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MODERN PRIMARY SCHOOL MANAGEMENT USING IT

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Abstract: The article addresses the issue of modern management in primary schools through the use of information technology tools. It highlights the role of digital solutions in organizational, administrative, and pedagogical aspects of school functioning. The analysis is based on a survey conducted among teachers from the OSEhero 2024/2025 community, which examined the extent of ICT use in teaching, administration, and communication. The findings identify the most commonly applied tools, their areas of use, as well as challenges related to teachers' digital competences and training needs. The study indicates that the implementation of ICT significantly supports effective school management but also requires continuous professional development and adequate technological infrastructure.

Keywords: digital tools, ICT in education, school management

JEL Classification: I21, I28, M15

Introduction

Information technology tools are widely used in everyday life. Primary schools are faced with the need to implement modern solutions in school management. Social expectations, legislative changes, and the growing importance of digital skills are forcing the management of educational institutions to continuously improve their working methods. Effective school management covers organisational, administrative, and pedagogical issues, combined with the use of available financial, human, and technological resources.

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The aim of this article is to present IT tools that support the daily functioning of schools. In particular, it focuses on three main areas: school financing, the role and tasks of the school principal, and IT systems and programmes used in educational institutions. Based on the results of a survey conducted among teachers belonging to the OSEhero community, the authors analysed the use of ICT in teaching, administration and communication. The data obtained allows us to identify the most commonly used tools, indicate the areas of use of the tools by teachers and draw attention to the problems and training needs of the teaching staff.

The article is a review and research paper that aims to answer the question of how computerisation can support modern school management in the Polish education system.

School funding characteristics

State involvement in financing education is common in many countries. It is based on the belief that the right to education is one of the fundamental human rights, and not all citizens are able to cover the costs of schooling (Korolewska, 2010). The financing of education in Poland is regulated by a number of legal acts, such as the Constitution of the Republic of Poland, the Act on the Education System, the Act on the Revenues of Local Government Units, and the Act on Public Finance (Adamowicz, 2017).

The most important public sources of financing for schools in Poland include:

- the education part of the general subsidy, which is transferred from the state budget to local government units;
- targeted subsidies from the state budget, which are transferred to local government units;
- own funds of local government units;
- European funds;
- other public funds.

The above-mentioned public funds are not only allocated to public institutions, but also used as subsidies to finance non-public childcare institutions, kindergartens and schools (Korolewska, 2010). Education can also be financed from non-budgetary sources such as foundations, associations, or households (Adamowicz, 2017). It can be noted that the majority of funds are organised by local government units. This is because gminas (English: commune, municipality) are obliged to run primary schools and kindergartens, while powiats (English: district) are obliged to run secondary schools, educational centres and special schools (Najwyższa Izba Kontroli, 2022b).

The headteacher and his daily tasks in the school management process

School management is a complex process that requires organisational, pedagogical, and interpersonal skills. To become a headteacher in a public school, one must have a professional promotion to the level of a tenured or certified teacher (Journal

of Laws of 2023, items 2578, 2025). In addition, candidates must meet several formal requirements described in the regulation concerning the requirements that a person holding the position of headteacher should meet (Trochimiuk, 2023).

The school principal is at the head of the school's organisational structure and is responsible for its day-to-day operations. His or her duties cover a wide range of activities, from administrative matters and organising teaching work to cooperating with parents, governing bodies, and supervisory authorities. The daily work of a school principal requires flexibility, quick decision-making skills, and team management abilities (Norkowska, 2024). The tasks of a school principal in the field of educational supervision are specified in detail in the Regulation of the Minister of National Education of 27 December 2023 (Journal of Laws 2024, item 15, 2024).

Planning and supervising school activities involves setting educational, teaching, and organisational goals that facilitate everyday life at school. Supervision of the implementation of these goals ensures quality control of teaching, as well as monitoring the proper expenditure of funds and personnel management. Regular evaluation of teaching activities and adjustment of measures allow for continuous improvement of the institution's work. At this stage, cooperation between the headteacher and the supervisory body is essential, both in administrative and pedagogical terms. In schools, pedagogical supervision is carried out by the Board of Education, and in administrative terms by the municipal or city office (Janta, 2024).

The school principal is responsible for ensuring compliance with the law, regulations, and school statutes and documenting the school's activities. He or she prepares reports for governing bodies such as the school superintendent's office, local authorities and the teaching council (Ostrach, 2008).

