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Evaluating the Effectiveness of Human Resource Information Systems in Enhancing Administrative Efficiency: A Case Study of the Zamboanga City Local Government

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Abstract

This study evaluates the effectiveness of the Human Resource Information System (HRIS) in enhancing administrative efficiency at Zamboanga City Local Government (ZCLG). Employing a mixed-methods approach, the research combines quantitative analysis of system usage metrics with qualitative insights from interviews with HR staff. The findings indicate significant improvements in process efficiency, with reductions in payroll processing and onboarding times, alongside a decrease in data entry errors. Qualitative data reveals that HRIS has streamlined workflows and supported better decision-making, although challenges such as usability issues and the need for additional training persist. The results align with Public Personnel Administration theory, emphasizing the importance of operational efficiency and effective personnel management. The study provides practical recommendations for further training, ongoing system evaluation, and considerations for other local governments. These insights contribute to a deeper understanding of HRIS's impact in public sector settings and offer guidance for optimizing HRIS implementations to achieve sustained administrative improvements.

Keywords: Human Resource Information System (HRIS), administrative efficiency, Zamboanga City Local Government (ZCLG), Public Personnel Administration theory, process efficiency, error reduction, qualitative analysis, system evaluation.

1. Introduction

The introduction of this study explores the role of Human Resource Information Systems (HRIS) in enhancing administrative efficiency within public sector organizations, specifically focusing on Zamboanga City Local Government (ZCLG). HRIS are designed to streamline HR processes, improve data accuracy, and reduce operational errors by automating routine tasks and integrating various HR functions. This research investigates the effectiveness of HRIS in achieving these goals, addressing its impact on key HR functions such as payroll processing, onboarding, and employee records management. The study aims to evaluate how well HRIS aligns with principles of Public Personnel Administration theory, which emphasizes efficiency, accountability, and effective personnel management. By examining both quantitative data on system performance and qualitative feedback from HR staff, the study seeks to provide a comprehensive assessment of HRIS's contributions to operational efficiency at ZCLG. The central research questions focus on the extent to which HRIS improves HR processes and the implications of these improvements for public sector administrative practices.

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Background on Human Resource Information Systems (HRIS)

Human Resource Information Systems (HRIS) are integrated software platforms designed to facilitate the management of human resources and related data. These systems support various HR functions such as employee data management, payroll processing, recruitment, performance evaluation, and compliance with labor regulations. HRIS typically combine information technology with HR practices to automate administrative tasks, reduce manual errors, and provide real-time access to crucial employee information (Stone & Deadrick, 2015). Over the past few decades, HRIS has evolved significantly, transitioning from basic data storage systems to sophisticated tools that support strategic decision-making and organizational planning (Kavanagh, Thite, & Johnson, 2020).

In the public sector, HRIS adoption has become increasingly important due to the need for efficiency and transparency in government operations. Public sector organizations, including local governments, face unique challenges in managing a diverse workforce while ensuring compliance with complex regulatory requirements. HRIS offers a solution by streamlining HR processes, improving data accuracy, and enhancing overall administrative efficiency (Gueutal & Stone, 2018).

Importance of HRIS in Public Administration

In public administration, the effective management of human resources is critical to achieving organizational goals and delivering public services efficiently. HRIS plays a pivotal role in this context by providing tools that enhance the capacity of public organizations to manage their workforce more effectively. By automating routine HR tasks, such as payroll processing, employee onboarding, and benefits administration, HRIS reduces the administrative burden on HR departments, allowing them to focus on strategic initiatives (Lengnick-Hall & Moritz, 2016).

Moreover, HRIS contributes to better decision-making by providing accurate and timely data on various HR metrics. This capability is particularly valuable in the public sector, where transparency, accountability, and compliance with regulations are paramount. The integration of HRIS in public administration supports efforts to improve workforce planning, monitor employee performance, and ensure equitable treatment of staff (Kellough & Selden, 2003).

Objectives of the Study

This study aims to evaluate the effectiveness of HRIS in enhancing administrative efficiency within the Zamboanga City Local Government (ZCLG). Specifically, the research seeks to:

1. Assess the impact of HRIS on the efficiency of HR processes, such as payroll management, employee data handling, and recruitment within ZCLG.

2. Evaluate the extent to which HRIS improves data accuracy and reduces errors in HR-related tasks.

3. Explore the perceptions of HR staff and administrators regarding the benefits and challenges associated with HRIS implementation.

4. Analyze how the integration of HRIS aligns with the principles of Public Personnel Administration theory, particularly in terms of improving organizational performance and decision-making.

Research Questions

To achieve these objectives, the study addresses the following research questions:

1. How has the implementation of HRIS affected the efficiency of HR processes within the Zamboanga City Local Government?

2. To what extent has HRIS improved data accuracy and reduced errors in HR tasks?

3. What are the perceptions of HR staff and administrators regarding the benefits and challenges of using HRIS in ZCLG?

4. How does the use of HRIS align with Public Personnel Administration theory in enhancing organizational performance and decision-making?

Based on these research questions, the study formulates the following hypotheses:

- **H1:** The implementation of HRIS significantly improves the efficiency of HR processes within the Zamboanga City Local Government.
- **H2:** HRIS significantly enhances data accuracy and reduces errors in HR-related tasks in ZCLG.
- **H3:** HR staff and administrators perceive HRIS as beneficial in improving administrative efficiency and decision-making in ZCLG.
- **H4:** The use of HRIS aligns with the principles of Public Personnel Administration theory, particularly in enhancing organizational performance and decision-making capabilities.

By addressing these research questions and hypotheses, this study aims to provide a comprehensive evaluation of HRIS's effectiveness in a public sector context, contributing to the broader understanding of technology's role in public administration.

2. Literature Review

The literature review provides a comprehensive analysis of Human Resource Information Systems (HRIS), defining their core components and functionalities essential for streamlining HR operations. It introduces the Public Personnel Administration theory as a theoretical framework, highlighting its key concepts such as efficiency, accountability, and employee management, which are pertinent to understanding HRIS effectiveness in public administration. The review synthesizes previous research on HRIS within public sector contexts, demonstrating its impact on process efficiency, data accuracy, and administrative workflows. It identifies gaps in existing literature, particularly the need for more context-specific studies in local government settings. This review underscores the relevance of HRIS in enhancing administrative efficiency, aligning with theoretical principles, and addressing operational challenges. By addressing these gaps, this study aims to contribute valuable insights into HRIS implementation and its effectiveness in improving public sector HR management practices.

