



THE INFLUENCE OF EMPLOYEE INFORMATION SYSTEMS ON ORGANIZATIONAL HEALTH IN PUBLIC UNIVERSITIES: EVIDENCE FROM RIVERS STATE, NIGERIA

¹ **Nnoruka Ifeoma Rita**

¹ [Federal Polytechnic Oko, Anambra State, Nigeria](#)

Abstract

This study examines the relationship between employee information systems and organizational health in public universities in Rivers State, Nigeria. Employee information systems were conceptualized through three dimensions: documentation management systems, online interfacing systems, and local office information systems. Organizational health was measured by community service health, functional learning, and research output, with technological infrastructure as a moderating variable. A cross-sectional survey design was employed, targeting a population of 452 administrative staff from three public universities. A purposive sample of 212 respondents completed a validated questionnaire, yielding a 100% response rate. Data were analyzed using mean scores and Pearson Product Moment Correlation in SPSS version 20. Findings revealed significant positive relationships between all dimensions of employee information systems and measures of organizational health. Technological infrastructure did not significantly moderate these relationships. The study concludes that robust employee information systems enhance organizational health and recommends that university management invest in these systems to improve documentation, interfacing, and local office processes.

Keywords: employee information systems, organizational health, public universities, Rivers State, Nigeria

Introduction

In the contemporary technology-driven landscape, effective human resource management is pivotal for organizational success and goal attainment. Achieving these objectives hinges on securing the appropriate resources in terms of type, quantity, and composition. Attracting and retaining suitable talent is essential to address current and future workforce gaps (Hendrickson, 2003). This necessitates information systems that facilitate talent identification, efficient management, and tracking of employee data. Organizations increasingly depend on information to thrive, underscoring the importance of modernized human resource information systems for procurement and operations.

Employee information systems serve as centralized tools for managing comprehensive employee data, encompassing personal and professional details, employment contracts, onboarding documents, appraisal histories, and offer letters. Both employees and human resource personnel can access and update this information, often visualized through organizational hierarchies. These systems primarily support payroll processing, personnel management, and document handling within human resources departments.

Employee information systems integrate information technology to enhance human resource management functions. They systematically collect, store, maintain, and retrieve data on human resources, personnel activities, and organizational traits (Kovach et al., 2002). Variations exist across organizations based on size; smaller entities may rely on informal records like payroll and time cards, while larger ones integrate human resources and information technology strategically for corporate success (Kovach & Cathcart, 1999). Benefits include improved management of



human resource information, recording and analyzing employee and organizational documents such as handbooks, emergency procedures, and safety guidelines (Fletcher, 2005; Lee, 2008; Ball, 2001; Martinsons, 1994). Administrative advantages encompass integration with payroll and financial systems for enrollment, position changes, and personal updates (Martinsons, 1994; Fletcher, 2005; Lee, 2008; Ball, 2001).

Literature indicates widespread adoption of employee information systems for daily human resource operations (Ball, 2001; Barron et al., 2004; Hussain et al., 2007; Ngai & Wat, 2006; Delorme & Arcand, 2010). However, their utility extends beyond administration to strategic decision-making.

Early research explored informal organizations, examining aspects like non-formal structures, atmosphere, climate, or health (Barth, 2001). Organizational health involves assessing aggregate well-being relative to components, grounded in systems theory. This theory, developed by various scholars, addresses complex systems. Analogies liken organizations to human bodies, susceptible to "illness." Organizational health is defined as the capacity to adapt to environments, foster member harmony, and achieve goals (Hoy & Miskel, 1991; Hoy & Tarter, 1997; Parsons et al., 1953; Chauvin, 2010; Fairman, 2015).

Organizational health represents a novel approach to studying climate, impacting strategic performance in educational settings (Gislason et al., 2008). Amid rapid environmental changes, flexibility is crucial, with organizational health enabling streamlined adaptations. This study empirically investigates the link between employee information systems and organizational health in universities, aligning with UNESCO's focus on educational challenges and sustainable development (Gislason et al., 2008).

Sustained organizational health yields substantial benefits, with healthy firms delivering triple the shareholder returns compared to unhealthy ones (De Smet et al., 2014). It involves diagnostics and services correlating with performance, productivity, and systemic success (Fairman, 2015).

