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ORIGINAL RESEARCH ARTICLE

Educational Management Strategies for Improving School Quality in the Digital Transformation Era

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ABSTRACT

Digital transformation creates opportunities for school improvement but also introduces organisational demands concerning leadership, professional capacity, information governance, and equitable access. This article develops an integrated educational management framework for SMP Al-Madani, Kragilan, through a structured literature-informed synthesis of publications from 2020 to 2025. The supplied manuscript provides the contextual focus and five preliminary themes, while verified journal literature supplies the conceptual and methodological foundations. The analysis organises the evidence around data-informed planning, adaptive and collaborative leadership, professional development, digital management and learning processes, and a culture of continuous quality improvement. The synthesis suggests that these dimensions should operate as an interconnected management cycle rather than as independent technology projects. A proposed implementation model links readiness assessment, collective priority setting, supported pilot activities, monitoring, and revision. Supporting tables specify evidence requirements, responsibilities, implementation outputs, and measurable indicators, while figures describe the model and the publication profile of the reference corpus. The framework prioritises reliable baseline information, pedagogically purposeful technology use, inclusive participation, and sustainable organisational learning. However, the source contains no documented school observations, participant dataset, intervention results, or reproducible systematic-review screening log. Accordingly, the findings are presented as conceptual synthesis and prospective implementation guidance rather than demonstrated improvements at the school. The contribution is an operational connection between digital transformation and school quality management that can guide subsequent field validation and context-sensitive programme development.

Keywords: Educational Management; School Quality; Digital Transformation; Literature Synthesis.



ABSTRAK

Transformasi digital membuka peluang peningkatan mutu sekolah, tetapi juga menuntut kesiapan organisasi dalam kepemimpinan, kompetensi profesional, tata kelola informasi, dan pemerataan akses. Artikel ini mengembangkan kerangka manajemen pendidikan terpadu untuk SMP Al-Madani, Kragilan, melalui sintesis terstruktur berbasis literatur terbitan tahun 2020 sampai 2025. Naskah sumber menyediakan konteks kajian dan lima tema awal, sedangkan artikel jurnal terverifikasi digunakan untuk memperkuat landasan konseptual dan metodologis. Analisis mengorganisasikan bukti dalam tema perencanaan berbasis data, kepemimpinan adaptif dan kolaboratif, pengembangan profesional, digitalisasi proses manajemen dan pembelajaran, serta budaya peningkatan mutu berkelanjutan. Hasil sintesis menunjukkan bahwa kelima dimensi perlu bekerja sebagai siklus manajemen yang saling berhubungan, bukan sebagai proyek teknologi yang terpisah. Model penerapan yang diusulkan menghubungkan penilaian kesiapan, penetapan prioritas bersama, kegiatan percontohan dengan pendampingan, pemantauan, dan perbaikan. Tabel pendukung memuat kebutuhan bukti, pembagian tanggung jawab, keluaran penerapan, dan indikator terukur, sedangkan gambar menyajikan model serta profil tahun publikasi korpus referensi. Kerangka ini menekankan informasi dasar yang andal, pemanfaatan teknologi sesuai tujuan pedagogis, partisipasi inklusif, dan pembelajaran organisasi yang berkelanjutan. Namun, naskah sumber belum menyediakan dokumentasi observasi sekolah, data partisipan, hasil intervensi, atau catatan penyaringan kajian sistematis yang dapat direplikasi. Oleh karena itu, temuan disajikan sebagai sintesis konseptual dan panduan penerapan prospektif, bukan sebagai peningkatan mutu yang telah terbukti di sekolah. Kontribusi artikel adalah mengoperasionalkan hubungan transformasi digital dan manajemen mutu sekolah untuk mendukung validasi lapangan serta pengembangan program sesuai konteks.

Kata kunci: Manajemen Pendidikan; Mutu Sekolah; Transformasi Digital; Sintesis Literatur.

