Journal of Education and Learning Reviews, 3 (3): May-June 2026 ISSN: 3057-0387
Website: https://so19.tci-thaijo.org/index.php/JELS/about
Article ID: e2811

Educational Leaders' Preparation for Digital and Change Management in Basic Education: A Qualitative Document Analysis of Policy Expectations and Preparation Pathway

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Received 29/12/2025	Revised 26/01/2026	Accepted 30/03/2026

Abstract

Background and Aim: Digital transformation has expanded expectations placed on educational leaders in basic education, particularly in relation to organizational change, innovation, equity, and governance. International policy and institutional frameworks increasingly position school leaders as key agents of digital transformation, yet less is known about how leadership preparation is framed in these documents and whether preparation pathways are articulated beyond aspirational expectations. This study examines how educational leaders' preparation for digital and change management is conceptualized and articulated in publicly available online policy and institutional documents.

Materials and Methods: The study employed qualitative document analysis guided by Bowen's framework. A corpus of fifteen agenda-setting documents published between approximately 2015 and 2024 was purposively selected from a broader universe of international policy and institutional texts based on relevance to educational leadership, digital transformation, and change management in basic education. The dataset included UNESCO policy reports and guidance documents, alongside leadership standards, digital competence frameworks, and policy-oriented reports from other reputable international organizations. Data was analyzed using iterative qualitative content analysis combining deductive and inductive coding, with SDGs 4, 9, 10, and 16 used as an analytic lens. Digital tools supported document organization and cross-document comparison

Results: Findings indicate that leadership preparation is predominantly framed in normative and competency-based terms, emphasizing leadership roles and expectations but offering limited articulation of explicit preparation pathways. While key competencies related to digital leadership and change management are highlighted, alignment with the SDGs is partial and uneven. Preparation discourses align more strongly with SDG 4 (Quality Education) and SDG 9 (Innovation and Infrastructure) than with SDG 10 (Reduced Inequalities) and SDG 16 (Strong Institutions), which remain largely implicit. Significant gaps persist in relation to digital ethics, equity-oriented leadership, AI governance, and systematic change management preparation.

Conclusion: The study identifies a persistent disconnect between policy expectations and preparation pathways for educational leaders in basic education. The findings underscore the need for explicit, coherent, and SDG-aligned leadership preparation frameworks that move beyond aspirational rhetoric toward systematic capacity-building for sustainable and equitable digital transformation.

Keywords: Educational leadership; Digital transformation; Change management; Leadership preparation; Sustainable Development Goals; Qualitative document analysis

Introduction

Educational systems are undergoing accelerating digital transformation, reshaping expectations for leadership in basic education. School and system leaders are increasingly expected to guide technology-enabled reform, strengthen organizational responsiveness, and sustain improvement amid evolving demands for infrastructure, teaching practice, and governance (UNESCO, 2023; UNESCO GEM Report, 2024). In this policy context, leadership is commonly positioned as the mechanism through which digital initiatives are translated into institutional routines and educational outcomes (UNESCO, 2023). Yet while leadership expectations expand, the ways in which leaders are prepared for digital and change management responsibilities remain unevenly articulated across publicly available policy and institutional documents (UNESCO GEM Report, 2024).

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A central challenge is that "preparation" is frequently invoked in policy discourse without clear definitional boundaries. In document terms, preparation may be framed as formal leadership training, standards alignment, credentialing requirements, induction processes, continuing professional development (CPD), mentoring and coaching, or broader system capacity-building measures such as resourcing, professional learning infrastructures, and accountability supports (Bowen, 2009; UNESCO, 2023). Each framing implies a different theory of how leadership readiness is developed and where responsibility lies—within individual leaders, preparation providers, or education systems. However, policy texts do not always clarify which version of preparation they assume, nor how preparation is expected to unfold over time. This ambiguity is consequential because it can obscure whether leadership readiness is treated as a structured developmental outcome or as an assumed professional condition.

This study advances a document-analytic puzzle: when policy and institutional documents refer to preparing educational leaders for digital transformation and organizational change, what exactly is being articulated—competency expectations, developmental pathways, or system support? Addressing this question matters because policy documents function not only as guidance but also as normative instruments that shape what leadership "should" look like, what counts as legitimate competence, and what systems prioritize or leave unaddressed in leadership development (Bowen, 2009; UNESCO GEM Report, 2024). A qualitative document analysis approach is well-suited to this task because it enables systematic examination of both explicit statements and under-specified areas, including silences related to equity-oriented digital leadership and governance responsibilities (Bowen, 2009; UNESCO, 2023).

In this study, basic education is operationalized as the formal schooling sector encompassing primary and secondary education, including leadership roles and governance arrangements that influence school-level and system-level implementation. Because the document corpus draws on international and cross-institutional materials, the analysis does not assume uniform schooling structures across contexts; instead, it focuses on how leadership preparation is framed in influential documents intended to shape basic education systems broadly (UNESCO, 2023; UNESCO GEM Report, 2024). Guided by the Sustainable Development Goals, particularly SDGs 4, 9, 10, and 16, the researcher examined how leadership preparation is conceptualized, which competencies and responsibilities are emphasized, the extent of SDG alignment, and the gaps or silences that remain in preparation discourse.

