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Evaluating the effectiveness of electronic records management system training procedures in Malaysian government agencies

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ABSTRACT

This paper examines electronic records management systems (ERMS) training procedures for Malaysian government agencies through a systematic literature review (SLR). The review synthesizes studies on electronic records management, digital records competency, public-sector readiness, training evaluation, security, and compliance published primarily between 2013 and 2024, with earlier seminal sources consulted where necessary for theoretical and contextual support. Evidence was drawn from Scopus, Web of Science, IEEE Xplore, Google Scholar, Emerald, and ScienceDirect. The findings indicate that ERMS implementation is constrained by fragmented training design, uneven user competency, limited instructional evaluation, and inconsistent alignment between training content and records-management obligations. The review also shows that effective ERMS training procedures require role-specific modules, practical system tasks, assessment of learning outcomes, workplace transfer mechanisms, and policy-based performance indicators. This paper contributes to digital governance and educational evaluation by positioning ERMS training procedures as a competency development mechanism rather than a peripheral implementation activity. It proposes an evaluative basis for strengthening user readiness, records authenticity, secure system use, and audit readiness in Malaysian public-sector records management.

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1. INTRODUCTION

Malaysian government agencies are transitioning from paper-based and hybrid records practices to electronic records management systems (ERMS) to improve service delivery, transparency, accountability, and access to reliable records [1]–[4]. Effective implementation depends on users' ability to apply classification, metadata, retention, authenticity, access-control, and legal requirements [5]–[8]. Studies in Malaysia and other public-sector contexts continue to reveal deficits in competency, institutional preparation, governance support, and long-term capacity development [1], [4], [6], [9]–[13]. Maintaining robust electronic information systems requires technical dependability of the underlying digital storage environment [14]. By integrating educational evaluation into digital records governance, this review positions ERMS training as a competency-focused mechanism linking training effectiveness, user competency, workplace application, system adoption, and compliance. It assesses ERMS training procedures in Malaysian government agencies and proposes a framework for evaluating learning transfer, ERMS use, and compliance performance.

Effective electronic records management supports compliance, security, accountability, and efficient public service delivery. ERMS provides structured control over digital records, but its effectiveness depends on user competency, institutional readiness, and clear operating procedures [1], [5], [10]. However, Malaysian agencies face challenges such as inconsistent recordkeeping, low adoption rates, incomplete metadata, and uneven training implementation [2], [3], [15]. Implementation of digital document management system (DDMS) 2.0 and records-management training in Malaysia is hindered by inconsistencies in training content, role alignment, evaluation, and policy enforcement, despite support from Arkib Negara Malaysia and other agencies [16]–[18].

ERMS implementation in Malaysian government agencies remains constrained by gaps in user competency, standardized training, and organizational readiness [2], [3], [15]. Sustainable implementation requires structured, role-aligned training supported by adequate resources, policy guidance, and institutional support [10], [16], [17], [19]. Continuous evaluation and change-management support are also important for strengthening user readiness and consistent workplace application [20], [21].

The study informs policy refinement, institutional training, and professional learning by linking ERMS competency with daily work, audit readiness, and accountable public-sector records management. National Archives of Malaysia policies govern record creation, classification, retention, preservation, and disposal [17], requiring training to translate these obligations into routine practice. The study examines the ERMS in Malaysian Government Agencies, highlighting its role in ensuring accountability, transparency, service delivery, and institutional memory. It stresses the importance of trustworthy electronic records, noting that inadequate classification, metadata, or access control can undermine evidence reliability. The focus is on effective ERMS usage throughout the electronic record lifecycle.

2. METHOD

This study employed a systematic literature review (SLR) to identify, appraise, and synthesize evidence on ERMS training procedures and related factors [22], [23]. The review process and study selection were reported using PRISMA [24]. A predefined protocol specified sources, search terms, eligibility, screening, quality appraisal, and synthesis. The review asked:

- What ERMS training procedures are reported?
- What factors influence effectiveness in Malaysian government agencies?
- What challenges concern training, readiness, records knowledge, compliance, and security?

2.1. Information sources and database selection

The formal literature search utilized six databases: Scopus, Web of Science, IEEE Xplore, Google Scholar, Emerald, and ScienceDirect, as the main evidence base for the review. Institutional and policy sources, such as Arkib Negara Malaysia, DDMS 2.0, and Organisation for Economic Co-operation and Development (OECD), provided contextual support but were excluded from database counts and PRISMA selection totals. Database-specific retrieval counts are detailed in Table 1, and final inclusion results after consolidated screening are illustrated in Figure 1.