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1. INTRODUCTION

Educational management connects institutional purposes with the daily decisions through which schools organise teaching, allocate resources, support staff, and assess progress. Digital transformation expands the information available to decision makers while requiring them to reconsider established responsibilities and routines. For a secondary school, the central management question is therefore how digital resources can strengthen educational processes and the conditions under which improvement is sustainable. Leadership and transformation research provides complementary perspectives on this relationship (Willermark et al., 2024; Netolicky, 2020). The present article examines these issues in relation to SMP Al-Madani, Kragilan, while retaining the literature-based character of the supplied manuscript.

A recurring problem in digital change is the separation of technology acquisition from organisational improvement. Devices and platforms can be purchased without establishing coherent objectives, adequate user support, or procedures for evaluating their educational contribution. Schools may consequently accumulate applications while teachers and administrators continue to repeat tasks or work with incompatible records. Research on strategic integration and organisational transformation offers grounds for treating technology as part of

institutional planning (Sosa-Díaz et al., 2022; Nugroho, 2020). In this article, school quality refers to the coherence and reliability of educational provision, the responsiveness of management, and the opportunities available for learners, rather than simply the quantity of equipment installed.

The contextual relevance of the problem must be distinguished from observed conditions at a specific institution. The source identifies SMP Al-Madani as the intended setting but supplies no observation dates, interview transcripts, infrastructure inventory, teacher survey, or administrative dataset. It is therefore impossible to state that fragmented records, low competence, or unequal access have actually been observed there. Instead, these are diagnostic questions suggested by the wider literature (König et al., 2020; González-Betancor et al., 2021). A future field assessment should investigate how staff produce and use information, whether families can access communication channels, and which organisational processes most urgently require improvement. Such questions establish a grounded direction for observation without substituting assumptions for evidence.

Relevant research connects school leadership with the mobilisation of collective capacity during change. Leadership becomes consequential when institutional goals are communicated clearly, responsibilities are negotiated, and staff receive practical support for new work. Digital initiatives may fail when leaders delegate technical tasks without engaging with their pedagogical or organisational implications. Studies addressing leadership and distributed responsibility inform the need to link direction with participation (Harris & Jones, 2020; Mifsud, 2024). For the proposed school context, this means that the principal, teachers, administrative personnel, and governing body should collectively define the educational problem a digital initiative is expected to address.

Data-informed planning offers another important line of scholarship. Attendance records, assessment results, programme documentation, and stakeholder feedback can support more explicit decisions about school priorities. Nevertheless, the existence of a dataset does not guarantee valid interpretation or useful action. Staff need time, analytical support, and agreement about what an indicator represents before translating information into a management response (Schildkamp & Datnow, 2022; Jimerson et al., 2021). The proposed framework therefore treats data interpretation as a collaborative process. Quantitative records should be examined alongside explanations from teachers and learners so that apparent performance differences do not automatically become simplistic judgements about individuals.

Teachers' digital competence constitutes an additional organisational condition. Effective use requires more than familiarity with software: teachers must judge whether a resource supports curricular aims, assessment, participation, and the needs of different learners. Professional development should consequently connect technical practice with pedagogical reasoning and opportunities for supported experimentation. Research on digital competence and teacher learning provides a basis for this approach (Falloon, 2020; Masoumi & Noroozi, 2025). A school may need differentiated support because staff vary in confidence, experience, subject specialisation, and access to appropriate resources. A uniform training session is unlikely to resolve every implementation problem.

The expansion of digital learning also raises questions about continuity, access, and workload. Experience with remote and technology-mediated teaching has drawn attention to the conditions

under which teachers and students can participate meaningfully. Management must take account of connectivity, device availability, family support, and the additional time needed to redesign learning activities (Trust & Whalen, 2021; Costa et al., 2021). These concerns imply that a digital strategy should include accessible alternatives and realistic expectations. At SMP Al-Madani, the appropriate form of such alternatives remains an empirical question; the framework requires their assessment rather than presuming either universal readiness or universal disadvantage.