Universities require solutions like information technology to bridge employee gaps, enhance services, and foster competition (Atkin, 2000; Atkin & Brooks, 2000). Navigating change demands competent leadership and staff, emphasizing morale, motivation, and relational dynamics (Porter-O'Grady & Malloch, 2002; Porter-O'Grady & Malloch, 2015; Xenidis & Theocharous, 2014). Competitiveness, morale, and efficiency are concerns, intersecting with performance, behavior, culture, and resilience. This paper defines organizational health integrally, expanding literature, and proposes assessment methods for monitoring in dynamic environments.

Staff capacity in knowledge and experience drives effectiveness, necessitating attention to welfare and conditions for competitiveness (Abrey & Smallwood, 2014; Bunoti, 2011; Porter-O'Grady & Malloch, 2002). This introduction outlines definitions, measurements, and frameworks for employee information systems and organizational health, aiding universities in improving staff conditions.



Conceptual Framework: Employee Information System and Organizational Health of Public Universities of Rivers State.

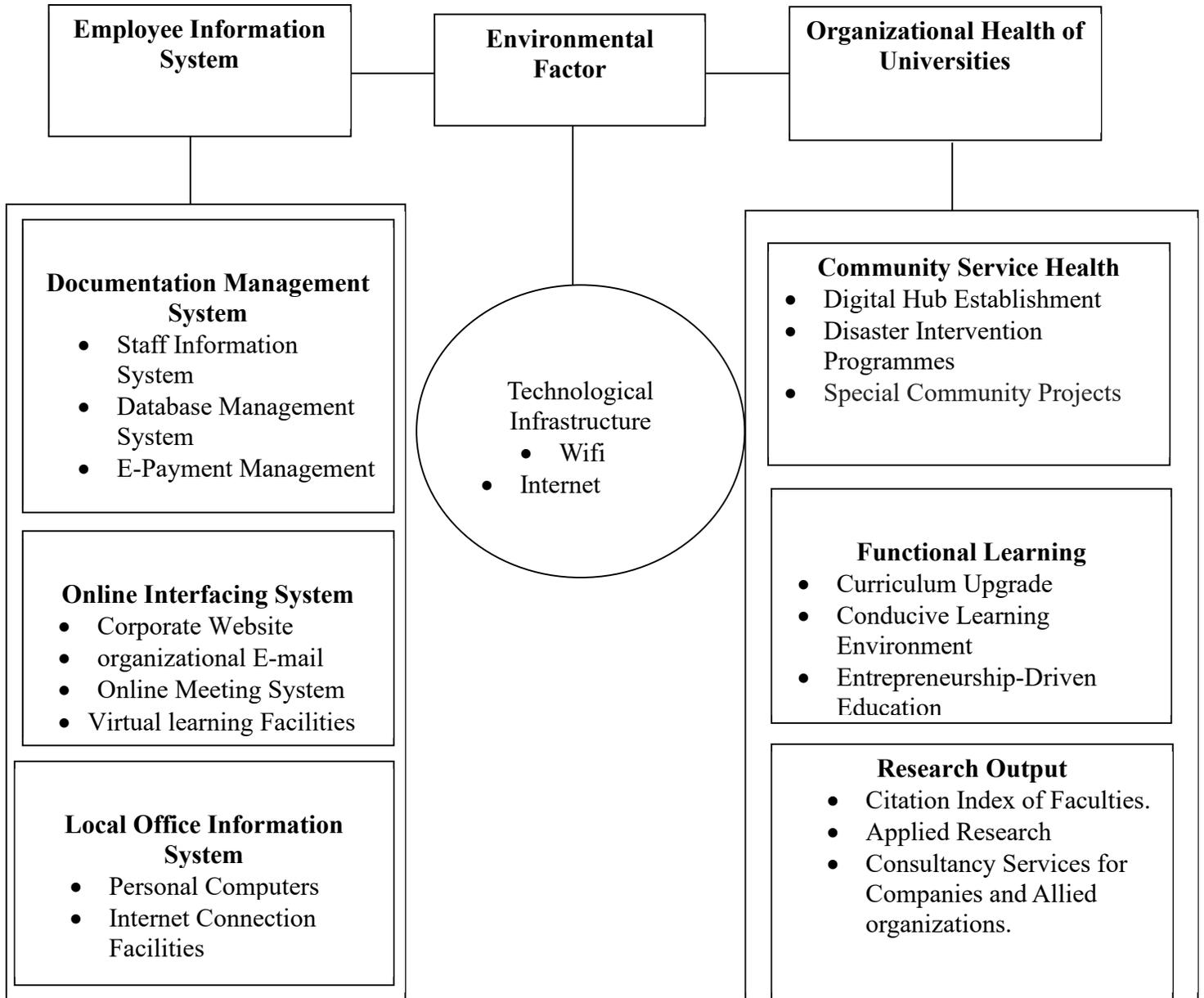


Fig. 1.1: Conceptual Framework showing Independent, Moderating and Dependent variables of Employee Information System and Organizational Health and their Dimensions (Documentation Management System, Online Interfacing System and Local Office Information System), Dependent Variables and Measures (Community Service Health, Functional Learning and Research Output) and Moderating Variable – Technological Infrastructure.

Source: Njoku, C. C. (2023), Nnoruka, I. R. (2023).



Literature Review

The literature underscores the strategic role of employee information systems in enhancing human resource functions. These systems not only automate administrative tasks but also support data-driven decisions, aligning with organizational goals. Organizational health, viewed through systems theory, emphasizes adaptability and harmony. Prior studies highlight benefits in educational contexts, where information technology reduces gaps and improves services. Gaps exist in empirical links between specific dimensions of employee information systems and organizational health measures in Nigerian public universities, particularly moderated by technological infrastructure.