2.2. Eligibility criteria

The formal literature search was limited to English-language sources published between 2013 and 2024. Earlier seminal publications were consulted only for theoretical or contextual support and were not included in the formal PRISMA study-selection process in Table 2.

Table 1. Database search strategy and retrieval results for the ERMS training review

Database	Search string/keywords	Years	Retrieved
Scopus	TITLE-ABS-KEY(("electronic records management" OR ERMS OR "digital document management") AND (training OR competency OR readiness OR adoption) AND (government OR "public sector"))	2013–2024	11
Web of Science	TS=(("electronic records" OR "records management system") AND (training OR "training effectiveness" OR competency OR "digital literacy") AND government)	2013–2024	88
IEEE Xplore	("electronic records management system" OR ERMS) AND (security OR metadata OR training OR adoption)	2013–2024	6
Google Scholar	"ERMS training" OR "electronic records management training" OR "digital records competency"	2013–2024	100
Emerald	("records management" AND training) OR ("training evaluation" AND "digital government")	2013–2024	20
ScienceDirect	("electronic records management" OR ERMS) AND (training OR competency OR readiness OR adoption) AND (government OR "public sector")	2013–2024	494
	Total		719

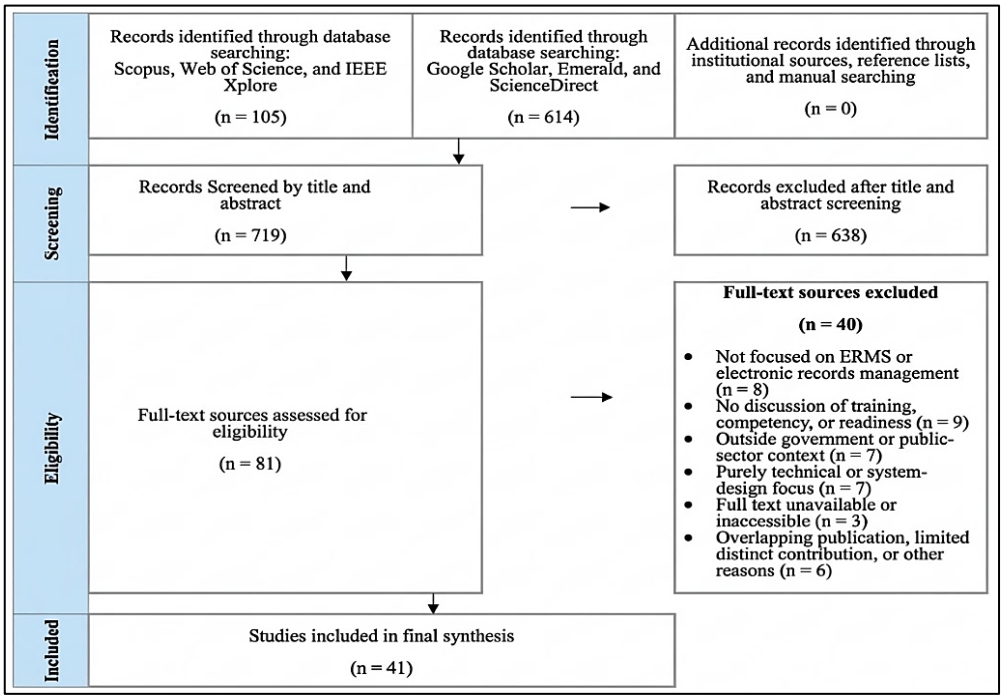


Figure 1. PRISMA flow diagram for the selection of studies on ERMS training procedures

Table 2. Inclusion and exclusion criteria

Criteria	Inclusion	Exclusion
Topic focus	ERMS, electronic/digital records, DDMS, records governance, or digital document management.	Unrelated to records management or digital governance.
Training focus	Training, competency, awareness, readiness, system use, capacity building, or evaluation.	Technical architecture only, without training, readiness, or user competency.
Context	Public-sector, government, education, institutional, or comparable organizational contexts with relevance to ERMS implementation.	Unrelated private-sector systems without transferable ERMS relevance.
Document type	Peer-reviewed journal articles and conference papers, as well as scholarly books/chapters and theses	Editorials, blogs, unsupported websites, duplicates, or inaccessible full texts.
Language and period	English-language sources published from 2013 to 2024.	Sources published outside 2013–2024 or non-English-language sources without an official English translation