Quality improvement depends on the school's ability to learn from implementation. A programme can meet an administrative deadline yet provide little evidence of improved teaching or more reliable service delivery. Evaluation should therefore examine how activities are enacted and what changes follow, while allowing staff to report difficulties and unintended consequences. Literature on professional collaboration and school improvement supports the importance of organisational learning (Zheng et al., 2021; Grimm, 2024). The proposed model links reflection to programme revision so that digital change becomes a continuing management process. Documentation is valuable when it helps participants understand decisions and improve practice, rather than when it merely increases reporting volume.

The gap addressed here concerns the operational connection between these management dimensions. The reviewed fields discuss leadership, competence, technology integration, data use, and organisational learning, but their concepts do not automatically specify how a school can coordinate responsibilities, sequence activities, or choose manageable indicators. Recent discussions of digital transformation and educational technology make this integrative question particularly relevant (Mukul & Büyüközkan, 2023; Freires & Lopes, 2024). The contribution claimed by this article is therefore bounded: it translates five themes already identified in the source into a coherent implementation framework. It does not claim that these themes are newly discovered, nor that no comparable framework exists elsewhere.

The study aims to clarify the management mechanisms that connect digital transformation with school quality, formulate a context-sensitive implementation model, and identify the evidence required for subsequent validation. Two questions guide the synthesis: how can the five management dimensions be coordinated, and what indicators can help a school examine their implementation? Additional scholarship on digital education and institutional readiness supports the need to align aspirations with actual capacity (Kovanovic et al., 2021; Smestad et al., 2023). The resulting framework is intended for planning and inquiry at SMP Al-Madani. Its novelty lies in the explicit alignment of thematic mechanisms, implementation responsibilities, monitoring requirements, and feedback, subject to confirmation through future fieldwork.

2. RESEARCH METHODS

This article uses a structured, literature-informed qualitative synthesis to develop a management framework. Although the supplied manuscript labels its approach a systematic literature review, it does not provide a complete search history, screening decisions, excluded full texts, or a quality-appraisal record. The expanded article therefore avoids claiming a reproducible systematic review. Methodological reporting guidance clarifies why those records matter (Page et al., 2021; Rethlefsen et al., 2021). The unit of analysis is the published article or methodological

contribution, while SMP Al-Madani is the intended application context rather than an observed participant sample. The design supports conceptual interpretation and framework construction, not causal estimation of school improvement.

The reference corpus contains 40 journal publications within the 2020–2025 publication window. The supplied bibliography was treated as a starting point for topic identification, but journal names and incomplete records were not counted as individual studies. Additional sources were located through scholarly metadata searches and publisher or repository records using combinations of school leadership, digital transformation, teacher digital competence, school improvement, data use, and qualitative synthesis. DOI metadata were checked against the bibliographic identity of each retained record. Search-reporting guidance informed documentation of these decisions (Rethlefsen et al., 2021). The corpus is purposively assembled for this article and should not be interpreted as an exhaustive census of the field.

Selection prioritised conceptual relevance, identifiable authorship, journal publication, an eligible publication year, and a DOI linked to the cited work. Studies of schools and teacher development were preferred for educational interpretation; broader organisational or educational-sector studies were used only where their concepts could be transferred cautiously. Methodological articles were retained to support transparent reporting and qualitative interpretation. Table 1 specifies the extraction fields and separates bibliographic evidence from missing school-level information. Thematic-analysis scholarship informed attention to consistency between the analytic purpose, coding choices, and strength of the conclusions (Braun & Clarke, 2021b; Braun & Clarke, 2021a). No formal risk-of-bias score or pooled effect estimate is reported because neither was produced by the source or this conceptual design.

Table 1. Evidence extraction and school data requirements

Data category	Extraction or specification	Evidence status
Bibliographic identity	Authors, year, title, journal, DOI	40 identifiable journal records
Conceptual evidence	Management theme, setting, relevance, transfer limits	Literature-informed interpretation
School baseline	Staff capacity, access, records, governance	Not provided in source
Field observations	Dates, settings, participants, observation notes	Not provided in source
Implementation evidence	Pilot logs, user feedback, workflow records	Required for future validation
Outcome evidence	Comparable baseline and follow-up indicators	No school outcome values reported

Analysis began with the five categories in the original manuscript and examined how relevant publications could inform their definitions, relationships, and practical implications. The synthesis organised interpretive notes around the management problem, enabling conditions, proposed mechanism, anticipated output, and evidence needed for evaluation. This process is best understood as a framework-guided interpretive synthesis rather than an independently replicated coding experiment. A worked methodological example supports transparent articulation of interpretive decisions (Byrne, 2022). Cross-theme comparison was used to identify dependencies, such as the need for competence and data governance before a dashboard can inform action. Citation choices distinguish direct contextual relevance from more general conceptual support.