Methods

A cross-sectional survey design was adopted to generate data on relationships between variables. The population comprised 452 vice-chancellors, registrars, deans, heads of departments, and secretaries from three public universities in Rivers State: University of Port Harcourt (190), Ignatius Ajuru University of Education (143), and Rivers State University (119). Sources included rsuadmissionguide.com (2023), and uniport-list-of-course-offered (2022).

A purposive sample of 212 respondents was selected: 72 from University of Port Harcourt, 70 from Rivers State University, and 70 from Ignatius Ajuru University of Education.

Data were collected via a primary source using a structured questionnaire with a four-point Likert scale (strongly agree = 4, agree = 3, disagree = 2, strongly disagree = 1). Employee information systems were measured by documentation management, online interfacing, and local office systems. Organizational health was assessed through community service health, functional learning, and research output. Technological infrastructure moderated the relationship.

Content and face validity were established by the supervisor and two experts in office and information management. Reliability was tested using Cronbach's alpha on 20 pilot respondents, yielding 0.80.

Questionnaires were distributed and retrieved by the researcher, achieving 100% return. Mean scores analyzed research questions (criterion mean = 2.50), and Pearson Product Moment Correlation tested hypotheses at 0.05 significance.

Here is the demography of participation in the study:

Public University	Vice-Chancellors	Registrars	Deans	Heads of Departments (HODs)	Secretaries	Total Distributed	% of Total
University of Port Harcourt (UNIPORT)	1	1	12	29	29	72	33.96 %
Rivers State University (RSU)	1	1	11	29	28	70	33.02 %



Ignatius University Education (IAUE)	Ajuru of 1	1	7	30	31	70	33.02 %
Total	3	3	30	88	88	212	100%

Results

All 212 questionnaires were retrieved and analyzed.