2.3. PRISMA study selection process

Records were checked for duplicate citations during consolidation. The consolidated screening set comprised 719 records, which proceeded to title and abstract screening. Following title and abstract screening, 638 entries were removed, and 81 full-text sources were evaluated for eligibility. A total of 40 full-text sources were excluded because they did not meet the predefined topic, training/readiness, contextual, methodological, accessibility, or distinct-contribution criteria. The final synthesis therefore comprised 41 studies, as shown in Figure 1.

2.4. Quality appraisal

The mixed methods appraisal tool (MMAT) [25] guided the methodological quality assessment of qualitative, quantitative, and mixed-methods studies. In addition, review-specific criteria were applied to assess relevance, methodological clarity, evidence quality, training or evaluation focus, and transferability.

2.5. Data extraction and synthesis strategy

A structured matrix captured key characteristics and methods across the 41 studies, which were synthesized into six recurring themes and five core framework elements.

2.6. Educational evaluation dimension for ERMS training effectiveness

ERMS training is evaluated as professional learning through knowledge, system application, workplace behavior, and compliance, as summarized in Table 3. Kirkpatrick's four levels [26] guide the evaluation of training outcomes, while unified theory of acceptance and use of technology (UTAUT) constructs [27] explain factors influencing ERMS adoption and use.

Table 3. Educational evaluation dimensions for ERMS training effectiveness

Educational evaluation variable	Operational meaning in ERMS training	Possible indicator for future empirical assessment
Trainee satisfaction	Training relevance, clarity, and usefulness.	Satisfaction/usefulness ratings.
Knowledge improvement	Knowledge of classification, metadata, retention, authenticity, privacy, and compliance.	Pre/post-test; retention quiz.
Competency gain and digital literacy	Accurate, confident ERMS task performance.	Task score, metadata accuracy.
Behavioral change	Correct ERMS procedures in daily work.	Observed records practices.
Workplace transfer	Sustained workplace application.	Supervisor feedback, helpdesk demand.
Compliance performance	Policy compliance, audit readiness, and secure handling.	Non-compliance, audit/security errors.

3. RESULTS AND DISCUSSION

ERMS supports governance, efficiency, and accountability, yet implementation remains uneven. Malaysian data ties inconsistent ERMS implementation to competency, policy, and preparedness gaps [2], [4], [7], [15], whereas foreign studies focus on training, resources, legal requirements, and broader implementation circumstances [6], [9], [12]. Readiness frameworks emphasize competency, training access, policy alignment, security, and management support [10], [11], [19], [27]–[29]. Training should address core records-management tasks such as metadata, classification, retention, and authenticity [5], [30], alongside privacy and security responsibilities [8], [31]. National agencies support ERMS/DDMS training [16]–[18], but stronger role alignment, evaluation, and continuity are still needed during upgrades, turnover, and policy change [18]–[20], [32].

3.1. Critical comparative analysis of reviewed studies

The 41 studies converged on six themes: training and competency, organizational readiness, records-management knowledge, policy and compliance, security, and ERMS adoption. Table 4 summarizes selected evidence and its implications for the proposed framework [2], [7], [15], [27], [30], [33]–[37]. Across the studies, training supported user capability and records-management practice [36], [38], [39]; organizational readiness depended on management support, infrastructure, change management, training, and resources [37], [40]–[43]; and records-management knowledge influenced system use [44]–[46]. Policy and records controls supported compliance [33], [47]–[49], while security studies emphasized secure access, authenticity, and employee compliance [34], [35], [50], [51]. UTAUT factors also influenced ERMS adoption [37], [52]–[54]. Overall, sustained learning and workplace transfer received less attention than adoption and readiness.

