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DEVELOPING INCLUSIVE DIGITAL MANAGEMENT COMPETENCE OF SCHOOL LEADERS

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Abstract: The digital transformation of education has fundamentally changed the requirements for effective school leadership. Modern school administrators are expected to combine traditional management knowledge with advanced digital competencies and inclusive educational principles. The development of inclusive digital management competence is particularly important because schools must provide equal educational opportunities for students with different abilities and learning needs. This competence involves the effective use of digital platforms, educational information systems, assistive technologies, and electronic communication tools. It also includes the ability to organize accessible digital environments and coordinate the activities of teachers, specialists, parents, and other educational stakeholders. This article examines the theoretical foundations and practical mechanisms for developing inclusive digital management competence among school leaders. Particular attention is paid to the experience of the Commonwealth of Independent States, including scientific research conducted in Russia, Kazakhstan, and Uzbekistan. The study applies theoretical analysis, comparative analysis, and conceptual modelling. It identifies five interconnected components of inclusive digital management competence: technological, managerial, pedagogical, communicative, and ethical. The article proposes practical directions for improving school administrators' professional development through digital leadership training, educational data analysis, and inclusive technology management. The findings emphasize that digital transformation should serve educational accessibility and student participation rather than technological innovation alone.

Key Words: inclusive education, digital management competence, school leadership, digital transformation, educational management, digital accessibility, professional development, assistive technologies.

INTRODUCTION

The rapid development of information and communication technologies has significantly influenced the organization and management of modern educational institutions. Digital transformation is no longer limited to introducing computers or electronic learning platforms into schools. It increasingly requires changes in institutional management, professional responsibilities, communication systems, and educational planning. In this context, school leaders play a central role in determining how digital technologies are selected, implemented, and evaluated. Their professional effectiveness depends on the ability to connect technological opportunities with educational objectives.

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These responsibilities become particularly important in inclusive education, where institutional decisions must consider the individual characteristics and learning requirements of all students. Inclusive schools require accessible infrastructure, adapted educational materials, qualified specialists, and effective communication between participants in the educational process. Digital technologies can support these objectives by improving information exchange, organizing individual educational support, and monitoring student progress. However, the effectiveness of these opportunities depends considerably on the digital management competence of school administrators. The development of digital competence among educational leaders has become an important subject of scientific research in the Commonwealth of Independent States. Deryabin, Boytsov, Popov, Rabinovich, and Zavedensky (2021) examined Russian school principals' perceptions of the digital competencies required by participants in the educational process [1]. Their research demonstrates the importance of understanding digital competence as a comprehensive professional requirement rather than a purely technical skill. Research by Saudabayeva and colleagues (2025) also highlights the relationship between digital, intercultural, and strategic competencies in educational management in Kazakhstan [2]. These studies provide a useful theoretical foundation for examining the professional development of school leaders in digitally transforming educational systems. In Uzbekistan, the modernization of education and the development of inclusive learning opportunities have increased the need for innovative management approaches. National educational reforms emphasize accessibility, equal opportunities, and the improvement of institutional conditions for children with special educational needs. Therefore, school administrators need competencies that allow them to manage both digital transformation and inclusive educational processes. The purpose of this study is to examine the structure, significance, and development mechanisms of inclusive digital management competence among school leaders.

MATERIALS AND METHODS

The study is based on theoretical research methods, including scientific literature analysis, comparative analysis, systematization, and conceptual modelling. Scientific publications from Uzbekistan, Russia, and Kazakhstan were examined to identify contemporary approaches to digital educational management. Particular attention was given to research concerning digital competencies of school principals and the organization of inclusive digital environments. The study by Deryabin et al. (2021) was used to examine the digital competencies expected from educational administrators and other participants in the educational process [1]. The research of Saudabayeva et al. (2025) provided additional perspectives on digital and intercultural competence in educational leadership [2]. Bun, Kuznetsova, and Zayec (2025) contributed to the analysis of digitalization in inclusive education management [3]. Research by Shemanov and colleagues (2024) was considered in relation to information accessibility in the Russian school environment [4]. National regulatory documents of Uzbekistan were also examined to establish the institutional context of inclusive education development. The comparative method was applied to identify common characteristics and differences in approaches to digital educational management. The systems approach made it possible to consider technological, pedagogical, organizational, and ethical competencies as interconnected elements. The research also examined the relationship between school leadership, digital infrastructure, teacher readiness, and student participation. On this basis, five principal components of inclusive digital

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management competence were identified. These components were subsequently organized into a conceptual framework for professional development. The proposed framework considers the practical responsibilities of school administrators in digitally transforming inclusive educational institutions. The study is theoretical and conceptual in nature and does not claim experimentally verified results from an independent survey or intervention.

