



Culturally Grounded Educational Leadership for Sustainable Development Goals (SDGs): A Conceptual Framework for Future Education Managers

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ABSTRACT

This study developed a culturally grounded conceptual framework for educational leadership to support Sustainable Development Goals (SDGs). It responds to the need to prepare future education managers who can integrate strategic leadership, inclusive governance, digital capability, professional self-efficacy, and local cultural awareness. Using a conceptual research design and qualitative document analysis, the study synthesizes Central Asian historical-cultural heritage with contemporary literature on educational leadership and sustainable management. The proposed framework positions heritage as a leadership resource for strengthening institutional identity, gender-inclusive governance, and innovation-oriented educational management. The study offers a curriculum-oriented model for preparing future education managers.

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1. INTRODUCTION

Sustainable educational development requires leadership models that align with global educational goals while remaining responsive to local cultural contexts. Sustainable Development Goals (SDGs), especially SDG 4, emphasize inclusive and equitable quality education and lifelong learning opportunities for all. Sustainable educational development requires policy alignment, pedagogical innovation, institutional readiness, and leadership capacity (Maryanti et al., 2022). In higher education and teacher education contexts, SDG 4 cannot be achieved through curriculum reform or administrative regulation alone. It also requires education managers who can lead institutional change, support teacher development, promote inclusive governance, and build learning environments that respond to social and cultural needs. Therefore, preparing future education managers requires pedagogical mechanisms that strengthen administrative competence, leadership capacity, and commitment to quality education in the SDGs era (Khimataliev et al., 2026a).

Educational leadership has become an important factor in improving school quality, teacher motivation, instructional effectiveness, and organizational performance. Leadership is related not only to formal authority but also to the ability to guide people, shape institutional culture, support professional development, and sustain innovation. Effective leadership and organizational culture can strengthen job satisfaction, performance appraisal, and sustainable institutional performance among academic staff (Adeoye et al., 2023). Recent research has also highlighted the relationship between transformational leadership, teacher self-efficacy, and innovative work behavior in competency-based higher education contexts (Mukhamedov et al., 2024). Transformational leadership can support teachers' motivation and instructional effectiveness when it is connected with professional development and teacher well-being (Presas, 2026). Community-based educational leadership further shows that improving teaching and learning quality requires leaders who understand school-community relationships and local educational conditions (Ximenes, 2026).

The development of future education managers requires more than technical administrative competence. Education managers need strategic leadership, ethical decision-making, digital capability, cultural awareness, innovation capacity, and professional self-efficacy. Leadership training programs should therefore be designed with clear, measurable, and relevant objectives. Thus, future managers can develop practical leadership competencies. Specific, Measurable, Achievable, Relevant, Time-bound (SMART)-based leadership technologies, referring to specific, measurable, achievable, relevant, and time-bound objectives, can support innovative leadership programs by making leadership development more structured, goal-oriented, and applicable to educational organizations (Glushchenko, 2023). A person-centered approach is also relevant because future managers must understand human needs, institutional relationships, and the personal dimensions of educational management (Ra'no, 2026).

Digital transformation has also changed the work of educational leaders. Modern education managers are expected to manage information systems, digital communication, institutional data, and technology-supported decision-making. Educational technology, artificial intelligence, virtual reality, learning management systems, machine learning, and gamification create new opportunities and challenges for educational institutions (Nandiyanto and Sidik, 2026). In modern academic ecosystems, cluster-based education models can strengthen the ICT competence of future educators, while advanced pedagogical training may support the development of practical competence in specific learning domains

(Khimataliev *et al.*, 2026b; Mukhamedov *et al.*, 2025). However, digital tools alone cannot guarantee sustainable educational improvement. Digital governance must be connected with leadership values, institutional trust, equity, and inclusive access. AI-guided management tools can support institutional management when school leaders apply appropriate leadership styles and practices (Amado and Digo, 2026). Therefore, digital capability should be understood as part of educational leadership competence, not only as a technical skill.