The study reports literature-derived results and a prospective application model. It includes no recruited participants, identifiable student records, intervention allocation, or fabricated observation results. Consequently, no school-level sample size, consent procedure, statistical test, or improvement percentage is asserted. Ethical review, permission to access institutional records, and consent arrangements would need to be established for a subsequent empirical study. Tables 2 and 3 specify proposed responsibilities and indicators, and the figures distinguish conceptual structure from bibliographic counts. Quality criteria for thematic interpretation encourage explicit limits on inference (Braun & Clarke, 2021b; Braun & Clarke, 2021a). Verification in the school should include baseline assessment, implementation documentation, stakeholder feedback, and comparison of the same indicators over time.

3. RESULTS AND DISCUSSION

The synthesis yields an integrated management framework organised around five dimensions inherited from the source manuscript. Their relationship is the substantive result: reliable planning requires usable information; coordinated leadership establishes responsibility; professional development enables enactment; digital processes support delivery; and evaluation feeds experience back into planning. Figure 1 presents this relationship as a proposed cycle. Its arrows indicate logical and organisational connections rather than statistically estimated effects. The model therefore provides a basis for implementation design, while the actual strength of each connection at SMP Al-Madani remains to be investigated.

The first dimension is data-informed planning. Its function is to convert an institutional concern into an explicit priority with a documented rationale. A future readiness assessment should identify which information already exists, who maintains it, how complete it is, and what decisions it supports. For example, attendance and assessment records could help a team identify a question about student participation, but the explanation would require discussion with teachers and learners. The result of this stage would be a verified baseline inventory and a short list of priorities. Neither product is claimed to have already been completed at the school.

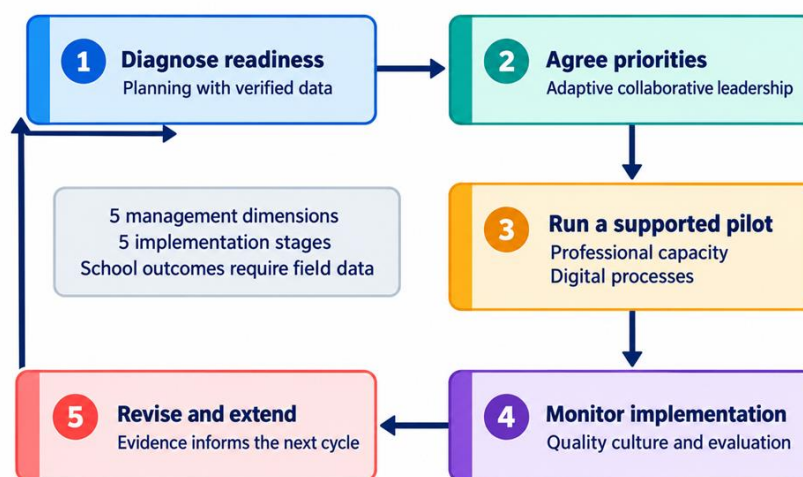


Figure 1. Proposed management and implementation cycle for SMP Al Madani

The second dimension is adaptive and collaborative leadership. Its operational purpose is to connect agreed priorities with clear authority, communication, and support. A proposed school improvement team would include representatives of teaching and administration, with responsibilities agreed by the principal and relevant governing body. The team would coordinate a bounded pilot and review difficulties before extending it. This arrangement should prevent a digital initiative from depending entirely on one technically confident staff member. Table 2 maps responsibilities to concrete outputs, offering a management structure that the school can adapt to its actual staffing and governance arrangements.