RESULTS

The analysis demonstrates that inclusive digital management competence consists of several interconnected professional dimensions. The first dimension is technological competence, which involves the ability to use digital platforms, electronic documentation systems, communication applications, and educational information resources. School leaders should understand the functional possibilities of these technologies and determine whether they are appropriate for institutional objectives. The second dimension is managerial competence, which includes digital planning, coordination of educational activities, monitoring, and evidence-based decision-making. Through these skills, administrators can organize institutional processes more systematically and evaluate the effectiveness of digital initiatives. The third dimension is pedagogical competence, which involves understanding how digital technologies can support differentiated instruction and individual learning pathways. This is particularly important when students require adapted materials, alternative communication methods, or assistive technologies. The fourth dimension is communicative competence, which enables school leaders to establish effective digital cooperation with teachers, parents, specialists, and students. Electronic communication platforms can improve information exchange and strengthen coordination between participants in inclusive education. The fifth dimension is ethical competence, which concerns personal data protection, information security, digital responsibility, and equal access to technological resources. These dimensions should not be developed separately because effective inclusive digital management requires their coordinated application. The analysis also suggests that school administrators need practical experience in evaluating the accessibility of educational platforms and electronic materials. They should be able to identify technological barriers that may prevent certain students from participating fully in educational activities. Digital monitoring systems can provide information about attendance, learning progress, accessibility, and the implementation of individual support plans. Such information can help administrators determine institutional priorities and improve the distribution of resources. Consequently, inclusive digital management competence should be considered a combination of technological knowledge, professional judgment, organizational ability, and social responsibility.

DISCUSSION

The development of inclusive digital management competence requires a change in the traditional understanding of school leadership. In conventional administrative approaches, school leaders often concentrate on organizational documentation, personnel management, and the implementation of educational regulations. Digital transformation expands these responsibilities by requiring the effective coordination of technological systems and information resources. In inclusive educational institutions, this transformation must be directed towards improving accessibility and participation.

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Bun, Kuznetsova, and Zayec (2025) examine the role of digitalization in managing inclusive education and emphasize the importance of organizational and policy mechanisms [3]. Their research supports the idea that technological development must be accompanied by appropriate management decisions. Similarly, Shemanov and colleagues (2024) highlight the importance of information accessibility in the inclusive school environment [4]. This indicates that school leaders should evaluate not only the availability of digital resources but also their usability for different groups of learners.

An important issue is the professional readiness of school administrators. Some leaders may possess basic computer skills but lack experience in strategic digital planning, educational data interpretation, and accessibility assessment. Therefore, professional development programmes should move beyond introductory computer training. They should include practical activities involving digital institutional planning, educational monitoring, online communication, and the selection of assistive technologies. Another important direction is the development of collaborative leadership. Inclusive digital management cannot be implemented successfully through the activities of the school principal alone. It requires cooperation with teachers, psychologists, special educators, information technology specialists, parents, and relevant educational authorities. Digital platforms can facilitate this cooperation by improving the exchange of information and coordination of support activities. Nevertheless, technological solutions must be selected according to educational requirements rather than their popularity or technical complexity. Personal information about students must be protected, and access to sensitive educational records should be restricted to authorized personnel. Thus, the effectiveness of inclusive digital leadership depends on balancing innovation, accessibility, professional competence, and ethical responsibility.

CONCLUSION

The development of inclusive digital management competence is an essential requirement for modern school leadership. Digital transformation has expanded the professional responsibilities of school administrators and increased the importance of technological and analytical skills. Inclusive educational environments require leaders who can combine digital innovation with accessibility, equal opportunities, and individual student support. The analysis identifies technological, managerial, pedagogical, communicative, and ethical dimensions as the main components of this competence. These dimensions provide a theoretical foundation for organizing professional development programmes for school leaders. Research from Russia and Kazakhstan demonstrates the growing scientific interest in digital competencies and educational leadership. The experience of these countries can provide useful perspectives for improving inclusive educational management in Uzbekistan. However, the implementation of digital technologies should always be guided by educational needs and institutional priorities. School administrators should develop the ability to evaluate digital platforms, manage educational information, and coordinate professional cooperation. Particular attention should be given to the accessibility and security of digital resources. Continuous professional development can strengthen school leaders' readiness to manage digital and inclusive educational processes. The proposed recommendations provide directions for improving administrative practice and institutional development. Further empirical research could examine the effectiveness of specific training programmes for school leaders in Uzbekistan. Ultimately, inclusive

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digital management competence should serve as a professional foundation for building accessible, innovative, and student-centered schools.

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