Table 4. Critical comparison of selected ERMS and training-related studies

Study	Strength	Limitation	Implication for this study
[2]	Malaysian public-sector ERMS readiness evidence.	Focuses on readiness rather than training-outcome evaluation.	Links readiness and competency to structured training
[7]	Examines ERM practices in Malaysian federal ministries.	Limited focus on training effectiveness.	Supports role-specific competency development.
[15]	Leadership and competency factors.	No transfer or outcome framework.	Positions competency as a key training outcome.
[30]	Evidence on ERMS implementation at ANM	Limited evaluation of learning outcomes.	Aligns training with operational records practice.
[33]	Identifies policy, human, and organizational factors.	Limited direct training evaluation.	Supports standardized, policy-aligned training.
[34]	Highlights security governance and organizational barriers.	Not specific to ERMS training.	Integrates security awareness and compliance into training.
[35]	Examines employee security-policy compliance.	Not specific to ERMS effectiveness.	Reinforces security and compliance as training outcomes.
[27]	UTAUT adoption model.	Focuses on adoption intention.	Grounds the training–adoption link in UTAUT.
[36]	Links training, competency, and compliance	Single context and self-reported competency	Supports measuring competency and compliance outcomes
[37]	Highlights training, reinforcement, and change support.	Single-case context limits transferability	Supports post-training reinforcement and workplace transfer.

3.2. Synthesis of established frameworks

UTAUT explains system adoption [27], while records-management knowledge, policy, and implementation factors [28], together with technological, organizational, training, and security factors [29], shape ERMS readiness. Public-sector evidence further highlights training, management support, policy,

change management, and security [34], [37], [40]–[43]. These elements form the basis of the proposed ERMS training framework presented in Table 5.

Table 5. Comparison of established framework elements

Element	Mukred *et al.* [27]	Norolazmi *et al.* [28]	Hawash *et al.* [29]	Proposed framework
Training	✓		✓	✓
Records-management knowledge		✓		✓
Records-management policy	✓	✓		✓
Regulatory rules	✓			✓
Security			✓	✓

3.3. UTAUT-based theoretical framework and proposed conceptual model

The proposed model adapts selected UTAUT constructs, including performance expectancy, effort expectancy, facilitating conditions, and behavioral intention, to explain ERMS adoption and use [27]. Public-sector studies similarly identify these factors, together with compatibility and organizational support, as important to EDRMS/ERMS use [52]–[54]. Within the suggested framework, successful training is projected to increase ERMS use and workplace application, thereby promoting accurate, secure, and compliant records-management practices. Figure 2 integrates ERMS training, records-management knowledge, policy, regulatory requirements, and security with UTAUT constructs and workplace use. It emphasizes role-specific training, continuous support, and evaluation to strengthen competency, system adoption, and compliance performance in Malaysian government agencies.

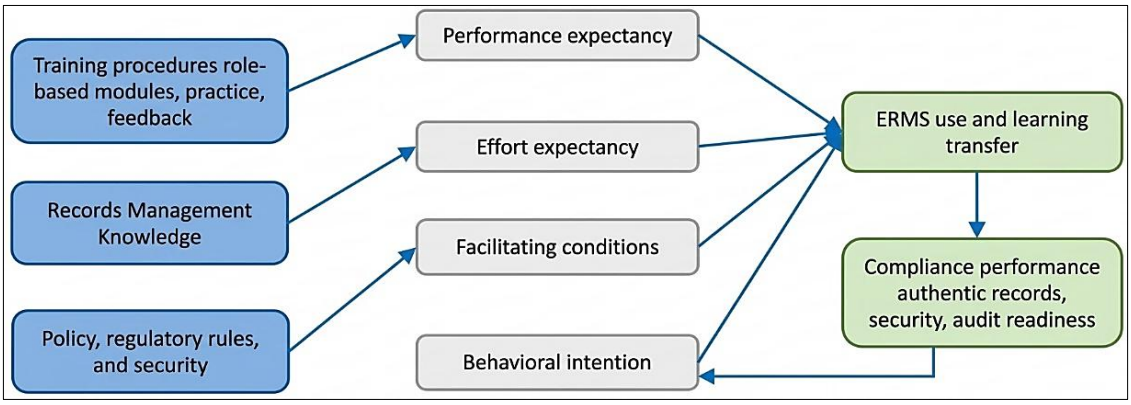


Figure 2. UTAUT-based theoretical framework for ERMS training procedures in Malaysian government agencies

3.4. Operational definitions and justification of framework elements

ERMS training should strengthen competency in system use, records management, compliance, and security. Role-specific instruction in classification, metadata, retention, and records handling, supported by assessment and feedback, can improve practical competency [5], [16], [20], [36], [39]. Records-management knowledge supports authentic and usable records [5], [7], [30], [44]–[46], while policy and security requirements strengthen accountability and compliance [8], [17], [31], [33]–[35], [47], [49]–[51].