Educational leadership models should not depend entirely on imported or Western-centered management frameworks. In culturally rich societies, leadership models may become more meaningful when they are connected with local heritage, historical memory, ethical traditions, and community values. Central Asia provides an important context for this discussion because its historical-cultural heritage contains narratives about knowledge acquisition, social responsibility, institutional authority, women's agency, and community-based governance. Studies on women's roles in Uzbek cultural processes, Zoroastrian family values, and women's social status in the Avesta show that local heritage can provide important foundations for discussing gender-inclusive participation and social responsibility (Djuraeva and Toliboeva, 2020; Karimova, 2022; Khayrullayeva, 2024). This regional context also includes humanitarian and ethical principles associated with Islamic civilization, including historical discussions of women's access to property, education, and socio-economic participation. These values are also reflected in the traditional applied arts of the Uzbek people, notably in carpet weaving, where complex ornaments such as *oy-gilam* (moon-carpet) and *namazlik* (prayer rug) may be interpreted as cultural symbols of family unity, spiritual purity, and women's creative potential within society. These values can be reinterpreted as educational leadership resources for preparing future education managers. When future education managers understand local historical values, they may develop stronger professional self-efficacy and greater confidence in promoting inclusive institutional change.

The main problem addressed in this study is the limited integration between historical-cultural heritage and contemporary educational leadership development. Historical studies often discuss cultural heritage, women's status, and intellectual traditions as historical topics, while educational management studies usually focus on leadership competencies, digital governance, and organizational performance. At the same time, gender remains an important issue in family, education, social change, classroom participation, and academic performance (Boriongan and Abdulmalic, 2023; Demalata *et al.*, 2024). As a result, future education managers may be trained through technical leadership models that have limited connection to local cultural values and historical sources of inclusive governance. This gap has been historically exacerbated by periods where dogmatic misinterpretations and superstitious household views overrode authentic religious and cultural values, entrapping regional women in regressive patriarchal customs (such as forced early marriage and domestic isolation), which severely hindered the development of their political and legal consciousness. This separation creates a gap in educational leadership curriculum because local heritage, including the profound socio-economic autonomy and ethical codes represented in applied arts and authentic religious teachings, is not fully used as a resource for strengthening leadership identity, gender-inclusive management, and SDG 4-oriented institutional transformation. Therefore, a culturally grounded leadership framework is needed to connect local historical values with contemporary educational management competencies.

This study aims to develop a conceptual framework for culturally grounded educational leadership to support SDG 4. Specifically, it examines how historical-cultural heritage can be

connected with strategic leadership, digital governance, professional self-efficacy, innovation capacity, sustainability orientation, and inclusive educational management. The originality of this study lies in positioning cultural heritage not as a decorative historical background but as a leadership resource for preparing future education managers. The proposed framework is expected to support educational management curriculum, leadership training, and institutional policy by helping future education managers become culturally grounded, innovation-oriented, gender-inclusive, digitally capable, and committed to sustainable quality education.

2. METHOD

This study employed a conceptual research design to construct an integrated framework for culturally grounded educational leadership rather than to test statistical relationships among variables. The study synthesized two bodies of literature: historical-cultural sources on Central Asian heritage, women's agency, knowledge acquisition, ethical values, social protection, and institutional governance; and contemporary studies on educational leadership, professional self-efficacy, digital governance, innovation, sustainable management, and future education managers. These sources were used to connect local historical values with modern educational management needs in the SDG 4 era.

The study applied qualitative document analysis. Historical-cultural materials were examined to identify recurring themes related to knowledge, equity, responsibility, gender-inclusive participation, and community governance. Contemporary educational leadership literature was analyzed to identify competencies relevant to SDG 4, including strategic leadership, digital capability, innovation capacity, inclusive governance, professional self-efficacy, and sustainability orientation.

The interpretation was guided by three approaches. Contextual reinterpretation was used to understand historical values within their socio-cultural settings and adapt them meaningfully to modern educational leadership. Feminist hermeneutics was used to reinterpret narratives of women's agency, knowledge access, and institutional participation. A purposive approach was applied to focus on the broader aims of historical-cultural traditions, such as justice, knowledge, responsibility, protection, and social welfare.

Sources were selected through conceptual screening based on their relevance to educational leadership, cultural heritage, gender-inclusive governance, digital transformation, professional self-efficacy, and SDG 4. Purely descriptive materials or sources unrelated to educational management and leadership development were excluded. The analysis proceeded in four stages: identifying historical-cultural values, mapping contemporary leadership competencies, comparing both bodies of literature to identify conceptual intersections, and organizing these intersections into an integrated framework. Trustworthiness was strengthened through thematic consistency and source triangulation across historical, leadership, and SDG 4-oriented literature. The resulting framework is therefore theoretically grounded but still requires future empirical testing in educational management programs and higher education institutions.