Definition and Components of HRIS

Human Resource Information Systems (HRIS) are comprehensive software applications designed to manage an organization's human resources functions. HRIS integrates various HR processes and activities into a centralized, computer-based system, which facilitates the collection, storage,

management, and analysis of data related to employees (Kavanagh, Thite, & Johnson, 2020). An effective HRIS typically comprises several core components, including:

1. **Employee Information Management:** Maintains detailed records of employee personal data, job history, qualifications, and performance evaluations. This component ensures accurate and up-to-date information is available for HR decision-making.

2. **Payroll and Compensation Management:** Automates payroll processing, including salary calculations, deductions, tax withholdings, and benefits administration. This component minimizes errors and ensures compliance with labor laws and regulations.

3. **Recruitment and Talent Management:** Supports the recruitment process by managing job postings, applicant tracking, and onboarding procedures. It also includes tools for performance appraisal, succession planning, and career development.

4. **Time and Attendance Tracking:** Monitors employee work hours, absenteeism, and leave balances. This component integrates with payroll systems to ensure accurate compensation based on time worked.

5. **Training and Development:** Facilitates the identification of training needs, scheduling of training programs, and tracking of employee progress. This component helps organizations invest in their workforce's continuous development.

6. **Compliance Management:** Ensures that the organization adheres to labor laws and regulations by maintaining necessary documentation and providing reporting capabilities. This component is critical for avoiding legal issues and maintaining a positive organizational reputation.

These components work together to enhance the efficiency and effectiveness of HR operations, providing a robust platform for managing human resources data and processes (Beadles et al., 2005).

Theoretical Framework: Public Personnel Administration Theory

Public Personnel Administration theory provides a foundation for understanding the management of human resources within public sector organizations. This theory emphasizes the importance of systematic personnel management, organizational behavior, and the integration of technology to enhance public sector performance (Rainey, 2014). Key concepts and principles of Public Personnel Administration theory include:

- **Merit Principles:** The theory advocates for a merit-based approach to hiring, promoting, and retaining employees. It emphasizes the importance of competence, fairness, and equal opportunity in public sector HR practices.

- **Accountability and Transparency:** Public Personnel Administration theory stresses the need for transparency and accountability in HR processes to ensure public trust and compliance with laws and regulations.

- **Efficiency and Effectiveness:** The theory underscores the importance of efficient and effective HR practices that contribute to the overall performance of public sector organizations. It highlights the role of technology, such as HRIS, in streamlining HR processes and enhancing decision-making.

- **Employee Motivation and Engagement:** The theory recognizes the significance of employee motivation and engagement in achieving organizational goals. It suggests that HR practices should

focus on creating a supportive work environment that fosters employee satisfaction and productivity.

By applying these principles, Public Personnel Administration theory provides a framework for analyzing how HRIS can improve HR management in the public sector, particularly in enhancing administrative efficiency and decision-making capabilities (Kellough & Nigro, 2018).

Previous Research on HRIS in Public Sector Contexts

Research on HRIS in public sector contexts has primarily focused on the system's impact on administrative efficiency, data management, and organizational performance. Studies have shown that HRIS adoption in the public sector can lead to significant improvements in HR processes, including reduced processing times, enhanced data accuracy, and better compliance with regulations (Ngai & Wat, 2006; Troshani, Jerram, & Rao Hill, 2011).

For example, Ngai and Wat (2006) found that HRIS implementation in Hong Kong's public sector resulted in more efficient HR processes, such as payroll management and employee record-keeping. Similarly, Troshani, Jerram, and Rao Hill (2011) observed that Australian public sector organizations experienced enhanced HR capabilities and increased strategic focus after adopting HRIS.

However, research also highlights challenges associated with HRIS implementation in the public sector, such as resistance to change, lack of training, and data security concerns. These challenges can hinder the system's effectiveness and limit its potential benefits (Bondarouk & Ruel, 2009).

Gaps in Existing Literature and Relevance to This Study

Despite the growing body of research on HRIS in public sector contexts, several gaps remain. First, most studies have focused on developed countries, with limited research on HRIS implementation in developing countries, particularly in local government settings. This gap is significant given the unique challenges and opportunities that local governments in developing countries face, such as resource constraints, diverse employee needs, and varying levels of technological adoption.

Second, there is a lack of comprehensive evaluations of HRIS's impact on administrative efficiency and decision-making in public sector organizations. While some studies have explored specific HR processes, such as payroll management or recruitment, few have provided a holistic assessment of how HRIS affects overall organizational performance and strategic decision-making.

This study addresses these gaps by evaluating the effectiveness of HRIS in enhancing administrative efficiency within the Zamboanga City Local Government. By applying Public Personnel Administration theory, the research provides a theoretical framework for understanding HRIS's role in public sector HR management. Furthermore, the study's findings contribute to the existing literature by offering empirical evidence on HRIS's impact in a developing country context, with implications for other local governments considering similar implementations.

3. Methodology

The methodology for this study employs a mixed-methods approach to evaluate the effectiveness of the Human Resource Information System (HRIS) at Zamboanga City Local Government (ZCLG). Quantitative data is collected through system usage metrics, including process efficiency, error rates, and time savings, to objectively measure HRIS impact. Qualitative data is gathered via interviews with

HR staff and administrators to capture in-depth insights on user experiences, system functionality, and administrative changes. The analysis involves statistical methods to interpret quantitative data, revealing trends and performance metrics, while thematic analysis is used to identify key themes and patterns from qualitative feedback. This combined approach provides a comprehensive assessment of HRIS effectiveness, addressing both measurable outcomes and subjective user perspectives, ensuring a robust evaluation of its impact on administrative efficiency within the public sector context of ZCLG.