Table 2. Proposed implementation responsibilities and outputs

Stage	Responsible roles	Expected output
1 Diagnose	Principal, teacher representatives, administration	Verified inventory and readiness report
2 Prioritise	School improvement team and governing body	Agreed problem, scope, responsibilities
3 Pilot	Workflow coordinator and participating staff	Supported workflow and practical training record
4 Monitor	Team and designated data custodian	Indicator summary and stakeholder feedback
5 Revise	Principal and implementation team	Corrective-action log and continuation decision

The third dimension is professional capacity. The framework requires an assessment of the competencies associated with the selected priority, followed by practice-oriented support. If the pilot concerns assessment records, training should include accurate entry, interpretation, and the use of results in lesson planning. If it concerns parent communication, support should address clarity, access, and agreed response routines. Peer mentoring and shared review can accompany formal training. The expected output is demonstrated capability in the relevant workflow,

documented through a practical task or agreed rubric. Attendance at a workshop is an activity record and is not sufficient evidence of improved competence.

The fourth dimension is digital management and learning processes. The proposed approach begins with a manageable process whose educational or administrative value is clear. Staff would document the current workflow, identify avoidable duplication, select an appropriate tool, and establish responsibilities for access and maintenance. A pilot might concern attendance, resource sharing, assessment documentation, or communication, depending on verified local needs. The framework does not prescribe a particular platform because the source supplies no infrastructure or budget assessment. The intended output is a usable, documented process that supports the chosen priority and can continue within the school's resource constraints.

The fifth dimension is quality culture and continuing evaluation. Monitoring is linked to decisions through a scheduled review in which the team examines indicators, practical difficulties, and feedback. The review should ask whether the workflow is being used, whether records are reliable, whether users can participate, and whether the expected educational contribution is plausible. It should also identify unintended burdens such as extra data entry or exclusion from communication. An action log would document the decision, responsible person, and follow-up date. This output operationalises the source manuscript's call for continuous improvement without claiming that a quality culture has already been measured.

Application of the model is proposed in five stages: diagnosis, collective priority setting, supported piloting, monitoring, and revision. Diagnosis establishes actual conditions; priority setting selects an achievable problem; piloting tests an agreed workflow; monitoring documents use and difficulties; and revision determines whether to modify, continue, or extend the activity. Figure 1 represents this sequence together with the management dimensions and the feedback loop. The sequence is a recommendation for future implementation rather than a report of completed intervention sessions. Progress to a later stage should depend on the evidence available from the preceding stage, not simply on a predetermined calendar.

Table 3 converts the proposed framework into measurable indicators. Record completeness can be expressed as the number of valid records divided by the number expected, while workflow adoption can be expressed as the number of intended users demonstrating use divided by the number eligible. Competence demonstration requires a predefined task and scoring rubric, and corrective-action completion requires a dated action log. The table deliberately leaves baseline and follow-up values unfilled because no empirical values appear in the source. These formulas are measurement specifications, not synthetic observations. They make the subsequent field study more concrete while preserving the distinction between a proposed evaluation and a completed one.

Table 3. Proposed indicators for subsequent school evaluation

Indicator	Operational definition	Data and status
Record completeness	Valid records / expected records $\times 100$	Record audit; baseline and follow-up pending
Workflow adoption	Users demonstrating use / eligible users $\times 100$	Usage evidence; baseline and follow-up pending
Competence demonstration	Staff meeting agreed task rubric / staff assessed $\times 100$	Practical assessment; rubric must be defined
Communication access	Intended recipients able to access / recipients assessed $\times 100$	Access check; values pending
Action completion	Completed due actions / actions due $\times 100$	Dated action log; values pending
Educational contribution	Evidence of change against agreed teaching objective	Student work and observations required

The only quantitative summaries reported here concern the assembled reference corpus. Table 4 and Figure 2 display the number of cited publications by year, calculated directly from the 40 bibliographic records. These counts describe the temporal distribution of the article's evidence base and are not measures of school performance. The corpus includes 20 references assigned to the introduction, 15 additional substantive references used in the discussion, and five methodological references used in the method section. This allocation makes the requested reference structure transparent. It does not imply equal evidential weight, representative coverage, or comparability of research designs across the cited publications.

