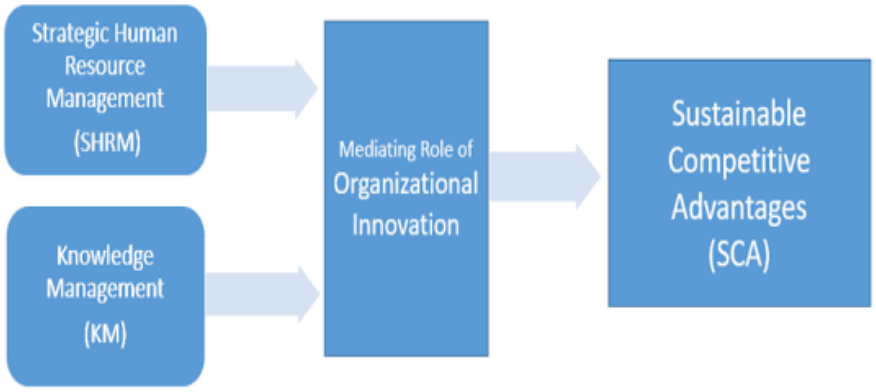

Figure 2.28 Human resource management systems and their role in the development of strategic resources: empirical evidence on knowledge and skill development

2.2.30 Shared leadership in enterprise resource planning and human resource management system implementation

Hoch and Dulebohn (2021) investigated the importance of shared leadership where responsibility is distributed across project teams during the complex implementation of Enterprise Resource Planning (ERP) and Human Resource Management (HRM) systems. The research suggests that successful system adoption is highly dependent on involvement from diverse stakeholders, including IT, HR, and end-users, rather than just top-down management. For the Zamboanga Puericulture Center, this emphasizes that the Integrated System's success requires collaboration and buy-in from clinic staff, nurses, doctors, and administrative personnel during the design and implementation phases.

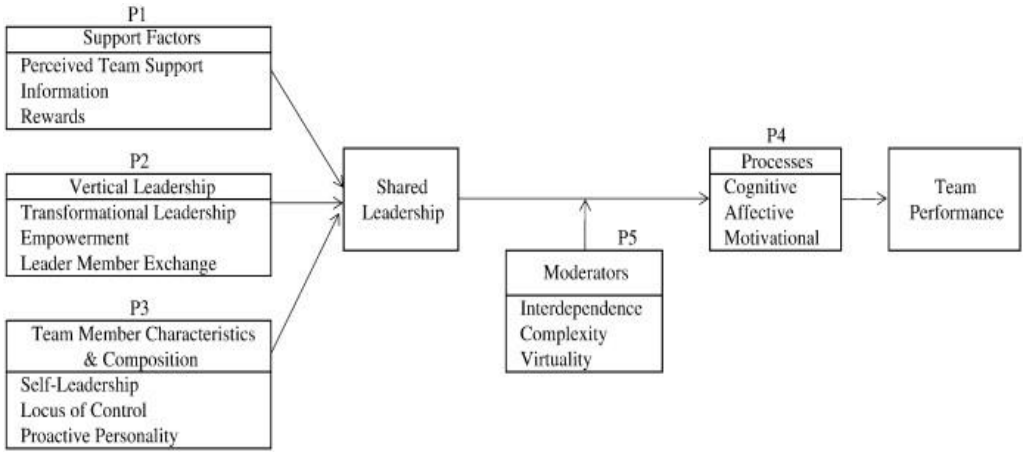

Figure 2.29 Shared leadership in enterprise resource planning and human resource management system implementation

2.2.31 Synthesizing the link between human resource management and organizational performance

Wood (2023) provides a comprehensive review of the long-established link between Human Resource Management (HRM) and organizational performance, often termed the "black box" of HRM, by synthesizing various models and empirical findings. The core finding is that high-commitment and high-involvement HRM practices consistently lead to superior performance through increased employee motivation, skills, and organizational commitment. The Zamboanga Puericulture Center must ensure their Integrated System is designed to support such practices, for instance, by facilitating fair performance appraisals and accessible communication, thereby fostering a highly committed workforce for better service delivery.

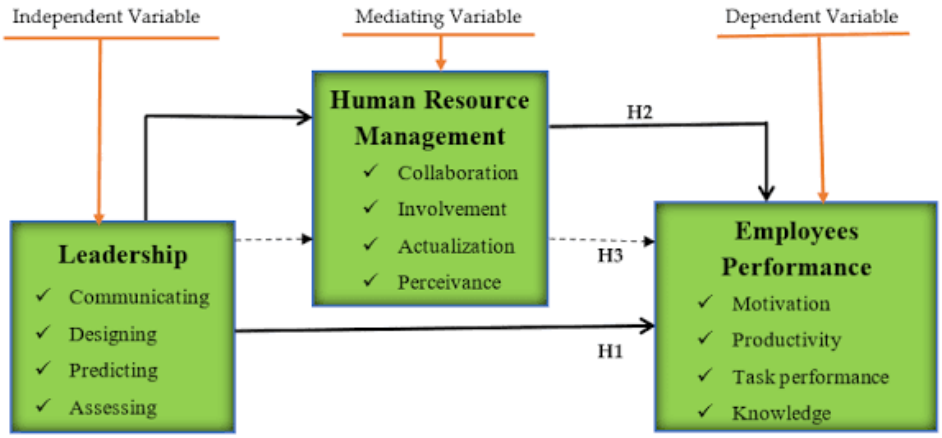

Figure 2.30 Synthesizing the link between human resource management and organizational performance

2.2.32 Comparative human resource management (HRM): a systems perspective on external fit

Begin (2023) outlines the utility of a systems perspective in comparative Human Resource Management (HRM), arguing that national and organizational HRM approaches should be viewed as interconnected subsystems that interact with the external environment like labor markets, culture. This framework highlights that HR success depends on external fit. The Zamboanga Puericulture Center must design its Integrated System to not only manage internal staff data but also comply with local Zamboanga City government regulations and national Civil Service Commission rules, ensuring the system's external fit with the local public service environment

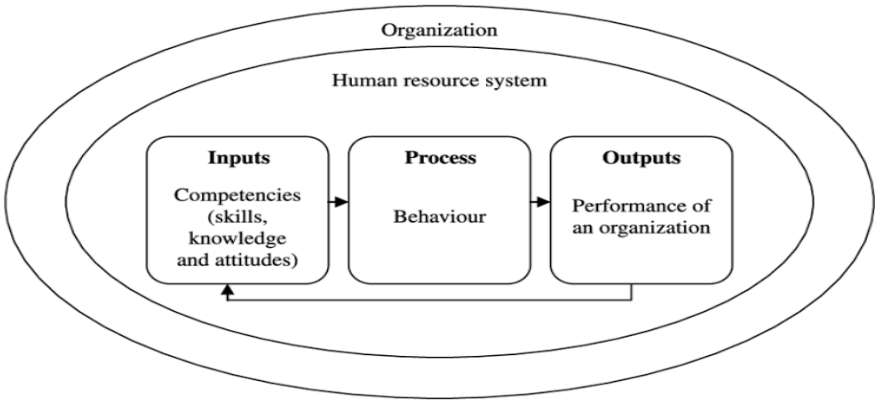

Figure 2.31 Comparative human resource management (HRM): a systems perspective on external fit

2.2.33 Human resource management systems and work attitudes: The mediating role of future time perspective on commitment

Korff et al. (2020) explored the relationship between specific Human Resource Management (HRM) systems and resulting employee work attitudes, highlighting the mediating role of Future Time Perspective (FTP) the belief in the time one has left in their career. The study showed that HR systems emphasizing development opportunities positively influence FTP, which in turn leads to greater engagement and commitment. The Zamboanga Puericulture Center should design its Integrated System to clearly communicate and track career development and training pathways, boosting staff commitment and improving the quality of patient interaction and care.

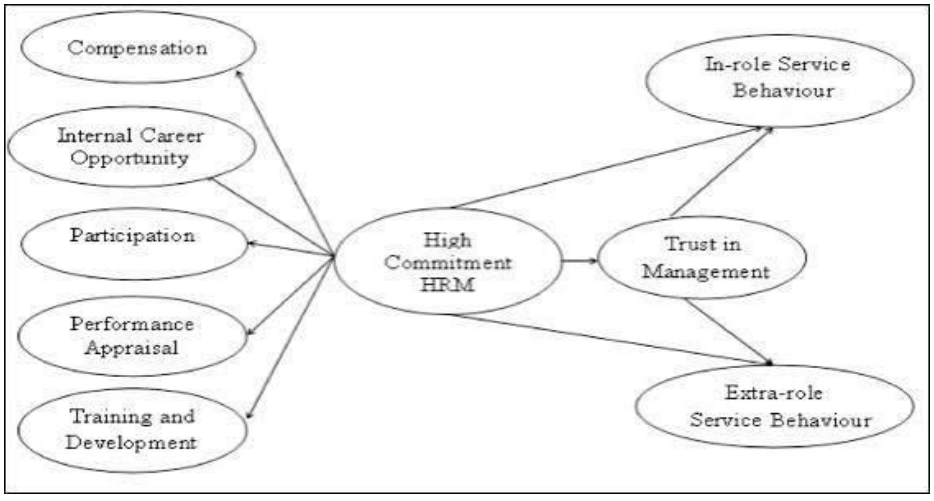

Figure 2.32 Human resource management systems and work attitudes: The mediating role of future time perspective on commitment.

2.2.34 Diversity and equality management systems: An integrated institutional and strategic human resource approach

Konrad et al., (2020) examined the factors preceding the adoption of diversity and equality management systems and their subsequent organizational outcomes, using an integrated institutional and Strategic HRM approach. The research underscores that having systems that promote fair treatment and equal opportunity leads to positive outcomes like enhanced reputation and internal fairness perceptions. For the Zamboanga Puericulture Center, the Integrated System must be designed with transparent modules for recruitment, promotion, and grievance handling to ensure fair and equitable treatment of all healthcare professionals, regardless of background.

Figure 2.33 Diversity and equality management systems: An integrated institutional and strategic human resource approach

2.2.35 Employee well-being, human resource management systems, and firm performance: The well-being paradox

Ho and Kuvaas (2020) analyzed the complex relationship between Human Resource Management (HRM) systems, employee well-being, and firm performance, contrasting the "mutual gains" perspective (HRM benefits both) with the "critical" perspective (performance is prioritized over well-being). The study identified a "well-being paradox" where high-performance work systems may increase stress while simultaneously boosting performance. The Zamboanga Puericulture Center must be mindful of this paradox when designing their Integrated System, ensuring modules like scheduling and performance monitoring help optimize efficiency without leading to staff burnout in the high-stress public healthcare environment.

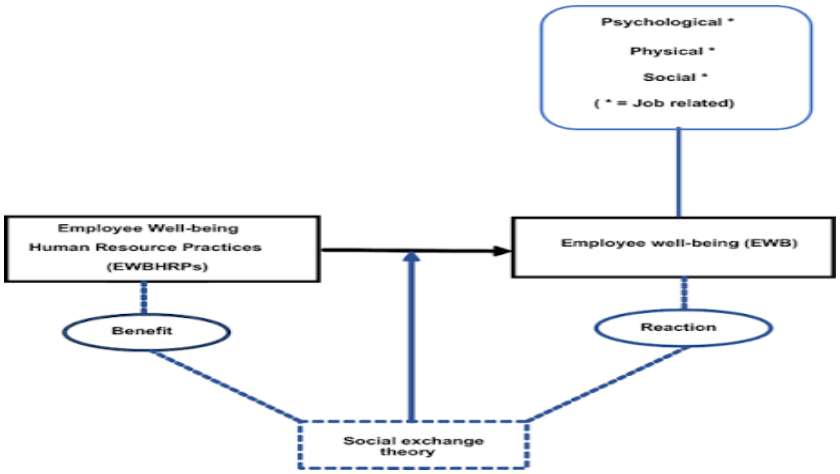

Figure 2.34 Employee well-being, human resource management systems, and firm: The well-being paradox

2.2.36 Smart human resource management system to maximize productivity using advanced technology

Hewage et al. (2020) proposed the implementation of a "Smart Human Resource Management System" utilizing advanced technologies like data analytics to streamline HR processes and, ultimately, maximize employee productivity. This smart system is characterized by its ability to automate decision-making for routine tasks and predict workforce needs. The Zamboanga Puericulture Center can draw on this concept to incorporate smart features into their Integrated System, such as automated notifications for expiring medical licenses or predictive scheduling based on anticipated patient load, thereby maximizing the productivity of their limited staff.

Figure 2.35 Smart human resource management system to maximize productivity using advanced technology

2.2.37 Review of important issues and future trends in human resource management

Cooke et al., (2020) introduced a review issue by identifying the critical and emerging issues in contemporary Human Resource Management (HRM), including digitalization, the future of work, and managing diverse global workforces. This paper highlights that modern HR must move beyond traditional administrative roles to address complex strategic and societal challenges. For the Zamboanga Puericulture Center, this underscores the need for their Integrated System to be designed with flexibility to adapt to future healthcare trends and to include modules for managing evolving employment arrangements, like remote work for administrative tasks or staggered shifts for medical personnel.

Figure 2.36 Review of important issues and future trends in human resource management

2.2.38 Human resource management system strength and organizational resilience in times of crisis

Sanders et al. (2024) investigated the crucial concept of Human Resource Management (HRM) System Strength defined by its distinctiveness, consistency, and consensus and its impact on organizations during periods of crisis or disruption. The research suggests that a strong, clearly communicated HR system is vital for maintaining employee morale, reducing uncertainty, and ensuring organizational resilience when faced with unforeseen challenges. For the Zamboanga Puericulture Center, their Integrated System must be robust and reliable to consistently manage staff during public health crises, ensuring continuity of service and clear communication of procedures and support.

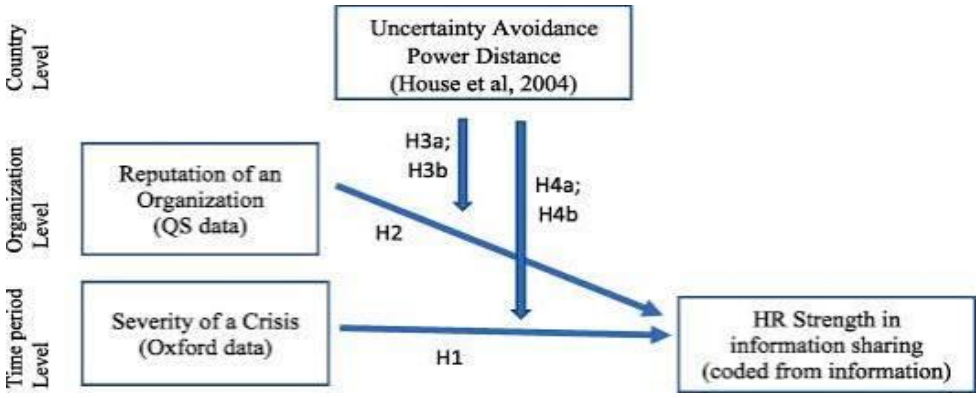

Figure 2.37 Human resource management system strength and organizational resilience in times of crisis

2.2.39 Measuring government management capacity: Comparative analysis of city human resources management systems

Donahue et al., (2021) conducted a comparative analysis focused on measuring government management capacity through the effectiveness of city-level Human Resources Management (HRM) systems. The study emphasizes that the quality of an HR system is a direct reflection of public administration efficiency, affecting areas like meritocracy, retention, and employee skill development. This is directly relevant to the Zamboanga Puericulture Center (a government entity), confirming that the successful design and implementation of their Integrated System is a measure of their overall management capacity and commitment to public service excellence.

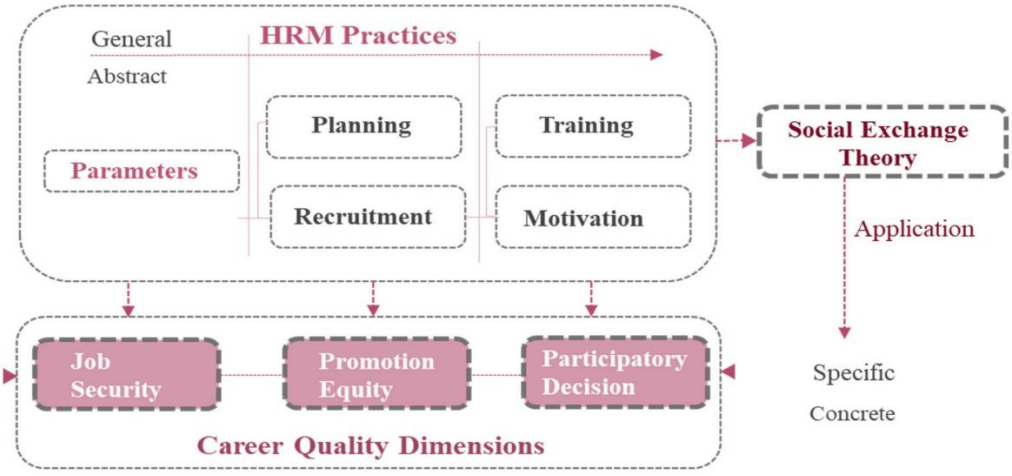

Figure 2.38 Measuring government management capacity: Comparative analysis of city human resources management systems

2.2.40 The effects of a gamified human resource management system on employee motivation and engagement

Silic et al. (2020) empirically studied the effects of a gamified Human Resource Management (HRM) system on two critical employee attitudes: job satisfaction and work engagement. The findings indicated that incorporating elements of gamification such as points, badges, and leaderboards into routine HR tasks (like training or performance feedback) can significantly boost employee motivation and positive engagement with the system and their work. The Zamboanga Puericulture Center could potentially utilize this concept by adding gamified elements to their Integrated System's training modules or wellness programs to increase staff participation and boost morale

Figure 2.39 The effects of a gamified human resource management system on employee motivation and engagement

2.3 Table of Comparison

Table 2.1 Table of Comparison

Study/System	Employee Overview	New Employee Request	Profiling	Create and Manage User Account	Log History	Job Position Tracking	Leave Request Report	Department Scheduling
Integrated System for Zamboanga Puericulture Center A Human Resource Management	✓	✓	✓	✓	✓	✓	✓	✓
Lepak, D. P. (2021). A systematic review of human resource management systems and their measurement.		✓					✓	
Budhwar, P., & Debrah, Y. A. (2020). Future research on human resource management systems in Asia.					✓	✓		✓
Ichniowski, C., & Shaw, K. (2021). The effects of human resource management systems on economic performance: An international comparison of US and Japanese plants. Management Science				✓				
Katou, A. A., & Budhwar, P. S. (2020). Human resource management		✓		✓		✓		✓

systems and organizational performance.								
Lee, H. W., Pak, J., Kim, S., & Li, L. Z. (2019). Effects of human resource management systems on employee proactivity and group innovation.				✓		✓	✓	✓
Liao, H., Chung, Y., & Harden, E. E. (2023). A conceptual review of human resource management systems in strategic human resource management research.		✓		✓	✓		✓	✓
Ranjan, J., Goyal, D. P., & Ahson, S. I. (2020). Data mining techniques for better decisions in human resource management systems.	✓			✓		✓		
Zhu, Y., Warner, M., & Rowley, C. (2020). Human resource management with 'Asian'characteristics: a hybrid people-management system in East Asia.	✓	✓		✓	✓	✓	✓	
A Study of Information Systems in Human Resource Management (HRM. (2020).			✓	✓		✓	✓	

Acceptance of Human Resource Information Technology in Nigeria. (2023).	✓	✓		✓			✓	
Effectiveness of Human Resource Information System Through Employee Satisfaction and the System Usage. (2022).	✓	✓	✓	✓				
Human Resource Information System: A Review of Previous Studies. (2020).			✓	✓		✓		✓
"Information systems support to the human resource management in universities. (2020).		✓				✓		✓
The Impact of Information Technology (IT) on Human Resource Management (HRM). (2020).	✓	✓		✓		✓		
The Implementation of Human Resource Management Information System. (2020).	✓		✓	✓			✓	
The implementation of human resources information system and it's benefit for organizations. (2021).			✓			✓	✓	✓

The Role of Human Resource Information Systems (HRIS) in Strategic Human Resource Management (SHRM. (2020).	✓					✓	✓	
The Role of the Human Resources Information System in the Practice of Human Resources Management Strategies: A survey of the views of a sample of teaching staff at the faculties of Cihan University-Erbil. (2022).	✓	✓	✓					
The Value of Human Resource Information Systems in Human Resource Management. (2021).			✓				✓	
Estrellado, J. E. (2024). Sustainable Human Resource Practices and Framework in the Selected Philippine State Universities and Colleges (SUCs): A Case Study.	✓		✓	✓				
Dela Cruz, M. M., & Cabaluna, A. Y. (2022). Investigating human resource practices and its impact on employee performance in selected banks in the Philippines.		✓	✓	✓				

Bonifacio, R. V., & Martir, E. M. (2022). Implementation of Electronic Human Resource Management (E-HRM): Its Effectiveness and Challenges.				✓	✓		✓	✓
Stone, D. L., & Lukaszewski, K. M. (2020). An expanded model of the factors affecting the acceptance and effectiveness of electronic human resource management systems.	✓		✓	✓	✓			✓
Edralin, D. M. (2020). Human Resource Management Practices: Drivers for Stimulating Corporate Entrepreneurship in Large Companies in the Philippines.	✓	✓		✓				
Llenares, I. I. (2020). Contribution of demographics and human resource management practices to work values of employees in the Philippines.	✓			✓			✓	
Human Resource Management Practices. (2021). International Journal Of Multidisciplinary: Applied Business And Education Research.	✓		✓	✓				

The relationship of human resources management roles and practices and organization effectiveness. (2022).	✓		✓	✓	✓		✓	
Ferguson, K. L., & Reio, T. G., Jr. (2025). Human resource management systems and firm performance.	✓	✓				✓		
Nivlouei, F. B. (2020). Electronic human resource management system: The main element in capacitating globalization paradigm.	✓		✓	✓	✓	✓		
Roman, E. R. (2021). Human Resource Management Practices in the Philippines.	✓			✓			✓	
Tork, D. M. (2020). Human resource management practices: Drivers for stimulating corporate entrepreneurship in large companies in the Philippines.		✓		✓		✓		
Ambong, R. M. (2024). Sustainable Human Resource Practices and Framework in the Selected Philippine State Universities and Colleges (SUCs): A Case Study.	✓		✓	✓			✓	

Seera, K. I. (2020). Contribution of demographics and human resource management practices to work values of employees in the Philippines.	✓			✓		✓		
Del Prado, F. L. E., & Rosellon, M. A. D. (2024). Developing technological capability through human resource management: case study from the Philippines.		✓		✓		✓		✓
Mendoza, A. M. E., Supangco, V. T., & Tolosa, M. T. B. (2021). A look into the role of human resource management in corporate governance and risk management: The Philippine experience. In Corporate Governance: Does Any Size Fit?	✓			✓		✓		
Amante, M. S. V. (2021). Human resource management in Japanese enterprises in the Philippines: Issues and problems.	✓	✓		✓		✓		
Tayco, R. O. (2022). Human resource management practices and organizational outcomes in the accommodation facilities in central			✓	✓			✓	

Philippines.								
Andante, M. S. V. (2023). The “best practice model” and the Japanese human resource approach in the Philippines.	✓		✓	✓	✓	✓	✓	
Tampol, R. A., & Aguiling, H. M. (2021). Organizational culture and human resource practices of the SVD educational institutions in the Philippines: Understanding its integration and implementation.	✓		✓	✓	✓		✓	✓
Jackson, S. E., Chuang, C.-H., Harden, E. E., & Jiang, Y. (2021). Toward developing human resource management systems for knowledge-intensive teamwork.	✓	✓		✓		✓		✓
Jiang, K., Lepak, D. P., Han, K., Hong, Y., Kim, A., & Winkler, A.-L. (2021). Clarifying the construct of human resource systems: Relating human resource management to employee performance.	✓	✓	✓	✓			✓	
Youndt, M. A. (2024). Human resource management systems,	✓		✓	✓	✓	✓		✓

intellectual capital, and organizational performance								
Su, Z.-X., & Wright, P. M. (2023). The effective human resource management system in transitional China: A hybrid of commitment and control practices.	✓	✓	✓	✓	✓	✓	✓	
Kramar, R., & De Cieri, H. (2025). Human resource management in Australia: Strategy people performance.	✓		✓	✓		✓		
Gill, C., Gardner, W., Claeys, J., & Vangronsvelt, K. (2020). Using theory on authentic leadership to build a strong human resource management system.	✓	✓	✓				✓	✓
Gong, Y., Zhao, M., Wang, Q., & Lv, Z. (2022). Design and interactive performance of human resource management system based on artificial intelligence.	✓		✓	✓		✓	✓	