Objectives

This study aimed to examine how educational leaders' preparation for digital leadership and change management in basic education is conceptualized and articulated in publicly available online policy and institutional documents. Specifically, it sought to:

1. Describe how educational leaders' preparation for digital and change management in basic education is conceptualized and articulated in publicly available online policy and institutional documents.
2. Identify the key competencies, roles, and responsibilities related to digital leadership and change management emphasized in leadership preparation frameworks and policy documents.
3. Assess the extent to which leadership preparation documents align with relevant United Nations Sustainable Development Goals (SDGs 4, 9, 10, and 16) in addressing digital transformation and organizational change in basic education, as articulated in the documents.
4. Examine the gaps, limitations, and silences evident in publicly available online documents regarding the preparation of educational leaders for digital and change management in basic education.

Literature review

Educational Leadership in Digital Transformation Contexts

Across recent scholarship, educational leadership is repeatedly positioned as a key condition for meaningful digital transformation in basic education. Rather than being treated as a purely technical upgrade, digital transformation is increasingly framed as a leadership challenge that involves shaping instructional priorities, redesigning organizational routines, and making value-laden decisions about technology use (Avolio et al., 2020; Selwyn, 2022). International frameworks reinforce this positioning

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by describing school leaders as central actors expected to translate system goals into school-level practice, particularly where digital tools are linked to learning improvement and modernization agendas (OECD, 2021; UNESCO, 2024). Yet, a recurring tension emerges in this literature: leadership expectations have expanded rapidly, while the preparation systems intended to support leaders—through training, induction, or continuing development—often remain underspecified or unevenly implemented. This mismatch raises questions about whether current policy discourse is describing leadership as a capability that can be developed, or as a responsibility that leaders are simply expected to absorb.

Leadership Preparation for Change Management and Organizational Reform

A second strand of research emphasizes that digital transformation in schools is inseparable from organizational change. Leadership in this context requires the capacity to mobilize staff, manage resistance, and sustain improvement under conditions of uncertainty—tasks that go beyond generic managerial competence (Fullan, 2020; Hallinger, 2020). While change management is frequently invoked in leadership research, the literature suggests that preparation programs do not consistently translate these ideas into structured developmental experiences. Instead, preparation is often communicated through broad competency expectations that describe "what leaders should do" without specifying how such capacities are cultivated over time through sequenced learning, practice-based mentoring, or supported implementation (Bush, 2020; Leithwood et al., 2020). This distinction matters because competency language can function in two different ways: it can guide developmental progression, or it can operate as an accountability checklist that assumes competence already exists. Document analysis is therefore useful for examining whether policy texts treat preparation as a pathway (developmental process) or as a baseline expectation (assumed professional attribute).

Digital Leadership Competencies and Data-Informed Practice

Within the digital leadership literature, competence is not treated as a single skill set but as a bundle of capabilities that connect pedagogy, technology, and organizational decision-making. Major frameworks increasingly emphasize strategic direction-setting, support for technology-enabled teaching and learning, and the use of evidence to guide improvement (OECD, 2021; Selwyn, 2022). However, the literature also reveals different ways of conceptualizing competence. Some frameworks imply competence through observable behavioral indicators (e.g., "uses data to inform decisions"), while others align competence with capability development and professional identity formation (Darling-Hammond et al., 2022). These differences are not trivial: when competence is framed as behavior, preparation tends to focus on compliance and performance monitoring; when framed as capability, preparation is more likely to emphasize learning trajectories, reflection, and contextual judgment. A related issue concerns "data-informed decision-making," which is often mentioned as a leadership priority but rarely unpacked in terms of the types of data involved (learning data, administrative data, digital platform data), governance requirements, or analytic capacity needed at the school level. This conceptual gap becomes especially important as systems increasingly discuss AI-enabled analytics and digital monitoring tools, which introduce new risks and responsibilities for school leaders (Williamson & Eynon, 2020).

Equity, Ethics, and Governance in Digital Leadership

Equity and ethics have become more visible in digital transformation debates, particularly as the pandemic highlighted unequal access to devices, connectivity, and learning support. Scholars warn that technology initiatives can reproduce or widen inequalities when reforms prioritize infrastructure or innovation without corresponding attention to inclusion and accountability (Selwyn, 2022; Williamson & Eynon, 2020). At the same time, governance concerns have expanded beyond traditional administrative issues to include data privacy, platform accountability, and the ethical implications of emerging technologies. While these concerns are frequently acknowledged in principle, the literature suggests they are often framed normatively—stating what should happen—rather than operationally—specifying what leaders should learn, practice, and be assessed on (OECD, 2021). From a preparation perspective, "operational" equity and ethics would be reflected in concrete markers such as training in privacy compliance, stakeholder consultation processes, procurement ethics, and risk assessment

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practices for data-intensive or AI-enabled tools. Whether such markers appear in policy and institutional documents remains an open question that document analysis can address.