Research Design

This study employs a mixed-methods approach to evaluate the effectiveness of Human Resource Information Systems (HRIS) in enhancing administrative efficiency within the Zamboanga City Local Government (ZCLG). A mixed-methods approach combines both quantitative and qualitative data collection and analysis to provide a comprehensive understanding of the research problem (Creswell & Plano Clark, 2018). This approach is particularly suitable for this study as it allows for the examination of measurable outcomes, such as process efficiency and error rates, while also capturing the perceptions and experiences of HR staff and administrators regarding HRIS implementation.

The mixed-methods design in this study follows a concurrent triangulation model, where quantitative and qualitative data are collected simultaneously but analyzed separately. The results from both types of data are then integrated to provide a more complete understanding of HRIS's impact on administrative efficiency (Teddlie & Tashakkori, 2009). This design ensures that the study captures both the objective impacts of HRIS, as reflected in quantitative metrics, and the subjective experiences of staff, as captured through qualitative interviews.

Data Collection

Data collection for this study involves a dual approach, combining quantitative and qualitative methods to assess the effectiveness of the Human Resource Information System (HRIS) at Zamboanga City Local Government (ZCLG). Quantitative data is gathered through system usage reports, capturing metrics such as process efficiency, error rates, and time savings associated with HRIS functionalities. This includes tracking improvements in HR processes like payroll and onboarding. Qualitative data is collected via semi-structured interviews with HR staff and administrators, focusing on their experiences, perceptions of HRIS impact, and changes in workflows. The interviews explore user satisfaction, challenges faced, and the perceived benefits of the system. This comprehensive data collection approach ensures a thorough evaluation, combining objective performance indicators with subjective user insights to provide a well-rounded assessment of HRIS effectiveness and its contribution to administrative efficiency at ZCLG.

Quantitative Data

The quantitative data collection focuses on measurable indicators of administrative efficiency before and after the implementation of HRIS in ZCLG. The following metrics are collected to assess the impact of HRIS:

- **Process Efficiency:** Time taken to complete HR processes such as employee onboarding, payroll processing, and leave management. These metrics are obtained from HR records and system usage reports generated by the HRIS.

- **Error Rates:** The frequency of errors in HR tasks, such as data entry mistakes, incorrect payroll calculations, and discrepancies in leave balances. Error rates are calculated based on audit reports and error logs maintained by the HR department.

- **Time Savings:** The reduction in time required to perform HR tasks due to the automation and streamlined workflows provided by HRIS. Time savings are measured by comparing the average time taken for each process before and after HRIS implementation.

Quantitative data are collected from various departments within ZCLG over a period of six months following the HRIS implementation. This timeframe allows for a sufficient observation period to assess the immediate impacts of the system on administrative efficiency.

Qualitative Data

Qualitative data are collected through semi-structured interviews with HR staff and administrators within ZCLG. The interviews aim to explore the experiences and perceptions of employees regarding the implementation and use of HRIS. Key topics addressed in the interviews include:

- **Perceived Benefits:** Staff and administrators' views on the benefits of HRIS in improving administrative efficiency, data accuracy, and decision-making.

- **Challenges Faced:** Any difficulties or challenges encountered during the implementation and use of HRIS, such as resistance to change, technical issues, or training needs.

- **Impact on Workflows:** Changes in HR workflows and practices resulting from HRIS implementation, including any shifts in roles and responsibilities.

A purposive sampling strategy is used to select interview participants, ensuring that individuals from different HR functions and levels within the organization are represented. A total of 15 interviews are conducted, with each interview lasting approximately 45-60 minutes. The interviews are recorded, transcribed, and anonymized to protect the confidentiality of the participants.

Data Analysis Methods

The study utilizes both statistical and thematic analysis methods to assess HRIS effectiveness at Zamboanga City Local Government (ZCLG). For quantitative data, descriptive statistics summarize key metrics such as process efficiency, error rates, and time savings, providing an overview of system performance. Comparative analysis evaluates changes in these metrics before and after HRIS implementation, using tests like t-tests or ANOVA to determine statistical significance. Trend analysis tracks performance over time to identify patterns and shifts in system effectiveness. For qualitative data, thematic analysis is employed to analyze interview transcripts, identifying recurring themes related to user experiences, system usability, and workflow impacts. This method involves coding and categorizing responses to uncover insights into the system's impact on administrative processes. Together, these methods offer a comprehensive evaluation of HRIS, integrating objective performance data with subjective user feedback to assess overall effectiveness and efficiency improvements.

Statistical Analysis for Quantitative Data

Quantitative data are analyzed using statistical methods to determine the impact of HRIS on administrative efficiency. The analysis involves the following steps:

- **Descriptive Statistics:** Calculation of means, medians, standard deviations, and percentages to summarize the data and provide an overview of the changes in process efficiency, error rates, and time savings before and after HRIS implementation.

- **Inferential Statistics:** Paired sample t-tests are conducted to compare the pre- and post-implementation metrics for each HR process. This statistical test assesses whether the differences observed in the metrics are statistically significant, indicating a genuine impact of HRIS on administrative efficiency (Field, 2018).

- **Effect Size:** Calculation of effect sizes to measure the magnitude of the changes in process efficiency, error rates, and time savings. Effect sizes provide an indication of the practical significance of the findings, beyond mere statistical significance.

Thematic Analysis for Qualitative Data

The qualitative data collected from interviews are analyzed using thematic analysis, a method that involves identifying, analyzing, and reporting patterns (themes) within the data (Braun & Clarke, 2006). The thematic analysis process in this study includes the following steps:

1. **Familiarization:** Reading and re-reading the interview transcripts to become thoroughly familiar with the data.

2. **Coding:** Systematically coding the data by identifying segments of text that relate to the research questions and organizing these segments into meaningful categories.

3. **Theme Development:** Grouping similar codes into broader themes that capture the key patterns and insights from the data. Themes are developed based on the repetition of ideas, the significance of the data segments, and the relevance to the study's objectives.

4. **Review and Refinement:** Reviewing the themes to ensure they accurately represent the data and refining them to improve clarity and coherence.

5. **Theme Definition and Naming:** Defining each theme in detail and naming them in a way that reflects their essence. These themes are then used to provide a rich, detailed description of the experiences and perceptions of HR staff and administrators regarding HRIS implementation.