Zhou, Y., Hong, Y., & Liu, J. (2020). Internal commitment or external collaboration? The impact of human resource management systems on firm innovation and performance.	✓		✓	✓	✓	✓		
Open-Source Software for Accomplishing a Human Resource Management Portal. (2023).		✓		✓	✓		✓	
Development of Human Resource Information System: The Managerial Implications. (2021).	✓	✓		✓			✓	
Chen, H., & Cui, X. (2022). Design and implementation of human resource management system based on B/S mode.		✓		✓	✓	✓		✓
Silic, M., Marzi, G., Caputo, A., & Bal, P. M. (2020). The effects of a gamified human resource management system on job satisfaction and engagement.	✓	✓	✓			✓	✓	
Abdulraheem, A. S., Zeebaree, S. R., & Abdulazeez, A. M. (2020). Design and implementation of electronic human resource management system.			✓	✓	✓		✓	

Berdnikova, L. F., Mikhalenok, N. O., Frolova, V. A., Sukhacheva, V. V., & Krivtsov, A. I. (2020). Human resource management system development at smart university.	✓		✓	✓		✓	✓	✓
Wang, T., Li, N., & Li, H. (2021). Design and development of human resource management computer system for enterprise employees.	✓	✓		✓	✓	✓		
Abdullah, R. M., Alazawi, S. A. H., & Ehkan, P. (2023). SAS-HRM: secure authentication system for human resource management.	✓		✓	✓		✓		✓
Shukur, H. M., Zeebaree, S. R. M., Zebari, R. R., Hussan, B. K., Jader, O. H., & Haji, L. M. (2021). Design and implementation of electronic enterprise university human resource management system.	✓		✓		✓	✓	✓	
Jawad, W. K. (2020). Design and implementation of E-human resource management system for IT company.	✓	✓	✓		✓			

Boon, C., Den Hartog, D. N., & Lepak, D. P. (2019). A systematic review of human resource management systems and their measurement.	✓	✓		✓			✓	✓
Toward developing human resource management systems for knowledge-intensive teamwork.	✓		✓	✓		✓		✓
Chinos, C. (2021). Human resource management systems and the performance of US .		✓		✓	✓		✓	
Rodríguez, J. M., & Ventura, J. (2021). Human resource management systems and organizational performance: an analysis of the Spanish manufacturing industry.	✓		✓		✓	✓		✓
Academia.edu. (2021). Design And Development of Human Resource Information System.			✓	✓	✓	✓		
Academia.edu. (2023). Human Resource Information Management System.	✓	✓	✓		✓		✓	
Academia.edu. (2020). Human Resources Information System for the	✓			✓		✓		✓

University of Cebu.								
Navarro, E. C. (2023). Human Resource Information Management System.		✓		✓	✓			✓	
Zeebaree, S. R., Shukur, H. M., & Hussan, B. K. (2019). Human resource management systems for enterprise organizations: A review.		✓	✓	✓		✓	✓	✓	✓
Ordóñez de Pablos, P. (2023). Human resource management systems and their role in the development of strategic resources: empirical evidence.		✓	✓		✓		✓		✓
Hoch, J. E., & Dulebohn, J. H. (2021). Shared leadership in enterprise resource planning and human resource management system implementation.			✓		✓	✓	✓	✓	
Wood, S. (2023). Human resource management and performance.		✓	✓	✓	✓				
Korff, J., Biemann, T., & Voelpel, S. C. (2020). Human resource management systems and work attitudes: The mediating role of future time perspective.			✓	✓					

Konrad, A. M., Yang, Y., & Maurer, C. C. (2020). Antecedents and outcomes of diversity and equality management systems: An integrated institutional agency and strategic human resource management approach.	✓	✓				✓		✓
Ho, H., & Kuvaas, B. (2020). Human resource management systems, employee well-being, and firm performance from the mutual gains and critical perspectives: The well-being paradox.	✓			✓				✓
Hewage, H. A. S. S., Hettiarachchi, K. U., Jayarathna, K. M. J. B., Hasintha, K. P. C., & Senarathne, A. N. (2020). Smart human resource management system to maximize productivity.				✓	✓	✓		
Cooke, F. L., Dickmann, M., & Parry, E. (2020). Important issues in human resource management: introduction to the 2020 review issue.	✓	✓	✓	✓	✓			

Sanders, K., Nguyen, P. T., Bouckenooghe, D., Rafferty, A. E., & Schwarz, G. (2024). Human resource management system strength in times of crisis.	✓	✓		✓				
Donahue, A. K., Selden, S. C., & Ingraham, P. W. (2021). Measuring government management capacity: A comparative analysis of city human resources management systems.			✓		✓	✓		✓
Martín-Alcázar, F., Romero-Fernández, P. M., & Sánchez-Gardey, G. (2020). Transforming human resource management systems to cope with diversity.	✓	✓		✓				
Silic, M., Marzi, G., Caputo, A., & Bal, P. M. (2020). The effects of a gamified human resource management system on job satisfaction and engagement.	✓		✓				✓	

2.4 Synthesis

The reviewed literature highlights that adopting an advanced Human Resource Management System (HRMS) is no longer just an administrative enhancement but rather a crucial strategic decision for any contemporary organization, including public service agencies like the Zamboanga Puericulture Center. The findings consistently indicate that an effectively designed integrated HR system positively impacts both employee efficiency and satisfaction. By automating routine tasks such as payroll and administrative duties, the system enables staff, including health workers, to lessen their administrative load and focus more on their primary responsibilities, ultimately improving patient care and service provision.

The prevailing agreement among academics sees HRMS as an essential tool for Strategic Human Resource Management (SHRM), allowing the HR function to transition from basic processing to offering data-driven insights for high-level decision-making. Research indicates that integrated systems, as opposed to fragmented practices, are the true catalysts for enhanced productivity and economic success. For the Puericulture Center, this implies that the system must be sufficiently robust to connect all HR functions from recruitment to training and to gather and analyze data on critical metrics, such as turnover and training effectiveness, to guide strategic workforce planning.

The effectiveness of an integrated HR system largely depends on user acceptance and its implementation. Research indicates that a system can only be truly efficient when employees actively utilize it and view it as user-friendly and compatible with their current workflows. Therefore, the Center's initiative must incorporate thorough training and change management tactics to proactively tackle potential challenges such as data security concerns and employee pushback against new technologies. Additionally, the design should be attuned to the distinct local context of the Philippine public sector, merging global technological best practices with local cultural factors and regulatory standards.

Additionally, the HRMS acts as a tool to promote a culture of high performance and innovation. By integrating features such as open performance feedback and efficient communication pathways, the system can encourage employees to take initiative in proposing enhancements and new ideas, which is essential for a flexible public health organization. Research conducted locally in the Philippines also highlights that intentional HR practices, including clear promotion criteria and ongoing professional development, are crucial for shaping

and aligning the work values of Filipino public servants towards professionalism and public service.

The anticipated benefits of adopting the Integrated HR System are evident: it should enhance administrative efficiency, improve data precision, and foster better internal communication, which will ultimately validate the investment in the project. The findings indicate that the real advantage of the system lies in its capacity to convert basic HR data into practical insights that aid in achieving the organization's goals and enhance overall success and service quality.

To sum up, the research presented offers a solid academic basis for the Zamboanga Puericulture Center's initiative, affirming that the integrated HR system ought to be regarded as a strategic resource. Achieving success will depend on making sure the system is technologically advanced, culturally suitable, crafted to optimize strategic advantages, and rolled out with a strong emphasis on user-friendliness and employee buy-in.

CHAPTER III

TECHNICAL BACKGROUND

This project focuses on creating an Integrated Human Resource Management System for the Zamboanga Puericulture Center. Its goal is to make HR tasks easier and lessen the staff's manual work. Instead of using traditional methods, the system provides a simple digital platform for handling profiling, job updates, leave requests, and other HR activities. With this system, the institution can manage its daily operations more smoothly and access employee information more quickly and efficiently.

3.1 Technicalities of the Project

The project is about creating an integrated human resource management system for the Zamboanga Puericulture Center. The goal of the system is to make office work easier and more organized by improving how employee information is managed. It is designed to:

- Automate HR tasks like employee profiles, job records, and leave requests.
- Make office work more efficient by lessening the manual handling of employee data.
- Keep records safe with the use of logins and access levels for different users.
- Put all employee details in one place for easier checking of job roles, departments, and access rights
- Provide better access since both HR staff and employees can use it on computers or Android phones.

3.1.1 System Architecture

The system will use a client-server setup with a web-based design so it can be opened on different devices.

- Front-End (User Interface) - The interface will be built with JavaScript, HTML, and CSS to make it more responsive and easier to use.
- Back-End (Logic & Processing) - PHP will handle the main functions of the system, such as data operation and login security.
- Database - All employee records and activity logs will be stored in MySQL.
- Connectivity - The system can be accessed on computers or Android phones that are connected through the internet.

3.1.2 Core Features

The system includes modules designed for three types of users: Admin, HR, and Employees. Each module provides features based on the users' responsibilities and permissions.

Employee Features

1 View Personal Profile – Allows employees to see their basic information and work-related details in one place.
2 Access Career Path Information – Shows the employee's position history and growth within the institution.
3 Manage Account Settings – Lets employees update their login details and personalize their account.
4 Submit Leave Requests – Provides an easy way to apply for leave using the system instead of manual forms.
5 Check Leave Balances and Status – Employees can view their remaining leave credits and track the status of their requests.
6 View Login History – Helps employees check when they accessed the system for transparency and security.
7 Access 201 File – Allows employees to view their daily time logs and important HR documents.
8 View Official Schedules – Shows the employee's assigned work schedule for better planning and time management.

HR features

- Create Employee Accounts – HR staff can register new employees into the system and provide login access.
- Recommend Leave Requests – HR can evaluate leave applications and forward them for final approval.
- Manage Departments – Allows HR to update department lists and assign employees accordingly.
- Manage Job Titles – Enables HR to organize job titles and update positions when needed.
- View Employee Career Paths – Lets HR monitor an employee's progress, transfers, or promotions within the center.

- Manage Employee Accounts – HR can update or adjust employee information whenever required.
- Manage Scheduling Templates – Helps HR create and update schedules for different departments or shifts.
- View Log History – Allows HR to monitor user actions in the system for security and accountability.
- Manage Employee 201 File / DTR – Lets HR check and update attendance information and important employee details.
- Manage Employee Salary – Provides secure access for HR to adjust or update salary-related information.

Admin Features

- Create System Accounts – Admins can generate accounts for HR and employees to access the platform.
- Create Employee Accounts – Admins may also assist in onboarding by adding new employee accounts.
- Approve or Disapprove Leave Requests – Admins handle the final decision on employee leave applications.
- Manage Departments – Enables admins to organize department structures and ensure they are updated.
- Manage Job Titles – Admins can add or modify job titles used across the institution.
- View Employee Career Paths – Provides visibility to the progression and assignments of employees.
- Activate or Deactivate HR Accounts – Admins can control which HR staff members have access to the system.
- View Login History – Allows admins to track system usage for security monitoring.
- Manage Employee 201 File / DTR – Admins can oversee attendance and important HR documents.
- Manage Employee Salary – Gives admins authority to update salary information when required.
- View Employee Leave Credits – Admins can check the current leave balances of employees.

- View Official Schedules – Lets admins access the schedules for all employees across the institution.

3.2 Details of the Technologies to Be Used

3.2.1 Hardware Technologies

- Computer - Serves as the main server where the system runs and stores data.
- Router & Modem - Provide internet connection so the system can be used across devices.
- Android Phone - Allow both staff and admins to use the system on mobile.

3.2.2 Software Technologies

- PHP (Back-End) - Manages the server-side process and connects the system to the database.
- JavaScript, CSS (bootstrap), and HTML (front-end)—make the interface interactive and user-friendly.
- MySQL (Database) - Keeps employee information, schedules, leave records, and logs safe in storage.

3.3 How the Project Will Work

The Human Resource Management System for Zamboanga Puericulture Center is made to make HR work easier, safer and to avoid errors. It reduces manual tasks by putting everything in one place and giving faster access to data. The system mainly supports employee records, scheduling, leave requests, and secure access for both staff and administrators.

The system works through the following features:

- User Login - Employees and admins can log in using a computer or Android device to use the system safely.
- System Access - Role-based access ensures employees only see their own info, while admins manage the whole system.
- Log History - Every action made in the system is recorded for monitoring and accountability.
- Scheduling & Requests - HR can make department schedules and handle employee or leave requests.

- Data Storage & Security - All information is stored in MySQL with protection and limited access.
- Remote Access - The system can be opened on computers or smartphones with internet connection, giving users flexibility even outside to office.

The anticipated number of individuals who will utilize the Human Resources Management System for the Zamboanga Puericulture Center is approximately 20 users, encompassing HR personnel, an IT specialist, and employees. To assess whether the system functions effectively and fulfills its intended purpose, the researchers will administer a Software Department Questionnaire. This will allow users to evaluate the system based on usability, accuracy, speed, and overall effectiveness. The feedback collected will be instrumental in determining the system's effectiveness and identifying areas that may require enhancements. This approach ensures that the system can comprehensively support the HR responsibilities and daily operations of the center.

In the development phase, the project will adhere to the Software Development Life Cycle (SDLC). This systematic approach will assist the team in creating a system that is dependable, secure, and efficient; while also ensuring it meets the unique HR requirements of the Zamboanga Puericulture Center.

CHAPTER IV
METHODOLOGY

This chapter outlines the development of the ISFZPC Human Resource Management System (HRMS) at the Zamboanga Puericulture Center, detailing the process from planning and requirements gathering to system design, development, and testing. It emphasizes the tools and techniques used to create a functional, reliable, and user-friendly system that aids HR staff in managing tasks effectively and enhancing HR operations within the institution.

4.1 Requirements Analysis

The Integrated System for Zamboanga Puericulture Center, which focuses on Human Resource Management, utilizes the Modified Waterfall Model in the Software Development Life Cycle (SDLC) it provides a linear and structured approach that is suitable for projects with clearly defined requirements.

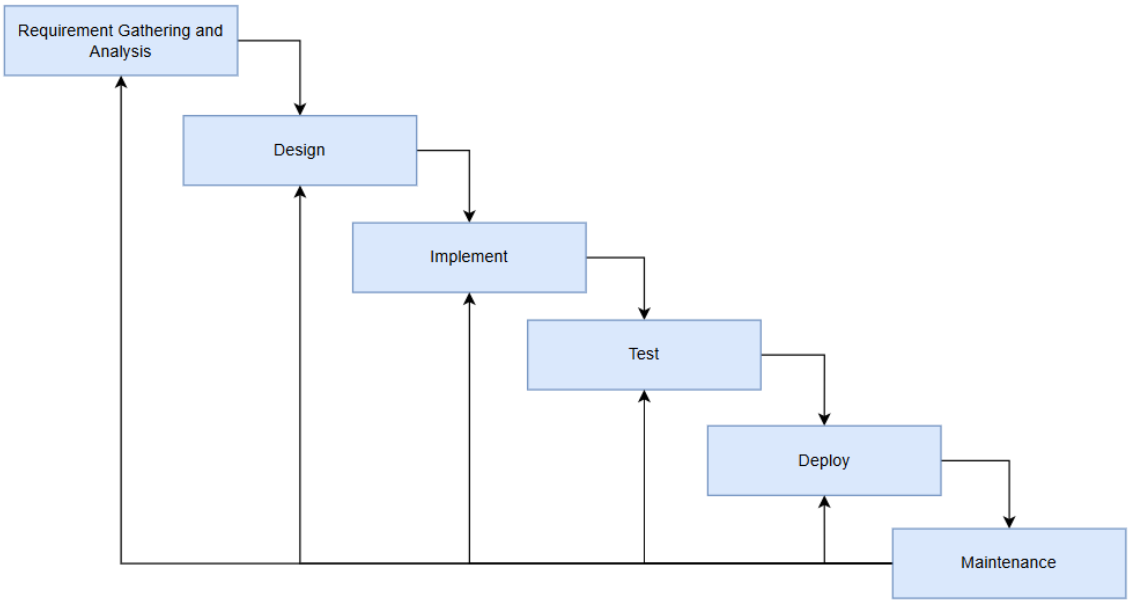

Figure 4.1 Waterfall Model for Integrated System for Zamboanga Puericulture Center: A Human Resource Management

1. Requirements Gathering and Analysis

The initial phase marks the start of everything. The development team collaborates closely with the HR department of the Zamboanga Puericulture Center to discuss the challenges they typically encounter in their manual HR processes. From these discussions, the team noted

the essential features required and drafted brief user stories for guidance. The tasks were prioritized, and the objectives for the cycle were outlined. This step was crucial to ensure that the project was well-defined and truly aligned with the center's needs.

2. Design

The development of the Integrated System for Zamboanga Puericulture Center: Human Resource Management encompasses design, which serves as both the process and the outcome in a project. These systems are developed prior to coding. During this phase, detailed Data Flow Diagrams (DFDs) illustrate how data flows within the system, while Entity Relationship Diagrams (ERDs) depict the structural organization of that data in the database. At this point, your team will outline the user interface (UI), and wireframes will emerge as a visual representation of the solution based on the data collected earlier. There were initial drafts (wireframes and mockups) created to visualize how certain features would appear and function: employee profiles, leave requests, scheduling, and more. This single-page web application was tailored specifically for HR users who are easy to use but not particularly tech-savvy.

3. Implementation

During the implementation stage, the human resource management system for Zamboanga Puericulture Center was created according to the final design. Adopting a modular methodology, front-end developers crafted a clean and responsive user interface using JavaScript, HTML5, and CSS3 (Bootstrap5), while back-end developers utilized vanilla PHP to manage secure logins, data processing, and employee record tracking. Employee data, activity logs, and system transactions are securely stored in a MySQL database. The collaboration between developers and testers facilitated early detection of issues and ongoing enhancements. Overall, the system automates HR functions, ensures efficient data accessibility, and boosts overall reliability and performance.

4.Testing

The testing phase is when the Human Resource Management System for the Zamboanga Puericulture Center is carefully checked to make sure it works properly and is reliable. The process begins with unit testing, where individual components of the system, such as the login feature, employee records, and reports, are evaluated separately to verify their proper functionality. Following this, integration testing is performed to confirm that all components operate together seamlessly. The final stage is system testing, which assesses the entire system

against the specified requirements to ensure everything operates as intended. During this phase, any issues like slow performance, errors, or missing features are identified and corrected. Testing also emphasizes the importance of user-friendliness for administrators, HR personnel, and employees. Input from testers aids developers in enhancing the system's design and code. By the conclusion of this phase, the system is fully operational, dependable, and prepared for real-world use.

5. Deployment

After the system passed all of the test sections, it advanced to release. Deployment occurred incrementally rather than as a final release. The Human Resource Management System was initially launched for a specific group of HR staff at the Zamboanga Puericulture Center, starting with a pilot program involving a limited number of participants. Employees were able to explore the system's features, such as managing employee records and leave, along with scheduling tasks in a testing environment that would not impact operational data. The purpose of this controlled implementation was to gather user input and confirm the usability in actual conditions, as well as to identify potential issues that had not been detected during laboratory assessments. Following each development cycle, updated versions were released to facilitate further testing of new modules and functionalities.

By implementing the changes in stages, we successfully minimized risks, facilitated the adaptation process for HR administrators, and ensured the system remained stable. Once everything operated flawlessly and aligned with the business requirements, the entire system configuration received approval for organization-wide implementation.

6. Maintenance

The maintenance phase guarantees that the Human Resource Management System for the Zamboanga Puericulture Center remains dependable, secure, and responsive to the changing requirements of the organization. When users encounter issues like system failures, interface irregularities, or unforeseen behaviors, developers address and resolve these through corrective maintenance to avoid future occurrences. Additionally, adaptive maintenance is carried out to ensure that the system remains compliant with updated software tools, administrative practices, or organizational policies at the Zamboanga Puericulture Center. Preventative maintenance is also conducted, including backup management, security updates, and database optimization, which can avert potential future problems. We carefully track these updates and integrate them into our

refined development cycles. Throughout the Maintenance Phase, the Human Resource Management System is upheld to ensure it operates reliably and effectively in line with the company's future needs.

4.2 Requirements Documentation

The researchers requested the management of the Zamboanga Puericulture Center for permission to collect data and do both the alpha and beta tests of the Human Resource Management System. Approval was granted by the institution before the study moved forward.

- **Planning** - In the planning stage, the team scheduled meetings with key staff, especially those working in HR, to learn more about their current manual processes. Through this discussion, the researchers were able to identify the problem they faced. Using this information, a step- by-step plan was prepared to guide the design, development, and eventual implementation of the Human resource management system (HRMS).
- **Interview** - The researchers also conducted interviews with the admin, HR staff, and other selected employees of the center. The interviews were done to understand the specific needs of the users, the common issues in their daily work, and what they expected from the new system. The answers provided by the employees became an important basis for deciding what features to include in the HRMS.
- **Survey**- Along with interviews, surveys were also carried out among the HR personnel and other staff members. The survey responses gave details about problems like delays in processing leave requests and difficulties in keeping accurate employee records. These insights helped the researchers identify the essential functions of the HRMS, making sure that the system design directly addressed their actual needs and made their work easier.

4.3 Design of Software, System, Production, and/or Processes

The ISFZPC HRMS has been developed to facilitate ease of use in every HR operation. It makes the management of employee records easier by lessening the error and reduced the workloads, thereby making organization's flow to organized better.

System Design

The ISFZPC HRMS system will emphasize the management of fundamental HR tasks such as employee profiles, leave scheduling, job orders, and departmental rosters. It will serve as a central database that keeps employee records and allows HR professionals to retrieve accurate, up-to-date information whenever necessary. Additionally, the system will include features for managing employment positions, processing leave requests, updating wage records, handling 201 files, personal data sheets (PDS), and tracking user activities. To enhance accessibility, the system will feature an intuitive interface that can be easily managed by administrators, HR staff, and employees. It will be accessible on both web and mobile platforms for employees. This enables employees to conveniently access their HR information while HR personnel can manage operations from a single system. Ultimately, the goal of the Human Resource Management System is to reduce manual tasks, enhance the accuracy of records, and streamline HR processes. By achieving this, the organization can make faster decisions, minimize errors, and foster a more organized HR environment.

4.3.1 Architectural Design

User Layer	Admin 	Hr 	Employee 
Physical Layer			
Application Layer			
Presentation Layer	Human Recourse Management System (Admin Dashboard)	Human Recourse Management System (Hr dashboard)	Human Recourse Management System (Employee Dashboard)
Logical Layer	- Admin can create HR and Employee Account. - Admin Can Approved or reject the Leave Request of the Employee. - Admin can add department and job title. - Admin can deactivate hr and employee Account. - Admin can create schedules. - Admin can manage 201 files of the employees. - Admin can manage	- Hr can create employee account. - Hr can recommend employee leave request to be approved or reject by the admin. - Hr can add department and job title. - Hr can deactivate employee Account. - Hr can create schedules. - Hr can manage 201 files of the employees. - Hr can manage personal information.	- Employee can create account. - Employee can request leave. -Employee can view payslip. - Employee can view Employment history. - Employee can manage personal 201 files - Employee can manage personal information.

	personal information.		
Database Layer	Integrated system for Zamboanga puericulture center: A human resource management		

Figure 4.2 Architectural Design

The Figure 4.3 illustrates how the HRMS is organized in layers and how Admin, HR staff and employees interact with it. Each layer has a function and when combined, they tell us something about how the system operates internally.

The User Layer recognizes the three major users; Admin, HR and Employee who all access the system according to their roles. The physical Layer presents the devices they use (computers, laptops or mobile), and stressed that a system can be deployed on standard hardware. In the middle is the Application Layer, where the HRMS software used by all users resides. Both types of users use the same system, but different functions appear for each user according to their level of access. Presentation Layer -It shows properly dashboard for a Admin role (managing system-wide settings), HR Role (handling employee related work) and Employees (Task of Employee, like check schedule or apply leave).