Leadership Preparation and the Sustainable Development Goals

The Sustainable Development Goals (SDGs) provide a global policy vocabulary that links education reform to development priorities, including quality, innovation, inclusion, and institutional strength. Educational leadership is frequently positioned as an enabling condition for SDG 4 and is also connected to digital infrastructure and innovation agendas relevant to SDG 9 (Tikly et al., 2020; UNESCO, 2023). However, the literature suggests that SDG alignment is often uneven: SDGs may be referenced as broad aspirations, while equity (SDG 10) and governance (SDG 16) are less consistently embedded as actionable commitments within leadership preparation discourse (OECD, 2021; UNESCO, 2024). This raises a document-analytic puzzle: when SDGs appear in leadership-related texts, do they function mainly as symbolic legitimacy markers, or do they shape the content of preparation pathways through operational commitments and accountability mechanisms?

Synthesis and Research Gap

Taken together, post-2020 literature highlights a persistent tension between expanding leadership expectations for digital transformation and the limited articulation of preparation as a structured, developmental pathway. While competencies such as strategic vision, data use, and change leadership are widely promoted, there is less clarity on how preparation is distributed across actors (states, universities, professional bodies, school systems, or individual leaders) and how operational requirements—particularly for equity, ethics, and governance—are translated into preparation design. This study addresses that gap by using qualitative document analysis to examine how leadership preparation for digital and change management is constructed in publicly available policy and institutional documents, including what is emphasized, what is implied, and what remains silent in relation to SDG-aligned educational transformation.

Analytic Propositions

These propositions are not treated as claims to be "tested," but as theoretically informed starting points that remain open to refinement as document patterns emerge (Bowen, 2009).

Proposition 1 Preparation: Policy and institutional documents are likely to construct leadership preparation for digital and change management primarily through competency expectations and normative language, with variable specificity regarding developmental pathways such as formal training, induction, mentoring, or assessed professional learning sequences.

Proposition 2 Uneven competence operationalization: Documents may emphasize digital leadership competencies (e.g., vision-setting, innovation orientation, data use, governance responsibility) more consistently than they specify how these competencies are developed, supported, and assessed across preparation systems.

Proposition 3: Selective SDG Integration: References to SDG priorities are expected to be uneven across documents, with stronger articulation of SDG 4 (Quality Education) and SDG 9 (Innovation and Infrastructure) than SDG 10 (Reduced Inequalities) and SDG 16 (Strong Institutions), particularly in relation to operational preparation requirements.

Proposition 4: Persistent Silences in Governance and Equity: Documents may contain recurring silences or under-specification regarding equity-oriented leadership preparation, ethical governance, and AI-related accountability mechanisms, despite increasing reliance on digital platforms and analytics in education systems.

Conceptual Framework

Figure 1 presents the conceptual framework that guided this qualitative document analysis by showing how leadership preparation for digital transformation and change management is constructed within publicly available policy and institutional texts. The framework positions these documents as the primary discourse environment through which expectations for leadership are articulated and legitimized. In this study, "preparation" refers to how texts describe or assume developmental supports such as competency standards, formal training and credentialing, induction and mentoring, continuing professional development (CPD), and system capacity-building. Four preparation domains organize the

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analysis: (1) digital leadership competencies (e.g., strategic vision, instructional technology leadership), (2) change management and organizational reform (e.g., implementation planning, stakeholder engagement), (3) data-informed decision-making and governance (e.g., data literacy, ethical use of digital systems and AI), and (4) equity, ethics, and accountability (e.g., inclusion, privacy, transparency). SDGs 4, 9, 10, and 16 are embedded as an interpretive lens to assess alignment as articulated in documents. Each box in Figure 1 was operationalized as a deductive code family, while arrows guided theme development around discursive gaps between expectations and preparation pathways.