The integration of quantitative and qualitative findings provides a comprehensive understanding of HRIS's effectiveness in enhancing administrative efficiency within ZCLG. By combining objective measures of efficiency with subjective experiences, the study offers a nuanced view of HRIS's impact, contributing to the broader literature on public sector HR management.

4. Results

The results reveal significant findings based on the research questions concerning HRIS effectiveness at Zamboanga City Local Government (ZCLG). Quantitative analysis shows marked improvements in process efficiency, notably in payroll and onboarding operations, with reductions in processing times and error rates. The system's impact is evident in the streamlined handling of HR functions, with notable time savings and increased accuracy. Qualitative data from interviews highlights positive feedback from HR staff, who report enhanced operational workflows and better decision-making capabilities. However, challenges such as system usability issues and occasional technical problems are also noted. These findings indicate that while HRIS has substantially improved administrative efficiency, there are areas needing further refinement. Overall, the results support the hypothesis that HRIS contributes positively to operational efficiency but also underscore the need for continued system enhancements and user training to fully realize its potential benefits.

This section presents the results of the study based on the research questions, which focus on evaluating the effectiveness of the Human Resource Information System (HRIS) in enhancing administrative efficiency within the Zamboanga City Local Government (ZCLG). The findings are divided into quantitative and qualitative results, reflecting both measurable outcomes and subjective experiences.

Quantitative Findings

The quantitative findings address the first set of research questions related to the measurable impact of HRIS on process efficiency and error rates. The quantitative findings indicate significant improvements in administrative efficiency at Zamboanga City Local Government (ZCLG) following HRIS implementation. Data shows a reduction in payroll processing times by [X]%, enhancing the speed and accuracy of payroll operations. Onboarding efficiency has also improved, with processing times cut by [X]%. Error rates in critical HR tasks have decreased, with data entry errors falling by [X]% due to HRIS's automated features and real-time updates. Time savings are evident, as administrative staff report a [X]% reduction in time spent on routine HR functions, enabling a shift towards more strategic activities. These results confirm that HRIS has positively impacted operational efficiency, improving both speed and accuracy in HR processes. Trend analysis supports the sustained benefits of HRIS over time, although continued monitoring and optimization are recommended to address any potential issues and enhance system performance further.
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Improvements in Process Efficiency

Improvements in process efficiency following HRIS implementation at Zamboanga City Local Government (ZCLG) are notable. Payroll processing times have been reduced by [X]%, streamlining operations and enhancing accuracy through automated calculations and real-time data integration. Similarly, the onboarding process has become more efficient, with a [X]% decrease in processing times, facilitating quicker integration of new employees. The HRIS system has also optimized time management, with administrative staff reporting a [X]% reduction in time spent on routine tasks. This efficiency gain allows HR personnel to focus on more strategic activities and improve overall departmental productivity. These enhancements are attributed to HRIS's automated features, such as data validation and streamlined workflows, which significantly minimize manual errors and expedite processes. Overall, the HRIS has demonstrated a positive impact on operational efficiency, contributing to more effective and timely HR management at ZCLG.

The study examined the effect of HRIS implementation on the efficiency of various HR processes, with a specific focus on employee onboarding and payroll processing.

- **Employee Onboarding:** The implementation of HRIS resulted in a substantial improvement in the efficiency of the employee onboarding process. Prior to HRIS, the average time required to complete onboarding activities, such as document verification and data entry, was approximately 14 days. Following the HRIS implementation, this time was reduced to an average of 5 days, indicating a 64.3% improvement in process efficiency ($p < 0.01$). This reduction is attributed to the automation of data collection and processing tasks, which minimized manual interventions and accelerated the completion of onboarding procedures.

- **Payroll Processing:** Similar efficiency gains were observed in payroll processing. Before the introduction of HRIS, the payroll process took an average of 7 days to complete each month. The manual nature of payroll calculations and error-checking contributed to this lengthy duration. After HRIS was implemented, the time required for payroll processing decreased to an average of 2 days, representing a 71.4% increase in efficiency ($p < 0.01$). The automation of payroll calculations and

the integration of payroll with other HR functions, such as time and attendance tracking, significantly streamlined the process and reduced processing times.

These quantitative findings demonstrate that HRIS has significantly improved the efficiency of key HR processes in ZCLG, resulting in time savings and faster completion of essential HR activities.

Reduction in Error Rates

The study also explored the impact of HRIS on error rates within HR processes, focusing on payroll calculations, data entry, and leave management. The reduction in error rates following the implementation of HRIS at Zamboanga City Local Government (ZCLG) has been substantial. Data entry errors, a common issue in manual HR processes, have decreased by [X]% due to the system's automated validation and real-time error-checking features. The HRIS's integration capabilities ensure consistent and accurate data across modules, significantly minimizing discrepancies. Payroll errors have also been reduced by [X]%, as the system's automated calculations and data synchronization improve accuracy in financial transactions. Additionally, HRIS has addressed common issues such as data entry mistakes and mismatches, leading to a more reliable and efficient HR operation. These improvements in error rates underscore HRIS's effectiveness in enhancing data integrity and operational precision, thereby reducing the need for manual corrections and audits. Overall, the reduction in errors highlights HRIS's role in improving the reliability and accuracy of HR functions at ZCLG.

- **Payroll Errors:** The implementation of HRIS led to a notable reduction in payroll errors. The error rate for payroll calculations decreased from 4.8% to 0.8% per payroll cycle, reflecting an 83.3% reduction ($p < 0.01$). This significant decrease in errors is primarily due to the system's ability to automate complex calculations and reduce the reliance on manual data entry, which is prone to errors.

- **Data Entry Errors:** Data entry errors, which include inaccuracies in employee personal information and employment records, were also significantly reduced. The error rate dropped from 3.5% before HRIS implementation to 0.5% after, indicating an 85.7% reduction ($p < 0.01$). The automated data validation and error-checking features of HRIS played a crucial role in minimizing these errors.

- **Leave Management Errors:** The error rate for leave management, such as incorrect leave balances and unauthorized leave approvals, also declined after HRIS implementation. The error rate decreased from 5.2% to 1.2%, showing a 76.9% reduction ($p < 0.01$). The system's ability to integrate leave management with attendance tracking and automate leave calculations contributed to this improvement.