Selected administrative and organisational tasks are presented below:

– Planning and supervising school activities involves setting educational, teaching, and organisational goals that facilitate everyday life at school. Supervision of the implementation of these goals ensures quality control of teaching, as well as monitoring the proper expenditure of funds and personnel management. Regular evaluation of teaching activities and adjustment of measures allow for continuous improvement of the institution's work. At this stage, cooperation between the headteacher and the supervisory body is essential, both in administrative and pedagogical terms. In schools, pedagogical supervision is carried out by the Board of Education, and in administrative terms by the municipal or city office (Janta, 2024).
– Work schedule planning – creating a schedule for teachers and administrative staff, lesson schedules for individual classes, coordinating teachers' plans, and classroom availability.
– Budget management is one of the key elements in ensuring the proper functioning of an educational institution. It involves planning, controlling, and spending funds in such a way as to ensure that the objectives set out in the financial plan are achieved. Regardless of the amount of educational needs and subsidies allocated from the local government budget, which is the main source of school funding and is distributed on the basis of adopted assumptions (Ministerstwo

Edukacji, 2024). The school may apply for EU funds, its own income, such as rental income, and donations, including computer equipment.

- Supervision of teachers – responsibility for organising teachers' work, including assigning teaching hours, arranging substitutes, evaluating teachers' work, organising professional training, and resolving day-to-day issues with staff.
- Communication with teachers – organising staff meetings, conducting individual discussions with teachers on educational and teaching issues.
- Communication with parents – organising meetings with parents, consultations, open days, and monitoring cooperation between teachers and parents.
- Assessment of teaching quality – monitoring the quality of teachers' work by creating a lesson observation plan and monitoring student progress. Supporting the professional development of teachers, assessing the implementation of teaching programmes.
- Fundraising – raising additional funds for the development of the school, e.g., from EU grants, collections, and cooperation with foundations.
- Organisational culture – ensuring a positive atmosphere at school, motivating employees to work effectively, assigning employees to various types of academies commemorating important historical events, or promoting safety-related activities. In addition, assigning teachers to look after classrooms, computer labs, or chemistry labs.
- Resolving conflicts in difficult situations, such as conflicts between teachers and parents or students, the headteacher acts as a mediator.
- Cooperation with the local community – involving the school in the life of the local community, establishing cooperation with external institutions, organisations, companies, or local authorities.

Nowadays, it is difficult to imagine managing a school without the use of IT tools. The level of computerisation in education depends on many aspects, including legal, economic, technological, pedagogical, competence, and ethical aspects.

Tools supporting school management work

Schools are increasingly turning to modern technological solutions that support them in their daily tasks. These tools streamline the management of educational institutions, from planning expenses, creating class schedules and substitutions, maintaining electronic records, to facilitating contact with parents, teachers, and students (Kinal, 2025).

The basic IT tool that streamlines work at school is the electronic register. One of them, Vulcan, is a solution often chosen by local government units to manage the entire school network (Więsław, 2018). What makes this system stand out is its integration with other Vulcan tools, such as modules for human resources and payroll, finance, student recruitment, organisational sheets and library collection management.

Purchasing Vulcan's integrated system or packages allows schools to systematically expand their functionality with specialised school management modules, depending on their current needs.

The most popular modules are presented below:

- Organisational sheet – a tool that enables the preparation and management of a school's organisational sheet, an important document defining the organisational structure of the institution for a given school year. In addition, it allows for the preparation of reports for the governing body and the pedagogical supervision authority (Vulcan, 2025).
- The finance module is a tool that enables schools to create budget plans and track school expenditure and income, which helps in the effective management of public finances. This makes it easy to monitor the use of funds, ensuring that they are in line with the plan and identifying any deviations. In addition, it minimises the time needed to prepare budget and financial statements and reports (Czaja et al., 2024).
- Salaries – a tool that helps determine the remuneration of school employees, taking into account factors such as salary components, allowances, deductions, holidays, and other variables related to remuneration. The programme is widely used in school administration, covering tasks such as determining the salaries of teachers and administrative staff and generating reports and documents related to remuneration.
- Human Resources – a tool that supports school administration in managing employees, enabling, among other things, contract management and task delegation. The programme provides comprehensive support for documents related to employee recruitment, such as employment contracts, annexes, employment certificates, and holiday requests. The programme enables accurate recording of working time for both teachers and administrative staff.
- Inventory – a programme used to manage and control the resources owned by the school. It can cover a variety of assets, such as computer equipment, books, furniture, teaching aids, and other resources.
- Optivium + students – the tool is available online under the name UONET+ and consists of administration, secretarial, register, and messaging modules. It enables the management and tracking of student data as part of the educational process. It is a central tool that collects all necessary information about students and enables their ongoing monitoring. It includes a range of functions that support administration in the areas of student records, grades, attendance, and communication with parents.
- E-register – a tool that enables the management of student documentation, including their grades and attendance. It also contains information about curricula for individual subjects, material schedules, data about teachers teaching in a given class, trips, and changes to the timetable. This module also enables communication between administrative staff, teachers, students, and their parents. It is a solution that facilitates the daily work of the school by providing access to data in electronic form and enabling the automatic generation of reports and