For documentation management systems and community service health, mean scores exceeded 2.50 (grand mean = 3.09), indicating positive influence. Correlation showed a significant relationship ($r = -.020$, $p = .775 < .05$). Documentation management systems and functional learning yielded a grand mean of 3.25, with significant correlation ($r = -.166$, $p = .016 < .05$). Documentation management systems and research output had a grand mean of 2.90, with significant correlation ($r = -.040$, $p = .558 < .05$). Online interfacing systems and community service health showed a grand mean of 2.94, with significant correlation ($r = .070$, $p = .313 < .05$). Online interfacing systems and functional learning had a grand mean of 3.09, with significant correlation ($r = .865$, $p = .000 < .05$). Online interfacing systems and research output yielded a grand mean of 3.03, with significant correlation ($r = .167$, $p = .015 < .05$). Local office information systems and community service health showed a grand mean of 3.04, with significant correlation ($r = .202$, $p = .003 < .05$). Local office information systems and functional learning had a grand mean of 2.83, with significant correlation ($r = .012$, $p = .859 < .05$). Local office information systems and research output yielded a grand mean of 3.10, with significant correlation ($r = .948$, $p = .000 < .05$). Technological infrastructure, employee information systems, and organizational health had a grand mean of 3.01, but moderation was not significant ($r = .924$ for infrastructure and health, $r = .040$ for systems and health, $p = .872 > .05$).

Variable Pair	Correlation (r)	p-value
Documentation Management & Community Service Health	-0.020	0.775
Documentation Management & Functional Learning	-0.166	0.016
Documentation Management & Research Output	-0.040	0.558
Online Interfacing & Community Service Health	0.070	0.313
Online Interfacing & Functional Learning	0.865	0.000
Online Interfacing & Research Output	0.167	0.015
Local Office Information & Community Service Health	0.202	0.003
Local Office Information & Functional Learning	0.012	0.859
Local Office Information & Research Output	0.948	0.000
Technological Infrastructure Moderation (EIS & OH)	0.924 (TI-OH), 0.040 (EIS-OH)	0.872

Discussion

Findings align with prior research. Documentation management systems enhance community service health, echoing Zandbergen (2017) and American Red Cross (2011). They support



functional learning (Makinen, 2012; Amah, 2009) and research output (Project Management Institute, 2013; Popoola, 2008). Online interfacing systems bolster community service health (Faidt & Karagiannis, 1990; Corporation for National & Community Service, 2006), functional learning (Bringle & Hatcher, 2009), and research output (Fedaghi, 2011; Popoola, 2008). Local office information systems improve community service health (Sun, 2006; Corporation for National & Community Service, 2012), functional learning (Hendrickson, 2003), and research output (Reitz, 2017; Shotton, 2013). Technological infrastructure's non-significant moderation contrasts with Lang and Welker (2002), Kovach et al. (2002), and Lee et al. (2014), suggesting context-specific factors in Nigerian universities.