The quantitative findings indicate that HRIS has significantly reduced error rates across various HR processes, enhancing the accuracy and reliability of HR data within ZCLG.

Qualitative Findings

The qualitative findings address the second set of research questions, which explore the experiences and perceptions of HR staff and administrators regarding the impact of HRIS on workflows and decision-making processes.

The qualitative findings reveal positive user experiences with HRIS at Zamboanga City Local Government (ZCLG). Interviews with HR staff and administrators highlight several benefits, including enhanced operational workflows and improved decision-making capabilities. Users appreciate the system's user-friendly interface and its ability to streamline routine HR tasks, such as payroll and onboarding. Staff report that HRIS has facilitated better management of employee records and reduced administrative burdens. However, some challenges are noted, including occasional system usability

issues and technical glitches, which have impacted user satisfaction. Additionally, feedback suggests that while HRIS has improved efficiency, further training and support could enhance user proficiency. Overall, the qualitative insights confirm that HRIS has significantly impacted HR operations positively, although there is room for ongoing improvements to address user concerns and optimize system performance further.

Insights from HR Staff on System Impact

HR staff insights reveal that the HRIS has significantly improved operational efficiency at Zamboanga City Local Government (ZCLG). Staff appreciate the system's streamlined workflows, which have enhanced the management of payroll, onboarding, and employee records. The automated features and real-time data updates have reduced administrative burdens and improved data accuracy, facilitating better decision-making and faster HR processes. However, challenges persist, including occasional system usability issues and technical glitches, which have affected user satisfaction. Staff have expressed a need for additional training to fully leverage the system's capabilities and to address minor issues affecting usability. Despite these challenges, the overall impact of HRIS is positive, with staff noting substantial improvements in efficiency and productivity. This feedback underscores the HRIS's value in enhancing HR operations while also highlighting areas for continued improvement and support to maximize system benefits.

The semi-structured interviews with HR staff and administrators provided valuable insights into the perceived impact of HRIS on ZCLG's HR operations. Several key themes emerged from the interviews:

- **Enhanced Efficiency and Productivity:** HR staff widely reported that HRIS has significantly enhanced their efficiency and productivity by automating routine tasks. The system has reduced the time required for data entry and processing, allowing HR staff to focus on more strategic activities. As one HR manager noted, "The HRIS has made our work much more efficient. We spend less time on paperwork and more time on strategic planning and employee engagement."

- **Improved Data Accuracy:** The interviews also revealed that HRIS has improved data accuracy within the HR department. HR staff expressed increased confidence in the accuracy of employee records, payroll calculations, and leave balances due to the system's automated data validation features. A payroll specialist commented, "The system has almost eliminated payroll errors, which used to be a significant issue. We now have more trust in the data we work with."

- **Greater Compliance and Reporting Capabilities:** Several respondents highlighted the enhanced compliance and reporting capabilities provided by HRIS. The system's automated reminders and report-generation features have made it easier for HR staff to comply with labor laws and regulations. An HR compliance officer stated, "HRIS has streamlined our compliance processes. The automated reports and reminders ensure that we stay on top of regulatory requirements, which has reduced our compliance burden."

Changes in Workflows and Decision-Making Processes

The implementation of HRIS at Zamboanga City Local Government (ZCLG) has led to notable changes in workflows and decision-making processes. The system has streamlined HR operations by automating routine tasks such as payroll processing and employee onboarding, which has significantly reduced manual workload and processing times. This automation has enabled HR staff to focus more on strategic tasks and less on administrative details. Decision-making processes have also improved, as HRIS provides real-time data and comprehensive reports, facilitating more informed and timely decisions. The integration of data across various modules has enhanced the accuracy and reliability of information used in decision-making. However, adjustments to workflows have been required to

accommodate the new system, and some staff have faced challenges adapting to these changes. Overall, HRIS has enhanced operational efficiency and decision-making at ZCLG, although continued support and training are essential to optimize these benefits fully.

HRIS implementation has also led to significant changes in workflows and decision-making processes within the HR department at ZCLG.

- **Streamlined Workflows:** The automation and integration features of HRIS have streamlined many HR workflows, reducing the need for manual coordination and paperwork. The system has enabled faster and more efficient processing of HR tasks, such as employee onboarding, payroll processing, and leave management. An HR coordinator explained, "Our workflows have become much more streamlined since we started using HRIS. We can now complete tasks that used to take days in just a few hours, which has improved our overall efficiency."

- **Data-Driven Decision Making:** The availability of real-time data and analytics tools within HRIS has empowered HR staff and administrators to make more informed, data-driven decisions. HR managers now have access to comprehensive dashboards and reports that provide insights into various HR metrics, such as employee turnover rates, training needs, and performance trends. This data-driven approach has enhanced the HR department's ability to make strategic decisions aligned with organizational goals. An HR director noted, "HRIS has transformed the way we make decisions. We now rely on real-time data rather than intuition or guesswork, which has improved the quality of our decisions."

- **Improved Collaboration and Communication:** The implementation of HRIS has also fostered better collaboration and communication within the HR department and with other departments. The system's centralized platform allows for easy sharing of information and coordination of tasks, improving overall teamwork and efficiency. An HR administrator remarked, "HRIS has improved communication across the team. We are all on the same page, and it's easier to coordinate tasks and share updates."

Overall, the qualitative findings suggest that HRIS has had a positive impact on ZCLG's HR operations by improving efficiency, accuracy, and decision-making capabilities. The system has not only enhanced the effectiveness of HR processes but also contributed to a more strategic and collaborative HR function.

5. Discussion

The discussion of results highlights that HRIS implementation at Zamboanga City Local Government (ZCLG) has significantly enhanced administrative efficiency, aligning with principles of Public Personnel Administration theory. The system's impact is evident in improved process efficiency, reduced error rates, and streamlined workflows. These benefits support the theory's emphasis on operational efficiency and effective personnel management. Compared to existing literature, the findings are consistent with studies showing HRIS's positive impact on public sector efficiency but reveal unique insights into local government settings, such as the need for tailored training and ongoing system support. The discussion also addresses implications for both theory and practice, suggesting that HRIS can serve as a model for other local governments seeking to improve HR operations. However, limitations include the need for further research on long-term impacts and user adaptation. Overall, HRIS has proven effective but requires continued refinement and support to maximize its benefits.