4. CONCLUSION

This study positions ERMS training as a competency-development mechanism linking training quality, records-management knowledge, regulatory understanding, system use, and compliance performance. The proposed framework emphasizes role-specific, continuous, and evidence-based training to strengthen competency, security, and audit readiness in Malaysian government agencies. Future research should empirically validate relationships among training, workplace transfer, ERMS use, and compliance outcomes.

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Brandy Mary Duncan	✓	✓		✓	✓	✓	✓		✓	✓				
Ap-azli Bunawan		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		
Seri Intan Idayu		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		
Shahrul Asari														

C : **C**onceptualization
M : **M**ethodology
So : **So**ftware
Va : **Va**lidation
Fo : **Fo**rmal analysis
I : **I**nvestigation
R : **R**esources
D : **D**ata Curation
O : Writing - **O**riginal Draft
E : Writing - Review & **E**diting
Vi : **Vi**sualization
Su : **Su**pervision
P : **P**roject administration
Fu : **Fu**nding acquisition

CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

INFORMED CONSENT

Informed consent was not applicable because this review did not involve human participants.

ETHICAL APPROVAL

This review used published and publicly available literature and did not involve human or animal subjects, thus ethical approval was not necessary.

DATA AVAILABILITY

The authors affirm that all data analyzed in this review came from published sources listed in the publication.

REFERENCES

[1] U. A. Mokhtar and Z. M. Yusof, "Electronic records management in the Malaysian public sector: The existence of policy," *Records Management Journal*, vol. 19, no. 3, pp. 231–244, 2009, doi: 10.1108/09565690910999201.

[2] A. A. Bunawan, R. Hamdan, M. Z. Endin, and M. N. Ahmad, "Investigating the public service readiness of electronic records application among Malaysian public sectors," *International Journal of Academic Research in Business and Social Sciences*, vol. 13, no. 6, pp. 2177–2187, 2023, doi: 10.6007/IJARBSS/v13-i6/17535.

[3] M. Mohamad, A. K. A. Thani, N. Rosely, and S. R. Sakarji, "Evolution of e-records management practices in e-government: A Malaysian perspective," *International Journal of Academic Research in Business and Social Sciences*, vol. 13, no. 8, pp. 660–669, 2023, doi: 10.6007/IJARBSS/v13-i8/17455.

[4] P. P. Micheal, M. N. Yunus, and I. K. Abd. Kadir, "Effects of electronic records management best practices and records professionals in Malaysia," *Environment-Behaviour Proceedings Journal*, vol. 8, no. SI12, pp. 95–101, 2023, doi: 10.21834/e-bpj.v8iSI12.5011.

[5] W. Saffady, *Records and Information Management: Fundamentals of Professional Practice*, 4th ed. Lanham, MD, USA: Rowman & Littlefield, 2021.

[6] M. Mukred, Z. M. Yusof, W. A. Al-Moallemi, U. A. A. Mokhtar, and B. Hawash, "Electronic records management systems and the competency of educational institutions: Evidence from Yemen," *Information Development*, vol. 38, no. 1, pp. 125–148, 2022, doi: 10.1177/0266666920980829.

[7] I. K. Abd. Kadir, "Electronic Records Management (ERM) practices at the Malaysian Federal Ministries: Exploring the fundamental organizational and professional issues," Ph.D. dissertation, Universiti Teknologi MARA, Malaysia, 2014.

[8] F. H. Semantha, S. Azam, B. Shanmugam, K. C. Yeo, and A. R. Beeravolu, "A conceptual framework to ensure privacy in patient record management system," *IEEE Access*, vol. 9, pp. 165667–165689, 2021, doi: 10.1109/ACCESS.2021.3134873.

[9] C. M. Ambira, H. N. Kemoni, and P. Ngulube, "A framework for electronic records management in support of e-government in Kenya," *Records Management Journal*, vol. 29, no. 3, pp. 305–319, 2019, doi: 10.1108/RMJ-03-2018-0006.