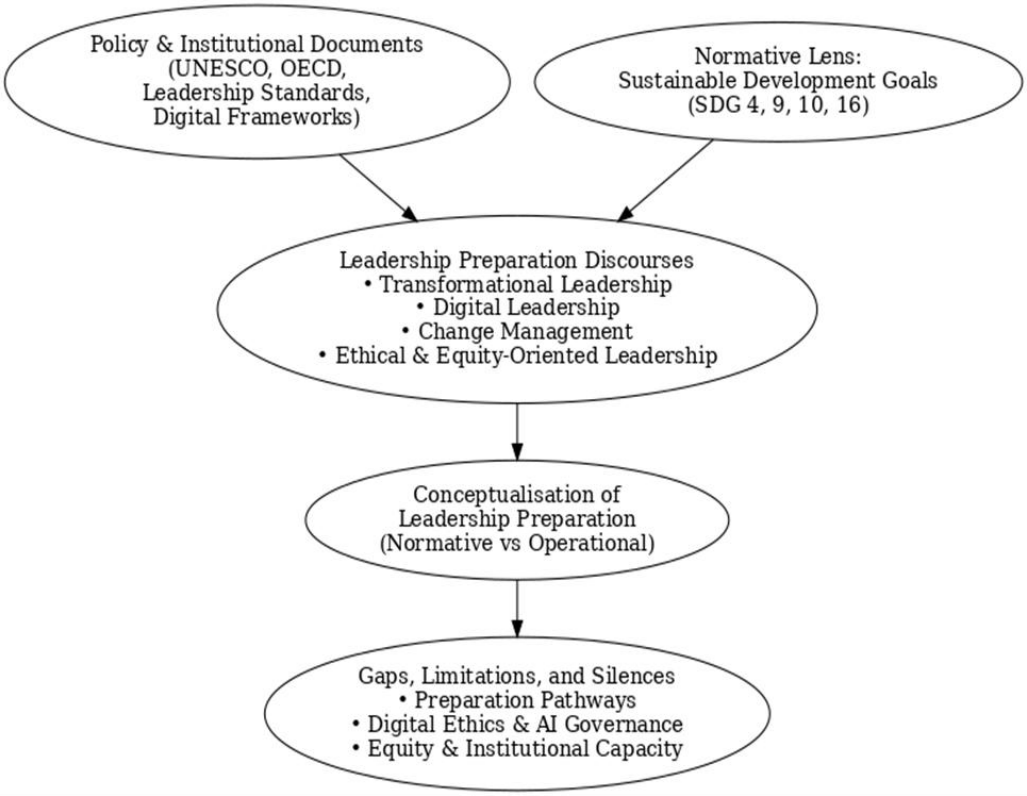

Figure 1: Conceptual Framework

Methodology

Research Design

This study employed a qualitative document analysis design following Bowen's approach, treating publicly available policy and institutional documents as a systematic source of evidence on how educational leaders' preparation for digital and change management is articulated in basic education contexts (Bowen, 2009). Qualitative document analysis was selected because it enables the examination of how leadership preparation is constructed through standards, frameworks, guidance reports, and institutional discourses that shape expectations across systems, particularly when empirical access to preparation programs or participants is constrained. To ensure procedural transparency, the study developed an explicit document search and selection protocol, including defined inclusion and exclusion criteria, time boundaries, and source credibility requirements. The analytic corpus consisted of 10 documents purposively selected from an initial universe of 50 retrieved documents, drawn from reputable international organizations and professional standard-setting bodies (e.g., UNESCO and the Global Education Monitoring Report series, OECD-affiliated reports where applicable, European Commission competence frameworks, and leadership standards documents). Documents were limited

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to those published between 2015 and 2024, written in English, and explicitly addressing leadership preparation, digital transformation, school leadership competencies, or change management in basic education. Corpus adequacy was judged through thematic saturation, operationalized as the point at which additional documents repeated established constructs and did not introduce substantively new code families relevant to the research questions.

Document type	Organization/Source	Year(s)	No. of documents	Relevance to RQs (brief)
Global education monitoring/policy reports	UNESCO / GEM	2023–2024	10	Leadership expectations, governance, SDG framing
Leadership standards/competency frameworks	Professional standards bodies	2015–2023	10	Competency, roles, responsibilities
Digital competence/education transformation frameworks	European Commission / related bodies	2017–2022	10	Digital capacity, competence domains
Peer-reviewed conceptual studies (if included in corpus)	Journals	2020–2024	10	Preparation discourse, change management framing
Institutional guidance documents (if included)	Universities/institutes	2020–2024	10	Preparation pathways, CPD structures

The corpus table provides an audit trail of document types, sources, and time range, strengthening transparency and enabling readers to evaluate potential selection bias. While the findings are not intended to be statistically generalizable, the corpus reflects influential discourses that shape leadership preparation expectations across diverse education contexts.

Population and Scope

The data sources consisted of publicly accessible online documents produced by international organizations, policy bodies, and professional institutions involved in educational leadership and education reform. Emphasis was placed on materials issued by UNESCO, given its normative role in shaping global education policy and its leadership in advancing the Sustainable Development Goals. These included global reports, policy frameworks, and guidance documents addressing educational leadership, digital transformation, system governance, and sustainable development. documents were included if they met the following criteria: (1) produced by an organization with an explicit education mandate and recognized governance role (e.g., intergovernmental organizations, professional standard-setting bodies, or education system authorities); (2) widely disseminated and publicly accessible for policy uptake; (3) explicitly addressing educational leadership, leadership preparation, digital transformation, or organizational change; and (4) providing normative guidance intended to shape leadership expectations, standards, or system practice. These criteria ensured that the corpus reflected influential discourses shaping leadership preparation rather than informal commentary or non-authoritative sources.

Data Collection

Data were collected through a structured online document retrieval process designed to identify policy and institutional texts that articulate educational leaders' preparation for digital transformation and change management in basic education. Searches were conducted between August and December 2025 using targeted keyword combinations applied across organizational repositories and open web sources. The search strings included: "educational leadership preparation" AND digital transformation, "school leader" and change management, "digital leadership competencies" and

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framework, "leadership standards" and technology, and SDG 4 OR SDG 9 OR SDG 10 OR SDG 16 and leadership. Primary sources included official repositories and publications pages of international and professional bodies (e.g., UNESCO and the Global Education Monitoring Report site), alongside targeted searches via Google Scholar and general web searches to locate publicly accessible standards, frameworks, and guidance documents. Documents were downloaded and logged in a corpus spreadsheet capturing title, issuing organization, publication year, document type, and URL.