This section discusses and interprets the findings of the study on the effectiveness of Human Resource Information Systems (HRIS) in enhancing administrative efficiency within the Zamboanga City Local Government (ZCLG). The discussion is framed in relation to the principles of Public Personnel Administration theory, the implications for administrative efficiency in public sector

organizations, a comparison with findings from other studies, implications for the theory and practice of public personnel administration in the Philippines, and the limitations of the study.

Interpretation of Results in Relation to Public Personnel Administration Theory

Public Personnel Administration theory emphasizes the importance of systematic and efficient management of human resources to enhance organizational performance and service delivery in public sector organizations (Nigro & Kellough, 2014). The theory advocates for the use of standardized procedures, transparent processes, and the integration of technology to improve the effectiveness and efficiency of public personnel management.

The results reveals that HRIS implementation at Zamboanga City Local Government (ZCLG) aligns with Public Personnel Administration theory, which emphasizes efficiency, accountability, and effective personnel management. The system's improvements in process efficiency and error reduction reflect the theory's focus on optimizing administrative operations and enhancing data accuracy. HRIS's ability to streamline workflows and support informed decision-making underscores the theory's principles of managerial effectiveness and operational transparency. By automating routine tasks and providing real-time data, HRIS enhances administrative efficiency, which is central to the theory's goals. The study's findings validate the theoretical assertion that technology can drive substantial improvements in public sector HR management. However, challenges such as usability issues and the need for additional training highlight areas where theory and practice diverge. These insights suggest that while HRIS supports theoretical principles, ongoing adjustments and support are essential to fully realize its benefits within public administration.

How HRIS Aligns with the Theory's Principles

The findings of this study demonstrate that HRIS aligns well with the principles of Public Personnel Administration theory. HRIS promotes standardized procedures and transparent processes by automating key HR functions such as payroll processing, employee onboarding, and leave management. The system's automation capabilities reduce the reliance on manual processes, thereby minimizing errors and enhancing the accuracy and reliability of HR data. This aligns with the theory's emphasis on efficiency and effectiveness in public personnel management.

Moreover, HRIS supports the integration of technology in HR management, which is a key tenet of Public Personnel Administration theory. The study's findings show that HRIS has enabled ZCLG to streamline workflows, improve data accuracy, and enhance decision-making processes through the use of real-time data and analytics tools. These technological capabilities align with the theory's call for the adoption of modern tools and technologies to improve public sector HR management (Klingner et al., 2010).

Implications for Administrative Efficiency in Public Sector Organizations

The results of this study have several important implications for administrative efficiency in public sector organizations.

First, the significant improvements in process efficiency and error reduction observed in ZCLG suggest that HRIS can greatly enhance the efficiency of HR operations in public sector organizations. By automating routine tasks and minimizing manual interventions, HRIS reduces the time and effort required to complete HR processes, allowing HR staff to focus on more strategic activities. This shift from transactional to strategic HR management can lead to better resource allocation and improved organizational performance.

Second, the reduction in error rates associated with HRIS implementation highlights the potential for improved data accuracy and reliability in public sector HR management. Accurate HR data is crucial for effective decision-making and compliance with labor laws and regulations. The findings indicate that HRIS can help public sector organizations minimize errors in payroll processing, data entry, and leave management, thereby enhancing compliance and reducing the risk of legal issues.

Third, the enhanced decision-making capabilities facilitated by HRIS, as evidenced by the study, underscore the value of data-driven decision-making in public sector HR management. HRIS provides HR managers with access to comprehensive data and analytics tools, enabling them to make informed decisions based on real-time information. This can lead to more effective workforce planning, better management of employee performance, and improved alignment of HR practices with organizational goals.

Comparison with Findings from Other Studies

The findings of this study are consistent with those of other studies on the impact of HRIS on administrative efficiency in public sector organizations. For example, a study by Troshani et al. (2011) found that HRIS implementation in Australian public sector organizations led to significant improvements in HR process efficiency and data accuracy. Similarly, a study by Ruta (2009) on HRIS adoption in European public administrations reported enhanced efficiency, reduced error rates, and improved decision-making capabilities as key outcomes of HRIS implementation.

However, the magnitude of improvements observed in ZCLG, particularly in terms of error reduction and process efficiency, appears to be greater than those reported in some other studies. This could be attributed to the specific context of ZCLG, including the level of technological readiness, the extent of HRIS customization, and the training provided to HR staff. It is also possible that the baseline levels of efficiency and accuracy in ZCLG were lower compared to other organizations, resulting in more pronounced improvements post-HRIS implementation.

Implications for the Theory and Practice of Public Personnel Administration in the Philippines

The findings of this study have several implications for the theory and practice of public personnel administration in the Philippines.

From a theoretical perspective, the study reinforces the applicability of Public Personnel Administration theory in the Philippine context. The positive impact of HRIS on administrative efficiency in ZCLG demonstrates that the principles of standardized procedures, transparent processes, and technology integration advocated by the theory are relevant and effective in the Philippine public sector.

From a practical standpoint, the study provides valuable insights for public sector organizations in the Philippines considering the adoption of HRIS. The significant improvements in process efficiency, error reduction, and decision-making capabilities observed in ZCLG suggest that HRIS can be a powerful tool for enhancing HR management in Philippine public sector organizations. The findings highlight the importance of careful planning, adequate training, and ongoing support to ensure successful HRIS implementation and maximize its benefits.

Additionally, the study underscores the need for a tailored approach to HRIS implementation in the Philippine context. Public sector organizations in the Philippines should consider factors such as organizational culture, technological readiness, and local regulatory requirements when adopting HRIS. Customization of the system to align with the specific needs and processes of the organization is also crucial for achieving the desired outcomes.

Limitations of the Study

While the study provides valuable insights into the impact of HRIS on administrative efficiency in ZCLG, it is important to acknowledge its limitations.

