WORLD CONFERENCE ON STUDENT - CENTERED LEARNING APPROACHES

EFFECTIVE USE OF DIGITAL TECHNOLOGIES IN THE PERFORMANCE OF SCHOOL PRINCIPALS' MANAGEMENT FUNCTIONS

Eshkobilov Sanjar Kuzibayevich

Senior Lecturer at A.Avloniy National Institute of Pedagogical Mastery.

In the modern education system, the management activities of school principals are becoming increasingly complex, and digital technologies are playing an important role in this process. Electronic document management systems, database management software, online monitoring platforms, and electronic journal systems enable principals to effectively monitor the educational process, evaluate teachers' activities, analyze students' achievements, and establish effective communication with parents. Digital technologies accelerate management decision-making, ensure rational use of resources, and make all areas of school activity more transparent.

The importance of developing the digital competence of school principals lies in the fact that, in the current era of digital technology, enhancing this competence enables the acceleration of innovative processes within educational institutions, the improvement of teaching quality, and the creation of an educational environment that meets modern demands.

Scientific studies on developing the digital competence of educational institution leaders show that school principals' digital skills and the level at which they use them directly affect the effectiveness of the educational process.

Nevertheless, many school principals currently lack sufficient knowledge and experience in the effective use of modern digital technologies.

The development of school principals' digital competence should be carried out in the following stages according to their level of skills:

Initial Stage. At this stage, school principals develop basic skills in working with essential software, including office applications; using Internet resources, particularly

educational resources; and communicating via email and instant messaging platforms.

Intermediate Stage. At this stage, school principals develop skills in working with databases and information management systems (ERP, eMaktab, and others), managing online reports and electronic documents (edo.ijro.uz, e-huquqshunos), and actively using the reporting section of the electronic journal system (eMaktab.uz) to monitor the educational process. They also develop skills in using virtual collaboration platforms.

Advanced stage. This includes working with and applying cloud technologies (Google applications, Microsoft Office 365, Dropbox, and others) in management activities, analyzing Learning Management Systems (LMS), developing a digital transformation strategy, and making decisions based on data analytics.

The tools that school principals can acquire at each stage of developing their digital competence are listed in the table below.

Initial Stage.	Intermediate stage	Advanced stage
Working with office software and files in PDF and other formats, searching for necessary information online, and using email and educational resources (maktab.uz, kitob.uz, etc.)	Using the ERP system, edo.ijro.uz, e-huquqshunos, eMaktab.uz, and other digital platforms, as well as the my.gov.uz portal and its interactive public services related to education, in management activities.	The effective use of cloud technologies (Google applications, Dropbox, Microsoft tools, and others) in school management, as well as the use of artificial intelligence technologies (ChatGPT, Claude.ai, Poe.com, and others) for strategic school planning and other management purposes.

Furthermore, cloud technologies, videoconferencing systems, and specialized management software provide school principals with opportunities to work remotely, exchange information promptly, and implement the digital transformation of the institution. Thus, integrating digital technologies into the management process is becoming one of the key factors in improving school efficiency, ensuring compliance with modern educational standards, and enhancing the quality of education.

School principals with digital competence have greater opportunities to effectively perform management functions within an educational institution. Developing the digital competence of general secondary school principals is a continuous and systematic process that constitutes an important factor in ensuring the effective functioning of the modern education system. Various approaches can be employed to develop the digital competence of general secondary school principals in a step-by-step manner.

In developing the digital competence of school principals:

First and foremost, school principals should participate in management training courses and develop their digital skills through practical training sessions focused on digital technologies.[1]

- develop school principals' digital skills by organizing special training sessions and courses;

- introduce a mentor–apprentice system, creating a mechanism for experience sharing between experienced principals who effectively use digital technologies and newly appointed principals. This will enable good practices and innovative approaches to be shared with other principals as well.

- Online professional communities: special online platforms can be created for school principals to share useful resources, solve problems together, learn about new digital solutions and programs, and exchange experience.

1 O‘zbekiston Respublikasi Vazirlar mahkamasining “Maktabgacha va maktab ta’limi xodimlarining uzluksiz kasbiy rivojlantirish tizimini takomillashtirish to‘g‘risida”gi qarori: 2024-yil 20-dekabr, PF-867-son [Elektron manba]. – URL: https://lex.uz/ru/docs/7271575.

- Self-development: special teaching guides, video lessons, webinars, and other educational materials should be created for principals. They should have the time and opportunity to learn independently.

The management functions of school principals include the following:



In each function, technologies serve to increase management efficiency, simplify work with data, and accelerate decision-making.

There are opportunities to use specific digital technology tools in performing the management functions of school principals, which are considered in detail below.

The information and analysis function of school principals plays an important role in collecting and analyzing data about school activities and making evidence-based decisions. The following digital tools can be used to perform the information and analysis function:

Google Sheets, Excel Online – creating analytical tables on students, teachers, and results;

Power BI, Google Data Studio – creating interactive analytical dashboards;

School management information systems (eMaktab, ERP, edo.ijro.uz, etc.) – obtaining automated reports and analyses;

ChatGPT, Claude – as auxiliary tools for analyzing data and preparing report texts;

The organizational-executive function consists of coordinating organizational work at the school, distributing tasks, and monitoring their implementation;

Google Workspace (Docs, Drive, Calendar, Meet) – document sharing, planning, and online meetings;

Trello, Asana, Notion – task distribution and process tracking;

Microsoft Teams, Zoom, Google Meet – organizing remote meetings and seminars;

E-Imzo, execution discipline system – approving documents with an electronic signature and maintaining official records.