This Logical Layer defines the actual functions of each role. Admins manage account creation, job and department assignments, approval of leave requests, schedules, as well as 201 files. The HR team can review employee information, update departmental details, approve leave requests and edit employee data. Staff members have the ability to sign up, make leave requests, analyze profiles and change their own details.

4.3.2 Use Case Analysis

The Use Case Analysis help define the interactions between users(Admin, Hr and administration) and the system, ensuring that each user's actions and expected outcome are well-document.

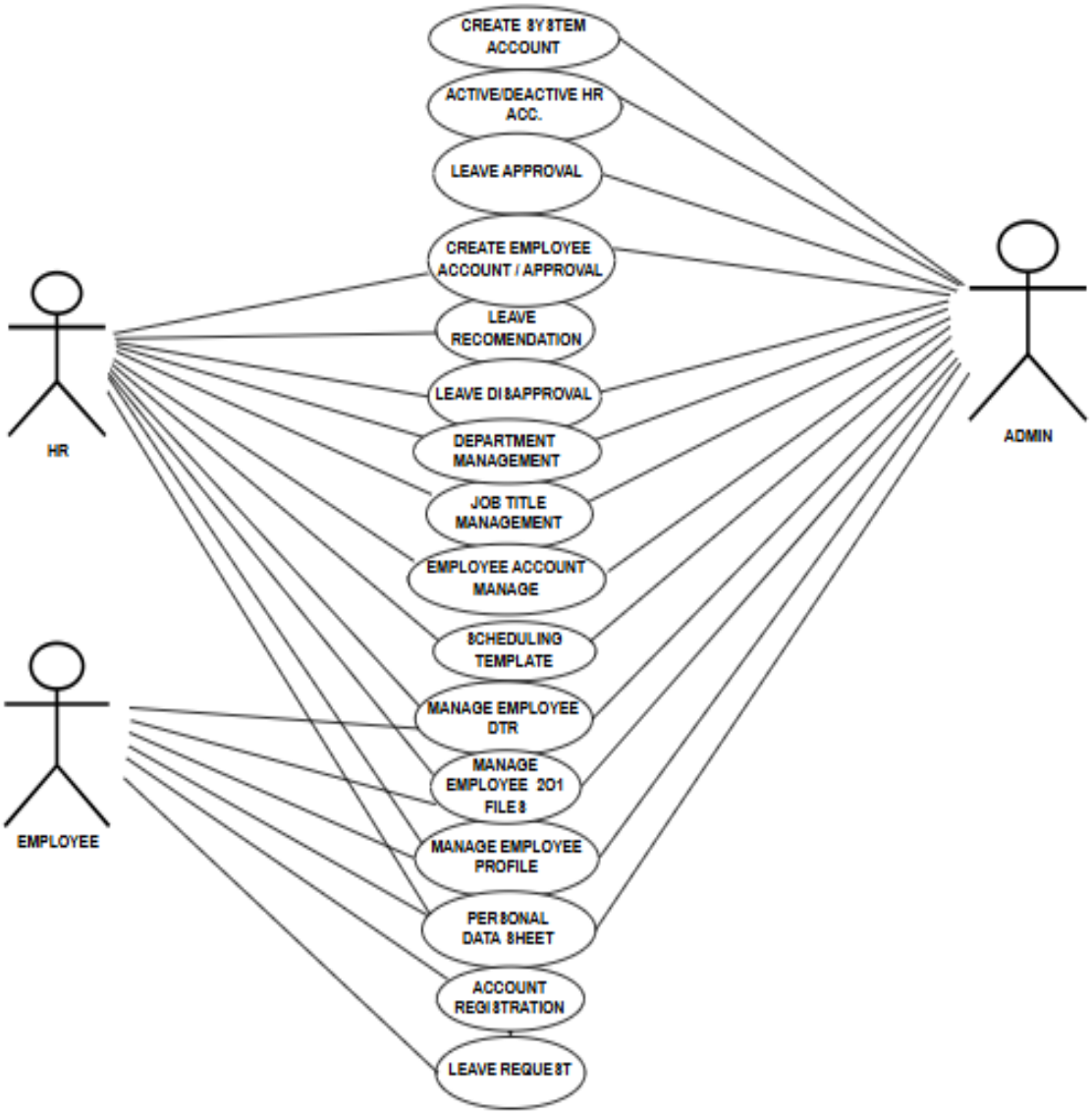

Figure 4.3 Use Case Analysis

The Figure 4.2 illustrates the use that can be made of this system by its users. It concentrates on 3 actors: Admin, HR and Employee. Each of these actors will be assigned roles

inside the system, according to their job in the company. The diagram specifies what sections of the system each user has access to and how different features connect.

Admin Functions Create System Account the Admin can generate new system accounts for an HR personnel or a new admin. Deactivated HR Account If an HR account needs to be deactivated, this is managed by the admin to ensure security and the integrity of access. Leave Approval/Disapproval The admin review the leave requests approved by HR and gives the final decision if required. Department Management Admin can view, edit and delete departments as per company's organization. Job Title Management Admin can manage job titles used across for employee profiles

HR Functions Create an Employee Account. HR is the source of record for new hires and initial account information. Leave Recommendation HR comes to check the leave and give recommendation before it goes to the Admin. Leave Approval/Disapproval HR is often the department that may also approve or deny some leave. Manage Employee DTR HR maintain & update employee DTR for attendance and payroll summaries. Manage Employee 201 Files HR keeps most work-related employee data i.e. documents, history & employment records. Scheduling Template Management HR sets up the scheduling templates that are used to assign shifts or work hours. Manage Employee Profile HR creates employee details like job title and the department they belong to.

Employee Functions Account Registration Employees provide initial details required for their account creation. Personal Data Sheet (PDS) Employee complete or update a personal data sheet that is incorporated into their HR file. Manage Profile (Self-Service) Employee are able to update some personal information, such as contact details. Leave Request The employees raise leave requests and get reviewed by HR and approved or disapproved by the Admin. View DTR Employee check their time worked to ensure it has been recorded correctly. View 201 Files (Limited Access) Employees have the right to see certain parts of their personnel file, but they are not allowed to edit the file that hr and admin insert in employee 201 file

4.3.3 Context Diagram

The Context diagram represents the flow of data within the Integrated System for Zamboanga Puericulture Center (ISFZPC): a human resource management system, illustrating interactions between users and core processes.

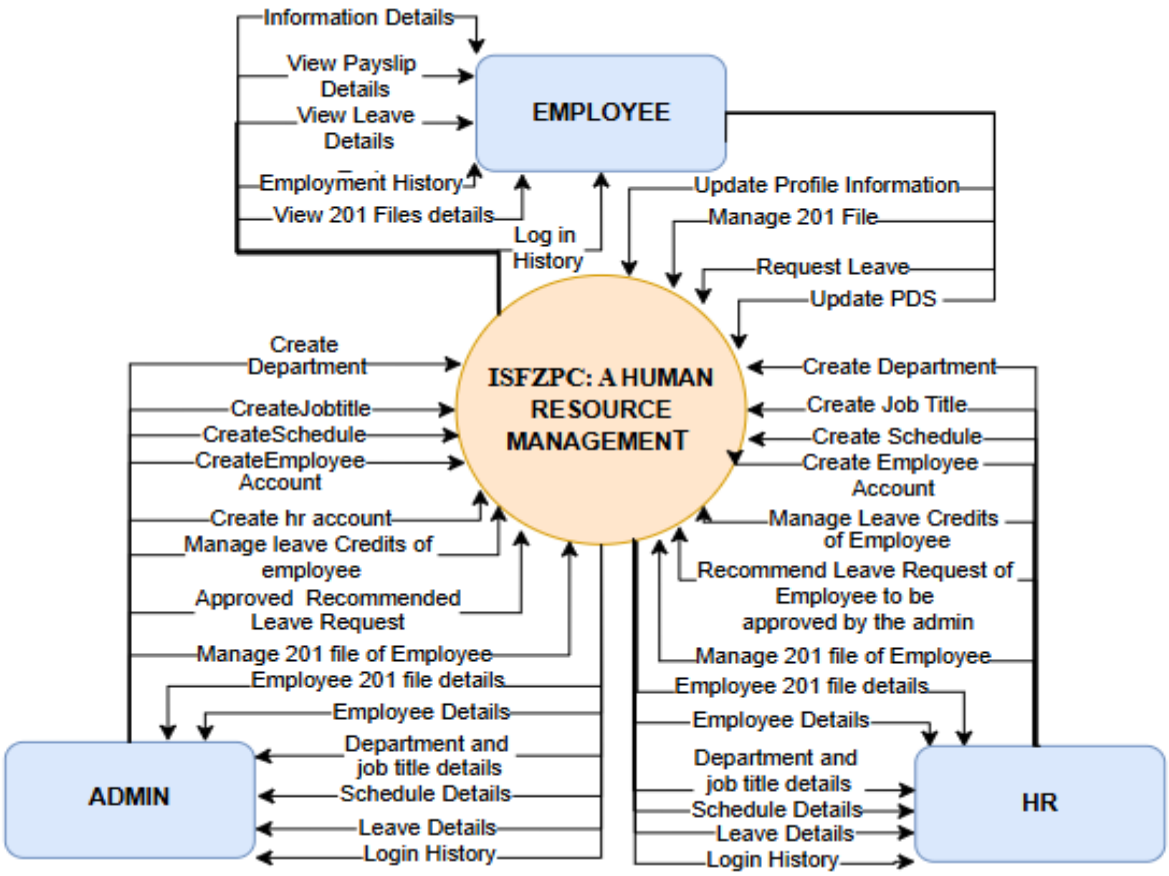

Figure 4.4 Context Diagram

This figure 4.4 illustrates how the three main users HR, Admin, and Employee interact with the fundamental HRMS operations by sending and receiving data to enable employee management, leave processing and record handling. The HRM in the middle of the diagram is core system that manages employee records, accounts, schedules, job titles, departments and leave requests as well as other HR specific information. The admin interfaces with the system through a high level of abstraction by executing input/output of functionalities in creating department, adding job title, schedule creation and registration of employee account, management of leave credits approval or rejection or leave application and updating employees' 201 files. Companies, employee data (staff or dept. & position title) leave personnel information Schedules and logins Everything back to the Admin with the system. The HR user also interacts

with the HRMS to support transactional HR activities. Information would refer to the creation of departments, assignment of job titles, schedule creation and generation employee login accounts as well managing employee leave credits referring leave requests for management consent-approval (consider or endorse to Administrator) and updating or maintaining individual employee 201 files. The system then sends current employee data, department and job title data, leave information, schedule information, and login history to HR personnel. Workers also use the system to do self-service transactions like filing leave, updating their PDS, monitoring their 201 files and profile. The HRMS allows employees to view their own payslip, leave history, 201 files and employment history. It also records their system activity for security and monitoring.

4.3.4 Data Flow Diagram

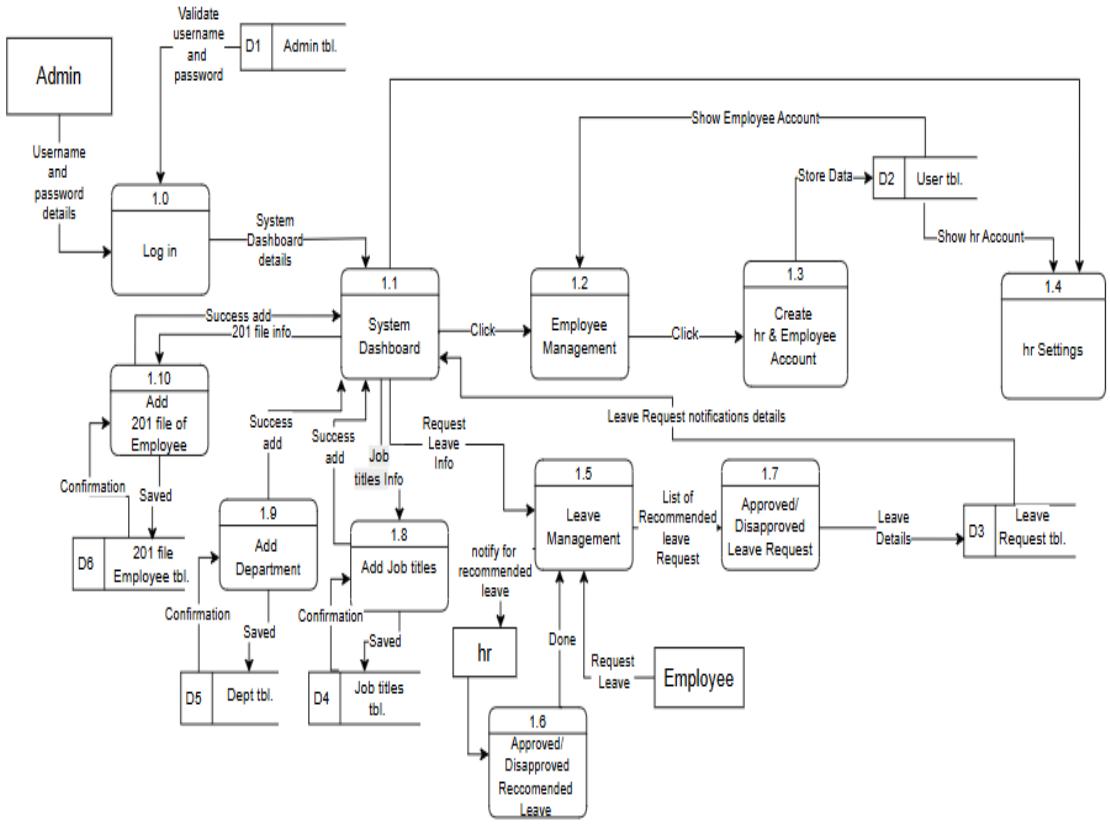

Figure 4.5 DFD Level 1 Admin

The admin data flow diagram level 1 illustrates the details of how a system flows and functions, it helps in distorting the situation as well as enhancing its potential for improvement by highlighting problematic areas; therefore, DFD can serve as an invaluable source of information particularly during the process of designing application. First Steps First, the employee would decide to sign up and this usually involves keying in a user name and password.

The system verifies this and emails a verification code to the employee in order for them to complete registration. Once verified, the employee can sign into their account. Upon login, the employee is routed to the System Dashboard page which allows access to different modules.

From the dashboard, employees can see their employment history and payslip details harvested from some databases -Employment and Payslip. The employee can also go to the Leave Management module for leave balance check and leave records. When an employee applies for leave, the request will be forwarded to the HR officer who reviews and recommends it to the admin. The admin notifies again in the system, and an email is sent out automatically to the employee, letting them know if they leave was accepted or denied.

The 201 File module is also in the diagram. The employees are able to see their 201-file information and HR staff has the ability to enter or update 201 file information via the Input 201 Files process with all data saved in a database table called '201 File'. Profile handling is another design depicted in the DFD. You can see, this employee's information will be updated on the basis of the Employee table.

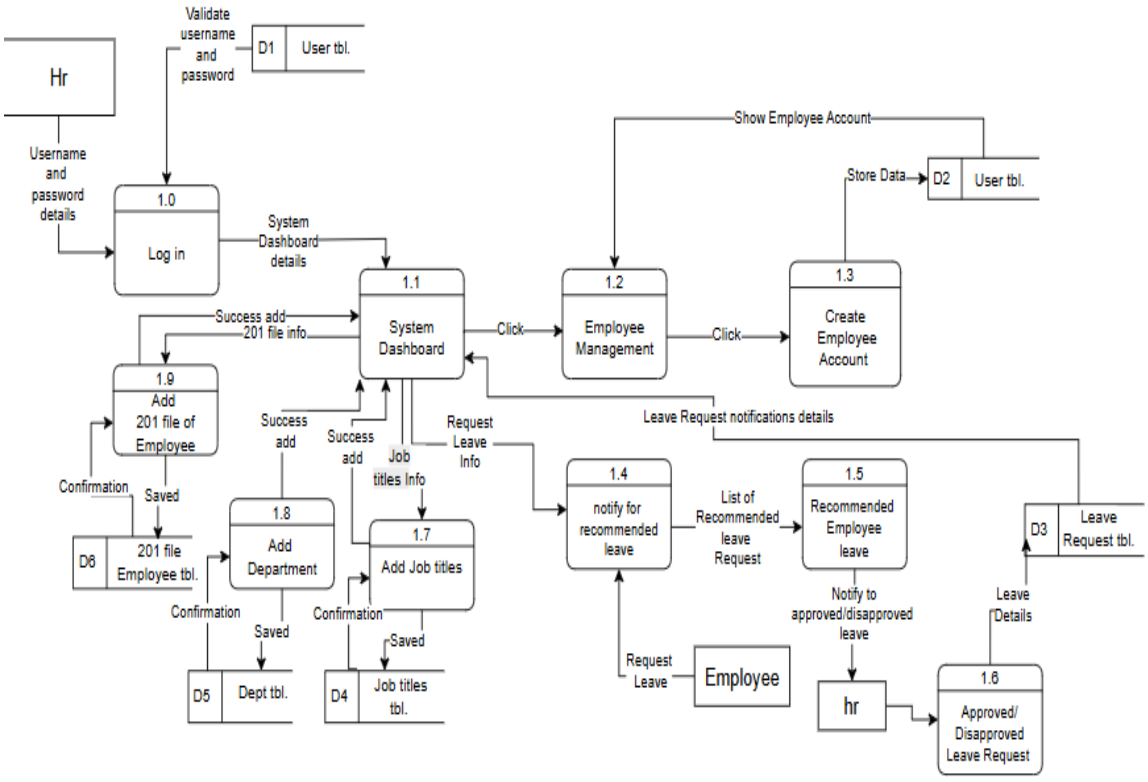

Figure 4.6 DFD Level 1 HR

The figure 4.6 illustrates how the HR user is able to interact with the Human Resource Management System (HRMS) to manage employee information, accounts, job titles, departments, and leave requests. The process begins with the HR user signing in by providing a username and password, which are checked to be valid from the user table. After logging in, the HR user is directed to the System Dashboard, through which they should be able to access all the key features of your system. From the dashboard, the HR user is able to access the Employee Management module. In this module HR users have the option to update employee details, like adding 201 file information, title position, and department. Every operation executed on this module is recorded in the respective database tables, the Employee Table, Job Titles Table, and Department Table. Once the updates are saved by the system successfully, messages will be returned to the Dashboard that will respond with these confirmation messages to HR users, which indicates that the data is updated. HR users are also able to establish new employee accounts by using the Create Employee Account process. On adding the new employee's credentials, this data is stored in the User Table, and a list of employees accounts is shown again. This allows account creation and maintenance to be organized and accessible.

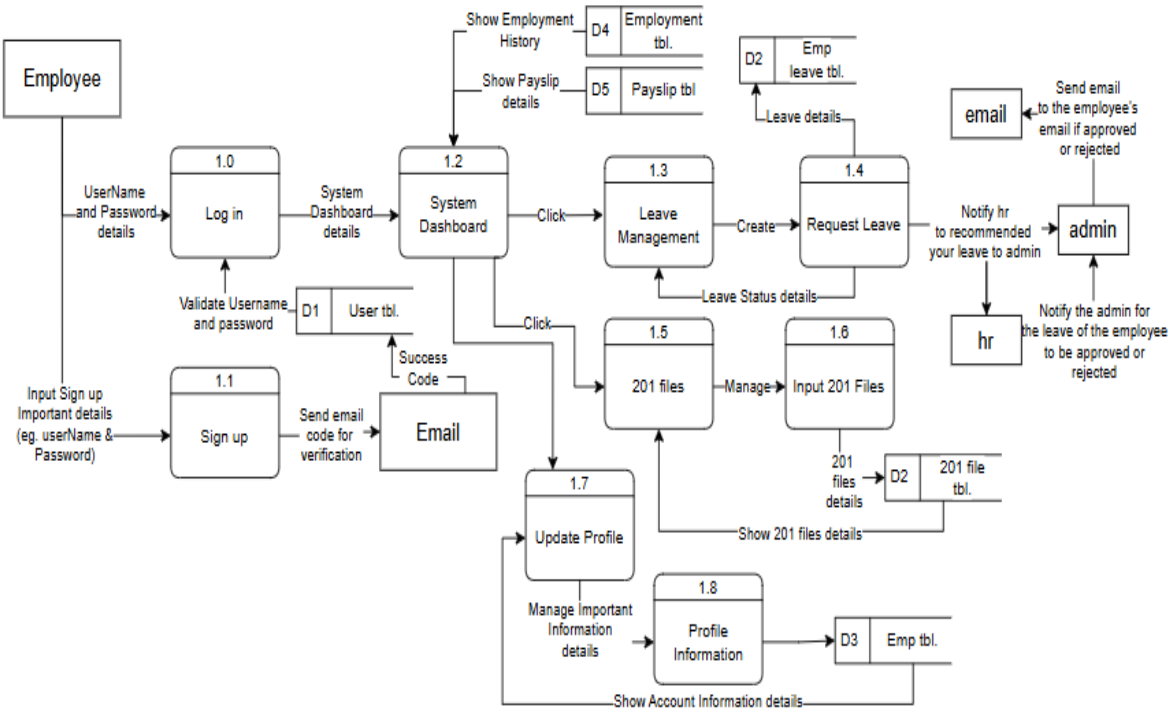

Figure 4.7 DFD Level 1 Employee

This figure 4.7 lustrates how employee records in the Human Resource Management System (HRMS) for login, profile, leave request, payslip, and 201 files are being interlinked. First, the user registers with his credentials, such as username and password. The system checks the data and sends a validation code in email to the employee's address for confirmation of registration. On successful verification, the employee can be signed in using the credentials. When logged in, a user is taken to the System Dashboard, where they are presented with various available modules.

From the dashboard, employees can also get their previous employment history and payslip details by fetching data from the Employment and Payslip tables. Employees can also go to the Leave Management module if they want to see leave balances and manage leave history. So, when an employee applies for leave, it sends the request to HR, and if he/she is granting the leave, then that person's recommendations are sent to admin. The notification is then sent back to the admin, and an email is triggered to the employee letting them know if their leave request was approved or declined.

The 201 File module is listed in the diagram as well. Staff can view their 201 file, and HR staff members are able to enter or update 201 file information via the Input 201 Files process, which holds all data in its database table. "Profile management" is another capability illustrated in the DFD. Your staff can easily modify their own contact details in the Update Profile and Profile Information software, with it automatically updated on downloaded data in the Employee Table.

4.3.5 Entity Relationship Diagram

The Entity Relationship Diagram (ERD) defines the database structure, identifying key entities and relationship within the Integrated system for Zamboanga puericulture center:

A human resource management. The ERD provides a blueprint for organizing data, ensuring efficient storage, retrieval and scalability.