[10] M. Y. Abdulkareem, N. M. Mnjama, and P. M. I. M. Sebina, "Training and resources of e-records readiness at the Federal Ministry of Finance in Nigeria," *Records Management Journal*, vol. 32, no. 1, pp. 43–61, 2022, doi: 10.1108/RMJ-06-2019-0028.

[11] O. Mosweu, "A framework for development of digital records preservation in the cloud in Botswana," *Journal of the South African Society of Archivists*, vol. 56, pp. 17–34, 2023, doi: 10.4314/jsasa.v56i.2.

[12] N. T. Thang, "Electronic records and document management in government administrative agencies during digital transformation: A policy approach," in *Creating Institutions for the Digital Transformation in Vietnam: Policies and Management*, N. M. Dung, N. T. K. Chi, N. V. Chieu, and B. T. Huong, Eds., 1st ed. Baden-Baden, Germany: Nomos, 2024, pp. 73–86.

[13] A. V. Farotimi, O. Adegoke, and O. Akeroro, "Emerging role of information and communications technology in effective and efficient records management," *Journal of Professional Secretaries and Office Administrators*, vol. 30, no. 1, pp. 27–38, 2023, doi: 10.69984/jopsoa.v30i1.107.
[14] G. Kou, K. Yi, H. Xiao, and R. Peng, "Reliability of a distributed data storage system considering the external impacts," *IEEE Transactions on Reliability*, vol. 72, no. 1, pp. 3–14, 2023, doi: 10.1109/TR.2022.3161638.
[15] A. L. Abdullah, Z. M. Yusof, and U. A. Mokhtar, "Factors influencing the implementation of electronic records and information management: A case study in military service in Malaysia," *Records Management Journal*, vol. 30, no. 1, pp. 81–99, 2020, doi: 10.1108/RMJ-10-2018-0043.
[16] M. Burtscher, S. Piano, and B. Welby, "Developing skills for digital government: A review of good practices across OECD governments," *OECD Social, Employment and Migration Working Papers*, no. 303, 2024, doi: 10.1787/f4dab2e9-en.
[17] Arkib Negara Malaysia, "Consultation & training," (in Malay), *ARKIB*. 2024. Accessed: May 10, 2026 [Online]. Available: https://www.arkib.gov.my/en/perkhidmatan/pengurusan-rekod/konsultasi-latihan
[18] Jabatan Digital Negara, Arkib Negara Malaysia, and Pejabat Ketua Pegawai Keselamatan Kerajaan Malaysia, "About DDMS 2.0," (in Malay), *Digital Document Management System 2.0* Portal, 2026. Accessed: May 21, 2026. [Online]. Available: https://portalddms.malaysia.gov.my/tentang-ddms-2-0/mengenai-ddms/
[19] N. H. A. Tajudin and N. S. A. Shukor, "Conceptualising effective record management of Malaysian public sector," *Selangor Business Review*, vol. 9, no. 2, pp. 157–170, 2024.
[20] H. Urbancova, P. Vrabcova, M. Hudakova, and G. J. Petru, "Effective training evaluation: The role of factors influencing the evaluation of effectiveness of employee training and development," *Sustainability*, vol. 13, no. 5, 2021, doi: 10.3390/su13052721.
[21] N. Tariq and N. Mehmood, "Exploring employees' resistance towards digital transformation: A case study of higher education institution," *Journal of Education and Humanities Research (JEHR)*, vol. 18, no. 2, pp. 113–135, 2024.
[22] S. Kraus, M. Breier, and S. Dasi-Rodriguez, "The art of crafting a systematic literature review in entrepreneurship research," *International Entrepreneurship and Management Journal*, vol. 16, no. 3, p. 1023, 2020, doi: 10.1007/s11365-020-00635-4.
[23] Z. Munn, M. D. J. Peters, C. Stern, C. Tufanaru, A. McArthur, and E. Aromataris, "Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach," *BMC Medical Research Methodology*, vol. 18, no. 1, p. 143, 2018, doi: 10.1186/s12874-018-0611-x.
[24] M. J. Page *et al.*, "The PRISMA 2020 statement: an updated guideline for reporting systematic reviews," *BMJ*, vol. 372, p. n71, 2021, doi: 10.1136/bmj.n71.
[25] Q. N. Hong *et al.*, "The Mixed Methods Appraisal Tool (MMAT) version 2018 for information professionals and researchers," *Education for Information*, vol. 34, no. 4, pp. 285–291, 2018, doi: 10.3233/EFI-180221.
[26] J. D. Kirkpatrick and W. K. Kirkpatrick, *Kirkpatrick's Four Levels of Training Evaluation*. Alexandria, VA, USA: Association for Talent Development, 2016.
[27] M. Mukred, Z. M. Yusof, F. M. Alotaibi, U. A. Mokhtar, and F. Fauzi, "The key factors in adopting an electronic records management system in the educational sector: A UTAUT-based framework," *IEEE Access*, vol. 7, pp. 35963–35980, 2019, doi: 10.1109/ACCESS.2019.2904617.