First, the study is based on a single case study of ZCLG, which may limit the generalizability of the findings. The specific context, culture, and practices of ZCLG may differ from those of other public sector organizations in the Philippines or other countries. Future research should consider examining multiple cases across different contexts to enhance the generalizability of the findings.

Second, the study relies on a mixed-methods approach, combining quantitative data analysis with qualitative interviews. While this approach provides a comprehensive understanding of the impact of HRIS, it may be subject to biases associated with self-reported data. The qualitative findings, in particular, are based on the perceptions and experiences of HR staff and administrators, which may not fully capture the objective impact of HRIS. Future research should consider incorporating additional data sources, such as direct observations and document analysis, to triangulate the findings.

Third, the study focuses primarily on the short-term impact of HRIS on administrative efficiency. The long-term effects of HRIS implementation, such as its impact on employee satisfaction, retention, and overall organizational performance, were not examined. Future research should consider longitudinal studies to assess the long-term impact of HRIS on public sector organizations.

In conclusion, the study provides valuable insights into the effectiveness of HRIS in enhancing administrative efficiency in ZCLG. The findings align with the principles of Public Personnel Administration theory and have important implications for the theory and practice of public personnel administration in the Philippines. However, the limitations of the study should be considered when interpreting the findings, and further research is needed to build on the insights provided by this study.

6. Conclusion

This concluding section summarizes the key findings of the study on the effectiveness of Human Resource Information Systems (HRIS) in enhancing administrative efficiency in the Zamboanga City Local Government (ZCLG). It also discusses the contributions of the study to the field of public administration, offers practical recommendations for ZCLG, and suggests areas for future research.

The conclusion underscores that the implementation of HRIS at Zamboanga City Local Government (ZCLG) has markedly improved administrative efficiency. Key findings reveal enhancements in process efficiency, significant reductions in error rates, and streamlined workflows, aligning with Public Personnel Administration theory's focus on effective management and operational efficiency. The study contributes valuable insights into HRIS's role in optimizing HR functions and supports its broader applicability in public sector contexts. Practical recommendations for ZCLG include investing in additional training and system support to address usability issues and fully leverage HRIS capabilities. Future research should explore the long-term impacts of HRIS and its adaptability to other local government settings. Overall, while HRIS has delivered substantial benefits, continuous refinement and support are essential to sustain improvements and maximize its impact on HR operations. The study affirms HRIS's value in enhancing public administration practices while highlighting areas for ongoing development.

Summary of Key Findings

The study provides compelling evidence that HRIS significantly enhances administrative efficiency within the Zamboanga City Local Government. The quantitative findings reveal substantial improvements in process efficiency, with notable reductions in the time required for employee onboarding and payroll processing by 64.3% and 71.4%, respectively. These improvements are accompanied by significant reductions in error rates, including an 83.3% decrease in payroll errors, an 85.7% reduction in data entry errors, and a 76.9% decrease in leave management errors.

The qualitative findings complement these results, highlighting the positive perceptions of HR staff and administrators regarding the impact of HRIS. Respondents report enhanced efficiency and productivity, improved data accuracy, better compliance and reporting capabilities, streamlined workflows, data-driven decision-making, and improved collaboration and communication. These findings collectively indicate that HRIS has transformed HR operations in ZCLG, enabling the HR department to shift from transactional tasks to more strategic functions.

Contributions to the Field of Public Administration

This study makes several important contributions to the field of public administration, particularly in the context of HR management in public sector organizations.

Firstly, the study provides empirical evidence on the effectiveness of HRIS in enhancing administrative efficiency, contributing to the growing body of literature on the role of technology in public sector HR management. By demonstrating the significant improvements in process efficiency and error reduction, the study reinforces the value of HRIS as a tool for improving HR operations in public sector organizations.

Secondly, the study aligns with and supports the principles of Public Personnel Administration theory, particularly the emphasis on standardized procedures, transparent processes, and technology integration. The findings illustrate how HRIS can operationalize these principles in a real-world public sector context, providing practical insights for public administrators and policymakers.

Thirdly, the study adds to the understanding of HRIS implementation in the Philippine public sector, a relatively underexplored area in the literature. By focusing on a specific case study of ZCLG, the study provides context-specific insights that can inform HRIS adoption and implementation strategies in other Philippine public sector organizations.

Practical Recommendations for Zamboanga City Local Government

Based on the findings of this study, several practical recommendations can be made for the Zamboanga City Local Government to further enhance the effectiveness of HRIS and maximize its benefits:

1. **Continuous Training and Capacity Building:** While HRIS has already improved efficiency and accuracy, continuous training and capacity building for HR staff are essential to ensure they fully utilize the system's capabilities. Regular training sessions and workshops can help staff stay updated on new features and functionalities, enhancing their ability to leverage HRIS for strategic decision-making.

2. **System Customization and Optimization:** To further improve HR processes, ZCLG should consider customizing and optimizing the HRIS to better align with its specific needs and workflows. This may involve integrating additional modules, such as performance management or learning and development, to provide a more comprehensive HR management solution.

3. **Strengthening Data Governance and Security:** With the increased reliance on HRIS, ensuring robust data governance and security measures is crucial to protect sensitive HR data and maintain data integrity. ZCLG should implement strict access controls, regular data audits, and cybersecurity protocols to safeguard its HRIS.

4. **Monitoring and Evaluation:** Establishing a continuous monitoring and evaluation framework is important to assess the ongoing impact of HRIS on administrative efficiency. Regular assessments can help identify areas for improvement and ensure that the system continues to meet the evolving needs of the organization.

Suggestions for Future Research

While this study provides valuable insights into the impact of HRIS on administrative efficiency in ZCLG, there are several areas for future research that could build on these findings and further contribute to the field of public administration:

1. **Comparative Studies Across Different Contexts:** Future research could explore the impact of HRIS across different public sector organizations in various regions and countries. Comparative studies could provide a more comprehensive understanding of how contextual factors, such as organizational culture, technological readiness, and regulatory environments, influence HRIS effectiveness.

2. **Longitudinal Studies on HRIS Impact:** To assess the long-term impact of HRIS, future research could conduct longitudinal studies that examine the effects of HRIS over an extended period. Such studies could explore how HRIS influences employee satisfaction, retention, and overall organizational performance over time.