Screening followed a staged process. First, all retrieved records were checked for relevance based on titles and executive summaries. Second, full-text screening was conducted using the following inclusion criteria: English-language documents published between 2015 and 2024, publicly available online, and containing explicit discussion of leadership preparation, leadership competencies, digital transformation, and/or change management in basic education contexts. Exclusion criteria removed duplicates, inaccessible texts, documents focused exclusively on higher education or corporate leadership, and materials without substantive leadership preparation content. In total, 50 documents were identified, 10 remained after duplicate removal and initial relevance screening, and 10 documents met all inclusion criteria and were retained as the final analytic corpus. This stepwise retrieval and screening process strengthened transparency by documenting how the study moved from an initial universe of available texts to a focused corpus for qualitative content analysis.

Research Instruments

The primary research instrument was a structured qualitative document analysis template adapted from Bowen's document analysis approach and aligned with the study's research questions and theoretical lenses (Bowen, 2009). The template supported consistent extraction and coding of document content across the analytic corpus by capturing document metadata (title, issuing organization, year, document type, and intended audience), explicit definitions of leadership preparation, articulated competencies and roles, references to digital transformation and change management, and evidence of SDG alignment (SDGs 4, 9, 10, and 16). It also included fields for identifying gaps, silences, and under-specified preparation pathways, enabling systematic cross-document comparison.

To strengthen analytic consistency and manage the volume of text, the study used **ChatGPT (OpenAI)** and Gemini as an AI-assisted qualitative analysis aid. Importantly, ChatGPT was used as a support tool rather than a substitute for the researcher's interpretation. AI assistance was limited to three bounded functions: (1) helping identify and segment text passages relevant to each research question, (2) suggesting provisional code labels based on the existing coding framework, and (3) supporting cross-document retrieval of similarly coded excerpts to aid comparison. The researcher retained full responsibility for all analytic decisions, including excerpt inclusion, final code assignment, code definition refinement, theme development, and interpretation.

Data Analysis

The study followed a structured qualitative content analysis approach combining deductive and inductive coding to enable systematic cross-document comparison while remaining open to emergent patterns (Bowen, 2009). First, the researcher conducted iterative readings of each document to familiarize themselves with its purpose, audience, and dominant framing of leadership preparation. A set of initial deductive codes was then applied based on the study's theoretical lenses and analytic priorities, including transformational leadership indicators (e.g., visioning, motivation, culture-building), digital leadership indicators (e.g., instructional technology leadership, digital strategy), change management indicators (e.g., implementation planning, stakeholder engagement, resistance management), and SDG-related categories (SDGs 4, 9, 10, and 16). These deductive codes served as top-level categories that ensured analytic alignment with the research questions.

Results

This section presents findings from the qualitative document analysis of the analytic corpus (n = 10; 2015–2024). Results are organized by research question (RQ1–RQ4). In line with qualitative document analysis conventions, each finding is supported by brief illustrative excerpts or closely paraphrased statements from the analyzed texts, referenced using coded document labels (Doc 1–Doc

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10). The excerpts are used to demonstrate how leadership preparation is articulated in policy and institutional discourse.

RQ1: Conceptualization of Educational Leaders' Preparation for Digital and Change Management

Finding 1: Preparation is framed primarily as a normative expectation rather than as a sequenced developmental pathway.

Across the corpus, leadership preparation is often articulated through aspirational and prescriptive language about what leaders are expected to do in digitally transforming systems. For example, several documents emphasize that leaders must guide transformation, sustain improvement, and support teacher development, but do not specify the institutional mechanisms by which leaders are prepared for these responsibilities.

Illustrative Evidence

Doc 2 emphasizes that school leadership is central to improvement and reform agendas, foregrounding leadership responsibilities without detailing a structured preparation route. Doc 7 presents leadership as a professional expectation expressed through domains of practice rather than through explicit preparation stages. Doc 1 frames leadership as a lever for system transformation and capacity building, but preparation is described broadly as "capacity development" rather than as a defined pathway.

Finding 2: Preparation is commonly operationalized through competency lists and standards language, with limited attention to how competencies are developed and assessed.

Multiple documents define preparation by enumerating competencies (e.g., strategic direction, instructional leadership, ethical responsibility, organizational improvement) while remaining largely silent on progression, assessment, or credentialing. In other words, preparation is visible as an end-state description ("leaders should be able to…") rather than a developmental process ("leaders are prepared through…").

Illustrative Evidence

Doc 4 outlines professional expectations through standard-like descriptors but provides minimal detail on preparation mechanisms. Doc 9 lists domains and dimensions of leadership competence, yet offers limited specification of induction, mentoring, practicum, or assessment procedures. Doc 2 similarly emphasizes competencies and leadership roles, while the pathway to competence remains implicit.