3. RESULTS AND DISCUSSION

3.1. Heritage-based Leadership Values in Educational Management

Historical-cultural heritage provides important values for educational leadership because it contains local narratives about responsibility, ethical governance, knowledge transmission,

and social organization. In the Central Asian context, historical sources such as Zoroastrian and Islamic traditions show that leadership was not only understood as authority but also as responsibility for social order, protection, knowledge, and community welfare. These values are relevant to modern educational management because education managers are expected to guide institutions ethically, organize resources fairly, and create inclusive learning environments. In the Zoroastrian tradition, the division of social and educational responsibility within the family and community reflected an early form of role-based governance. Studies on marriage, family values, and women's social status in Zoroastrianism and the Avesta show that historical-cultural traditions contained structured ideas about responsibility, social order, and gender participation (Karimova, 2022; Khayrullayeva, 2024). The concepts of *dmanopati* and *dmanopatni* can therefore be interpreted as local foundations for shared leadership and distributed responsibility. In modern educational institutions, similar principles can support collaborative governance, where leadership is not centralized only in one authority but distributed among school leaders, teachers, staff, students, and community stakeholders. For future education managers, heritage-based leadership values can strengthen leadership identity. When leadership training is disconnected from local history, future managers may see educational leadership as merely an imported administrative model. However, when local historical values are included, leadership becomes culturally meaningful and socially accepted. This supports the development of managers who are not only technically competent but also ethically grounded, culturally aware, and capable of leading change in local educational contexts.

3.2. Gender-inclusive Knowledge Access and Educational Leadership

The comparison between historical governance paradigms and modern educational management dimensions is presented in **Table 1**. Historical-cultural heritage can support gender-inclusive educational leadership. Several historical traditions in Central Asia included narratives of women's participation in knowledge, family governance, social organization, and cultural production. Studies on women's roles in the cultural processes of Uzbekistan show that women have contributed to social and cultural development across different historical periods (Djuraeva and Toliboeva, 2020). These narratives are important because they challenge the assumption that gender-inclusive leadership is only a modern or external concept. Instead, gender inclusion can be framed as part of local historical and cultural memory.

Table 1. Model comparisons and educational management dimensions.

GOVERNANCE PARADIGM	CORE STRUCTURAL MECHANISMS	MODERN EDUCATIONAL MANAGEMENT ALIGNMENT
Zoroastrian framework	Dual responsibility, family-based governance, competency testing, and social protection.	Distributed leadership, competency-based development, and ethical institutional management.
Classical Islamic paradigm	Universal knowledge access, legal and financial responsibility, and intellectual participation.	Inclusive governance, open-access learning, and equitable resource allocation.
Jadid reform movement	Modernized schooling, public enlightenment, and community-based reform.	Social innovation, curriculum renewal, and community-engaged educational leadership.

In classical Islamic educational philosophy, the pursuit of knowledge is understood as a universal responsibility, making it relevant to SDG 4's emphasis on equal access to quality education and lifelong learning. For future education managers, this principle can support inclusive governance by strengthening policies that promote equal opportunities, fair participation, and access to leadership development, professional learning, digital resources, and institutional support for women and marginalized groups. Since gender continues to influence family life, classroom participation, academic achievement, and social change, education managers need stronger gender-sensitive leadership capacity (Boriongan and Abdulmalic, 2023; Demalata et al., 2024).

3.3. Contextual Professional Self-efficacy for Future Education Managers

The competency framework for preparing future education managers is summarized in **Table 2**. Professional self-efficacy is an important dimension in preparing future education managers. It refers to the confidence of managers in their ability to plan, lead, solve problems, and implement institutional change. In educational organizations, leaders with strong professional self-efficacy are more likely to support innovation, respond to challenges, and guide teachers and staff toward shared goals. Leadership and organizational culture are also important because they influence sustainable performance appraisal, job satisfaction, and institutional effectiveness among academic staff (Adeoye et al., 2023).

Table 2. Competency framework for future education managers.