The goal-setting and motivational function also involves using digital tools to guide and motivate employees and students, including the following:

Google Forms, Microsoft Forms – determining motivation levels through surveys and interactive assessment;

ClassDojo, Edmodo, Moodle – monitoring students' achievements and managing incentive systems;

Telegram bots and channels – rapidly distributing news, recognition, and competition results;

Gamification platforms (Classcraft, etc.) – motivating teachers and students through game elements;

The monitoring and diagnostic function consists of evaluating the effectiveness of management activities, identifying problems, and analyzing them.

Google Forms, Microsoft Forms – online surveys to gather the opinions of students, parents, and employees.

Learning Management Systems (LMS) – monitoring the educational process.

Power BI – visual analysis of monitoring results.

Video surveillance systems – monitoring lessons, events, and discipline.

The forecasting and planning function involves determining school development prospects and planning resources and activities.

Google Calendar, Notion, ClickUp – creating annual, monthly, and weekly work plans.

MS Excel, SmartSheet – budget and resource planning.

AI tools (ChatGPT, Gemini, Copilot) – prospective analysis and developing strategic plan options.

MindMeister, Miro – mapping ideas and visualizing the planning process.

The regulation and coordination function consists of ensuring the coordinated operation of all departments, teachers, and organizational processes.

Slack, Microsoft Teams, Telegram groups – rapid information exchange and coordination.

CRM or HR systems (Bitrix24, Odoo Education) – automating teachers' activities and processes.

Google Drive, SharePoint – creating a unified document database.

Educational portals (uzedu.uz, my.mehnat.uz, erp.maktab.uz) – coordination in cooperation with government systems.

When using the digital technology tools described above, school principals' digital competence must correspond to current requirements. Digital leadership by school principals is highly important in today's modern educational environment. As technologies develop rapidly, educational processes are also undergoing fundamental changes, requiring school principals to develop new skills and strategic approaches.

In general, digital technologies are emerging as tools that fundamentally transform the management activities of school principals and significantly enhance their effectiveness. Successful leadership in modern educational institutions requires enriching traditional management approaches with digital solutions. Monitoring the educational process through electronic systems, making data-driven decisions,

optimizing resources, and establishing effective communication among all participants in the educational process are now among the key competencies of a school principal. The comprehensive use of digital technologies not only reduces the administrative workload but also enables school principals to devote more time to strategic planning, the implementation of innovative projects, and the continuous improvement of educational quality. In the future, school leaders with strong digital competence will undoubtedly occupy a leading position in the education system and raise their institutions to the level of competitive and modern centers of learning. Therefore, enhancing the digital literacy of school principals and developing their skills in the effective use of modern technologies should be regarded as one of the priority directions for improving the quality of education.

REFERENCES

1. O‘zbekiston Respublikasi Prezidentining “Raqamli O‘zbekiston — 2030» strategiyasini tasdiqlash va uni samarali amalga oshirish chora-tadbirlari to‘g‘risida”gi farmoni: 2020-yil 5-oktabr, PF-6079-son [Elektron manba]. – URL: https://lex.uz/ru/docs/-5030957.
2. O‘zbekiston Respublikasi Vazirlar mahkamasining “Maktabgacha va maktab ta’limi xodimlarining uzluksiz kasbiy rivojlantirish tizimini takomillashtirish to‘g‘risida”gi qarori: 2024-yil 20-dekabr, PF-867-son [Elektron manba]. – URL: https://lex.uz/ru/docs/7271575.
3. Eshqobilov S.Q. O‘quv-tarbiyaviy ishlarni boshqarishda axborot tizimlaridan foydalanish. Metodik qo‘llanma. – Toshkent: A. Avloniy nomidagi milliy-tadqiqot instituti, 2022. – 74 b.
4. Eshqobilov S., Normatov S., Badalova M., Boshqaruvda raqamli texnologiyalar va sun’iy intellekt. O‘quv qo‘llanma. – Toshkent: A. Avloniy nomidagi milliy-tadqiqot instituti, 2025. – 100 b.

5. Eshqobilov S.Q. The Role of General Education School Principals in The Digitalization of Education. American Journal of Science and Learning for Development. Volume 4, Issue 2 | 2025., ISSN: 2835-2157, https://journal.academicjournal.id/index.php/ajsld
6. Jumanazarov S.S. Developing the project design competence of “Tarbiya” subject teachers through digital technologies// Journal of Multidisciplinary Sciences and Innovations. German international journals company https://ijmri.de/idex. php/jmsi volume 4, issue 4, 2025. P. 169-171.
7. Jumanazarov S.S. The Significance of Mobile Learning in the Context of Continuous Professional Development Programs// American Journal of Open University Education ISSN 2997-3899 Vol. 2, No. 5, May 2025, Available online at: https://scientificbulletin.com/index.php/AJOUP. P. 19-21.
8. N.-E. Laouni, "School Principals’ Attitudes Towards Computers and Computer Use and Level of Computer Integration in Moroccan Public Schools," *SABA Publishing*, vol. 4, no. 1, pp. 1-36, 2023.
9. A. V. Rozhkova, "Application of digital technologies in modern educational institutions," European Proc. Soc. and Behavioural Sci., 2020.
10. A. Grissom, S. Loeb, and H. Mitani, "Principal time management skills: Explaining patterns in principals’ time use, job stress, and perceived effectiveness," *J. Educ. Admin.*, vol. 53, no. 6, pp. 773-793, 2015.