documents. One of the important features of the e-register that is useful for everyone is the schedule of tests and exams. This eliminates the possibility of having too many tests on a given day or week, which is contrary to the school's statutes. From the e-register, teachers can print school certificates. The e-register is also available on mobile phones as an app for both students and parents.

- Lesson plan – a tool that allows you to create lesson plans for your school. It allows you to easily assign teachers to subjects and classes and plan specific lesson times. It also allows the management of classroom availability and the assignment of appropriate classrooms to specific lessons, taking into account equipment requirements and class size.
- Substitutions – a tool that enables the headteacher or deputy headteacher to organise and monitor lesson substitutions. This is a very important feature, especially in the event of unforeseen circumstances, such as teacher illness or other unexpected situations that require a quick response and flexibility in organising school work.
- MOL NET+ – a tool that enables library resource management, supporting libraries in organising their work, including collection management, student services and the provision of library materials.

The use of IT systems brings many benefits to schools, such as increased administrative efficiency through budget planning and record keeping, better work organisation, improved communication processes and more effective personalisation of teaching. At the same time, implementing this system comes with some challenges, such as the need for training, ensuring adequate infrastructure, and keeping data safe. Still, the benefits of using the system, especially when it comes to developing e-learning and modern school management, make it a valuable tool in the Polish education system.

In addition to systems operating within schools, there are also nationwide systems that support the work of headteachers, teachers, and administrative staff.

The Education Information System (SIO) is part of the National Education Data System, which aims to collect and process data on the education system (Kuźniak-Stankowska, 2019). It is a tool that supports public administration, schools and other educational institutions in managing information about students, teachers, and educational institutions. The aim of the system is to integrate educational data at national, regional, and local levels. The objectives of the system include analysing the use of public funds allocated to finance educational tasks, determining the distribution of the educational part of the general subsidy, and collecting statistical data on institutions, teachers, and teaching equipment used.

Education Information System – Education Exams (SIO EO) – a system for collecting, processing, and storing data on exams conducted in the Polish education system. SIO EO covers exams such as the eighth-grade exam, the matura exam, and vocational exams (Pater, 2025).

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Research methodology

The survey was conducted among teachers belonging to the OSEhero group, 2024/2025 edition, which brings together educators from all over Poland. The group consisted of 569 people. At the turn of February and March 2025, a total of 223 questionnaires were collected. There were 22 questions in the questionnaire. All completed questionnaires were included in the study. The main objective of the study was to determine what tools educators currently use in their work, what difficulties they encounter when using these tools, whether they see the benefits of using IT tools in education, and how they assess the Internet at school, as most tools cannot be used without the Internet. Figure 1 shows the percentage share of respondents in individual voivodeships.