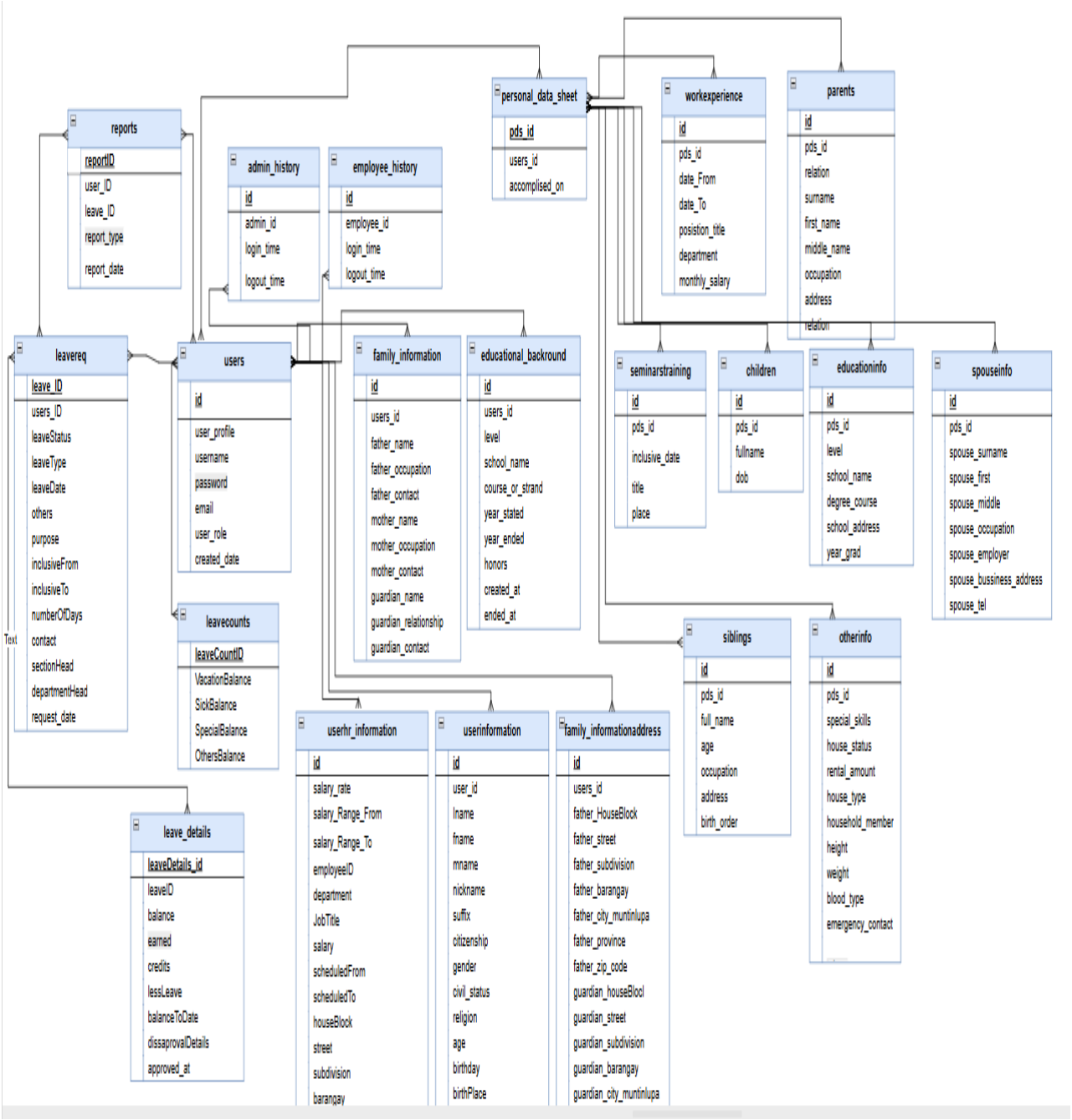

Figure 4.8 Entity Relationship Diagram in Database

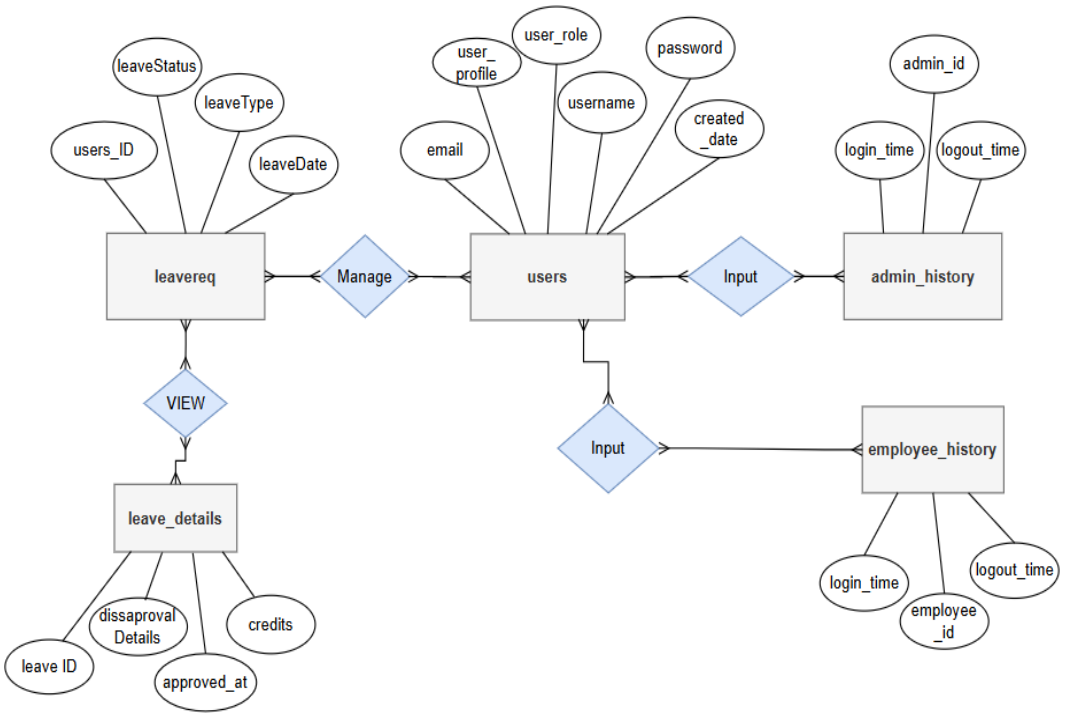

Figure 4.9 Entity Relationship Diagram

The Entity-Relationship Diagram (ERD) illustrate the structure where we observe the model with users, leave transactions and system activities. All the user-all account information such username, password, email, profile and user role are properties of instances of this model. This UI interfaces with system functionality such as leave management and activities logging. Leaves Request- A form that keeps track of all leaves requested by any employee and the type of leave, status (requested, approved etc.), date the leave is on (when it starts) and who applied for the leave. Backed by the Leave Details entity gives more information like approval time stamp, disapproval comments and leave credits so as to be able for an administrator to review correctly. Systems monitoring performed by 2 distinct transactions, Admin History and Employee History only allow access to login/logouts based on user role. These logs act as a deterrent, in that they can provide an accountability record for individuals who may be tempted to misuse the system and also as a means to trace access to the system. The ERD also possess dependent entity (View) and input processes that support the transfer of data between entities.

4.4 Development and Testing

The development and testing phase played an important role in ensuring that the Integrated Human Resource Management System for the Zamboanga Puericulture Center could meet its functional requirements, operational needs, and usability expectations. During development, the focus was on transforming the approved system design into a fully working application. This involved creating individual modules, integrating essential features, and establishing smooth system workflow. The process began with preparing the development environment, followed by designing user interfaces and connecting the system to a centralized database that supports employee information, leave requests, job assignments, and scheduling functions.

The system was developed using a PHP-based framework. Core modules such as employee management, user accounts, activity logs, job tracking, scheduling, and leave processing were built and integrated into a single database. Throughout development, adjustments were made to the code structure to improve clarity and prevent conflicts between modules. Version control tools were used to monitor changes, address errors, and restore previous versions when necessary. Although challenges such as function adjustments, validation issues, and data flow inconsistencies were encountered, the development team ensured that the system remained stable and well organized.

After completing the development phase, system testing was conducted to evaluate the reliability, accuracy, and responsiveness of the HR system. Functional testing verified that all features operated as intended, while non-functional testing focused on performance, security, and user experience. Beta testing was then carried out to assess how the system performed in a real working environment.

Beta testing involved actual end users, including employees, HR personnel, and the system administrator. Participants used the system to perform routine tasks such as creating and updating employee profiles, submitting and reviewing leave requests, managing job roles and schedules, and checking activity logs. Their feedback helped identify usability concerns, workflow issues, and areas that needed improvement.

The input provided by HR personnel and administrators was especially valuable in refining system functions and ensuring that workflow aligned with the real operational needs of the Zamboanga Puericulture Center. After addressing the reported concerns and applying

necessary enhancements, the system reached its final version and was prepared for deployment. This development and beta testing process ensured that the integrated HR system is reliable, user-friendly, and capable of effectively supporting the institution's human resource management activities.

4.4.1 Research/Capstone Project Team

This section details the roles and responsibilities of each member involved in the project. The team is structured around key positions, including the Project Manager/Systems Analyst (PM/SA), Software Engineer/Programmer (SE/P), Data Analyst/Technical Writer (DA/TW), and Quality Assurance (QA). Each member contributes significantly to the project's overall success through their assigned tasks.

1. Hero Pastor takes on the role of (PM, SA, and QA.)
    - He overseeing project planning and development, ensuring that all system components function cohesively and meet the project's objectives. Also assists in quality assurance by reviewing system functions and identifying areas for improvement.
2. Marco Jean Pagotaisidro covers (SE, P, PM, and QA) duties.
    - He focusses on system development and coding work. incorporating features to enhance functionality and maintain system performance. Responsible for quality assurance to ensure the system meets technical requirements.
3. Jaihana Hanani works as (DA and TW)
    - She processes raw data into insights that support the capstone's findings, conclusions and recommendations; compiles comprehensive documentation and final project reports.
4. Rhina Jane Milano focuses on (SA, DA, and TW) tasks.
    - She processes system analysis to ensure that all functionalities meet requirements, evaluates test results to identify issues, and prepares all written documentation, including reports and technical descriptions.

4.4.2 Project Work Plan

A project work plan was created to organized into multiple tasks each assigned a specific duration.

Table 4.1: Project Work Plan

Task ID	Task Name	Assigned to	Estimated		
			Duration (Hours)	Start Date	Finish Date
1	Requirement Phase	Pastor Pagotaisidro Hanina Milano	55	March 2025	April 2025
2	Design Phase	Pagotaisidro Milano	70	April 2025	May 2025
3	Document	Pastor Hanina Milano	210	March 2025	September 2025
4	Development Phase	Pagotaisidro	150	April 2025	September 2025
5	Testing Phase	Pastor Pagotaisidro Hanina Milano	40	May 2025	September 2025
5.1	Debugging	Pagotaisidro	30	July 2025	September 2025

4.4.3 Testing Plan

This testing plan puts things in place so the Integrated Human Resource Management System, or HRMS, at the Zamboanga Puericulture Center runs the way it should. It handles operations correctly, keeps everything secure, and stays consistent for administrators, HR and employees who use it day to day. The plan goes over unit testing, integration testing, system testing, and user acceptance testing in detail. Those steps help find and fix problems tied to data processing, record management, access control, and user interactions right from the start of development. Every phase in the testing brings out key quality aspects like functionality, performance, security, and usability. All of that makes sure the system lines up with what the organization requires. It supports HR work smoothly and follows institutional policies along with data privacy standards pretty much to the letter.

Table: 4.2 Testing Plan

Stage	Types of Tests	Description	When to Use
Unit Testing	Functionality Testing	Check individual features such as employee profiling, account creation, department management, job title updating, leave request filing, and schedule assignment.	While developing each module or system component.
Unit Testing	Logic and Validation Testing	Verify rules for leave calculations, approval workflows, account status changes, required fields, input formats, and data validation in forms.	After implementing core logic for leave processing, user management, and form validation.
Unit Testing	UI Responsiveness Testing	Test buttons, forms, navigation menus, tables, and modal dialogs to confirm that the interface works properly across devices and screen sizes.	After completing the UI for a module and before integrating it with other components.
Integration Testing	Authentication and Access Control Testing	Test login, logout, password recovery, role-based access, and session handling for Admin, HR, and Employees.	After integrating the authentication module with the system's user roles.
Integration Testing	Database and API Integration Testing	Verify that employee records, leave requests, schedules, job titles, and logs are properly stored, updated, and retrieved from the centralized database.	When modules begin saving and loading data to the HRMS database.
Integration Testing	Role and Dashboard Testing	Ensure that HR, Admin, and Employee dashboards show correct information (e.g., pending leaves, employee lists, job updates), and that each role can only access authorized features.	After implementing dashboard designs and role-specific functionalities.
System Testing	Security Testing	Assess system protection by confirming that unauthorized users cannot access confidential HR data and that sensitive records remain secure.	After integration is stable and before live testing in the organization.
System Testing	Performance and Reliability Testing	Measure load times for employee lists, leave processing, and report generation; test response time during simultaneous access by multiple HR staff or employees.	Before pilot deployment and during major system updates.
System	Feature	Check that all planned HRMS	After all modules

Testing	Verification Testing	components (profiling, scheduling, leave management, job title management, log history, account activation/deactivation) work together smoothly.	and integrations are completed.
Acceptance Testing	HR Staff User Acceptance Testing	Allow HR personnel to use the system for real tasks updating employee records, processing leaves, adjusting schedules and gather structured feedback.	During pilot implementation at Zamboanga Puericulture Center.
Acceptance Testing	Admin User Acceptance Testing	Enable Admin users to test system-wide controls such as account creation, deactivation, department and job title management, and log monitoring.	Alongside HR staff UAT during the pilot run.
Acceptance Testing	Employee User Acceptance Testing	Allow selected employees to update profiles, file leave requests, and view schedules; collect feedback on clarity, usability, and convenience.	During the same pilot phase with HR and admin testers.

4.4.4 Analysis Approach

The analysis approach section outlines the methods used to evaluate the usability of the system during the testing phases. The Post-Study System Usability Questionnaire (PSSUQ) is a standardized usability evaluation tool developed by IBM to measure users' perceived satisfaction after interacting with a system. It uses a 7-point Likert scale (1- strongly agree to 7- strongly disagree), where lower scores indicate better usability and higher user satisfaction.

Table 4.3 PSSUQ questionnaire

PSSUQ	1	2	3	4	5	6	7	N. A
1. Overall, I am satisfied with how easy it is to use this system.								
2. It was simple to use this system.								
3. I was able to complete the tasks and scenarios quickly using this system.								
4. I felt comfortable using this system.								
5. It was easy to learn to use this system.								
6. I believe I could become productive quickly using this system.								
7. The system gave error messages that clearly told me how to fix problems.								

8. Whenever I made a mistake using the system, I could recover easily and quickly.								
9. The information (such as online help, onscreen messages, and other documentation) provided with this system was clear.								
10. It was easy to find the information I needed								
11. The information was effective in helping me complete the tasks and scenarios.								
12. The organization of information on the system screens was clear.								
13. The interface of this system was pleasant.								
14. I liked using the interface of this system.								
15. This system has all the functions and capabilities I expect it to have.								
16. Overall, I am satisfied with this system.								

Source: Adapted from IBM Post-Study System Usability Questionnaire (PSSUQ) as present by UI/UX Trend.

The study's PSSUQ questionnaire items, which cover topics like overall satisfaction, system usefulness, ease of use, efficiency, learnability, and information quality, are shown in Table 4.3. Based on their actual experience with the system, respondents were asked to choose the rating that most accurately reflected how much they agreed with each statement.

Table 4.4 Specification of PSSUQ Questionnaire

Dimension	**Description**	**Item Numbers**
System Usefulness (SYSUSE)	Measures ease to use, efficiency, and effectiveness of the system	1-6
Information Quality (INFOQUAL)	Measures clarity, helpfulness, and organization of information provided by the system	7-12
Information Quality (INFOQUAL)	Evaluates the user interface design, layout, and ease of interaction	13-16
Overall Satisfaction	Represents the user's overall perception and satisfaction with the system	1-16

The dimensions and structure of the Post-Study System Usability Questionnaire (PSSUQ) are shown in Table 4.4. The table lists the main criteria system usefulness, information quality, interface quality, and overall satisfaction that are used to evaluate system usability. Overall satisfaction, which represents the users' overall opinion and degree of satisfaction with the system following use, is also included in the table. This specification guarantees a thorough evaluation of user experience and system performance.

4.4.5 System Testing

We carried out system testing for the Integrated Human Resource Management System at the Zamboanga Puericulture Center with active the participants (1) administrator, (2) HR personnel, and ten employees. The proponents reviewed all the feedback from the users. They identified system limitations, usability issues, and areas that required improvements.

Whenever challenges during testing, adjustments were made to the system. These modifications were intended to enhance accuracy, increase performance, and elevate user satisfaction overall. The proponent gathered data from a diverse group of individuals, including the HR personnel, administrators, and employees. This process helps deepen the proponents' understanding of the system's intended users.

This shows a Scale Rating of the responses in the study are mapped into a numerical scale. The scale rates a 1 to 3 **Strongly Agree**, 4 to 5 is **Neutral**, and 6 to 7 is **Strongly Disagree.** This allows respondents to indicate on how they strongly agree or strongly disagree to the platform with a variety of statements about the platform's usability. It's simple and easy to capture the respondents' feelings and the perceptions, making it easy to analyze the overall usability based on their feedbacks of the platform.

Table 4.5 Testing Respondents Score

Respondents	PSSUQ Questionnaire Respondents Score															
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
1	1	1	1	1	1	2	1	1	2	2	2	2	2	2	2	2
2	2	2	1	2	1	2	2	1	1	1	1	2	1	2	1	1
3	1	1	1	1	1	2	1	1	2	1	1	1	1	1	2	1
4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	2
5	1	1	5	2	2	1	3	2	2	2	4	2	2	2	2	2
6	1	2	2	2	1	2	2	2	2	1	2	1	2	2	2	1
7	1	1	3	2	1	2	2	2	1	1	2	1	2	1	2	1
8	1	2	3	1	1	2	3	2	2	1	2	1	1	1	2	1
9	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1
10	1	1	2	1	1	1	1	1	1	2	1	1	1	2	1	2
11	1	1	2	1	1	2	1	2	1	1	1	1	1	2	1	1
12	1	1	2	1	1	2	1	1	2	1	1	1	2	2	1	1
13	1	2	1	2	2	2	3	2	2	1	2	2	3	1	1	2
14	1	2	1	2	2	2	1	2	2	1	2	2	2	2	1	1
15	1	1	2	1	1	1	1	2	1	2	1	1	1	2	2	2

The table 4.5 present the feedback from 15 participants regarding 16 items of the PSSUQ (Q1–Q16) collected during the Beta Testing stage of the created platform. Analyzing these results suggests that the system exhibited a high degree of usability, with the majority of responses falling between 1 and 2 on the 7-point Likert scale, reflecting strong agreement with the usability statements. This observation indicates that users regarded the platform as beneficial, straightforward to learn, and effective to utilize, which reflects positive assessments within the System Usefulness (SYSUSE) category. Moreover, the consistently low scores for items related to Information Quality (INFOQUAL) suggest that the system delivered clear, precise, and adequate information to assist users in their tasks. Regarding Interface Quality (INTERQUAL), the positive feedback indicates that the design, navigation, and overall interface were well-structured and user-friendly. All in all, the findings presented in the table verify that the platform successfully met user expectations for usability and performed admirably across all PSSUQ dimensions during the Beta Testing phase.

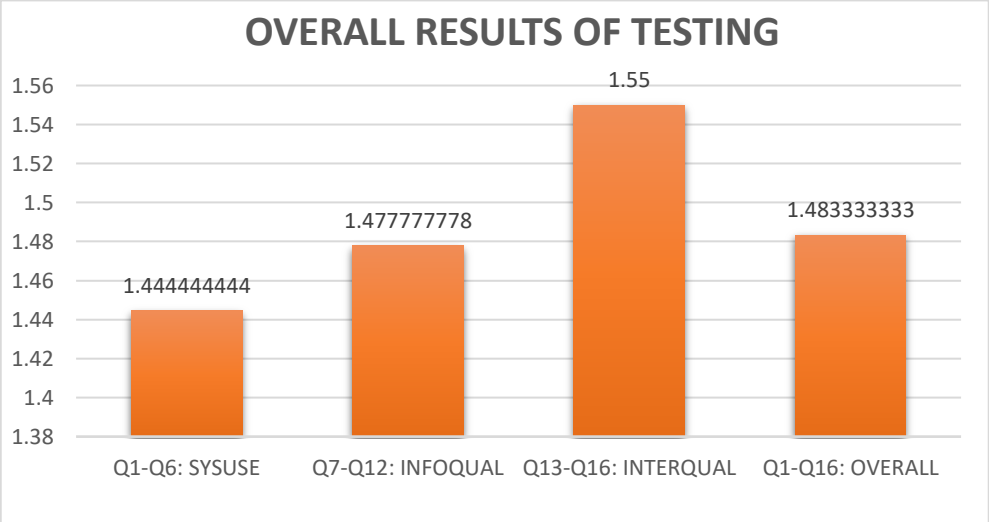

Figure 4.10 Overall Results of Testing (Q1-Q16)

This figure 4.10 present the average mean scores from the overall Testing results based on the PSSUQ questionnaire, categorized by its three dimensions of usability and the overall system score. The first bar indicates System Usefulness (SYSUSE), which includes items Q1 through Q6, and reveals an average mean score of 1.44. This score is positioned within the strongly agree category, suggesting that participants viewed the system as user-friendly, effective, and conducive to completing tasks. The second bar represents Information Quality (INFOQUAL), encompassing items Q7 to Q12, and similarly shows a mean score within the

strongly agree category, indicating that users considered the information offered by the system to be clear, precise, and beneficial. The third bar illustrates Interface Quality (INTERQUAL), which is calculated from items Q13 to Q16, with an average score of 1.55. This score also reflects strong agreement and implies favorable user perceptions of the system's interface design and interaction flow. The total PSSUQ score, derived from items Q1 to Q16, resulted in an average of 1.48, which further reinforces strong consensus across all usability aspects. In summary, the data presented in the bar graph demonstrate that the developed platform achieved a high usability level during the Testing phase, evidenced by consistently low mean scores across SYSUSE, INFOQUAL, INTERQUAL, and the overall evaluation

Table 4.6 PSSUQ Questionnaire Score and average mean (SYSUSE)

Respondent	PSSUQ Questionnaire Score (SYSUSE)						Score
	Q1	Q2	Q3	Q4	Q5	Q6	
1	1	1	1	1	1	2	7
2	2	2	1	2	1	2	10
3	1	1	1	1	1	2	7
4	1	1	1	1	1	1	6
5	1	1	5	2	2	1	12
6	1	2	2	2	1	2	10
7	1	1	3	2	1	2	10
8	1	2	3	1	1	2	10
9	1	1	2	1	1	2	8
10	1	1	2	1	1	1	7
11	1	1	2	1	1	2	8
12	1	1	2	1	1	2	8
13	1	2	1	2	2	2	10
14	1	2	1	2	2	2	10
15	1	1	2	1	1	1	7
					Overall Score:		130
					Average Mean:		1.4444444

The table displays the System Usefulness (SYSUSE) outcomes from the PSSUQ during the A Testing phase, focusing on items Q1 to Q6 for 15 participants. Each participant's score was calculated by adding their answers to the six SYSUSE items, leading to a total score of 130 across all participants. By dividing this total by the number of responses, the average mean score of 1.44 was obtained, which is situated in the strongly agree category of the 7-point Likert scale. This outcome suggests that the participants were in strong agreement with the aspects related to the system's usefulness, ease of use, and efficiency. The consistently low scores from Q1 to Q6 indicate that users successfully completed tasks with little difficulty while using the system. In general, the SYSUSE findings show that the platform excelled in terms of system usefulness during the Testing stage.

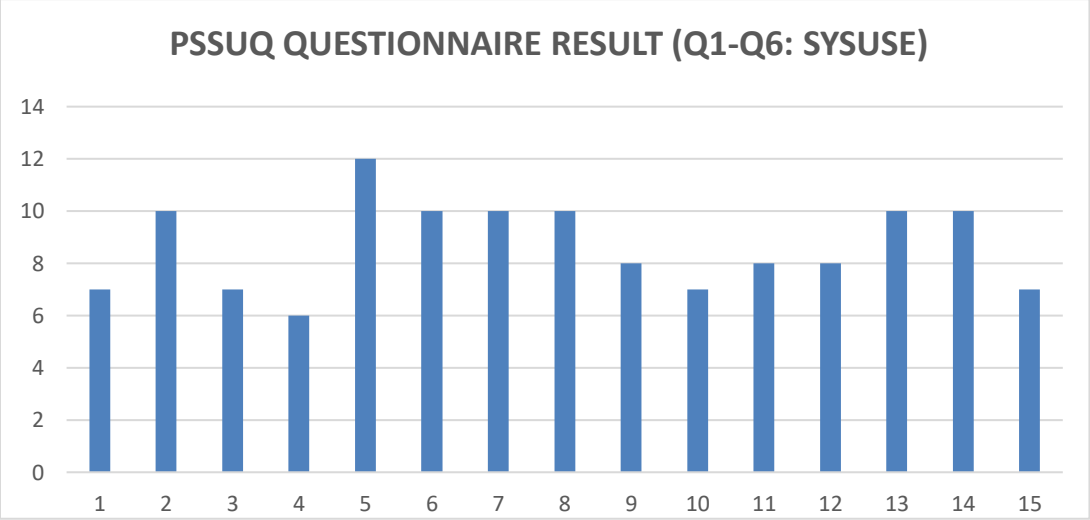

Figure 4.11 SYSUSE scores of the PSSUQ

The figure 4.11 illustrates the System Usefulness (SYSUSE) scores of the PSSUQ during the Beta Testing phase for each of the 15 respondents. Each bar represents the total SYSUSE score obtained by summing responses to items Q1 to Q6 for an individual respondent. The scores range from 6 to 12, with most respondents obtaining relatively low total scores, indicating positive usability perceptions. Lower SYSUSE scores reflect stronger agreement with statements related to ease of use, efficiency, and system effectiveness. The consistency of the bars, with no extremely high values, suggests that respondents had generally similar and favorable experiences when using the system. These results support the computed overall SYSUSE average mean of 1.44, which falls within the strongly agree range of the 7-point Likert scale. Overall, the bar graph

confirms that the developed platform demonstrated strong system usefulness and usability during the Testing phase.