COMPETENCY DIMENSION	SPECIFIC KEY INDICATORS	OPERATIONAL TARGET
Value orientation	Ability to align institutional policies with SDG 4 and localized cultural assets.	Ethical leadership and socially accountable decision-making.
Digital capability	Ability to manage digital platforms and institutional information systems.	Transparent communication and reduced administrative barriers.
Contextual self-efficacy	Confidence to challenge stereotypes using authentic historical-cultural narratives.	Stronger resilience and capacity to lead institutional change.
Ecosystem innovation	Ability to design collaborative and creative educational workspaces.	Higher institutional capacity for pedagogical improvement.
Inclusive governance	Ability to ensure equitable participation, protection, and resource allocation.	Inclusive institutional culture and equal opportunities for all participants.

Professional self-efficacy can be strengthened through cultural grounding. Future education managers may develop stronger confidence when they understand that leadership, knowledge, inclusion, and institutional responsibility are not foreign concepts but part of their own historical-cultural heritage. This cultural grounding can help managers face resistance, challenge stereotypes, and explain educational reform using locally meaningful narratives.

Person-centered leadership development is also relevant to this finding. Future education managers need leadership training that recognizes human needs, institutional relationships, personal growth, and professional confidence. A person-centered approach can help managers develop leadership skills that are not limited to technical management but also include empathy, communication, ethical responsibility, and adaptive decision-making (Ra'no, 2026). This is important because educational leadership development should prepare managers to lead people, not only to administer institutional procedures.

3.4. Innovation-oriented Educational Management and Digital Governance

Future education managers must be prepared to lead innovation in educational institutions. Innovation in educational management includes curriculum development, digital governance, instructional improvement, collaborative decision-making, and the use of technology to support learning quality. However, innovation should not be understood only as technological modernization. It should also include cultural adaptation, institutional creativity, and the ability to design educational practices that are relevant to local contexts.

Historical-cultural heritage can inspire innovation because cultural traditions often contain examples of creativity, knowledge transmission, and community-based production. For example, traditional textile and carpet-weaving practices in Central Asia can be interpreted as cultural innovation ecosystems because they involved design, symbolic communication, technical skill, intergenerational learning, and community identity. The study of qiz-gilam shows that carpet weaving among semi-nomadic Uzbek communities functioned not only as craft production but also as a medium of cultural expression, identity formation, and knowledge transmission (Nodir, 2023). In educational management, these principles can inspire collaborative learning spaces where teachers, students, and managers produce knowledge together. The relationship between historical cultural production and educational innovation is illustrated in **Figure 1**.



Figure 1. Historical innovation ecosystems.

Digital governance is another important component of innovation-oriented educational management. Modern education managers are expected to use digital platforms for communication, resource sharing, decision-making, and institutional transparency. Digital transformation in education also requires attention to access, learning quality, and institutional readiness, especially when digital systems are used in special needs education and religious or value-based learning contexts (Al Husaeni and Wahyudin, 2023; Al Husaeni and Rahmat, 2023). However, digital governance must be guided by inclusive leadership values. AI-guided management tools and digital systems can support institutional

management when school leaders apply appropriate leadership styles and practices (Amado and Digo, 2026). Therefore, digital capability should be developed together with ethical leadership, inclusive access, and cultural awareness.

SMART-based leadership technologies can also help future managers design more structured and measurable leadership programs. Leadership development should be specific, measurable, achievable, relevant, and time-bound. Thus, training outcomes can be evaluated and improved. Such approaches can support innovative leadership programs and make professional development more applicable to educational organizations (Glushchenko, 2023). This is relevant for educational management curriculum because leadership competencies should be translated into observable learning outcomes, practical tasks, and institutional improvement projects.

3.5. Integrated Culturally Grounded Educational Leadership Model

The proposed relationship among the model dimensions is shown in **Figure 2**. The model positions historical-cultural heritage as the foundation for leadership values, institutional identity, and inclusive governance. These foundations support strategic leadership, digital governance, innovation capacity, professional self-efficacy, and sustainability orientation, with the ultimate goal of promoting inclusive and quality education in line with SDG 4. The model also responds to recent discussions on technological innovation, sustainable materials, and scientific contributions, which emphasize that sustainability-oriented education requires interdisciplinary thinking, innovation capacity, and institutional readiness (Ragadhita et al., 2026; Solehuddin et al., 2025; Nandiyanto & Sidik, 2026).



Figure 2. Integrated culturally grounded educational leadership model for future education managers.