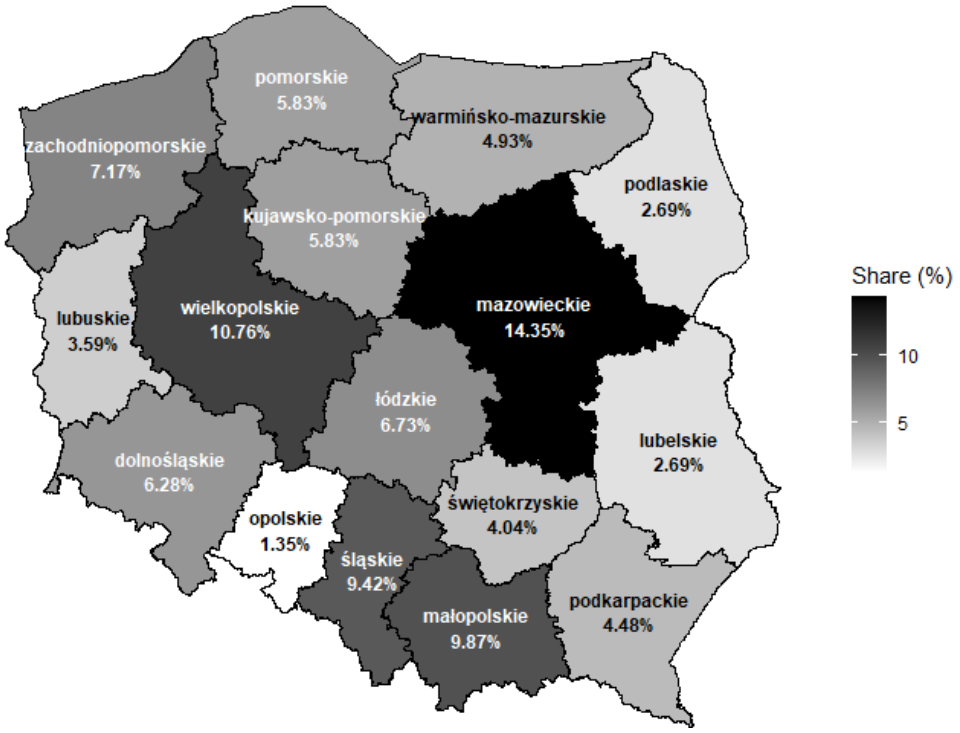

Figure 1. Percentage of surveyed teachers by voivodeship

Source: Own study using the R environment

There are differences between Polish voivodeships in terms of the number of respondents. Most respondents came from the mazowieckie (14.4%), wielkopolskie (10.8%) and małopolskie (9.9%) voivodeships. The next largest groups were from the zachodniopomorskie (7.2%) and dolnośląskie voivodeships (6.3%). The smallest number of respondents came from the opolskie (1.4%), lubelskie and podlaskie voivodeships (2.7%) (Figure 1).

Table 1. Frequency of using IT tools in teachers' work

Frequency leve	Share %
Every day	89.69
Several times a week	8.07
Once a week	1.79
Rarely	0.45
Never	0.00

Source: Own study

Based on the collected data, it can be concluded that most teachers use IT tools every day (89.7%) or several times a week (8.1%) (Table 1).

Table 2. Additional training for teachers in the field of information technology

Types of training	Share %
Training in network security	42.60
Training in troubleshooting computer and Internet problems	26.91
Workshops on organising online classes	16.91
Training in the use of office software, e.g. Word, Excel, PowerPoint	13.45
Training in the use of the e-register	8.52

Source: Own study

Based on the collected data, it can be concluded that teachers have diverse training needs. The majority of respondents indicated an interest in the topic of online safety – as many as 42.60% of respondents. This high result may indicate a growing awareness of digital threats and the need to improve skills in the field of data protection and safe use of the Internet. The teachers surveyed pointed to training in solving computer and Internet problems (26.91% of respondents). This may indicate a need for practical skills related to operating devices and solving everyday technical difficulties (Table 3).

Table 3. Technological difficulties encountered in the work of teachers

Types of technological problems	Share %
Internet problems	42.60
Lack of appropriate equipment	41.26
Lack of time to learn new tools	30.94
Lack of technical support	26.46
Difficulties in using software	4.04

Source: Own study

The respondents indicated that the greatest difficulties in working with IT tools concerned mainly technical aspects, e.g., problems with the Internet (42.60%) and the lack of appropriate equipment (41.26%), organisational problems related to the lack of time to learn new tools (30.94%), and the lack of systematic technical support (26.46%). By contrast, only a small proportion of teachers reported difficulties with the software used by the school (4.04%). In addition, teachers were asked about their attitudes towards the use of IT tools in education (Table 4).

Table 4. Percentage of teachers who expressed a specific opinion

Do you think that information technologies and tools should be used more often in education?	Share %
I strongly agree	41.26
I rather agree	35.43
I have no opinion	12.56
I rather disagree	8.97
I strongly disagree	1.79

Source: Own study

The majority of respondents (76.69%) believe that information technologies and tools should be used more often in education (answers “I rather agree” and “I strongly agree”). The opposite opinion was held by 10.76% of respondents (answers “I rather disagree” and “I strongly disagree”). This distribution of answers may indicate the growing teachers’ interest in modern teaching methods, as well as their awareness of changes in students’ educational needs. Respondents were also asked about the areas in which IT tools are currently used in teaching (Table 5).