Table 4.7 PSSUQ Questionnaire Score and average mean (INFOQUAL)

Respondent	PSSUQ Questionnaire Score (INFOQUAL)						Score
	Q7	Q8	Q9	Q10	Q11	Q12	
1	1	1	2	2	2	2	10
2	2	1	1	1	1	2	8
3	1	1	2	1	1	1	7
4	1	1	1	1	1	1	6
5	3	2	2	2	4	2	15
6	2	2	2	1	2	1	10
7	2	2	1	1	2	1	9
8	3	2	2	1	2	1	11
9	1	1	1	1	1	1	6
10	1	1	1	2	1	1	7
11	1	2	1	1	1	1	7
12	1	1	2	1	1	1	7
13	3	2	2	1	2	2	12
14	1	2	2	1	2	2	10
15	1	2	1	2	1	1	8
					Overall Score		133
					Average Mean:		1.4777778

The table displays the INFOQUAL results from the PSSUQ during the Testing phase, focusing on items Q7 to Q12 for 15 participants. The INFOQUAL score for each participant was calculated by adding their responses to the six items, resulting in a total score of 133 for all participants combined. This produced an average mean score of 1.47, which is categorized within the strongly agree section of the 7-point Likert scale, suggesting that participants strongly endorsed the statements regarding the quality of information provided by the system. The consistently low scores indicate that users found the information to be clear, accurate, and adequate for completing their tasks. The accompanying bar graph illustrates the individual INFOQUAL scores of each participant, highlighting that the majority of values are grouped towards the lower end of the scale, without any significant outliers. This uniformity among respondents reflects a generally positive and consistent view of the system's information quality. In summary, both the table and bar graph demonstrate that the platform excelled in Information Quality during the Testing phase.

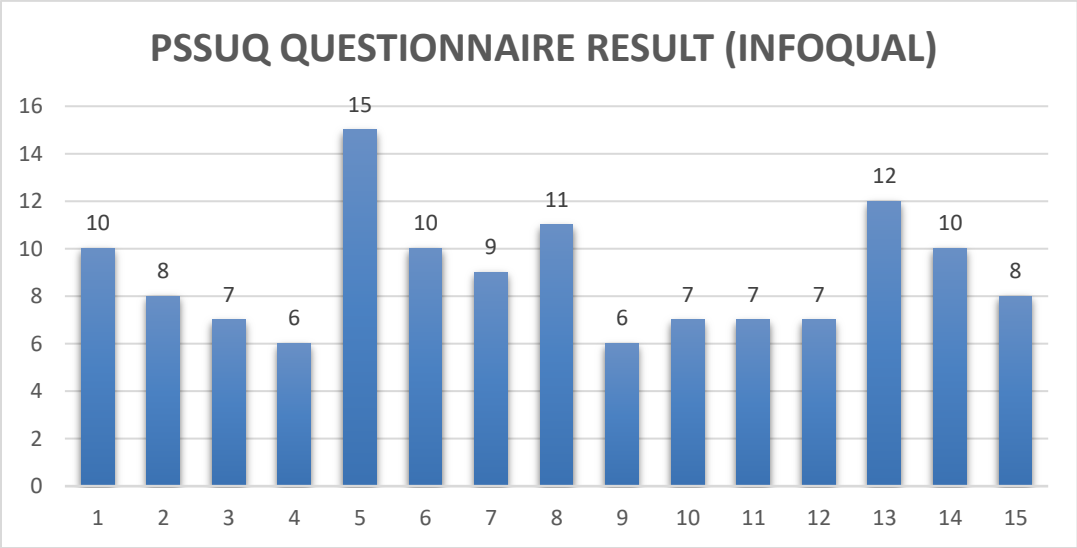

Figure 4.12 Information Quality (INFOQUAL) score

The Figure 4.12 for Information Quality (INFOQUAL) illustrates the aggregated scores of items Q7 through Q12 for each of the 15 participants during the Testing phase. Each bar reflects the total INFOQUAL score of an individual respondent, facilitating a straightforward comparison of their views on the clarity, accuracy, and usefulness of the information provided by the system. The bars predominantly display low score values, with the majority of respondents scoring between 6 and 11, suggesting a strong consensus with the INFOQUAL statements. A limited number of participants showed marginally higher scores; nevertheless, these results remain within the acceptable limits and do not signal negative views. The lack of extreme or widely varied values indicates that respondents had uniform experiences while using the system's information features. This visual pattern reinforces the calculated average mean score of 1.47, which lies within the strongly agree category, validating that the system provided high-quality information throughout the Testing phase.

Table 4.8 PSSUQ Questionnaire Score and average mean (INFOQUAL)

Respondent	PSSUQ Questionnaire Score (INTERQUAL)				Score
	Q13	Q14	Q15	Q16	
1	2	2	2	2	8
2	1	2	1	1	5
3	1	1	2	1	5
4	1	1	4	2	8
5	2	2	2	2	8
6	2	2	2	1	7
7	2	1	2	1	6
8	1	1	2	1	5
9	1	1	1	1	4
10	1	2	1	2	6
11	1	2	1	1	5
12	2	2	1	1	6
13	3	1	1	2	7
14	2	2	1	1	6
15	1	2	2	2	7
			Overall Score:		130
			Average Mean:		1.4444444

The table displays the results of Interface Quality (INTERQUAL) from the PSSUQ during the Alpha Testing phase, focusing on items Q13 to Q16 for 15 participants. The INTERQUAL score for each participant was calculated by totaling their responses to the four items, leading to an overall score of 93 for all participants combined. This resulted in an average mean score of 1.55, which lies within the strongly agree category of the 7-point Likert scale, signifying that participants strongly agreed with the statements regarding the system's interface quality. The consistently low scores across the items indicate that users viewed the interface as visually clear, well-organized, and easy to navigate. The accompanying bar graph represents the individual INTERQUAL scores of each participant, with scores typically ranging from 4 to 8. The majority of the bars cluster at the lower end of the scale, indicating little variation among participants and reflecting consistently favorable feedback about the interface design. The lack of extreme scores further reinforces the idea that the system's interface offered a seamless and user-friendly experience. In summary, both the table and the bar graph validate that the platform excelled in interface quality during the Testing phase.

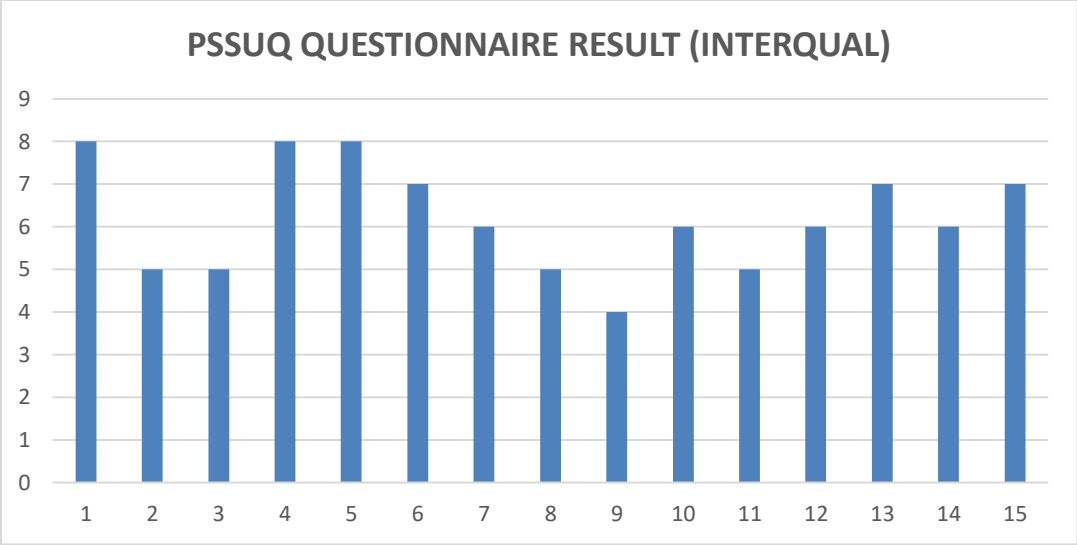

Figure 4.13 Information Quality (INFOQUAL)

The bar chart illustrates the INTERQUAL scores of the 15 participants during the Alpha Testing phase, indicating the total of their ratings for items Q13 to Q16. Each individual respondent is represented along the horizontal axis, while the vertical axis shows their cumulative score, which typically falls between 4 and 8. The chart indicates that the majority of respondents provided low scores on the scale, reflecting strong approval of favorable comments regarding the interface of the system. This steady trend shows that users largely regarded the interface as visually straightforward, well-organized, and easy to use, with little variation among respondents. There are no significant highs or lows, indicating that all participants had a comparably positive experience with the interface. In general, the bar graph supports the quantitative findings by visually reinforcing that the quality of the system's interface received high ratings during the Alpha Testing phase, demonstrating a consistent and favorable user perception.

4.5 Description of the Prototype

The researcher conducted a proposal to the clients once the researcher proposed their prototype design. Description of the prototype given each step-by-step process of the website that was given them. Once they show the clients the proposal will be implemented to develop in coding each module that is given by the clients need. After that once done developing the system will be implemented to the clients for testing and plan for debugging, errors on the testing in the system.

The prototype description of the proposed system entitled a prototype: Integrated System for Zamboanga Puericulture Center: A Human Resource Management System serves as a simple working model that shows how the system is meant to look and function. It gives a clear preview of its important features and how it will help manage HR tasks within the Zamboanga Puericulture Center, making every day processes easier and more organized for the staff.

Admin/HR User Interface

Figure 4.14 Login Page

The Login Page is displayed to users who want to access gives the system as depicted in Figure 4.9. The Login Access panel (1) at The core gives a clear indication of where users must log in. Immediately below is the user's name and password field (2) that the admin can readily fill in their account details. Once the details are inputted, user can tap the Login button (3) to progress into the system. For those who forget their password, the Forgot Account link (4) is a

convenient shortcut to access login details. The Sign-Up button (5), on the other hand, is for new users who don't have accounts yet

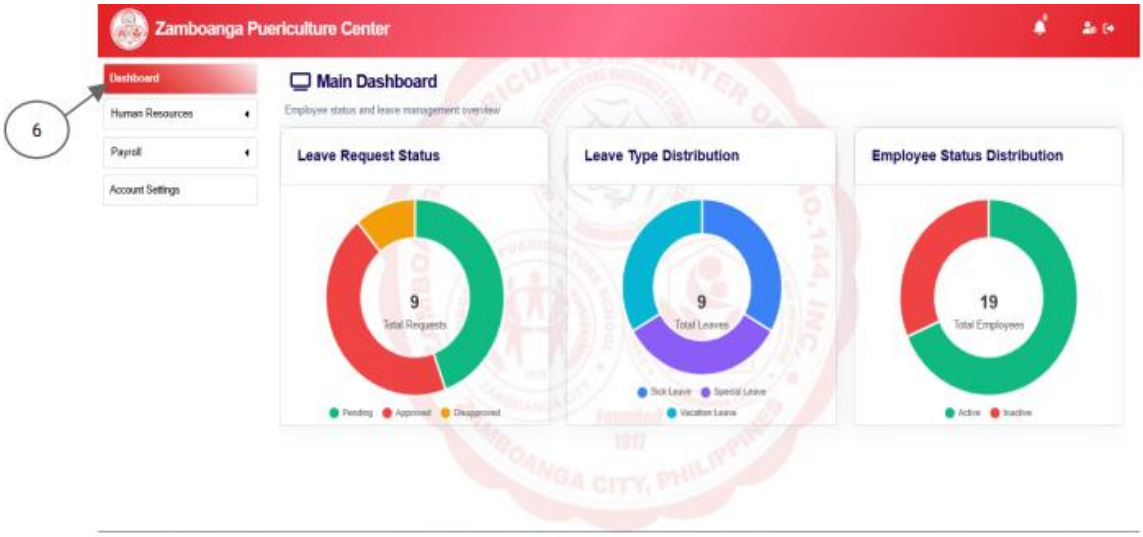

Figure 4.15 Admin/hr Dashboard

Figure 4.15 Admin/hr Dashboard for Zamboanga Puericulture Center's Human Resource Management System: The dashboard offers a clean and self-explanatory summary of vital details concerning the employee. On the left, there's a navigation which admin can open HR, Payroll, and Account Setting modules. The main dashboard consists of three primary visualizations. The first report displays the *Leave Request Status* and gives you an overview of how many leave requests are awaiting approval, approved, or declined. The second chart is *Leave Type Distribution*, which histograms the types of leave employees are requesting over time sick days or vacation. A third graph is the *Employee Status Distribution*, which provides a quick tally of active and inactive employees.

Figure 4.16 Employees Management interface (admin/hr)

Figure 4.16 shows the Employees Management page in the system. On the left side, the admin sees the HR menu. There, (7) highlights the Employees section. (8) points to other HR modules. Those include Leave, Departments and Jobs, and 201 Files. At the top right of the page, (10) indicates the Create Employee Account button. This button lets the admin add new employee profiles. Below the summary boxes, the main table displays employee details. It shows things like ID, name, department, and role. Each record includes action buttons. (9) shows the button used to view or change the employees account status

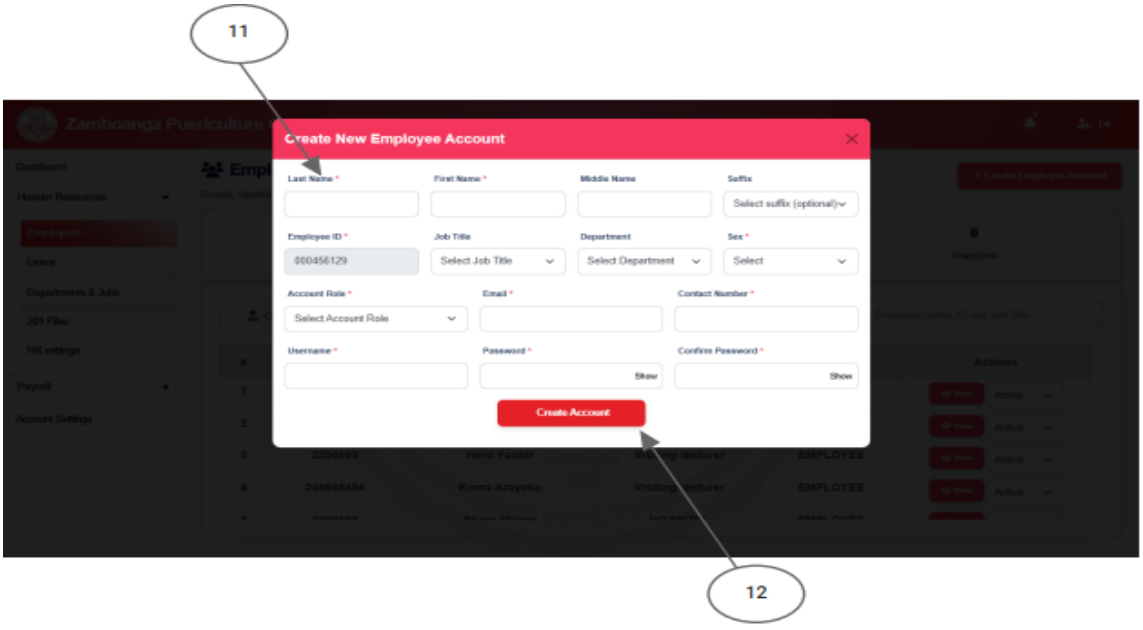

Figure 4.17 Create New Employee Account (Admin/hr)

Figure 4.17 shows the interface that handles creating a new employee account in the system. The label (11) points right to the pop-up form where the admin enters all the needed details. Those include the employees name, username, email address, contact number, department assignment, and the specific role for the account. After the admin finishes filling out every field completely, they can click on the button indicated at (12). That action saves everything and adds the new employee officially to the whole system

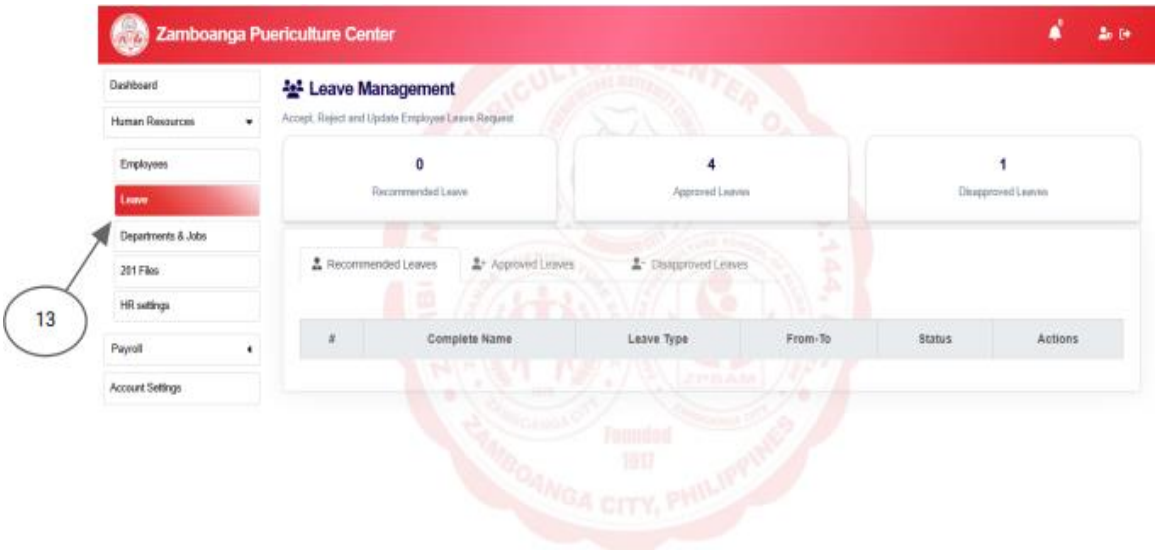

Figure 4.18 Leave Management (Admin)

Figure 4.18 shows the Leave Management page in a way that makes everything look clear and organized. The number thirteen points out the menu area that guides users right to the Leave module. Right there on the main page, you see summary boxes that show counts for pending leave requests, the ones HR has recommended, and those the admin has already approved or turned down. Under those summary boxes sits a table with all the details on every employee's leave request. It covers things like the employee's name, the type of leave they want, how many days they are asking for, and where the request stands right now. Employees start the whole thing by sending in their leave applications. HR folks then look them over and give their recommendations. After that, the admin checks those suggestions and decides whether to approve the leave or not.

Figure 4.19 Account Settings (Admin)

Figure 4.19 shows the Account Settings (14) interface in the administrator module. This page lets the administrator look at and handle all the registered hr accounts in the system. The interface has a table that lists the company name for each user. It also shows the account role, email address, account status, and possible actions. Those action buttons sit in the rightmost column. They let you edit, update, or delete an account pretty easily. Over on the left, the navigation panel gives quick access to other parts of the system. The whole layout helps administrators keep track of user accounts without much hassle. They can monitor and maintain the information efficiently.

Figure 4.20 Departments & Job Titles Management (Admin/hr)

Figure 4.20 illustrate the Departments and Job (15) Titles Management page for the administrator. This part of the system helps the admin organize and update the overall structure. They can add, edit or remove departments and job titles as needed. The interface features a table with department names, their codes, and the job titles under them. There is an Add Department button (16) to start creating new ones. Each row has action buttons (17) for changing or deleting records that already exist. The layout stays consistent, and the sidebar menu makes it simple to move around to other admin tasks.

Figure 4.21 2O1 Files (Admin/hr)

In this figure 4.21, the arrow (18) illuminates the menu item for 201 Files within the system's navigation pane to show where on the system screen an administrator would go in to access the employee's 201 records module. Arrow (19) indicates the Add File button in the Actions column of the employee table, which indicates that this button is used to upload or attach documents to an individual employee's 201 file.

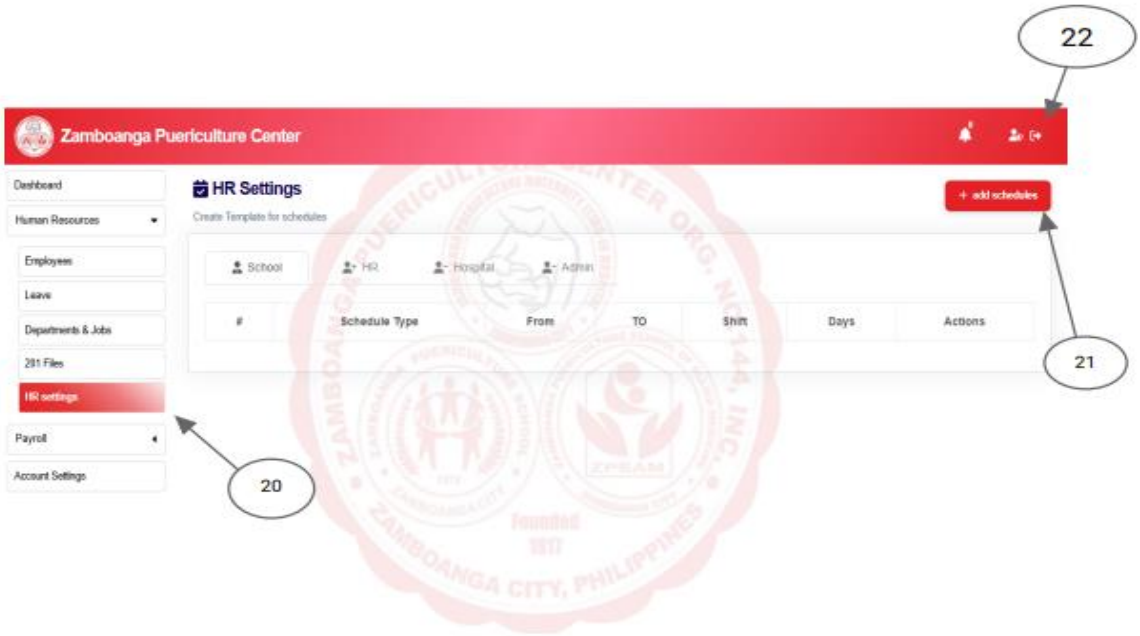

Figure 4.22 HR Settings (Admin/hr)

Figure 4.22 shows the HR Settings screen for the admin. Arrow 20 points to the HR Settings section in the left-hand navigation; it's where you go to do stuff (add/edit/delete) with all things HR template and settings. Arrow 21 indicates the "Add Schedule" button on the upper right-hand side of this screen, which is clicked to permit an administrator to create new scheduler templates by indicating whether a schedule is a "time type," time bracket, or shift with day applicability. Arrow 22 shows the user account controls, which would usually contain icons leading to the user profile, notifications, and account settings.