[28] N. Norolazmi *et al.*, "The effect of electronic recordkeeping implementation in information intensive agency," *International Journal of Engineering and Technology*, vol. 7, no. 3.7, pp. 100–103, 2018, doi: 10.14419/ijet.v7i3.7.16247.
[29] B. Hawash, U. Asma' Mokhtar, Z. M. Yusof, and M. Mukred, "The adoption of electronic records management system (ERMS) in the Yemeni oil and gas sector: Influencing factors," *Records Management Journal*, vol. 30, no. 1, pp. 1–22, 2020, doi: 10.1108/RMJ-03-2019-0010.
[30] A. A. Bunawan, R. A. Yaacob, and N. A. Kamarudin, "Implementation of electronic records management system (ERMS) at National Archive of Malaysia (ANM)," *Journal of Information and Knowledge Management*, vol. 4, no. 1, pp. 97–112, 2014.
[31] F. Ugbebor, O. Aina, M. Abass, and D. Kushanu, "Employee cybersecurity awareness training programs customized for SME contexts to reduce human-error related security incidents," *Journal of Knowledge Learning and Science Technology*, vol. 3, no. 3, pp. 382–409, 2024, doi: 10.60087/jklst.vol3.n3.p382-409.
[32] N. Zabidi, M. M. Ismail, Z. H. Adnan, and M. I. M. Zain, "Good governance practices for sustainable development in the public sector services in Malaysia," *Akademika*, vol. 94, no. 2, pp. 252–266, 2024, doi: 10.17576/akad-2024-9402-14.
[33] A. A. Aziz, Z. M. Yusof, U. A. Mokhtar, and D. I. Jambari, "Establishing policy for the implementation of electronic document and records management system in public sector in Malaysia: The influencing factors," *Advanced Science Letters*, vol. 23, no. 11, pp. 10732–10736, 2017, doi: 10.1166/asl.2017.10141.
[34] S. Talib, R. A. Munir, N. N. A. Molok, and M. R. Ahmad, "Information security governance issues in Malaysian government sector," *Journal of Information Systems and Digital Technologies*, vol. 5, no. 2, pp. 1–18, 2023, doi: 10.31436/jisdt.v5i2.404.
[35] M. R. A. Kadir, S. N. S. Norman, S. A. Rahman, A. R. Ahmad, and A.-A. Bunawan, "Information security policies compliance among employees in CyberSecurity Malaysia," in Pro*ceedings of the 28th International Business Information Management Association Conference (IBIMA)*, Seville, Spain, 2016, pp. 2419–2430.
[36] T. Wright, "Information culture in a government organization: Examining records management training and self-perceived competencies in compliance with a records management program," *Records Management Journal*, vol. 23, no. 1, pp. 14–36, 2013, doi: 10.1108/09565691311325004.
[37] L. Shonhe and B. Grand, "Implementation of electronic records management systems: Lessons learned from Tlokweng Land Board-Botswana," *Records Management Journal*, vol. 30, no. 1, pp. 43–62, 2020, doi: 10.1108/RMJ-03-2019-0013.
[38] M. Mukred, B. Hawash, M. I. Nofal, U. A. Mokhtar, and Z. M. Yusof, "Big Data and Electronic Records Management Systems for Public Sector Organizations Competency," in *Proceedings of the International Conference on Cyber Resilience (ICCR)*, Dubai, United Arab Emirates, 2022, pp. 1–7, doi: 10.1109/ICCR56254.2022.9995859.
[39] N. S. Marutha, "Framework for medical and health records management skills and competency development in Limpopo public hospitals to support healthcare service delivery in the digital era," *African Journal of Library, Archives and Information Science*, vol. 29, no. 2, pp. 185–198, 2019.
[40] B. E. Asogwa, "The readiness of universities in managing electronic records: A study of three federal universities in Nigeria," *The Electronic Library*, vol. 31, no. 6, pp. 792–807, 2013, doi: 10.1108/EL-04-2012-0037.
[41] H. Abdulkadhim, M. Bahari, A. Bakri, and W. Ismail, "A research framework of electronic document management systems (EDMS) implementation process in government," *Journal of Theoretical and Applied Information Technology*, vol. 81, no. 3, pp. 420–431, 2015.
[42] C. T. Nengomasha and A. Chikomba, "Status of EDRMS implementation in the public sector in Namibia and Zimbabwe," *Records Management Journal*, vol. 28, no. 3, pp. 252–264, 2018, doi: 10.1108/RMJ-08-2017-0023.
[43] A. Shibambu and N. S. Marutha, "A framework for management of digital records on the cloud in the public sector of South Africa," *Information Discovery and Delivery*, vol. 50, no. 2, pp. 165–175, 2022, doi: 10.1108/IDD-10-2020-0128.