Table 4. Publication profile of the reference corpus

Publication year	Reference count	Share of corpus
2020	9	22.5%
2021	10	25.0%
2022	6	15.0%
2023	3	7.5%
2024	6	15.0%
2025	6	15.0%
Total	40	100.0%

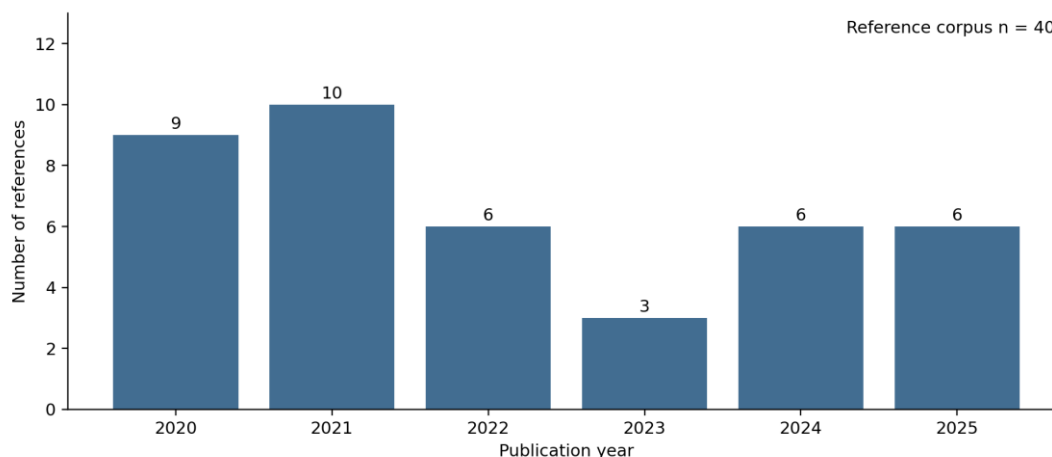


Figure 2. Publication years of the 40 cited journal references

The framework specifies a coordinated route from an identified management problem to documented organisational learning. Its practical value lies in showing what must be known, who should act, what output should be produced, and what evidence should guide revision. Its evidential limits are equally consequential: it cannot establish that SMP Al-Madani has adopted the model, that digital competence has improved, or that student outcomes have changed. Those claims require field records and an appropriate study design. The research result is therefore a literature-grounded implementation framework with explicit measurement requirements, rather than an empirical evaluation of an existing digital transformation programme.

Discussion

The framework places educational purpose at the centre of digital management. Its main implication is that transformation should be evaluated through the organisational and learning problems it addresses, rather than through platform acquisition alone. This interpretation connects the introduction's transformation perspective with additional work on educational digital change (Willermark et al., 2024; Gillpatrick, 2020). The school should be able to explain why a chosen process matters, how its users will enact it, and what evidence would justify continuation. A purchasing decision can support that process but cannot substitute for it. Because this article provides conceptual synthesis, the relationship is proposed as a mechanism requiring school-level examination.

Leadership contributes by coordinating decisions across otherwise separate functions. A principal's vision needs to be translated into achievable priorities, workable responsibilities, and support for staff. The proposed team structure draws on leadership scholarship while additional literature broadens the discussion of institutional change (Netolicky, 2020; Forfang et al., 2025). A distributed arrangement does not mean that every participant has the same authority or that accountability disappears. Rather, it requires agreement about who can decide, who maintains the workflow, and who responds when difficulties arise. Its suitability for SMP Al-Madani depends on the school's actual governance, staffing, and communication practices, which remain undocumented in the source.

Strategic planning becomes more useful when it specifies dependencies. An initiative that requires reliable student records should not proceed on the assumption that the records are already complete; an initiative that requires teacher judgement should include time for professional learning. The link between planning and implementation is consistent with work on educational technology integration and further discussion of transformation (Sosa-Díaz et al., 2022; Corrigan & Merry, 2022). This supports a staged approach in which readiness affects scope. The recommendation is not that schools postpone every innovation until ideal conditions exist. It is that the pilot should be bounded so that its requirements can be met and its difficulties can be understood.