RQ2: Competencies, Roles, and Responsibilities Emphasized in Preparation Frameworks

Finding 3: A core set of competencies recurs across documents, centered on vision-setting, instructional leadership, and organizational improvement in digitally mediated contexts.

Across the analytic corpus, leaders are expected to articulate a coherent digital vision, align technology with teaching and learning, build staff capacity, and sustain improvement efforts. These competencies are repeatedly positioned as necessary for navigating continuous change in basic education.

Illustrative Evidence

Doc 2 emphasizes leaders' responsibility to shape learning conditions and improvement, positioning leadership as central to system reform. Doc 7 frames leadership responsibilities around learning-focused leadership and professional practice expectations. Doc 9 similarly highlights domains linked to instructional leadership and organizational development.

Finding 4: Governance-oriented competencies (data stewardship, ethics, accountability) are less consistently specified and appear more strongly in selected policy-oriented texts than in standards-oriented frameworks.

While data-informed decision-making is frequently referenced, explicit articulation of data governance, privacy responsibilities, and AI-related leadership functions is uneven. Policy-oriented documents are more likely to gesture toward governance and institutional responsibility, whereas professional standards tend to emphasize role expectations and practice domains.

Illustrative Evidence

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Doc 1 includes governance-relevant framing connected to system stewardship and institutional capacity building. Doc 10 raises issues connected to digital competence and responsible technology use, but operational preparation requirements remain limited. Doc 4 and Doc 7 foreground professional practice expectations, with fewer explicit markers of AI governance or data compliance preparation.

RQ3: Alignment of Leadership Preparation Discourse with SDGs 4, 9, 10, and 16

Finding 5: SDG 4 (Quality Education) and SDG 9 (Industry, Innovation and Infrastructure) show the strongest alignment in leadership preparation discourse.

Themes associated with improving learning quality, supporting teachers, and strengthening learning systems (SDG 4) appear consistently across the corpus. Innovation and infrastructure-related narratives (SDG 9) are also present through references to modernization, digital transformation, and technology-enabled reform.

Illustrative Evidence

Doc 2 repeatedly frames leadership as central to learning improvement and system development (SDG 4). Doc 1 emphasizes system transformation and capacity building linked to innovation and institutional strengthening (SDG 9). Doc 7 and Doc 9 emphasized learning-centered leadership and improvement responsibilities that map onto SDG 4.

Finding 6: SDG 10 (Reduced Inequalities) and SDG 16 (Peace, Justice and Strong Institutions) are less consistently operationalized and are more often framed as principles rather than preparation requirements.

Equity and inclusion appear across several documents, but often as broad commitments rather than as explicit preparation content. Similarly, governance-related language (ethics, accountability, institutional integrity) is commonly expressed as a normative principle rather than a structured preparation component with accountability markers.

Illustrative Evidence

Doc 3 and Doc 8 reference inclusion-oriented commitments but rarely translate these into preparation pathway requirements. Doc 10 references are responsible for digital competence, but operational governance requirements (e.g., privacy compliance training) remain limited. Doc 1 contains governance-related framing, yet pathway mechanisms for building these competencies are underspecified.

Table 1 provides a simplified thematic SDG alignment matrix based on the document analysis.

SDG	Explicit naming in the corpus	Implicit conceptual alignment	Operational commitments	Accountability/monitoring
SDG 4	Occasional	Strong	Moderate	Limited
SDG 9	Occasional	Moderate–Strong	Limited–Moderate	Limited
SDG 10	Rare	Moderate	Limited	Rare
SDG 16	Rare	Weak–Moderate	Rare	Rare

RQ4: Gaps, Limitations, and Silences in Leadership Preparation Discourse

Finding 7: The most consistent gap across documents is the absence of explicit preparation pathways that specify progression, assessment, and credentialing.

Although documents strongly articulate what leaders should know and do, they rarely describe preparation as a sequenced pathway involving entry requirements, structured learning modules, supervised practice, mentoring, or assessment. This produces a recurrent "pathway silence" across the corpus.

Illustrative Evidence

Doc 2 and Doc 7 provide extensive descriptions of leadership responsibilities and practice expectations, but do not specify pathway components such as practicum, induction structures, or credentialing. Doc 4 and Doc 9 similarly enumerate competencies but provide limited detail on how leaders are prepared to develop them over time.

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Finding 8: Ethics, AI governance, and data stewardship are frequently present as rhetorical commitments but are rarely operationalized as preparation content.

Where ethics and responsibility are referenced, they often appear as broad principles rather than as concrete training requirements (e.g., procurement ethics, privacy impact assessment, algorithmic accountability). This indicates a gap between governance rhetoric and governance-ready preparation.

Illustrative Evidence

Doc 10 frames digital competence and responsible technology use, but operational governance mechanisms remain limited. Doc 1 signals governance-relevant concerns in system transformation language, yet preparation pathway requirements for these domains are under-articulated.