[44] M. Lewellen, V. Hooper, and G. Oliver, "The impact of knowledge interpretation and organizational context on the use of electronic recordkeeping systems," in *Proceedings of the 25th Australasian Conference on Information Systems (ACIS)*, Auckland, New Zealand, 2014.
[45] T. L. Mosweu and L. Kenosi, "Implementation of the Court Records Management System in the delivery of justice at the Gaborone Magisterial District, Botswana," *Records Management Journal*, vol. 28, no. 3, pp. 234–251, 2018, doi: 10.1108/RMJ-11-2017-0033.
[46] A. Sundqvist and P. Svärd, "Information culture and records management: A suitable match? Conceptualizations of information culture and their application on records management," *International Journal of Information Management*, vol. 36, no. 1, pp. 9–15, 2016, doi: 10.1016/j.ijinfomgt.2015.08.004.
[47] R. Tumuhairwe and A. Ahimbisibwe, "Procurement records compliance, effective risk management and records management performance: Evidence from Ugandan public procuring and disposing entities," *Records Management Journal*, vol. 26, no. 1, pp. 83–101, 2016, doi: 10.1108/RMJ-06-2015-0024.
[48] J. Namukasa, "Records management and procurement performance: A case of NAADS program in the central region of Uganda," *Records Management Journal*, vol. 27, no. 3, pp. 256–274, 2017, doi: 10.1108/RMJ-04-2016-0011.
[49] E. Klett, "Theory, regulation and practice in Swedish digital records appraisal," *Records Management Journal*, vol. 29, no. 1/2, pp. 86–102, 2019, doi: 10.1108/RMJ-09-2018-0027.
[50] S. L. Xie, "A must for agencies or a candidate for deletion: A grounded theory investigation of the relationships between records management and information security," *Records Management Journal*, vol. 29, no. 1/2, pp. 57–85, 2019, doi: 10.1108/RMJ-09-2018-0026.
[51] O. Mosweu, "Assessing digital records authenticity in a Botswana government accounting system: An archival diplomatics perspective," *South African Journal of Libraries and Information Science*, vol. 86, no. 1, p. 64, 2020, doi: 10.7553/86-1-1889.
[52] O. Mosweu, K. Bwalya, and A. Mutshewa, "Examining factors affecting the adoption and usage of document workflow management system (DWMS) using the UTAUT model: Case of Botswana," *Records Management Journal*, vol. 26, no. 1, pp. 38–67, 2016, doi: 10.1108/RMJ-03-2015-0012.
[53] A. A. Aziz, Z. M. Yusof, U. A. Mokhtar, and D. I. Jambari, "The determinant factors of electronic document and records management system (EDRMS) adoption in public sector: A UTAUT-based conceptual model," in *Proceedings of the 2017 6th International Conference on Electrical Engineering and Informatics (ICEEI)*, 2017, pp. 1–6, doi: 10.1109/ICEEI.2017.8312413.
[54] O. Mosweu and K. J. Bwalya, "A multivariate analysis of the determinants for adoption and use of the Document Workflow Management System in Botswana's public sector," *South African Journal of Libraries and Information Science*, vol. 84, no. 2, pp. 27–38, 2018, doi: 10.7553/84-2-1767.

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