Data-informed management requires interpretive capacity as well as access to information. A dashboard can display a pattern without explaining the circumstances that produced it. The proposed collaborative review therefore combines records with contextual accounts, drawing on the introduction's data-related literature and additional work relevant to information use (Nugroho, 2020; van den Boom-Muilenburg et al., 2023). This has practical consequences for school meetings: staff should formulate a question before collecting indicators and record the reasoning that connects the evidence to an action. The purpose is to improve the quality of a decision, not to maximise the amount of data collected. The framework does not support ranking teachers or learners through unvalidated composite scores.

The absence of school observations constrains contextual claims but also clarifies the next research step. The framework's diagnostic questions identify what an empirical investigation should examine without asserting that a literature-described problem exists locally. Research on educational conditions and further evidence about digital practice supports the need for contextual assessment (König et al., 2020; Loh et al., 2025). A future study should document setting, dates, participants, instruments, and the relationship between observations and conclusions. Observational notes about a workflow should be separated from participants' explanations of it. This distinction would help the school identify whether an implementation difficulty concerns access, capacity, workload, expectations, or another factor.

Access is an organisational issue because participation depends on how schools design their processes. A communication workflow that assumes continuous connectivity may disadvantage families even when the platform itself functions well. The model's readiness stage and accessible alternatives address this concern, informed by existing educational research and an additional contribution to the digital context (González-Betancor et al., 2021; Weber et al., 2025). Practical evaluation should therefore examine who receives information and can respond, rather than only counting messages sent. The appropriate alternative might be a different communication channel or a revised schedule. It must be chosen from evidence about the school's users, since the source does not establish their circumstances.

Professional development is strongest when it accompanies a real task and includes feedback. The model connects training to the selected workflow so that staff can test new knowledge, discuss difficulties, and revise practice. This interpretation builds on the introduction's professional-capacity perspective and further relevant scholarship (Harris & Jones, 2020; Vattøy & Gamlem, 2024). Evaluation should look for demonstrable use rather than equating attendance with competence. For example, a staff member's ability to produce a complete record and explain its

instructional use would be more informative than workshop participation alone. Such an assessment needs agreed criteria and supportive conditions; it should help identify learning needs rather than become an unexplained judgement of individual worth.

Collaboration can reduce dependence on isolated expertise while creating opportunities for organisational learning. However, a professional community requires time, a shared purpose, and routines that connect discussion to practice. The proposed mentoring and review arrangements are informed by collaboration-related work and additional scholarship (Mifsud, 2024; Warmoes et al., 2025). Simply establishing a group or scheduling a meeting does not demonstrate that collaborative improvement has occurred. Useful evidence would include changes to a shared resource, documented resolution of a problem, or the enactment of an agreed adjustment. The framework therefore specifies outputs and follow-up responsibilities so that collaboration is observable as work rather than assumed from membership.

The measurement framework separates activity, implementation, and outcome. Training participation is an activity indicator; consistent use of a workflow is an implementation indicator; and a meaningful improvement in educational provision requires outcome evidence. The importance of using information carefully is supported by earlier and additional literature (Schildkamp & Datnow, 2022; Spiele et al., 2025). This separation helps prevent a common inference error: assuming that completion of an action proves attainment of its intended benefit. At SMP Al-Madani, baseline and follow-up data would need comparable definitions, observation periods, and coverage. Without those conditions, apparent changes might reflect different recording practices rather than genuine improvement.

Monitoring should include staff workload and unintended effects. Digital processes may simplify retrieval yet create additional entry requirements, especially when schools retain parallel paper and electronic systems. The model's review stage provides space to examine these consequences in relation to relevant literature (Jimerson et al., 2021; Rapanta et al., 2020). Evaluation should ask whether a process replaces an existing task, adds a new task, or changes responsibility between roles. This can reveal a mismatch between the expected benefit and the lived experience of implementation. The source provides no time-use measurements, so the article proposes workload assessment without assigning hours saved or claiming efficiency gains.