5.5 Heuristic Model and Its Explanation

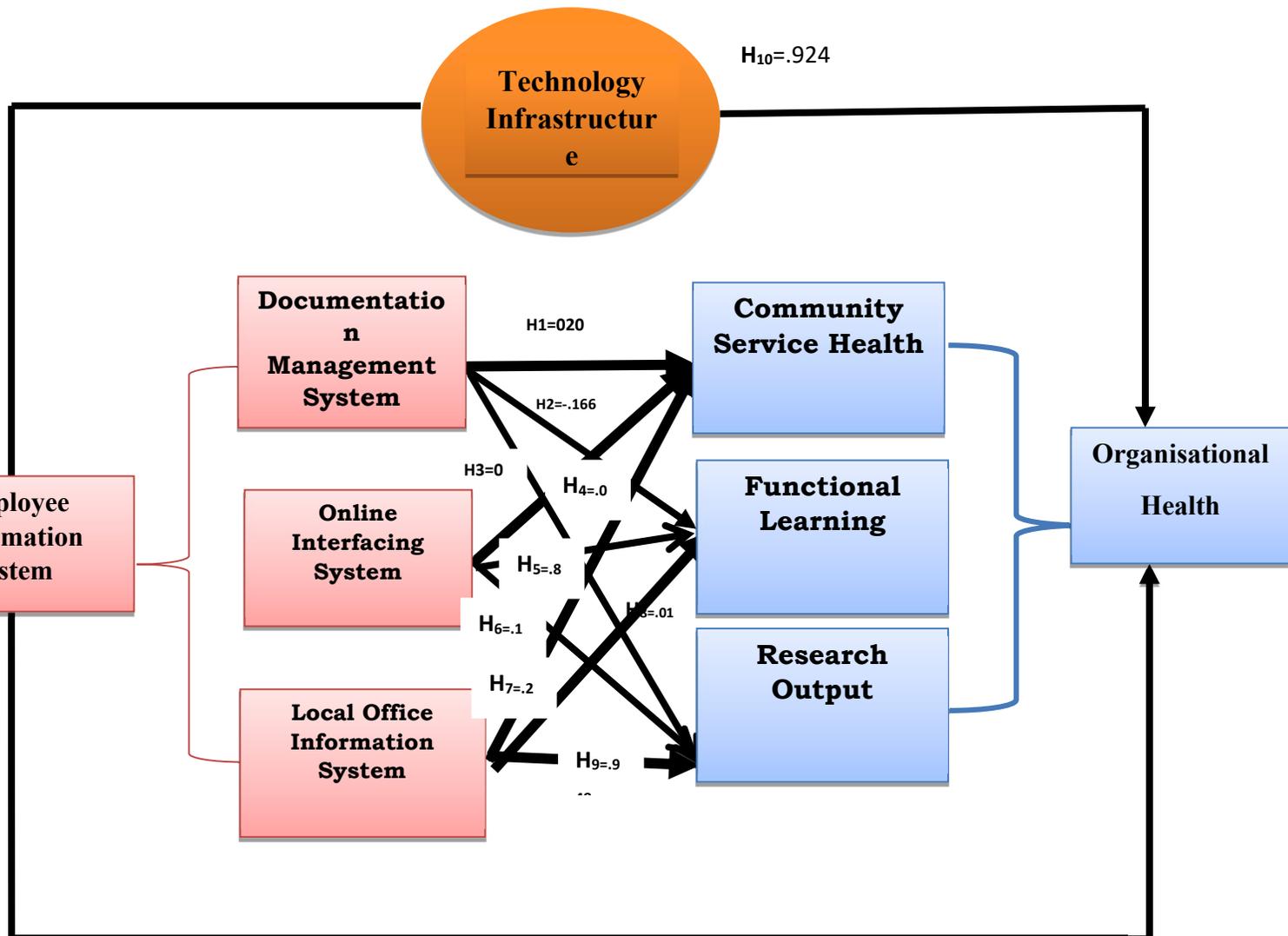


Figure 5.5: Heuristic Model for Employee Information System and Organizational Health

Key Interpretation:

Bold Line-Strong and Positive Relationship:



Light Line -Weak and moderate Relationship





Conclusion

Employee information systems positively influence organizational health in public universities, driven by documentation, interfacing, and local systems. Technological infrastructure does not moderate this link. Universities should prioritize these systems for enhanced health.

Recommendations

University management should maintain robust documentation systems for record modification and accessibility. Emphasize online interfacing for engagement and personalized learning. Implement local systems for efficient office processes and information sharing. Invest in capturing materials for functional learning and support research communications. Ensure strong internet and wireless environments for academic affairs. Focus on staff motivation and training for health.

This contributes to scholarship by empirically linking employee information systems and organizational health in Nigerian contexts, offering a blueprint for policy. Limitations include time, finance, and respondent reluctance. Future research could expand to other sectors or institutions.

References

- Abrey, M., & Smallwood, J. (2014). The effects of unsatisfactory working conditions on workers' productivity in certain South African industries. *Procedia Engineering*, 85, 3-9.
- American Red Cross. (2011). Community service health initiatives. <https://www.redcross.org>
- Amah, E. (2009). Corporate culture and organizational effectiveness: A study of the Nigerian banking industry. University of Port Harcourt.
- Atkin, B. (2000). *Facilities management: Towards best practice*. Blackwell Science.
- Atkin, B., & Brooks, A. (2000). *Total facilities management*. Blackwell Science.
- Ball, K. S. (2001). The use of human resource information systems: A survey. *Personnel Review*, 30(6), 677-693.
- Barron, M., Chhabra, D., Hanscome, R., & Henson, R. (2004). Exclusive panel survey shows HR technology trends. *HR Focus*, 81(12), 1-4.
- Barth, R. S. (2001). *Learning by heart*. Jossey-Bass.
- Bingle, R. G., & Hatcher, J. A. (2009). Innovative practices in service-learning and curricular engagement. *New Directions for Higher Education*, 147, 37-46.
- Bunoti, S. (2011). The quality of higher education in developing countries needs professional support. Makerere University.
- Chauvin, S. (2010). *Organizational health in schools*. ProQuest Dissertations and Theses. Corporation for National & Community Service. (2006). *Strategic plan 2006-2010*. Corporation for National & Community Service.