Employee User Interface

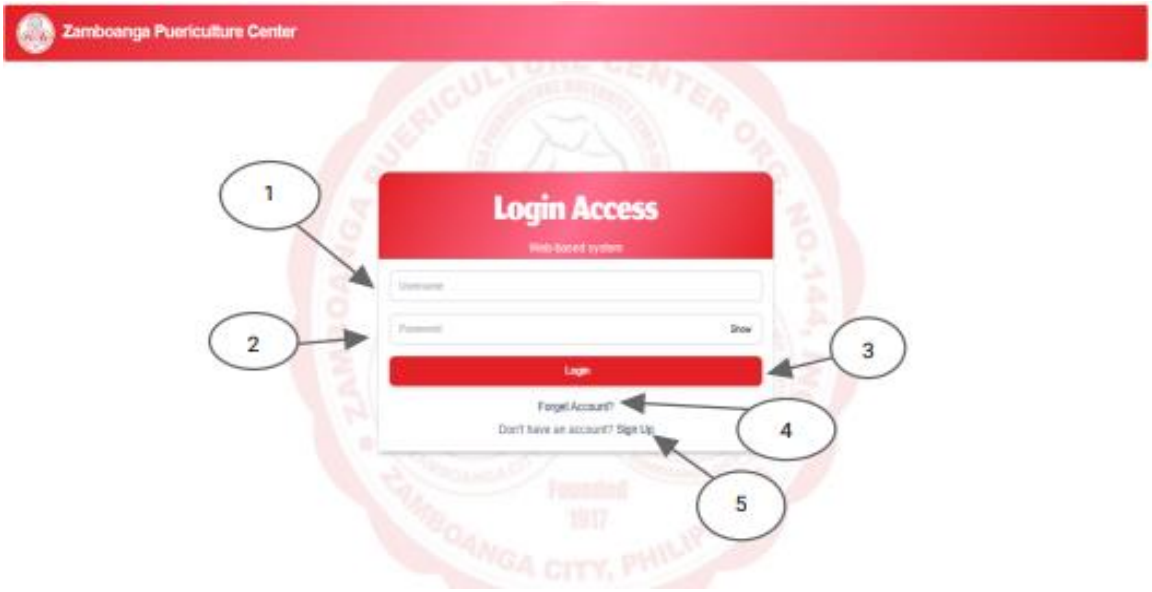

Figure 4.23 Log in page

The Log in Access works as the main way for employees to get into the system. They just need to type in their (1) username and (2) password to reach their accounts. This setup makes sure that only people with permission can actually use the platform. To keep things secure for personal details and job info, everyone has to enter their password as a check. It verifies who they are before letting them in. After putting in the username and password, the system checks those (3) Log in Access Details. Then it lets the employee see their own dashboard. If someone cannot remember their username or password, the (4) Forgot Account option comes in handy. They can get it back or change it using email or answering security questions. New users have the (5) Sign Up feature to start fresh. They provide some basic info and set up their username and password right there.

Figure 4.24 Employee Dashboard

The (6) Dashboard After employees successfully log into the system, they are directed to their main dashboard. Employees can jump into different features from there. They navigate modules easily. They also check updates that matter to their job and account

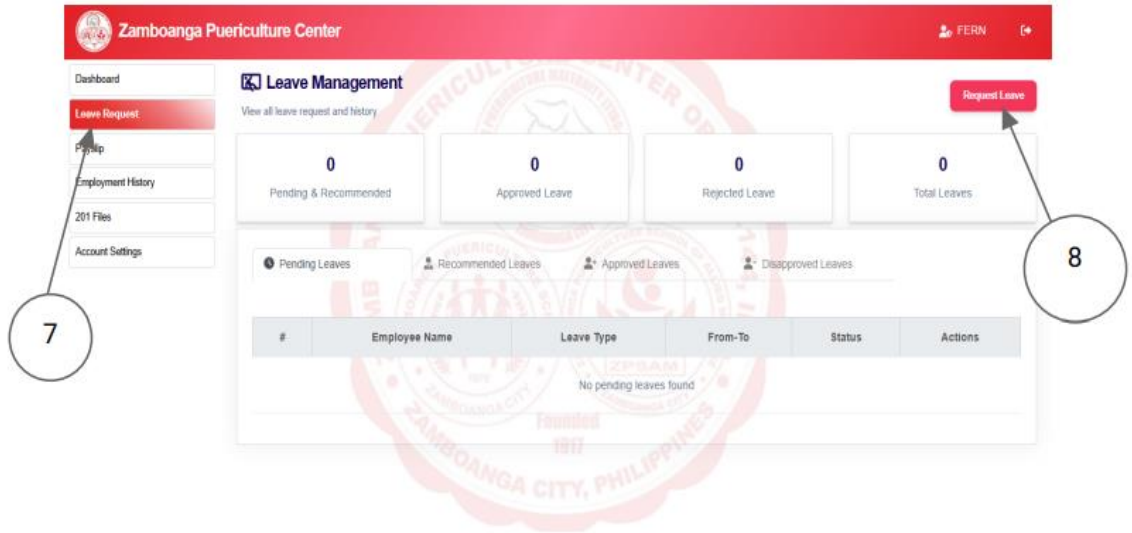

Figure 4.25 Leave Management (Employee)

The (7) leave request management the Employee see their old and ongoing applications. They track approval statuses that way. They review their full leave history too. If someone wants to put in a new request, they head over to the (8) request leave part. There they pick dates for the

leave. They choose what kind it is. They add all the details required. Then they submit it for someone to

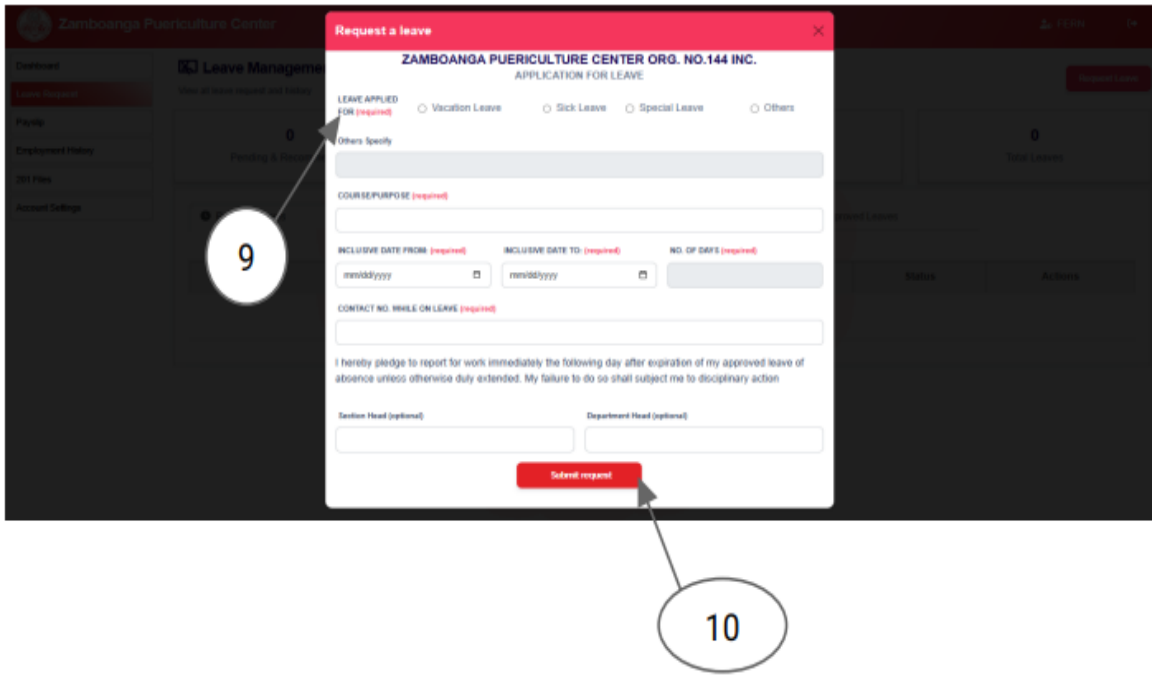

Figure 4.26 Request Leave interface (Employee)

In the (9) leave applied section, employees pick the exact reason or category. That could be sick leave or vacation time. It might be personal reasons. Once they fill out everything needed, they move to (10) submit the request. They wrap it up there. They send the application off for review. Their supervisor or HR team handles the approval.

Figure 4.27 Payslip Management (Employee)

Employees have access to the (11) Payslip Management. It lets them view their payroll information. This includes details on salary breakdowns, deductions, allowances, and various other related records.

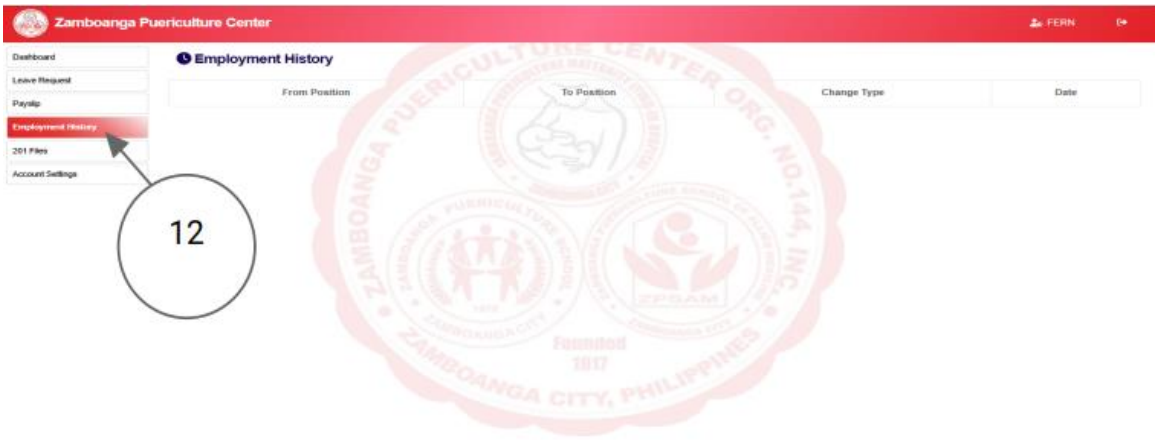

Figure 4.28 Employment History

The (12) Employment History section offers a full look at their work background inside the company. Employees can see things like past job roles, promotions they received, and their total time spent there.

Figure 4.29 2O1 Files (Employee)

In the (13) 201 Files section, (14) all documents that employees submitted are kept. These cover identification records, contracts, certificates, and other HR files they can easily view. The

Files module organizes everything into different categories. This setup makes viewing, managing, and finding documents more straightforward. If some file is not needed anymore or got uploaded by error, employees can pick the (15) Delete option to get rid of it. They just need to make sure it follows company policies.

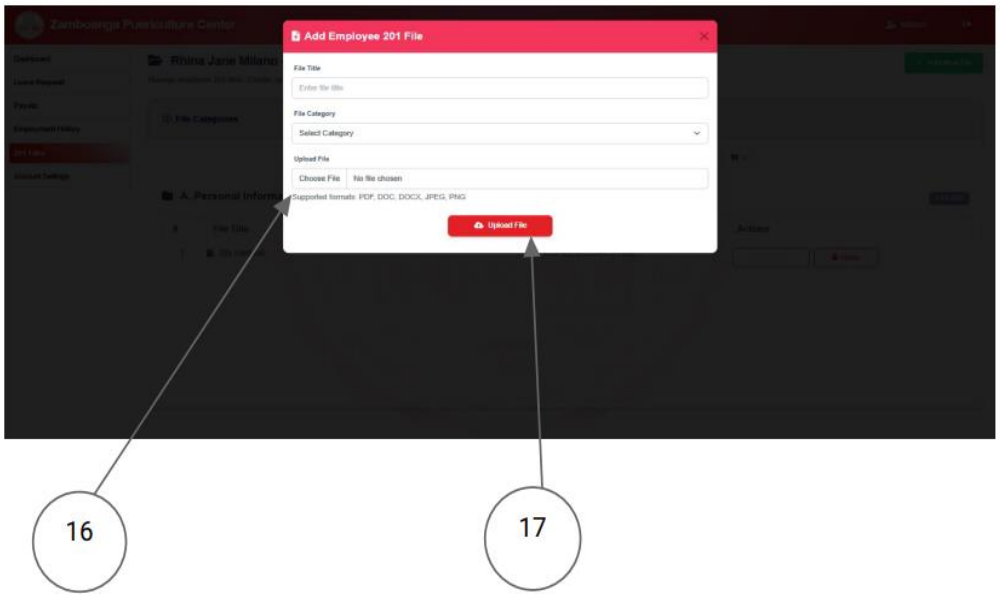

Figure 4.30 Add Employes 2O1 Files (Employee)

The (16) Add Employee Files feature helps workers add new personal or job-related documents to their records. This keeps their profile current and complete. With the (17) Upload Files option, they submit key items like identification cards, certificates, or medical records. HR might need those for processing.

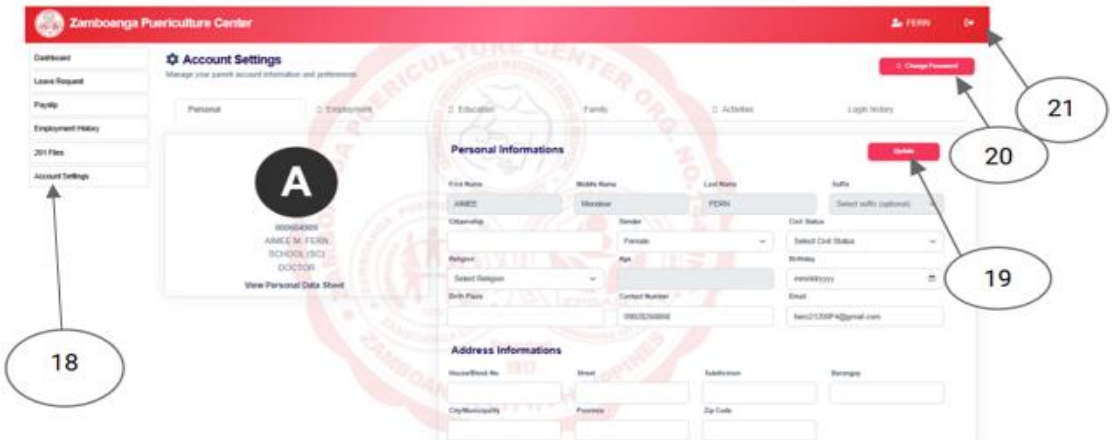

Figure 4.31 Account Setting (Employee)

In this figure show (18) Account Settings is where employees handle their personal touches and manage preferences. They adjust things like display choices, notifications, and other setups to fit what they want. If needed, the (19) Update Information tool lets them change personal details. That could be address or contact number, plus employment info. For security reasons, the (20) Change Password feature comes in handy. Employees update passwords regularly or switch them if they think credentials got compromised. The (21) Log Out option wraps it up. It makes sure they leave the system safely. This protects accounts and data, particularly on shared or public devices.

4.6 Implementation Plan

The proposed project, entitled "Integrated System for Zamboanga Puericulture Center: A Human Resource Management System," is designed for implementation within the Zamboanga Puericulture Center to modernize and streamline HR-related processes. Developers put together the system with a PHP-based framework handling the front-end side of things. They also link it to a centralized relational database that takes care of backend work. This whole platform covers main HR tasks pretty much like building employee profiles, sorting out accounts, managing jobs and departments, setting schedules, handling leave requests, making salary changes, and following log histories. On top of that, it hands over tools to administrators and HR people for keeping an eye on employee activities, checking requests, and holding onto solid organizational records.

Proponents start off with alpha testing done by the development team along with a few picked IT professionals. They zero in on checking if key parts work right, such as authentication, employee records, leave management, schedule handling, job title management, and log monitoring, all before touching any real organizational data. Running this kind of controlled check lets the technical folks spot functional glitches, odd workflow spots, missing bits in the interface, and usability issues that need fixing early on.

Once they wrap up that internal check, beta testing comes next with real end users and actual data pulled from the Zamboanga Puericulture Center. They bring in fifteen respondents total, made up of four IT professionals, two HR staff members, one admin, and eight employees, who then use the full system in everyday work situations. These participants go through real tasks like updating employee profiles, putting in leave requests and looking them over, tweaking schedules, setting up job titles, and pulling up log histories. The main goal stays on watching how

various user roles handle the system, judging its ease of use and dependability, and seeing if it really backs up daily HR work along with managing organizational records. They collect feedback from this beta round using structured surveys and guided reviews, then break it down to tweak the system's features, improve the interface flow, and boost overall performance. With those changes in place, the HRMS wraps up and stands ready for complete rollout at the Zamboanga Puericulture Center.

Table 4.9 : System Implementation

Task	Schedule	Team Members Responsible	Expected Output
User Orientation and Training	1 week	Pagotaisidro Pastor Milano Hanani	Oriented HR staff, admin, and employees on navigating and using the HRMS; signed attendance sheets and orientation acknowledgment forms.
Technical Support	Annually (or as needed)	Pastor Milano	Technical support logs; list of system issues reported and resolved; updated troubleshooting guide or FAQ.
System Updates and Bug Fixes	Annually	Pagotaisidro	Updated HRMS build; documented change log of enhancements and fixes; updated database structure or configurations if required.
Performance Review and Evaluation	Annually	Pagotaisidro Pastor Milano Hanani	Evaluation report based on system performance criteria; summary of feedback from HR personnel, admin, and employees; recommendations for further improvement.
Data Backup and Security Audit	Monthly	Pagotaisidro Pastor	Verified system backups; security audit notes; records of access logs and authentication issues, if any.
Documentation and Training Material Update	Annually	Pagotaisidro Pastor Milano Hanani	Updated user manuals, quick guides, and training materials for HR, admin, and employees.

4.6.1 Gantt Chart Legends

The Gantt chart for the proponents' title defense presents a structured timeline of tasks and milestones leading up to the presentation. It serves as a practical roadmap that helps organize activities, track progress, and ensure that all preparation steps are completed efficiently and on schedule.

Tasks ID	Task Name	Duration																									
		(in days)	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
	Requirement Gathering	9																									
	Title Planning	8																									
	Consulting	5																									
	CHAPTER 1																										
	Introduction	4																									
	Project Context	3																									
	Purpose and Description	3																									
	Objectives of the Study	2																									
	Significance of the Study	2																									
	Scope and Limitations	2																									
	Definition of Terms	2																									

	CHAPTER II																										
	Reviews of Related Literature/System																										
	Foreign and Local Related Literature Studies																										
	Foreign and Local Related Systems																										
	Table of Comparison																										
	Synthesis																										
	CHAPTER III																										
	Technical Background																										
	Technicality Of the Project																										

4.7 Implementation Results

The Integrated System for Puericulture Center: Human Resource Management System was successfully set up and tested. All the main features worked as planned, including account login, account creation, login history, profiling, leave scheduling, and file uploading.

Both the Admin and HR users were able to successfully create accounts, view employee information, access records, update details, and review employee data without any issues. Employees were also able to create their accounts, upload their requirements, and check their profiles through the online system. During testing, all pages loaded properly, forms were saved correctly, and the database stored the data as expected.

The system also ensured that only authorized users could access specific sections, which helped maintain data security. Overall, the results of the implementation show that the system can make HR processes faster, more organized, and more convenient for both employees and administrators.

CHAPTER V

CONCLUSION AND RECOMMENDATION

This chapter provides a summary of the project's findings and attests to the system's ability to enhance clinic operations. In order to keep the system safe, effective, and user-friendly, it also offers suggestions for future improvements.

5.1 CONCLUSION

The Human Resource Management System for the Zamboanga Puericulture Center was successfully designed and validated in line with its objectives. The system accomplished its goals of automating and centralizing HR functions, providing reliable core capabilities such as account and role management, employee profiling, leave and schedule management, processing of 201-files, payslip accessibility, and secure document handling, along with offering user-friendly interfaces for administrators, HR personnel, and employees. Functional tests confirmed proper operation and data integrity; user feedback through the PSSUQ indicated a strong sense of usefulness, clear and accurate information dissemination, and a high-quality interface, demonstrating that the system is functional, trustworthy, and ready for deployment.

By smoothing the processes and minimizing manual or paperwork, the HRMS accelerates processing times, reduces human errors, enhances data security, and allows HR staff to concentrate on strategic initiatives. To fully leverage the system’s advantages, the study suggests integrating the HRMS into the everyday functions of the Puericulture Center, implementing regular maintenance and software updates to ensure security and compatibility, offering thorough training and change management assistance to foster user acceptance, incorporating features like PDF generation for simplified reporting and document sharing, and creating a feedback system for ongoing enhancement. By following these recommendations, the HRMS can serve as a vital tool that boosts administrative effectiveness and fosters better workforce management and service provision at the Center.

5.2 RECOMMENDATIONS

Based on the results of the project entitled “Integrated System for Puericulture Center: A Human Resource Management”, the following recommendations are provided:

- Use the System Regularly: The Puericulture Center should fully use the system in daily operations so that Admin, HR, and Employees can benefit from its features.
- Keep the System Updated: Regular updates and maintenance are important to ensure the system stays secure, efficient, and compatible with future needs.
- Provide User Training: Offering training sessions for all users will help everyone navigate the system smoothly and make the most out of its features.
- Add PDF Generation: Including a feature to generate PDFs for reports or documents would make it easier to save, print, and share important information.
- Listen to Feedback: Continuously gathering feedback from users can help improve the system over time and make it even more user-friendly and effective.
- Implement Regular Backups and Security Audits: Schedule automated backups and periodic security audits to protect data integrity and ensure compliance with data protection best practices.
- Improve Role-Based Access Controls: Review and refine access permissions to ensure users see only the data and functions appropriate to their roles, reducing risk of unauthorized changes.
- Enhance Reporting and Analytics: Add customizable reports and dashboards to help management monitor HR metrics (attendance, leaves, turnover) and support data-driven decisions.
- Ensure Mobile and Cross-Browser Compatibility: Optimize the system for use on mobile devices and across common browsers so employees and managers can access features remotely.
- Maintain Documentation and Support Materials: Keep user manuals, quick guides, and an updated FAQ or troubleshooting guide available and revise them after system updates.