Finding 9: Equity is visible as aspiration, but equity-oriented digital leadership is seldom framed as an accountable preparation requirement.

Several documents acknowledge inclusion and access, but few specify how leaders should be prepared to diagnose inequities, monitor digital exclusion, or implement equity-oriented governance in technology adoption.

Illustrative Evidence

Doc 3 and Doc 8 reference inclusion and equity commitments but provide limited guidance on preparation design requirements for equity leadership.

Discussion

Findings from this qualitative document analysis show that leadership preparation for digital transformation and change management is largely constructed in international policy and institutional discourse as a set of normative expectations and competency statements rather than as a clearly specified developmental pathway. Importantly, this study evidences a discursive gap—what documents say about preparation—rather than an implementation gap about what systems do in practice. This distinction aligns the claims with the methodological limits of document analysis and responds directly to concerns about overreach.

Three cross-document tensions deepen the analysis. First, documents consistently position leaders as the primary agents of transformation while leaving the enabling role of systems, providers, and governance structures comparatively diffused. Through a transformational leadership lens, this emphasis on vision, motivation, and culture-building is prominent, yet the texts provide limited detail on how leaders develop such capacities through structured preparation, mentoring, and assessed professional learning.

Second, innovation and improvement narratives are prioritized over governance and accountability preparation. This helps explain why SDG 4 and SDG 9 show stronger alignment than SDG 16: learning improvement and innovation are easier to articulate in aspirational language, whereas governance requires operational commitments such as compliance training, procurement protocols, data stewardship responsibilities, and accountability mechanisms. The limited operationalization of these governance domains suggests that policy discourse may be keeping pace with technological change rhetorically, while preparation design requirements lag.

Third, equity is frequently framed as an aspirational commitment but seldom translated into accountable preparation requirements. This supports the finding of weaker SDG 10 alignment: equity language is present, but it is rarely connected to concrete preparation mechanisms such as equity-focused diagnostics, monitoring of digital exclusion, or leadership competencies tied to inclusive digital infrastructure decisions.

Above all, the findings indicate that international documents often function as normative templates that define leadership expectations without fully specifying preparation pathways. The study therefore contributes an actionable implication for policy and standards bodies: to move beyond competency lists and articulate minimum viable preparation pathways that include sequenced learning, practicum and mentoring structures, assessed competencies, and explicit preparation for digital governance, AI ethics, and equity-oriented leadership.

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Conclusion

This study examined how educational leaders' preparation for digital transformation and change management in basic education is conceptualized and articulated in publicly available international policy and institutional documents. Drawing on a qualitative document analysis of an analytic corpus (n = 10; 2015–2024), the findings indicate that leadership preparation is predominantly framed in normative and competency-based terms, emphasizing what leaders should know and be able to do, while offering limited specification of how such capacities are developed through structured and sequenced preparation pathways. Across the corpus, expectations for digital leadership are strongly articulated around vision-setting, instructional improvement, and organizational development, yet practical guidance on preparation mechanisms—such as induction, mentoring, practicum experiences, assessment, and credentialing—remains comparatively underarticulated.

The SDG lens further shows uneven alignment across documents. Themes associated with SDG 4 (Quality Education) and SDG 9 (Innovation and Infrastructure) are most visible through commitments to learning improvement and digital modernization, while SDG 10 (Reduced Inequalities) and SDG 16 (Strong Institutions) appear less explicitly and are more often framed as broad aspirations than as operational preparation requirements. Notably, governance-related capacities, particularly data stewardship, AI ethics, and accountability, are either absent or treated rhetorically in many texts, creating a mismatch between the growing complexity of digitally mediated schooling and the preparation discourse available to guide leaders' development.

Overall, the study concludes that the central gap identified in the corpus is discursive rather than implementation-based: international documents construct educational leaders as key agents of digital and organizational change, yet do not consistently articulate the preparation infrastructures needed to support capability development over time. Addressing this gap requires moving beyond competency lists toward minimum viable preparation pathways that integrate change management practice, data and AI governance, and equity-oriented leadership as assessable and supported elements of leadership development in basic education systems.

Knowledge Contribution

This study contributes to educational leadership scholarship by clarifying what is made visible—and what remains under-articulated—when leadership preparation for digital transformation is constructed primarily through policy and institutional texts. Rather than treating "preparation" as a general assumption, the analysis demonstrates that international frameworks frequently define preparation in normative and competency-based terms (i.e., what leaders should do), while providing limited specification of operational preparation pathways (i.e., how leaders are developed through sequenced learning, mentoring, practicum, assessment, and credentialing). This distinction advances a document-analytic contribution by separating discursive gaps (within texts) from implementation gaps (within systems), thereby aligning the study's claims with what the method can legitimately be evidenced.

A second contribution is the study's integration of the SDGs as an auditable interpretive lens for leadership preparation discourse. By applying an SDG alignment rubric (explicit naming, implicit conceptual alignment, operational commitments, and accountability references), the analysis shows that alignment is strongest where policy goals are politically and technically "easier" to frame—quality learning improvement (SDG 4) and digital innovation/infrastructure (SDG 9)—and weaker where alignment requires more explicit accountability and governance mechanisms (SDG 10 and SDG 16). This offers a theoretically grounded explanation for why SDG references in leadership preparation documents often function as legitimizing policy language rather than as pathway design requirements.