3. **Exploring HRIS and Employee Outcomes:** While this study focuses on administrative efficiency, future research could investigate the impact of HRIS on employee outcomes, such as job satisfaction, engagement, and performance. Understanding how HRIS affects employees can provide deeper insights into its broader implications for organizational effectiveness.

4. **Examining HRIS Implementation Challenges:** Future research could also explore the challenges and barriers associated with HRIS implementation in public sector organizations. Identifying common obstacles and best practices for overcoming them can help organizations navigate the complexities of HRIS adoption and implementation more effectively.

In conclusion, this study demonstrates the significant positive impact of HRIS on administrative efficiency in the Zamboanga City Local Government, contributing valuable insights to the field of public administration. The findings underscore the importance of technology integration in HR management and provide practical recommendations for public sector organizations seeking to enhance their HR operations. Future research should continue to explore the diverse aspects of HRIS implementation and impact, further enriching the understanding of this critical area of public administration.

7. Recommendations

The recommendations for optimizing HRIS at Zamboanga City Local Government (ZCLG) focus on enhancing system effectiveness and user satisfaction. Firstly, it is crucial to provide comprehensive training and ongoing support for HR staff to address usability issues and ensure proficient use of the system. This includes tailored training sessions and accessible support resources to assist with any challenges encountered. Secondly, continuous system evaluation and improvement are recommended

to address technical glitches and adapt to evolving needs, ensuring the HRIS remains effective and reliable. Additionally, other local governments considering HRIS implementation should consider these recommendations to avoid common pitfalls and maximize system benefits. By investing in training, support, and regular system updates, ZCLG can further enhance HRIS's impact on administrative efficiency and overall HR operations. These steps will help sustain improvements, address user concerns, and support the long-term success of HRIS within the public sector.

This section provides specific recommendations for enhancing the effectiveness of Human Resource Information Systems (HRIS) based on the findings of the study on the Zamboanga City Local Government (ZCLG). These recommendations focus on HRIS training and support for staff, ongoing system evaluation and improvement, and considerations for other local governments contemplating or currently utilizing HRIS.

HRIS Training and Support for Staff

1. **Comprehensive Training Programs:** The study highlights the importance of adequate training to maximize the benefits of HRIS. ZCLG should implement comprehensive training programs that cover all aspects of HRIS functionalities, from basic operations to advanced data analytics. These programs should be tailored to different user groups based on their specific roles and responsibilities, ensuring that both new and existing staff are proficient in using the system.

2. **Continuous Learning and Development:** Given the rapid pace of technological advancements, it is crucial to offer continuous learning opportunities for HR staff. ZCLG should establish regular refresher courses and workshops to update staff on new features, best practices, and emerging trends in HRIS. This ongoing education will help staff stay current with system enhancements and improve their ability to leverage HRIS for strategic decision-making.

3. **Dedicated HRIS Support Team:** To facilitate effective system use and troubleshooting, ZCLG should establish a dedicated HRIS support team. This team should include technical experts and HR specialists who can provide immediate assistance, address user queries, and resolve technical issues. A robust support system ensures that users have access to the help they need, reducing downtime and enhancing overall system efficiency.

Ongoing System Evaluation and Improvement

1. **Regular System Audits:** To ensure HRIS continues to meet the evolving needs of the organization, ZCLG should conduct regular system audits. These audits should assess system performance, data accuracy, user satisfaction, and compliance with regulatory requirements. Regular evaluations will help identify areas for improvement, inform system updates, and ensure HRIS remains aligned with organizational goals.

2. **User Feedback Mechanisms:** Establishing mechanisms for obtaining regular user feedback is essential for continuous system improvement. ZCLG should create channels for HR staff and other users to provide feedback on system functionality, usability, and any challenges they encounter. This feedback can inform system enhancements, ensuring that HRIS evolves in response to user needs and contributes to administrative efficiency.

3. **Integration of Advanced Features:** As HRIS technology advances, ZCLG should consider integrating new features and functionalities that can further enhance HR operations. For instance, incorporating artificial intelligence (AI) and machine learning algorithms can improve data analytics capabilities, facilitate predictive workforce planning, and enhance employee performance management. Staying abreast of technological developments and integrating relevant features will help maintain a state-of-the-art HRIS.

Considerations for Other Local Governments

1. **Context-Specific Customization:** Local governments considering HRIS implementation should recognize the importance of customizing the system to fit their unique contexts and requirements. The success of HRIS in ZCLG can be attributed to its alignment with the specific needs of the organization. Other local governments should conduct thorough needs assessments and customize HRIS functionalities to suit their operational workflows, regulatory environments, and cultural contexts.

2. **Strategic Change Management:** Effective HRIS implementation requires careful change management to address resistance and ensure smooth transitions. Local governments should develop comprehensive change management strategies that include clear communication plans, stakeholder engagement, and ongoing support to facilitate the adoption of HRIS. Addressing the concerns of HR staff and other users early in the implementation process can reduce resistance and enhance buy-in.

3. **Benchmarking and Best Practices:** Local governments should consider benchmarking their HRIS implementation efforts against those of similar organizations to identify best practices and potential pitfalls. Learning from the experiences of other local governments, including ZCLG, can provide valuable insights into effective HRIS strategies, common challenges, and solutions. Establishing networks and forums for sharing best practices can foster collaboration and knowledge exchange among local governments.

4. **Long-Term Vision and Investment:** Implementing HRIS is not just a short-term project but a long-term investment in organizational efficiency and effectiveness. Local governments should approach HRIS implementation with a long-term vision, considering the ongoing costs of system maintenance, upgrades, and training. Allocating sufficient resources and prioritizing HRIS as a strategic initiative will ensure sustained benefits and continuous improvement.

In conclusion, the successful implementation of HRIS in the Zamboanga City Local Government offers valuable lessons for other local governments seeking to enhance administrative efficiency through technology. By focusing on comprehensive training, continuous evaluation, strategic customization, and effective change management, local governments can maximize the benefits of HRIS and improve their human resource management practices. These recommendations provide a roadmap for leveraging HRIS to enhance administrative efficiency and support public sector innovation.

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