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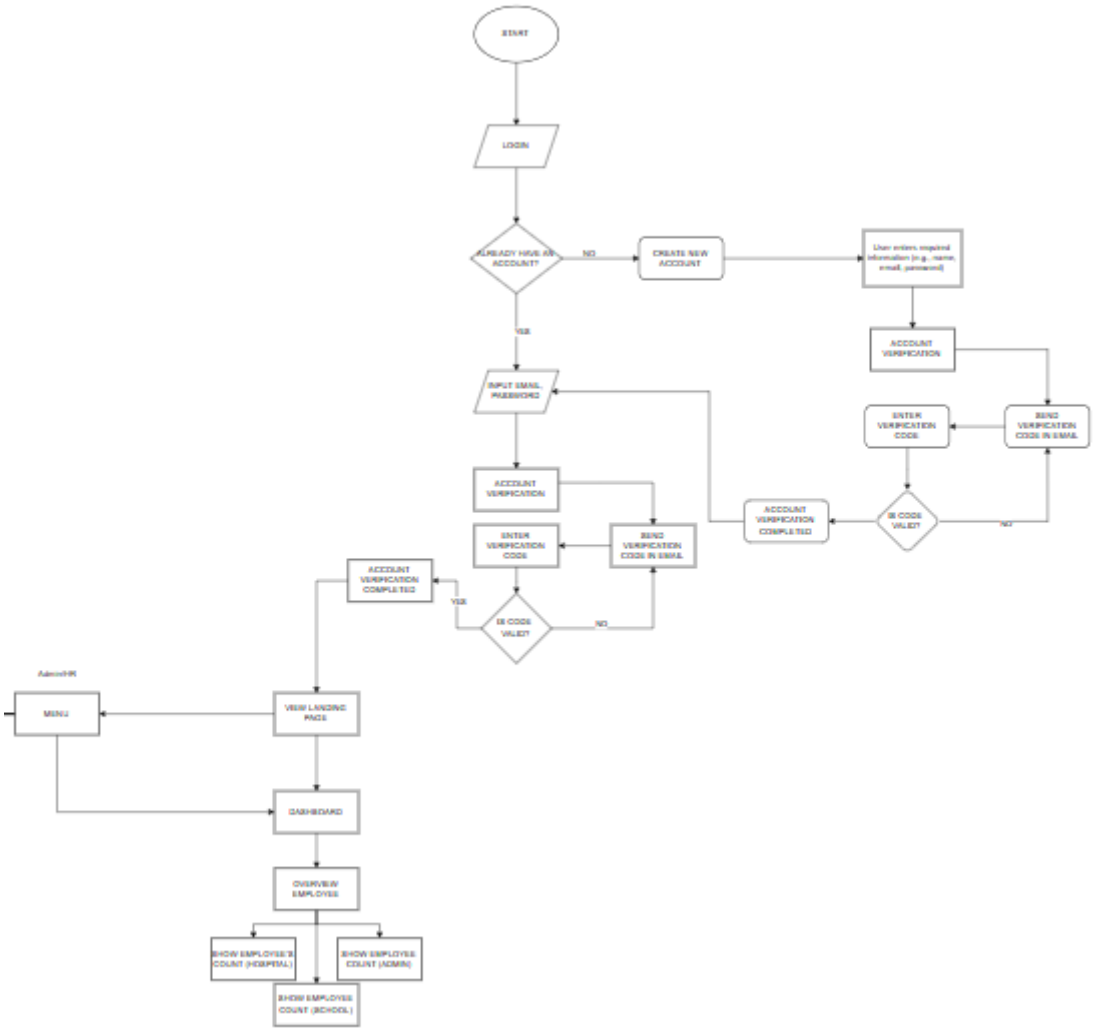
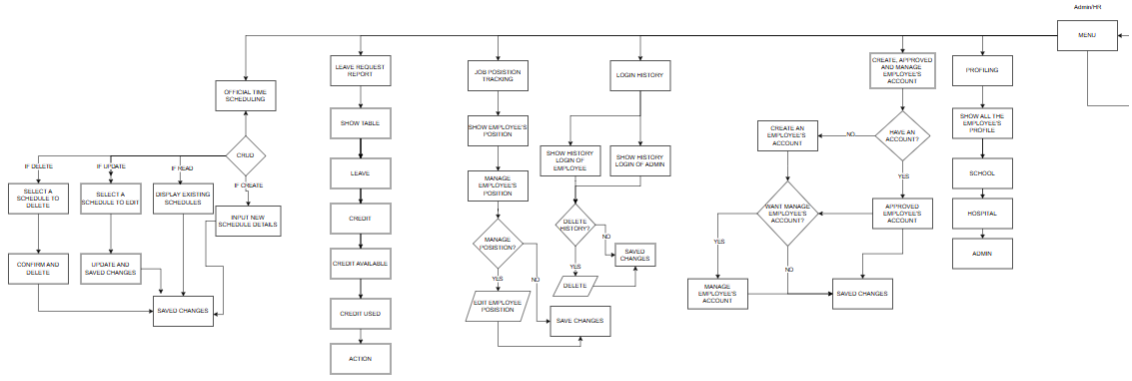
APPENDIX A

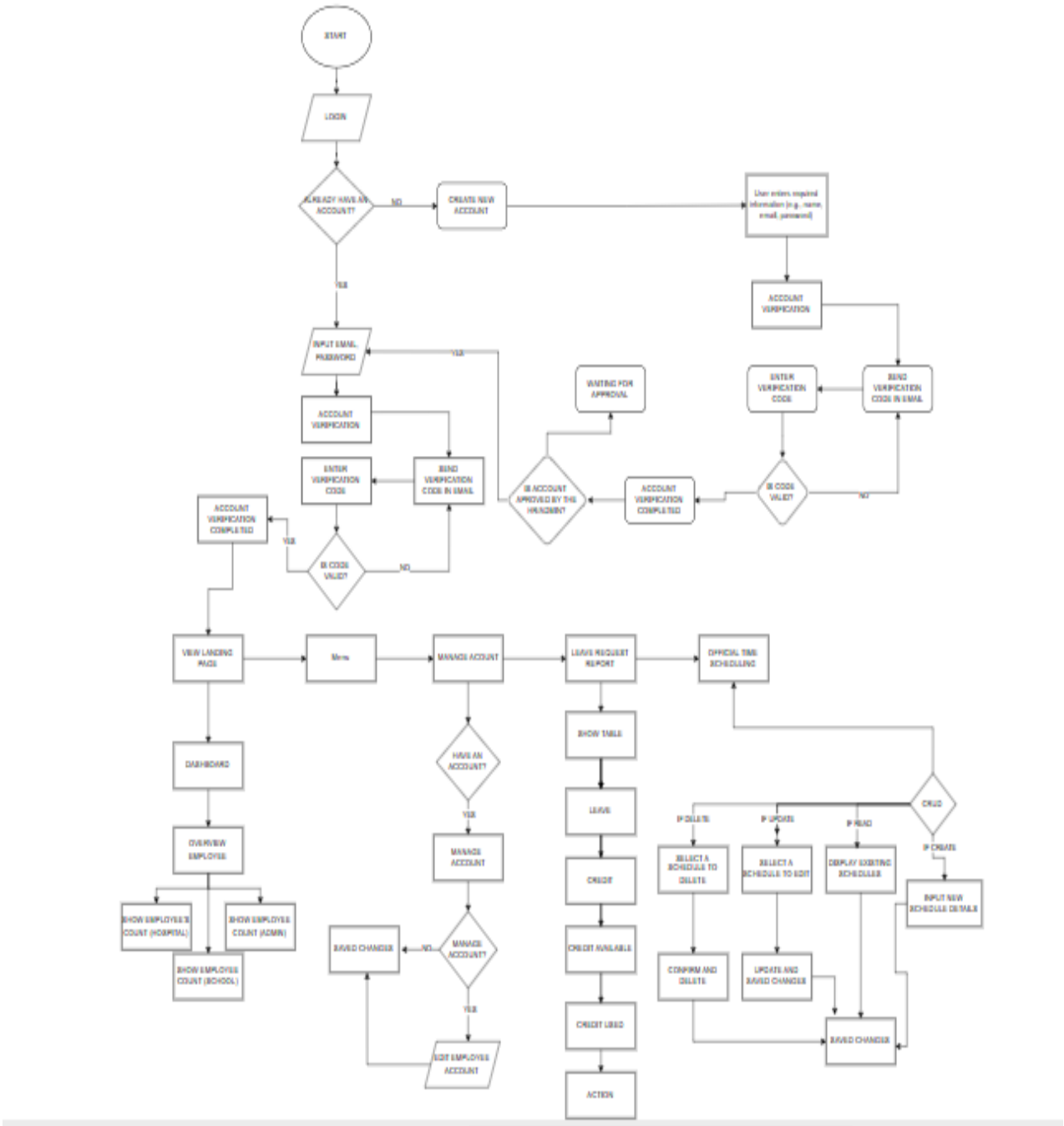
PICTURES SHOWCASING THE DATA GATHERING, INVESTIGATION

The picture shows the process of data gathering by the proponents through asking for recommendations and suggestions from the client and mentor for the development of the system. The proponents introduced the system to the client Doc. Rodelin M. Agbulos, MPH, FPSMS and to IT adviser as a respondent for unit testing.

APPENDIX B
PROCESS/DATA/INFORMATION


START
LOGIN
ALREADY HAVE AN ACCOUNT?
NO
CREATE NEW ACCOUNT
User enters required information (e.g., name, email, password)
ACCOUNT VERIFICATION
YES
INPUT EMAIL, PASSWORD
ENTER VERIFICATION CODE
SEND VERIFICATION CODE IN EMAIL
ACCOUNT VERIFICATION
ACCOUNT VERIFICATION COMPLETED
IS CODE VALID?
NO
ENTER VERIFICATION CODE
SEND VERIFICATION CODE IN EMAIL
ACCOUNT VERIFICATION COMPLETED
YES
IS CODE VALID?
NO
Admin/HR
MENU
VIEW LANDING PAGE
DASHBOARD
OVERVIEW EMPLOYEE
SHOW EMPLOYEE'S COUNT (HOSPITAL)
SHOW EMPLOYEE COUNT (ADMIN)
SHOW EMPLOYEE COUNT (SCHOOL)


Admin/HR
MENU
OFFICIAL TIME SCHEDULING
CRUD
IF DELETE
IF UPDATE
IF READ
IF CREATE
SELECT A SCHEDULE TO DELETE
SELECT A SCHEDULE TO EDIT
DISPLAY EXISTING SCHEDULES
INPUT NEW SCHEDULE DETAILS
CONFIRM AND DELETE
UPDATE AND SAVED CHANGES
SAVED CHANGES
LEAVE REQUEST REPORT
SHOW TABLE
LEAVE
CREDIT
CREDIT AVAILABLE
CREDIT USED
ACTION
JOB POSSESION TRACKING
SHOW EMPLOYEE'S POSITION
MANAGE EMPLOYEE'S POSITION
MANAGE POSSESION?
YES
NO
EDIT EMPLOYEE POSSESION
SAVE CHANGES
LOGIN HISTORY
SHOW HISTORY LOGIN OF EMPLOYEE
SHOW HISTORY LOGIN OF ADMIN
DELETE HISTORY?
NO
SAVED CHANGES
YES
DELETE
CREATE APPROVED AND MANAGE EMPLOYEE'S ACCOUNT
CREATE AN EMPLOYEE'S ACCOUNT
NO
HAVE AN ACCOUNT?
YES
WANT MANAGE EMPLOYEE'S ACCOUNT?
YES
NO
APPROVED EMPLOYEE'S ACCOUNT
MANAGE EMPLOYEE'S ACCOUNT
SAVED CHANGES
PROFILING
SHOW ALL THE EMPLOYEE'S PROFILE
SCHOOL
HOSPITAL
ADMIN


START
LOGIN
ALREADY HAVE AN ACCOUNT?
NO
CREATE NEW ACCOUNT
User enters required information (e.g., name, email, password)
ACCOUNT VERIFICATION
SEND VERIFICATION CODE IN EMAIL
ENTER VERIFICATION CODE
IS CODE VALID?
NO
ACCOUNT VERIFICATION COMPLETED
IS ACCOUNT APPROVED BY THE HR/ADMIN?
WAITING FOR APPROVAL
YES
INPUT EMAIL, PASSWORD
ACCOUNT VERIFICATION
ENTER VERIFICATION CODE
SEND VERIFICATION CODE IN EMAIL
IS CODE VALID?
NO
YES
ACCOUNT VERIFICATION COMPLETED
VIEW LANDING PAGE
Menu
MANAGE ACCOUNT
LEAVE REQUEST REPORT
OFFICIAL TIME SCHEDULING
DASHBOARD
OVERVIEW EMPLOYEE
SHOW EMPLOYEES COUNT (HOSPITAL)
SHOW EMPLOYEES COUNT (ADMIN)
SHOW EMPLOYEES COUNT (SCHOOL)
HAVE AN ACCOUNT?
YES
MANAGE ACCOUNT
MANAGE ACCOUNT?
NO
SAVED CHANGES
YES
EDIT EMPLOYEES ACCOUNT
SHOW TABLE
LEAVE
CREDIT
CREDIT AVAILABLE
CREDIT USED
ACTION
CRUD
IF DELETE
IF UPDATE
IF READ
IF CREATE
SELECT A SCHEDULE TO DELETE
SELECT A SCHEDULE TO EDIT
DISPLAY EXISTING SCHEDULES
INPUT NEW SCHEDULE DETAILS
CONFIRM AND DELETE
UPDATE AND SAVED CHANGES
SAVED CHANGES

APPENDIX C

SOURCE CODE

```
<?php include '../header.php';
initInstaller()
   ?>
<div class="header col-md-12 col-12 d-flex justify-content-center align-items-center py-2">
   <div class="bg-gradient-primary rounded-2 col-md-11 col-11 py-2 px-3">
      <h4 class="card-title text-white m-0">
         <img src="../assets/image/system_logo/pueri-logo.png" class="me-1 ">
         Zamboanga Puericulture Center
      </h4>
   </div>
</div>
<main id="main" class="login-page">
   <div class="container ">
      <div class="row">
         <div class="col-md-4 col-11 mx-auto">
            <div class="shadow">
               <div class="card-header text-white bg-gradient-primary text-center shadow bg-
primary">
                  <h4 class="card-title fontHeader fw-light">Login Access</h4>
                  <p class="card-text">Web-based system</p>
               </div>
               <div class="card-body bg-white shadow ">
                  <form id="login-form" class="form-floating" method="post">
                     <div class="mb-3">
                        <input type="text" class="form-control" name="username"
                           placeholder="Username ">
                     </div>
                     <div class="mb-3">
                        <input type="password" class="form-control" id="password"
name="password" placeholder="Password: ">
                     </div>
                     <div class="mb-3 text-center">
                        <button type="submit" class="btn btn-primary mb-0 col-md-12 col-12"><i
                              class="bi bi-person-plus-fill me-1 w-100"></i>Login</button>
```

```
                    </div>
                    <div class="w-100 text-center m-0">
                        <a href="forget_acc.php" class="m-0">Forget Account?</a>
                    </div>
                    <div class="col-12 text-center mt-1">
                        <div class="">
                            <span>Don't have an account? </span><a href="register.php"
                                class="text-decoration-none">Sign Up</a>
                        </div>
                    </div>
                </form>
            </div>
        </div>
    </div>
</main>
<script>
    document.addEventListener('DOMContentLoaded', function() {
        const passwordInput = document.getElementById('password');
        // Create show password toggle for password field
        const passwordToggle = document.createElement('button');
        passwordToggle.type = 'button';
        passwordToggle.innerHTML = 'Show';
        passwordToggle.style.position = 'absolute';
        passwordToggle.style.right = '10px';
        passwordToggle.style.top = '50%';
        passwordToggle.style.transform = 'translateY(-10px)';
        passwordToggle.style.background = 'none';
        passwordToggle.style.border = 'none';
        passwordToggle.style.cursor = 'pointer';
        passwordToggle.style.fontSize = '12px';
        // Add toggle buttons to password fields
        passwordInput.parentNode.style.position = 'relative';
```

```
        passwordInput.parentNode.appendChild(passwordToggle);
        // Toggle password visibility
        passwordToggle.addEventListener('click', function() {
            const type = passwordInput.getAttribute('type') === 'password' ? 'text' : 'password';
            passwordInput.setAttribute('type', type);
            passwordToggle.innerHTML = type === 'password' ? 'Show' : 'Hide';
        });
    });
</script>
<?php include '../footer.php' ?>
<?php include '../header.php'; ?>
<style>
@media(max-width:768px) {
    .container {
        margin: 0 !important;
    }
    .card-header {
        width: 90vw;
    }
    .card-body {
        display: flex !important;
        justify-content: start !important;
        align-items: start !important;
        height: 75vh !important;
        padding: .3rem !important;
    }
    .card-body::-webkit-scrollbar {
        display: none !important;
    }
    .fontRegister {
        font-size: 2rem !important;
    }
}
.verification-section {
```

```
    display: none;
    background: #f8f9fa;
    border-radius: 10px;
    padding: 20px;
    margin-top: 20px;
    border-left: 4px solid #007bff;
}
.password-feedback {
    font-size: 0.875rem;
    margin-top: 0.25rem;
}
</style>
<main id="main" class="login-page">
    <div class="container row justify-content-center align-items-center ">
        <div class="row justify-content-center align-items-center col-md-12 col-12">
            <div class="col-md-9 col-12 p-0 m-0">
                <div class="card-header shadow">
                    <div class="card-header bg-gradient-primary text-white shadow  text-center">
                        <h4 class="mb-0 fontRegister fw-light">Sign-up to Z.C Puericulture Center</h4>
                    </div>
                    <div class="card-body scroll">
                        <!-- Registration Form -->
                        <form class="row g-1 align-items-start justify-content-start" id="register-form"
method="post">
                            <!-- Name -->
                            <div class="col-md-3">
                                <label class="form-label">Last Name <span class="text-
danger">*</span></label>
                                <input required type="text" class="form-control" name="lastName"
id="lastName">
                            </div>
                            <div class="col-md-3">
                                <label class="form-label">First Name <span class="text-
danger">*</span></label>
```

```
                    <input required type="text" class="form-control" name="firstName"
id="firstName">
                </div>
                <div class="col-md-3">
                    <label class="form-label">Middle Name</label>
                    <input type="text" class="form-control" name="middleName"
id="middleName">
                </div>
                <div class="col-md-3">
                    <label class="form-label">Suffix</label>
                    <select class="form-select" name="suffix" id="suffix">
                        <option value="" disabled selected>Select suffix (optional) </option>
                        <option value="Jr">Jr</option>
                        <option value="Sr">Sr</option>
                        <option value="II">II</option>
                        <option value="III">III</option>
                    </select>
                </div>
                <!-- Reference ID -->
                <div class="col-md-3">
                    <label class="form-label">Employee ID <span class="text-
danger">*</span></label>
                    <?php
                        $randogs = str_pad(random_int(0, 999999), 9, '0', STR_PAD_LEFT);
                    ?>
                    <input required readonly type="number" value="<?=
htmlspecialchars($randogs) ?>"
                        class="form-control" name="employeeID" id="employeeID">
                </div>
                <?php
                    // Get all departments
                    $stmt_departments = $pdo->prepare("SELECT * FROM departments
ORDER BY Department_name ASC");
                    $stmt_departments->execute();
```

```
                $departments = $stmt_departments->fetchAll(PDO::FETCH_ASSOC);

                // Get all job titles initially (or only when a department is selected via AJAX)
                // If you want to show ALL job titles initially:
                $stmt_jobtitles = $pdo->prepare("SELECT J.*, D.Department_name
                    FROM jobTitles J
                    LEFT JOIN departments D ON J.department_id = D.Department_id
                    ORDER BY J.jobTitle ASC");
                $stmt_jobtitles->execute();
                $all_jobtitles = $stmt_jobtitles->fetchAll(PDO::FETCH_ASSOC);
            ?>

            <div class="col-md-3">
                <label for="Department_id" class="form-label">Department</label>
                <select class="form-select" id="Department_id" name="Department_id">
                    <option value="">Select Department</option>
                    <?php foreach($departments as $dep) : ?>
                    <option value="<?= htmlspecialchars($dep["Department_id"]) ?>">
                        <?= htmlspecialchars($dep["Department_name"]) . " (" .
htmlspecialchars($dep["Department_code"]) . ")" ?>
                    </option>
                    <?php endforeach ?>
                </select>
            </div>

            <div class="col-md-3">
                <label for="jobTitleSelect" class="form-label">Job Title</label>
                <select class="form-select" id="jobTitleSelect" name="jobTitle_id">
                    <option value="">Select Job Title</option>
                    <!-- Show all job titles initially -->
                    <?php foreach($all_jobtitles as $jb) : ?>
                    <option value="<?= htmlspecialchars($jb["jobTitles_id"]) ?>"
                        data-department-id="<?= htmlspecialchars($jb["department_id"] ?? '')
?>">
```

```
                        <?= htmlspecialchars($jb["jobTitle"]) . " (₱" .
number_format($jb["salary"], 2) . ")" ?>
                        <?php if(!empty($jb["Department_name"])): ?>
                        - <?= htmlspecialchars($jb["Department_name"]) ?>
                        <?php endif; ?>
                    </option>
                    <?php endforeach ?>
                </select>
            </div>
            <div class="col-md-3">
                <label class="form-label">Sex <span class="text-danger">*</span></label>
                <select required class="form-select" name="gender" id="gender">
                    <option value="">Select</option>
                    <option value="Male">Male</option>
                    <option value="Female">Female</option>
                </select>
            </div>

            <!-- Contact Information -->
            <div class="col-md-6">
                <label class="form-label">Email <span class="text-
danger">*</span></label>
                <input required type="email" class="form-control" name="email"
id="email">
            </div>
            <div class="col-md-6">
                <label class="form-label">Contact Number</label>
                <input type="number" class="form-control" name="contact" id="contact">
            </div>

            <!-- Account Info -->
            <div class="col-md-4">
                <label class="form-label">Username <span class="text-
danger">*</span></label>
```

```
                        <input required type="text" class="form-control" name="username"
id="username">
                    </div>
                    <div class="col-md-4">
                        <label class="form-label">Password <span class="text-
danger">*</span></label>
      <input required type="password" class="form-control" name="password" id="password">
                    </div>
                    <div class="col-md-4">
                        <label class="form-label">Confirm Password <span class="text-
danger">*</span></label>
                        <input required type="password" class="form-control" name="cpassword"
id="cpassword">
                        <div id="password-feedback" class="password-feedback"></div>
                    </div>
                    <div class="col-12 text-center mt-3">
                    <button type="submit" onclick="getVerification()" class="btn btn-primary px-5"
                        id="submit-btn">
                        <i class="bi bi-person-plus-fill me-1"></i> Create Account
                    </button>
                    <div class="mt-2">
                        <span>Already have an account? </span><a href="index.php"
                            class="text-decoration-none">Sign In</a>
                    </div>
                </div>
            </form>
        </div>
    </div>
  </div>
</main>

<script>
```

```
function getVerification() {
    document.getElementById("verification-section").style.display = 'flex';
}
$(document).ready(function() {
    let canResend = false;
    let countdownInterval;

    // Password match validation
    $('#cpassword').on('blur', function() {
        const password = $('#password').val();
        const cpassword = $(this).val();

        if (password !== cpassword && cpassword !== '') {
            $(this).addClass('is-invalid');
            $('#password-feedback').html('<span style="color: red;">Passwords do not
match!</span>');
        } else {
            $(this).removeClass('is-invalid');
            $('#password-feedback').html('');
        }
    });

    // Clear form when page loads
    $(window).on('load', function() {
        sessionStorage.removeItem('pending_registration');
        $('#register-form')[0].reset();
    });
});
</script>
<script>
document.addEventListener('DOMContentLoaded', function() {
    const passwordInput = document.getElementById('password');
    const confirmPasswordInput = document.getElementById('cpassword');
    const passwordFeedback = document.getElementById('password-feedback');
```

```
// Create show password toggle for password field
const passwordToggle = document.createElement('button');
passwordToggle.type = 'button';
passwordToggle.innerHTML = 'Show';
passwordToggle.style.position = 'absolute';
passwordToggle.style.right = '10px';
passwordToggle.style.top = '50%';
passwordToggle.style.transform = 'translateY(5px)';
passwordToggle.style.background = 'none';
passwordToggle.style.border = 'none';
passwordToggle.style.cursor = 'pointer';
passwordToggle.style.fontSize = '12px';

// Create show password toggle for confirm password field
const confirmPasswordToggle = document.createElement('button');
confirmPasswordToggle.type = 'button';
confirmPasswordToggle.innerHTML = 'Show';
confirmPasswordToggle.style.position = 'absolute';
confirmPasswordToggle.style.right = '10px';
confirmPasswordToggle.style.top = '50%';
confirmPasswordToggle.style.transform = 'translateY(5px)';
confirmPasswordToggle.style.background = 'none';
confirmPasswordToggle.style.border = 'none';
confirmPasswordToggle.style.cursor = 'pointer';
confirmPasswordToggle.style.fontSize = '12px';

// Add toggle buttons to password fields
passwordInput.parentNode.style.position = 'relative';
passwordInput.parentNode.appendChild(passwordToggle);

confirmPasswordInput.parentNode.style.position = 'relative';
confirmPasswordInput.parentNode.appendChild(confirmPasswordToggle);
```

```
// Toggle password visibility
passwordToggle.addEventListener('click', function() {
    const type = passwordInput.getAttribute('type') === 'password' ? 'text' : 'password';
    passwordInput.setAttribute('type', type);
    passwordToggle.innerHTML = type === 'password' ? 'Show' : 'Hide';
});

confirmPasswordToggle.addEventListener('click', function() {
    const type = confirmPasswordInput.getAttribute('type') === 'password' ? 'text' : 'password';
    confirmPasswordInput.setAttribute('type', type);
    confirmPasswordToggle.innerHTML = type === 'password' ? 'Show' : 'Hide';
});

// Password validation
function validatePassword() {
    const password = passwordInput.value;
    const confirmPassword = confirmPasswordInput.value;

    const hasMinLength = password.length >= 8;
    const hasUppercase = /[A-Z]/.test(password);
    const hasSpecialChar = /[!@#$%^&*()_+\-=\[\]{};':"\\|,.<>\/?]/.test(password);
    const passwordsMatch = password === confirmPassword;

    let messages = [];

    // Password requirements
    if (!hasMinLength) messages.push('at least 8 characters');
    if (!hasUppercase) messages.push('one capital letter');
    if (!hasSpecialChar) messages.push('one special character');

    // Confirm password check
    if (confirmPassword && !passwordsMatch) {
        messages.push('passwords do not match');
    }
```