Finally, the study contributes a revised conceptual model that explains the recurring "expectations versus pathways" tension as a structural discursive pattern across the corpus. The model highlights three cross-document tensions: (1) leaders positioned as agents of transformation versus systems positioned ambiguously as preparation enablers; (2) innovation and improvement discourse versus underdeveloped governance and accountability preparation; and (3) equity framed as aspiration versus equity operationalized as measurable preparation requirements. These tensions provide a

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transferable analytic frame that future studies can use to examine policy discourse in other education sectors, national contexts, or emerging technology governance debates.

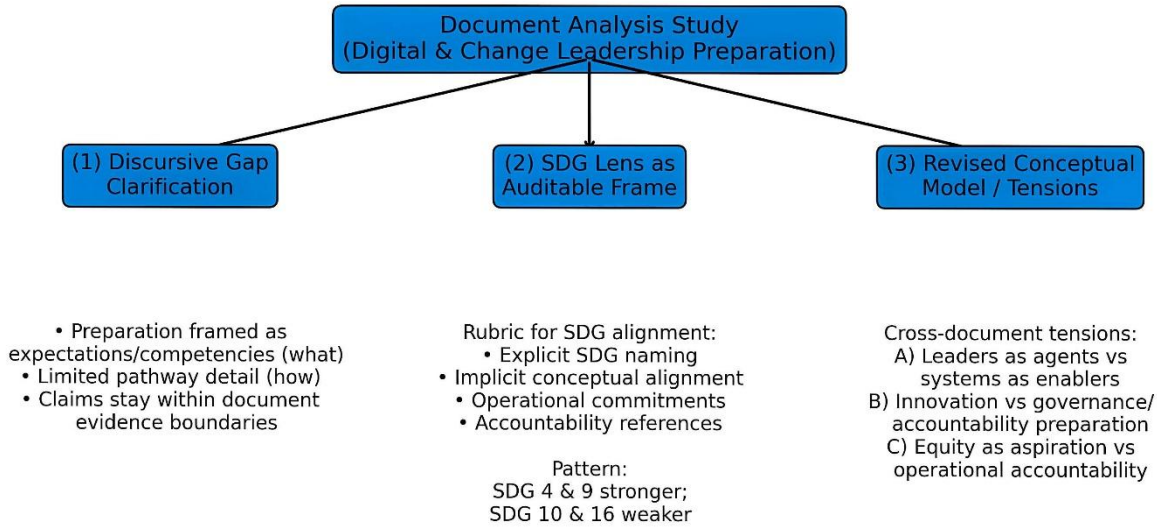

Figure 2 **Knowledge Contribution**

Figure 2 summarizes the study's knowledge contribution as a set of linked conceptual advances. First, the document analysis distinguishes discursive gaps—where policy and institutional texts emphasized leadership expectations without specifying developmental mechanisms—from implementation gaps that would require empirical evaluation of programs and practices. Second, the SDG alignment rubric makes the study's global-policy lens auditable by clarifying what counts as "alignment" in text (explicit naming, implicit conceptual alignment, operational commitments, and accountability references). Third, the revised conceptual model identifies three cross-document tensions that explain why leadership preparation remains aspirational: leaders are positioned as primary agents, while systems do not consistently articulate enabling preparation infrastructures; innovation is prioritized over governance preparation; and equity commitments are often rhetorical rather than operational. These contributions extend existing leadership preparation literature by offering a transferable analytic framework for examining how preparation is constructed, legitimized, and constrained within policy discourse.

Recommendation

Based on the findings of the study, here are the recommendations for each of the key stakeholders.

For Policymakers and Education System Leaders

Policymakers are encouraged to develop explicit and coherent leadership preparation frameworks that clearly articulate preparation pathways for digital and change management in basic education. Leadership standards and policies should integrate digital leadership, change management, equity, and ethical governance competencies aligned with SDGs 4, 9, 10, and 16. Clear accountability mechanisms and system-level support structures should be established to ensure that leadership preparation aligns with policy expectations and implementation realities.

For Leadership Preparation Providers (Universities and Professional Development Institutions)

Universities and professional development providers should redesign leadership preparation curricula to explicitly address digital transformation and organizational change. Programs should incorporate applied learning approaches, including case-based learning, simulations, and problem-based projects focused on digital leadership, equity, and ethical decision-making. Explicit preparation

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in change management theory, digital governance, data literacy, and AI ethics should be embedded across leadership development programs.

For School Leaders and Practitioners

School leaders are encouraged to engage in continuous professional learning focused on digital leadership, change management, and ethical governance. Leaders should seek collaborative learning networks and evidence-informed practices to strengthen their capacity to manage digital transformation equitably and effectively. Practitioners are also encouraged to advocate for institutional support that aligns leadership expectations with meaningful preparation and professional learning opportunities.

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