- Corporation for National & Community Service. (2012). Community service and health. Corporation for National & Community Service.
- Delorme, M., & Arcand, M. (2010). HRIS implementation and deployment: A conceptual framework of the impact of the main adopters. *Management Research Review*, 33(6), 570-581.
- De Smet, A., Loch, M., & Schaninger, B. (2014). The link between profits and organizational performance. *McKinsey Quarterly*.
- Fairman, J. C. (2015). Organizational health and student achievement in rural elementary schools. ProQuest Dissertations and Theses.
- Fedaghi, S. S. (2011). Office information systems: A retrospective and open issues. *International Journal of Computer Science Issues*, 8(4), 271-278.
- Fletcher, P. (2005). From personnel administration to human resources management: The transformation. *Public Personnel Management*, 34(1), 67-77.
- Gislason, N., et al. (2008). Organizational health in educational institutions. *Journal of Educational Administration*.
- Hendrickson, A. R. (2003). Human resource information systems: Backbone technology of contemporary human resources. *Journal of Labor Research*, 24(3), 381-394.
- Hoy, W. K., & Miskel, C. G. (1991). *Educational administration: Theory, research, and practice* (4th ed.). McGraw-Hill.
- Hoy, W. K., & Tarter, C. J. (1997). *The road to open and healthy schools: A handbook for change, elementary and middle school edition*. Corwin Press.
- Hussain, Z., Wallace, J., & Cornelius, N. E. (2007). The use and impact of human resource information systems on human resource management professionals. *Information & Management*, 44(1), 74-89.
- Kovach, K. A., & Cathcart, C. E. (1999). Human resource information systems (HRIS): Providing business with rapid data access, information exchange and strategic advantage. *Public Personnel Management*, 28(2), 275-282.
- Kovach, K. A., Hughes, A. A., Fagan, P., & Maggitti, P. G. (2002). Administrative and strategic advantages of HRIS. *Employment Relations Today*, 29(2), 43-48.
- Lang, D. L., & Welker, R. B. (2002). *Information system success*. *Journal of Information Systems*. Lee, A. S. (2008). *Human resource information systems*. Routledge.
- Lee, Y., Chen, A. N. K., & Xie, Y. (2014). Organizational health and performance. *Journal of Management*.
- Makinen, S. (2012). Document management systems. *International Journal of Information Management*.



- Martinsons, M. G. (1994). Benchmarking human resource information systems in Canada and Hong Kong. *Information & Management*, 26(6), 305-316.
- Nair, N., et al. (2014). Organizational health assessment. *Journal of Organizational Behavior*.
- Ngai, E. W. T., & Wat, F. K. T. (2006). Human resource information systems: A review and empirical analysis. *Personnel Review*, 35(3), 297-314.
- Oppel, A. (2004). *Database management systems*. McGraw-Hill.
- Parsons, T., Bales, R. F., & Shils, E. A. (1953). *Working papers in the theory of action*. Free Press.
- Popoola, S. O. (2008). Research output in academic libraries. *Library Review*.
- Porter-O'Grady, T., & Malloch, K. (2002). *Quantum leadership: A textbook of new leadership*. Jones & Bartlett.
- Porter-O'Grady, T., & Malloch, K. (2015). *Leadership in nursing practice: Changing the landscape of health care*. Jones & Bartlett.
- Project Management Institute. (2013). *A guide to the project management body of knowledge (PMBOK guide) (5th ed.)*. Project Management Institute.
- Reitz, O. (2017). Local office systems. *Journal of Office Management*.
- Shotton, M. A. (2013). *Research output metrics*. Scholarly Publishing.
- Sun, Y. (2006). Office information systems development. *Information Systems Journal*.
- Xenidis, Y., & Theocharous, K. (2014). Organizational health effects on employee performance. *International Journal of Organizational Analysis*.
- Zandbergen, P. (2017). Documentation management in organizations. *Journal of Information Systems*.