Culturally grounded educational leadership operates through a layered process. Historical-cultural literacy first provides future managers with local narratives of knowledge, responsibility, equity, and leadership. These narratives strengthen professional self-efficacy by helping managers understand that inclusive and ethical leadership has local historical roots. Stronger self-efficacy then supports strategic leadership and innovation, while digital governance provides tools for transparency, communication, and access. Together, these dimensions contribute to SDG 4-oriented educational outcomes.

This model contributes to educational leadership theory by connecting historical-cultural heritage with modern educational management. It also offers a curriculum-oriented framework for leadership preparation by positioning future education managers not as passive administrators, but as culturally grounded, digitally capable, inclusive, and innovation-oriented leaders.

3.6. Implications for Educational Management Curriculum

The curriculum implications of the proposed framework are summarized in **Table 3**. The findings have important implications for the educational management curriculum:

- (i) Leadership curriculum should include historical-cultural literacy as a component of professional preparation. This does not mean turning educational management into a history course. Instead, cultural heritage should be used to help future managers understand local leadership values, gender-inclusive participation, ethical governance, and community-based responsibility.
- (ii) Educational management programs should integrate leadership theory with practical competency development. Future education managers need structured training in strategic planning, digital governance, inclusive policy-making, communication, conflict resolution, and institutional innovation. Leadership development should be designed with clear objectives and measurable outcomes. Thus, students can develop practical leadership skills (Glushchenko, 2023). In addition, leadership training should connect managerial competence with teacher motivation, instructional effectiveness, and school-based improvement because educational leadership ultimately affects teaching and learning quality (Presas, 2026; Ximenes, 2026).
- (iii) Curriculum should include professional self-efficacy development. Future managers should be trained to reflect on their leadership identity, analyze institutional problems, and design solutions based on both global standards and local realities. This is important because leadership effectiveness depends not only on knowledge but also on confidence, motivation, and the ability to act in complex institutional settings.
- (iv) Digital governance should be included as a core component of educational leadership preparation. Future education managers must understand how digital tools and AI-supported systems can be used responsibly to support institutional management, communication, resource allocation, and learning quality. However, technology use should always be connected with equity, inclusion, and ethical decision-making (Amado and Digo, 2026).
- (v) The curriculum should promote community-based and inclusive leadership. Educational institutions are part of wider communities, and education managers must understand how schools and universities interact with families, cultural groups, local institutions, and social values. Community-based educational leadership can improve teaching and learning quality when leaders understand local contexts and involve

stakeholders in educational improvement (Ximenes, 2026). This is also consistent with gender and community studies showing that social norms, gender sensitivity, and participation patterns influence how educational and community programs are received by different groups.

Table 3. Curriculum implications for preparing future education managers.

CURRICULUM COMPONENT	LEARNING FOCUS	EXPECTED OUTCOME
Historical-cultural literacy	Local heritage, leadership values, and inclusive knowledge traditions.	Managers develop culturally grounded leadership identity.
Strategic leadership	Planning, decision-making, and institutional change.	Managers can guide educational improvement effectively.
Digital governance	Digital tools, data use, communication, and AI-supported management.	Managers can use technology responsibly and inclusively.
Professional self-efficacy	Reflection, leadership confidence, and problem-solving.	Managers become more confident in leading change.
Inclusive governance	Gender equity, participation, access, and social justice.	Institutions become more inclusive and responsive.
Innovation management	Creative program design and continuous improvement.	Managers can develop innovation-oriented educational institutions.
Community-based leadership	Stakeholder engagement and local educational needs.	Schools and universities become more connected with communities.

Culturally grounded educational leadership can support SDG 4 by integrating local heritage, inclusive governance, digital capability, professional self-efficacy, and innovation-oriented management. This approach allows future education managers to become leaders who are not only administratively competent but also culturally aware, gender-sensitive, digitally capable, socially responsible, and prepared to build sustainable educational institutions.

4. CONCLUSION

This study developed a culturally grounded conceptual framework for educational leadership to support SDG 4. Historical-cultural heritage can function as a leadership resource for preparing future education managers, particularly in strengthening ethical leadership, inclusive governance, professional self-efficacy, digital capability, and innovation-oriented educational management. By connecting Central Asian historical-cultural values with contemporary educational leadership literature, the proposed framework positions future education managers as culturally grounded and socially responsible leaders. The study contributes to educational management by offering a curriculum-oriented model that integrates local heritage, gender-inclusive leadership, digital governance, and sustainable quality education. Future research should empirically test this model in educational management programs and higher education institutions.

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6. AUTHORS' NOTE

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