Pedagogical quality remains central to competence development. A teacher may be able to operate a tool while needing support to select suitable tasks, interpret learner responses, or accommodate different levels of readiness. The competence dimension combines the introduction's relevant scholarship with a further contribution to digital teaching (Falloon, 2020; Garcias & Darder Mesquida, 2022). The practical implication is to assess the relationship between technology use and a teaching purpose. Lesson documentation, student work, and teacher reflection could provide complementary evidence in a future study. No particular device or application is treated as inherently effective; its educational contribution must be considered in relation to users, content, and implementation conditions.

The proposed model also depends on continuity of support. Initial enthusiasm may decline if staff encounter unresolved problems or if a key coordinator becomes unavailable. Professional-learning and additional organisational literature help frame sustainability as a management responsibility

(Masoumi & Noroozi, 2025; Abad-Segura et al., 2020). Documentation, shared access arrangements, and realistic maintenance responsibilities can reduce this vulnerability. The school should identify recurring costs and support needs before expanding a pilot. Sustainability is thus a question about continuing capacity, not merely the completion of the first implementation period. This article offers that planning logic but cannot determine whether the school has the resources to sustain a specific digital system.

Digital learning should be interpreted in light of the conditions under which the evidence was produced. Studies responding to emergency circumstances may illuminate readiness or support needs, but their findings cannot automatically be transferred to routine school management. The introduction's learning-related literature and additional scholarship reinforce the importance of contextual interpretation (Trust & Whalen, 2021; Li, 2024). For the present framework, the transferable lesson is to examine participation and capacity before setting expectations. The article does not treat all cited settings as equivalent to an Indonesian junior secondary school. Differences in governance, resources, learner age, and educational purpose limit the strength of direct extrapolation.

Continuous improvement requires a credible link between evaluation and subsequent action. Collecting feedback without documenting a response can weaken participants' confidence in the process. The model therefore includes a corrective-action log and a review of whether agreed actions were completed, supported by earlier and additional work (Costa et al., 2021; Suhadi et al., 2022). The proposed indicators are deliberately modest so that the school can establish a dependable routine before considering more complex analyses. They should be revised when local assessment reveals a poor fit. A future evaluation may also examine teaching or student outcomes, but attribution would require stronger evidence than simple before-and-after administrative counts.

The contribution of the article is a transparent operational synthesis rather than proof of effectiveness. It aligns five management dimensions with implementation stages, responsibilities, outputs, and indicator definitions, while recognising limitations in the source and the assembled corpus. Organisational-learning perspectives and additional relevant research support treating the framework as a starting point for empirical enquiry (Zheng et al., 2021; Ghani et al., 2020). Future validation should test usability, stakeholder understanding, implementation fidelity, and the relationship between process changes and educational outcomes. A documented systematic review could also broaden and appraise the evidence base. Until such work is completed, the framework should guide context-sensitive planning and research rather than certify improvement at SMP Al-Madani.

5. CONCLUSION AND SUGGESTIONS

Educational management in the digital transformation era requires coordinated attention to data-informed planning, adaptive and collaborative leadership, professional capacity, usable digital processes, and continuous quality improvement. The literature-informed synthesis develops these five dimensions into a proposed implementation cycle for SMP Al-Madani, Kragilan. Its practical contribution is to connect institutional priorities with responsibilities, documented outputs, and explicit indicators. The model treats technology as a means of supporting educational provision

within an organisational process, while recognising that access, competence, governance, and resources condition its implementation.

The article does not establish observed conditions or measured improvements at the school because the supplied manuscript contains no field dataset or intervention evidence. The model, implementation tables, and indicator formulas therefore constitute prospective guidance for validation. Subsequent research should establish a verified baseline, document stakeholder participation and implementation, and assess comparable indicators over time. Stronger claims about educational outcomes or causal effects would require an appropriate empirical design. Within these limits, the framework offers a concrete basis for school planning and a transparent agenda for investigating how digital transformation can support sustainable improvement.

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