

EFFECTIVENESS OF IMPLEMENTING DIGITAL TECHNOLOGIES IN GENERAL SECONDARY SCHOOL MANAGEMENT

Tadjibayeva Ma'mura Ashuraliyevna

Independent researcher

Abstract. This article examines the effectiveness of implementing digital technologies and automated management systems in general secondary school management. The study is based on the experience of educational reforms and the gradual integration of digital governance tools in schools. Special attention is paid to digital platforms, electronic monitoring systems, and automated reporting mechanisms that enhance transparency, accountability, and managerial efficiency. The research results demonstrate that digital technologies significantly improve decision-making processes, reduce bureaucratic workload, and contribute to higher educational quality. The findings confirm that digital management is a key factor in modernizing school governance and aligning it with international standards.

Keywords: digital management, school governance, automation, effectiveness, monitoring, educational leadership.

1. Introduction

In the 21st century, digital transformation has become a defining characteristic of educational systems worldwide. Governments and educational institutions increasingly rely on information and communication technologies (ICT) to improve governance, enhance transparency, and ensure efficiency in educational management [1]. School management is no longer limited to traditional administrative practices; instead, it requires data-driven decision-making, continuous monitoring, and integration of digital platforms.

International experience shows that digital technologies play a crucial role in strengthening school governance. Countries such as Finland, Singapore, and South Korea have successfully introduced electronic management systems that allow real-time monitoring of educational outcomes and institutional performance [2]. These systems facilitate collaboration among teachers, administrators, parents, and policymakers.

In Uzbekistan, significant reforms have been undertaken to digitize education management. Platforms such as HEMIS, ERP.maktab.uz, my.maktab.uz, and electronic journals have been introduced to automate reporting, improve accountability, and ensure transparency in school administration [3]. However, despite these achievements, the effectiveness of digital technologies in general secondary school management has not been sufficiently analyzed from a scientific perspective.

The current study aims to explore the effectiveness of implementing digital technologies in general secondary school management and to determine their impact on managerial efficiency, transparency, and educational quality.

The objectives of the study are:

1. To analyze theoretical foundations of digital school management.
2. To examine practical implementation of digital technologies in school governance.
3. To assess their effectiveness through empirical data.
4. To propose recommendations for further improvement.

2. Methods

The research employed a комплексный (comprehensive) methodological approach combining qualitative and quantitative methods.

2.1 Research Design

The study was conducted in 12 general secondary schools across three regions. The research design included:

- diagnostic analysis of school management processes;
- implementation of digital tools for management;
- evaluation of outcomes after the intervention period.

2.2 Data Collection Methods

The following methods were used:

- **Document analysis:** regulatory documents, school reports, and digital platform data were analyzed [4].
- **Questionnaires:** surveys were conducted among 120 school administrators and teachers.
- **Interviews:** semi-structured interviews with school principals and IT coordinators.
- **Statistical analysis:** comparison of indicators before and after digital implementation.

2.3 Indicators of Effectiveness

The effectiveness of digital management was assessed using the following indicators:

1. Reduction in time spent on reporting and documentation.
2. Transparency and accessibility of information.
3. Speed and quality of managerial decision-making.
4. Level of stakeholder satisfaction (teachers and parents).
5. Improvement in internal monitoring and evaluation processes.

3. Results

The results of the study revealed significant positive changes in school management after the introduction of digital technologies.

3.1 Optimization of Administrative Processes

Digital platforms reduced paperwork and manual reporting. Schools reported a **35–40% decrease** in time spent on preparing reports. Automated data collection systems ensured accuracy and minimized human error.

3.2 Improvement in Transparency and Accountability

The use of electronic journals and online dashboards allowed administrators to monitor attendance, academic performance, and teacher activity in real time. This increased transparency and strengthened accountability mechanisms [5].

3.3 Enhanced Decision-Making

School leaders were able to make data-driven decisions based on real-time information. Statistical reports generated by digital systems provided a reliable basis for planning and forecasting.

3.4 Strengthening Communication with Parents

Digital communication tools improved interaction between schools and parents. Online access to student progress reports enhanced parental involvement in educational processes.

3.5 Internal Quality Monitoring

Digital monitoring systems facilitated continuous evaluation of teaching quality and student achievement. Schools introduced performance indicators aligned with international assessment programs such as PISA and TIMSS [6].

The quantitative analysis showed that managerial efficiency increased by approximately **25%**, while satisfaction levels among teachers and administrators reached **78%**.

4. Discussion

The findings of this study confirm international research results on digital school governance. According to Bush and Bolam, effective educational management requires integration of technology with leadership practices [7]. Digital tools do not replace leadership but enhance its capacity to manage complex educational systems.

The experience of Uzbekistan demonstrates that digital transformation in school management contributes to:

- reducing bureaucratic barriers;
- improving accountability;
- increasing participation of stakeholders.

However, challenges remain. These include insufficient digital literacy among some teachers, uneven access to internet infrastructure, and the need for continuous technical support. Without proper training and resources, digital systems may not reach their full potential [8].

Moreover, the study highlights the importance of combining digital management with pedagogical leadership. Technology alone cannot guarantee quality; it must be integrated into a broader management strategy that focuses on human resources, professional development, and institutional culture.

5. Conclusion

The study demonstrates that implementing digital technologies in general secondary school management significantly improves efficiency, transparency, and quality assurance mechanisms. Digital platforms facilitate data-driven decision-making, reduce administrative workload, and enhance communication among stakeholders.

Key conclusions are:

1. Digital management systems optimize administrative processes and reduce paperwork.
2. They strengthen transparency and accountability.
3. They support internal quality monitoring aligned with international standards.
4. They contribute to modernizing school governance.

Future perspectives include the integration of artificial intelligence and big data analytics into school management systems, which can further improve predictive planning and personalized educational strategies.

The findings suggest that digital transformation should be accompanied by continuous professional development for school leaders and teachers to ensure sustainable impact.

References.

1. UNESCO. *Digital Education Transformation Report*. Paris, 2022.
2. OECD. *Education Governance Review*. Paris, 2021.
3. Decree of the President of the Republic of Uzbekistan on digitalization of education system, PF-79.
4. Qurbonov Sh. *Educational Management*. Tashkent, 2018.
5. Bush T. *Educational Leadership and Management*. London, 2011.
6. OECD. *PISA Global Competence Framework*. Paris, 2020.
7. Bolam R. *Educational Management: Redefining Theory and Practice*. London, 1999.
8. Leithwood K. *Transformational Leadership in Education*. Toronto, 2005.