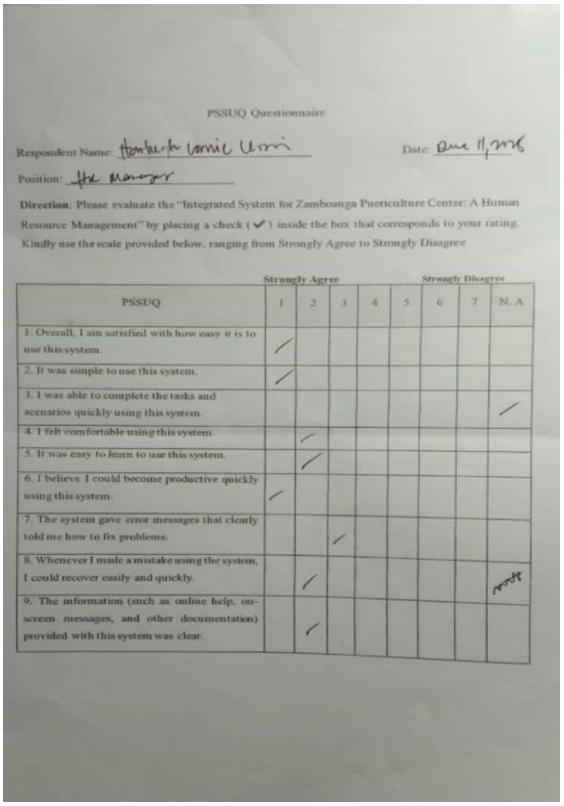
```
    // Update styling and feedback
    if (messages.length > 0) {
        passwordInput.style.borderColor = '#dc3545';
        confirmPasswordInput.style.borderColor = '#dc3545';
        passwordFeedback.style.color = '#dc3545';
        passwordFeedback.style.position = 'absolute';
        passwordFeedback.textContent = `Password must contain: ${messages.join(', ')}`;
    } else if (password.length > 0) {
        passwordInput.style.borderColor = '#28a745';
        confirmPasswordInput.style.borderColor = '#28a745';
        passwordFeedback.style.color = '#28a745';
        passwordFeedback.style.position = 'absolute';
        passwordFeedback.textContent = 'Password meets all requirements';
    } else {
        passwordInput.style.borderColor = '';
        confirmPasswordInput.style.borderColor = '';
        passwordFeedback.textContent = '';
    }

    return messages.length === 0;
}

// Real-time validation
passwordInput.addEventListener('input', validatePassword);
confirmPasswordInput.addEventListener('input', validatePassword);

// Form submission validation
const form = passwordInput.closest('form');
if (form) {
    form.addEventListener('submit', function(e) {
        if (!validatePassword()) {
            e.preventDefault();
        }
```

```
        });
    }
});
</script>
<script>
document.addEventListener('DOMContentLoaded', function() {
    const departmentSelect = document.getElementById('Department_id');
    const jobTitleSelect = document.getElementById('jobTitleSelect');

    if (departmentSelect && jobTitleSelect) {
        // Store all job title options for filtering
        const allJobTitleOptions = Array.from(jobTitleSelect.querySelectorAll('option'));

        departmentSelect.addEventListener('change', function() {
            const selectedDeptId = this.value;

            // Reset job title select
            jobTitleSelect.innerHTML = '<option value="">Select Job Title</option>';

            if (selectedDeptId === '') {
                // Show all job titles when no department is selected
                allJobTitleOptions.forEach(option => {
                    if (option.value !== '') {
                        jobTitleSelect.appendChild(option.cloneNode(true));
                    }
                });
            } else {
                // Filter job titles by selected department
                allJobTitleOptions.forEach(option => {
                    const deptId = option.getAttribute('data-department-id');
                    if (deptId === selectedDeptId) {
                        jobTitleSelect.appendChild(option.cloneNode(true));
                    }
                });
```

```
            // If no job titles for this department
            if (jobTitleSelect.options.length === 1) {
                const noOption = document.createElement('option');
                noOption.value = '';
                noOption.textContent = 'No job titles available for this department';
                jobTitleSelect.appendChild(noOption);
            }
        }
    });
}
});
</script>
<?php include '../footer.php'; ?>
```

APPENDI D

EVALUATION TOOL OR TEST DOCUMENT



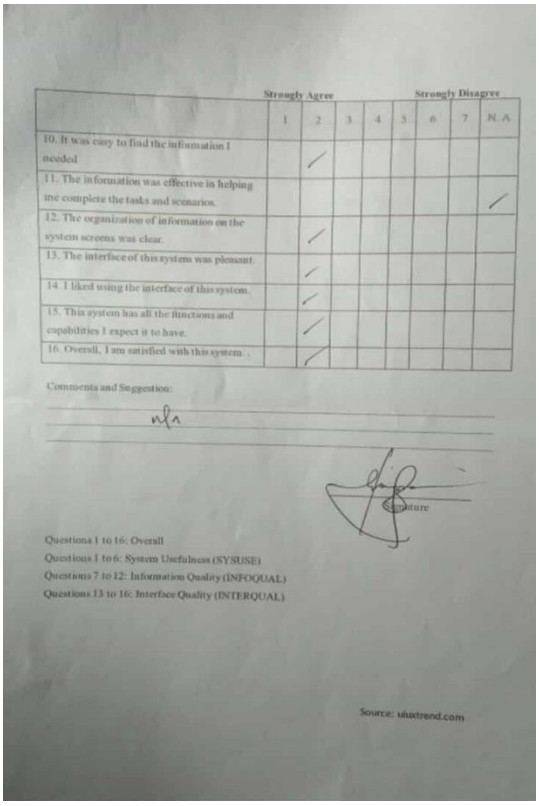
PSSUQ Questionnaire

Respondent Name: [illegible] Date: Dec 11, 2025

Position: the manager

Direction: Please evaluate the "Integrated System for Zamboanga Puericulture Center: A Human Resource Management" by placing a check (✔) inside the box that corresponds to your rating. Kindly use the scale provided below, ranging from Strongly Agree to Strongly Disagree

PSSUQ	Strongly Agree 1	2	3	4	5	6	Strongly Disagree 7	N. A
1. Overall, I am satisfied with how easy it is to use this system.	✓							
2. It was simple to use this system.	✓							
3. I was able to complete the tasks and scenarios quickly using this system.								✓
4. I felt comfortable using this system.		✓						
5. It was easy to learn to use this system.		✓						
6. I believe I could become productive quickly using this system.	✓							
7. The system gave error messages that clearly told me how to fix problems.			✓					
8. Whenever I made a mistake using the system, I could recover easily and quickly.		✓						[illegible]
9. The information (such as online help, on-screen messages, and other documentation) provided with this system was clear.		✓						



	Strongly Agree 1	2	3	4	5	6	Strongly Disagree 7	N. A
10. It was easy to find the information I needed		✓						
11. The information was effective in helping me complete the tasks and scenarios.								✓
12. The organization of information on the system screens was clear.		✓						
13. The interface of this system was pleasant.		✓						
14. I liked using the interface of this system.		✓						
15. This system has all the functions and capabilities I expect it to have.		✓						
16. Overall, I am satisfied with this system. .		✓						

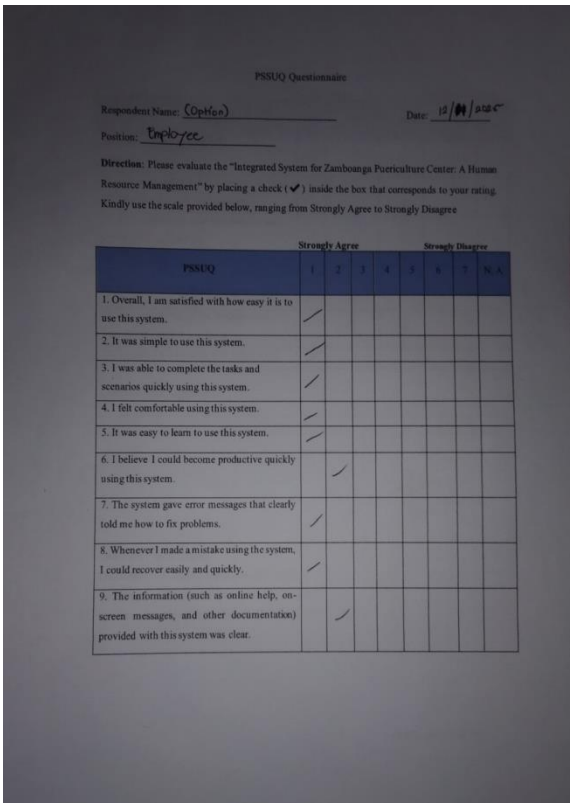
Comments and Suggestion:

n/a

Signature

Questions 1 to 16: Overall
Questions 1 to 6: System Usefulness (SYSUSE)
Questions 7 to 12: Information Quality (INFOQUAL)
Questions 13 to 16: Interface Quality (INTERQUAL)

Source: uiuxtrend.com



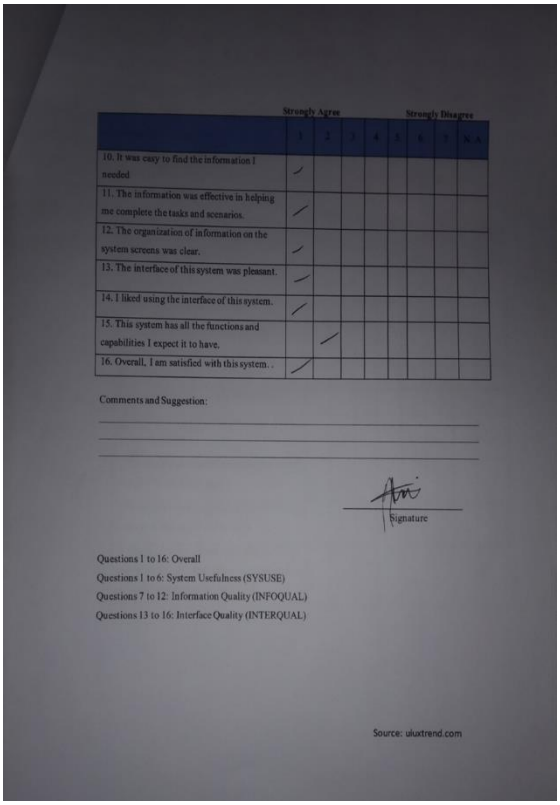
PSSUQ Questionnaire

Respondent Name: (Option) Date: 12/11/2025

Position: Employee

Direction: Please evaluate the "Integrated System for Zamboanga Puericulture Center: A Human Resource Management" by placing a check (✔) inside the box that corresponds to your rating. Kindly use the scale provided below, ranging from Strongly Agree to Strongly Disagree

PSSUQ	Strongly Agree 1	2	3	4	5	6	Strongly Disagree 7	N. A
1. Overall, I am satisfied with how easy it is to use this system.	✓							
2. It was simple to use this system.	✓							
3. I was able to complete the tasks and scenarios quickly using this system.	✓							
4. I felt comfortable using this system.	✓							
5. It was easy to learn to use this system.	✓							
6. I believe I could become productive quickly using this system.		✓						
7. The system gave error messages that clearly told me how to fix problems.	✓							
8. Whenever I made a mistake using the system, I could recover easily and quickly.	✓							
9. The information (such as online help, on-screen messages, and other documentation) provided with this system was clear.		✓						



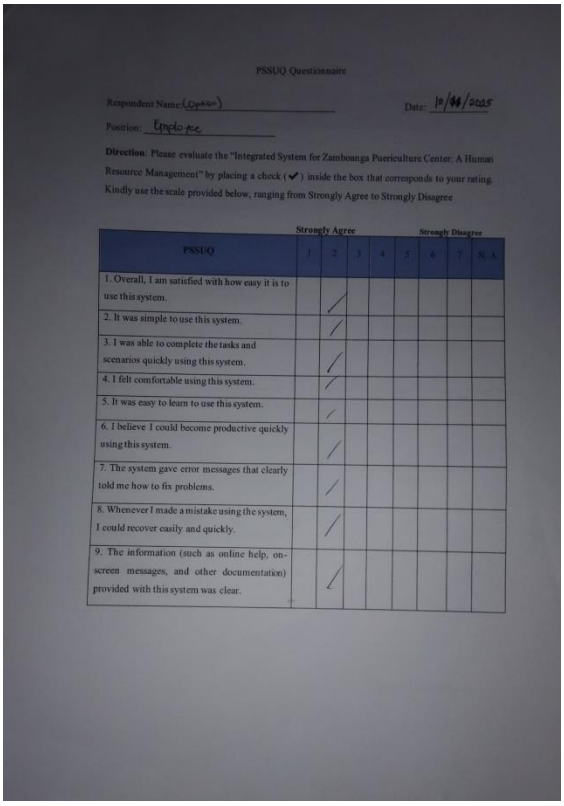
	Strongly Agree 1	2	3	4	5	6	Strongly Disagree 7	N. A
10. It was easy to find the information I needed	✓							
11. The information was effective in helping me complete the tasks and scenarios.	✓							
12. The organization of information on the system screens was clear.	✓							
13. The interface of this system was pleasant.	✓							
14. I liked using the interface of this system.	✓							
15. This system has all the functions and capabilities I expect it to have.		✓						
16. Overall, I am satisfied with this system. .	✓							

Comments and Suggestion:

Signature

Questions 1 to 16: Overall
Questions 1 to 6: System Usefulness (SYSUSE)
Questions 7 to 12: Information Quality (INFOQUAL)
Questions 13 to 16: Interface Quality (INTERQUAL)

Source: uiuxtrend.com



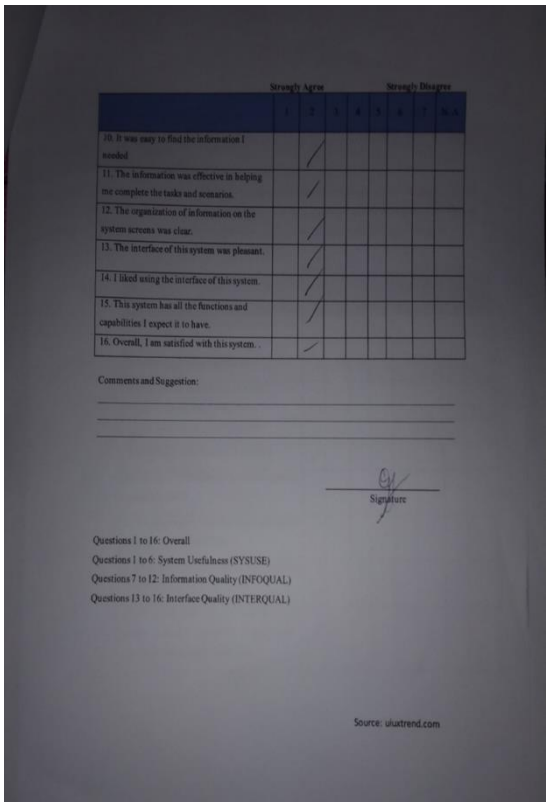
PSSUQ Questionnaire

Respondent Name: (Name) Date: 10/11/2025

Position: Employee

Direction: Please evaluate the "Integrated System for Zamboanga Puericulture Center: A Human Resource Management" by placing a check (✔) inside the box that corresponds to your rating. Kindly use the scale provided below, ranging from Strongly Agree to Strongly Disagree

PSSUQ	Strongly Agree 1	2	3	4	5	6	7 Strongly Disagree	N/A
1. Overall, I am satisfied with how easy it is to use this system.		✓						
2. It was simple to use this system.		✓						
3. I was able to complete the tasks and scenarios quickly using this system.		✓						
4. I felt comfortable using this system.		✓						
5. It was easy to learn to use this system.		✓						
6. I believe I could become productive quickly using this system.		✓						
7. The system gave error messages that clearly told me how to fix problems.		✓						
8. Whenever I made a mistake using the system, I could recover easily and quickly.		✓						
9. The information (such as online help, on-screen messages, and other documentation) provided with this system was clear.		✓						



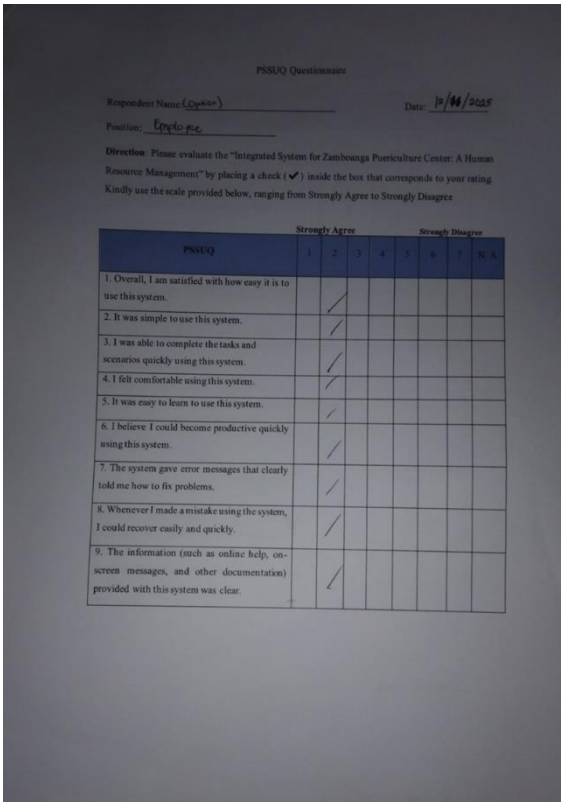
	Strongly Agree 1	2	3	4	5	6	7 Strongly Disagree	N/A
10. It was easy to find the information I needed		✓						
11. The information was effective in helping me complete the tasks and scenarios.		✓						
12. The organization of information on the system screens was clear.		✓						
13. The interface of this system was pleasant.		✓						
14. I liked using the interface of this system.		✓						
15. This system has all the functions and capabilities I expect it to have.		✓						
16. Overall, I am satisfied with this system. .		✓						

Comments and Suggestion:

Signature

Questions 1 to 16: Overall
Questions 1 to 6: System Usefulness (SYSUSE)
Questions 7 to 12: Information Quality (INFOQUAL)
Questions 13 to 16: Interface Quality (INTERQUAL)

Source: uiuxtrend.com



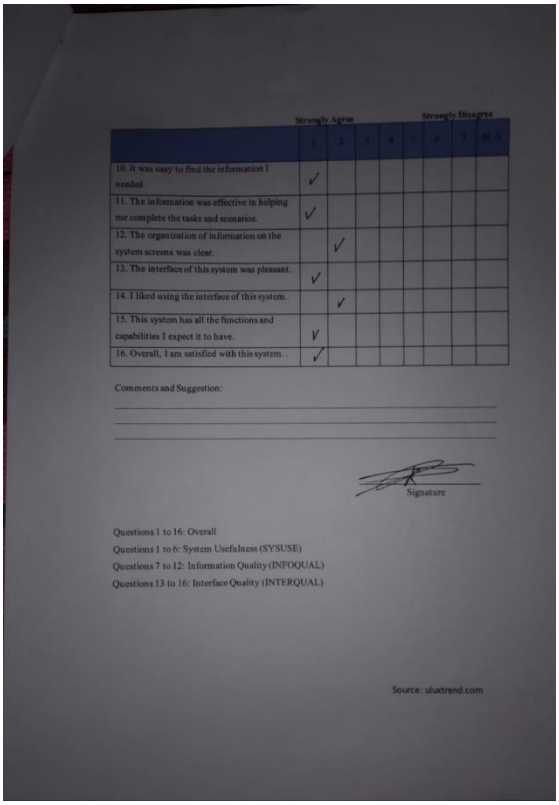
PSSUQ Questionnaire

Respondent Name: (Name) Date: 10/11/2025

Position: Employee

Direction: Please evaluate the "Integrated System for Zamboanga Puericulture Center: A Human Resource Management" by placing a check (✔) inside the box that corresponds to your rating. Kindly use the scale provided below, ranging from Strongly Agree to Strongly Disagree

PSSUQ	Strongly Agree 1	2	3	4	5	6	7 Strongly Disagree	N/A
1. Overall, I am satisfied with how easy it is to use this system.		✓						
2. It was simple to use this system.		✓						
3. I was able to complete the tasks and scenarios quickly using this system.		✓						
4. I felt comfortable using this system.		✓						
5. It was easy to learn to use this system.		✓						
6. I believe I could become productive quickly using this system.		✓						
7. The system gave error messages that clearly told me how to fix problems.		✓						
8. Whenever I made a mistake using the system, I could recover easily and quickly.		✓						
9. The information (such as online help, on-screen messages, and other documentation) provided with this system was clear.		✓						



	Strongly Agree 1	2	3	4	5	6	7 Strongly Disagree	N/A
10. It was easy to find the information I needed	✓							
11. The information was effective in helping me complete the tasks and scenarios.	✓							
12. The organization of information on the system screens was clear.		✓						
13. The interface of this system was pleasant.	✓							
14. I liked using the interface of this system.		✓						
15. This system has all the functions and capabilities I expect it to have.	✓							
16. Overall, I am satisfied with this system. .	✓							

Comments and Suggestion:

Signature

Questions 1 to 16: Overall
Questions 1 to 6: System Usefulness (SYSUSE)
Questions 7 to 12: Information Quality (INFOQUAL)
Questions 13 to 16: Interface Quality (INTERQUAL)

Source: uiuxtrend.com

APPENDI E

CURRICULUM VITAE

CURRICULUM VITAE

Name:	Pagotaisidro, Marco Jean F.
Address:	Purok 2B, Malagutay
Contact Number:	09357745262
Email Address:	pagotaisidromarcojean@gmail.com

Personal Information

Date of Birth:	May 21, 2004
Place of Birth:	Zamboanga City
Age:	20
Nationality:	Filipino
Religion:	Roman Catholic
Civil Status:	Single
Father's Name:	Felizardo S. Pagotaisidro
Mother's Name:	Marites F. Pagotaisidro

Education

College:	Zamboanga Peninsula Polytechnic State University - Zamboanga City Bachelor of Science in Information Technology 2022 - Present
Senior High School:	Baliwasan Stand Alone National High School 2020 - 2021
Junior High School:	Mabuhay National High School 2017 - 2019
Elementary:	Malinao Elementary School 2011 - 2017

Skills

Technical Skills:	Encoding, programming (language: PHP, database: MYSQL), Reliability, Leadership.
Soft Skills:	Communication, Creativity

CURRICULUM VITAE

Name:	Pastor, Hero M.
Address:	Purok 1, Sinubong ZC.
Contact Number:	09555925019
Email Address:	pastorr.hero@gmail.com

Personal Information

Date of Birth:	May 21, 2004
Place of Birth:	Zamboanga City
Age:	20
Nationality:	Filipino
Religion:	Roman Catholic
Civil Status:	Single
Father's Name:	Melvin S. Pastor
Mother's Name:	Josie M. Pastor

Education

College:	Zamboanga Peninsula Polytechnic State University - Zamboanga City Bachelor of Science in Information Technology 2025 - Present
Senior High School:	Sinubong National High School 2020 - 2021
Junior High School:	Sinubong National High School 2017 - 2020
Elementary:	Sinubong Elementary School 2011 - 2017

Skills

Technical Skills:	Assemble & disassemble (PC), Leadership.
Soft Skills:	Communication

CURRICULUM VITAE

Name:	Hanani, Jaihan A.
Address:	Cawit Zone 1
Contact Number:	09750327428
Email Address:	jaihanahanani29@gmail.com

Personal Information

Date of Birth:	June 29, 2002
Place of Birth:	Zamboanga City
Age:	22
Nationality:	Filipino
Religion:	Islam
Civil Status:	Single
Father's Name:	Ismael S. Hanani
Mother's Name:	Malbiya S. Hanani

Education

College:	Zamboanga Peninsula Polytechnic State University - Zamboanga City Bachelor of Science in Information Technology 2022 - Present
Senior High School:	Colegio De la Cuidad De Zamboanga 2020-2021
Junior High School:	Ayala National High School 2018 - 2019
Elementary:	Cawit Elementary School 2014 - 2015

Skills

Technical Skills:	Project Management, Analytical Thinking
Soft Skills:	Follow instructions, Communicate, Time Management.
Achievements:	Semestral Achiever (GWA: 1.75)

CURRICULUM VITAE

Name:	Milano, Rhina Jane M.
Address:	Zone1, Pamucutan
Contact Number:	09390328629
Email Address:	milano.rhinajane@gmail.com

Personal Information

Date of Birth:	October 04, 2003
Place of Birth:	Zamboanga City
Age:	21
Nationality:	Filipino
Religion:	Assembly of God (AG)
Civil Status:	Single
Father's Name:	Ruel S. Milano
Mother's Name:	Janneth M. Milano

Education

College:	Zamboanga Peninsula Polytechnic State University - Zamboanga City Bachelor of Science in Information Technology 2022 - Present
Senior High School:	Ayala National High School 2020-2021
Junior High School:	Recodo National High School 2019-2020
Elementary:	Recodo Elementary School 2015-2016

Skills

Technical Skills:	MS Office (Word, PowerPoint, Excel), Good in Basic Computer Interaction,
Soft Skills:	Follow instructions, Communication Skills, Collaborative and able to work in team Motivated, always willing to learn new things