Table 5. Areas of use of IT tools in teachers' work

In which areas of your work do you most often use IT tools?	Share %
Preparation of educational materials	93.72
Managing student grades and progress	79.82
Communicating with students	39.91
Collaborating with other teachers	36.77
Conducting online lessons	14.35

Source: Own study

The teachers surveyed indicated that they use IT tools primarily to prepare educational materials used in class (93.72% of teachers) and for statutory tasks, i.e., filling in electronic documentation in the form of an e-register. 79.82% of teachers use IT systems to assign topics, check student attendance, add grades, etc. Another important area of use of tools in the teacher's work is communication with students (39.91%).

Table 6. Use of telecommunications tools for communication in the work of teachers

	e-register	Whatsapp, messenger	e-mail	SMS	by telephone
Parents	88.34%	4.04%	0.45%	0.90%	6.28%
Students	75.34%	16.14%	5.38%	0.90%	2.24%
Other teachers	37.67%	26.46%	8.52%	8.97%	18.39%
Administrative staff	32.29%	6.28%	23.32%	6.28%	31.84%

Source: Own study

Both the form teacher and subject teachers use IT tools for communication depending on their needs at a given moment. When it comes to contacts with the administration, e.g., the headteacher, deputy headteacher, or school office, teachers prefer to communicate via the electronic register (32.3%), telephone (31.8%), and e-mail (23.3%). In addition to the electronic register (37.7%), teachers prefer to use social media such as WhatsApp and Messenger (26.5%) to communicate with other teachers. Teachers prefer to communicate with students via the electronic register (75.3%), which is due to the form imposed by the Ministry of National Education. However, social media platforms such as WhatsApp and Messenger (16.1%) are often chosen as a method of communication with this group of people. Communication with parents most often takes place via the e-register (88.3%). Other methods include telephone contact (6.28%) and contact via social media groups (4.0%).

Table 7. IT tools used by teachers in schools

Types of IT tools	Share%
Electronic register	96.86
Word processor (e.g., MS Word, Libre Office Writer)	83.41
E-mail	78.48
Graphics programmes (e.g., Canva, Gimp)	72.65
Cloud drives (e.g., Google Drive, OneDrive, Dropbox)	71.30
Presentation tools (e.g., PowerPoint, Prezi, Google Slides)	70.40
Video websites (e.g., YouTube, TikTok)	63.68
Spreadsheets (e.g., MS Excel, Libre Office Calc)	57.40
Educational platforms or platforms for group work (e.g., Microsoft 365, Classroom, Discord)	52.47
Quiz creation tools (e.g., Kahoot, Quizlet)	47.98
Tools for generating content and images using artificial intelligence (e.g. ChatGPT, DALL-E 3)	46.19
Portals provided by the Ministry (e.g., Integrated Education Platform)	44.84
Thematic websites or online encyclopaedias (e.g., Wikipedia)	40.81
Chat communication tools (e.g., Skype, Messenger, WhatsApp)	33.18
Social media portals (e.g., Facebook, X)	23.32
Moodle	6.73

Source: Own study

It can be observed that in professional matters related to school work, teachers prefer to use the electronic register to communicate with all groups, including the school administration, other teachers, students, and parents. This may be due to a desire to separate their professional and private lives. In addition to communication, teachers also use IT tools in other aspects of their work (Table 7).

Among the available information and communication technologies (ICT) used by teachers, the most important is the electronic register, which is used by as many as 96.86% of respondents. It plays a key role in documenting and organising the teaching process. Next, respondents indicate the frequent use of word processors (83.41% of respondents), e-mail (78.48%) as a communication channel, as well as graphics programmes used to create educational materials (72.65%). Cloud solutions, which enable the storage and sharing of teaching resources, are also playing an increasingly important role. They are used by 71.30% of the respondents. Among the websites used in educational practice, respondents most frequently mentioned multimedia platforms such as YouTube, which is used in class (63.68%).

Table 8. Benefits of using IT tools in education

Type of benefit from using IT tools	Share %
Facilitating access to educational materials	70.40
Facilitating the organisation of teachers' work	55.61
Interactivity and student engagement	30.49
Creativity and innovation	25.11
Enabling remote learning	12.56

Source: Own study

Most of the surveyed teachers pointed to easier access to educational materials (70.40%) and assistance in organising their work (55.61%) as the benefits of using IT tools in their work.

Over the past few years, the ability to use artificial intelligence (AI) tools in various industries has been gaining importance. Therefore, it seems reasonable to ask about the use of such tools in the work of teachers (Table 9).

Table 9. Use of AI by teachers to create teaching materials

Use of AI tools	Share %
Yes	61.82
No	36.82
I am afraid to use this technology	1.36

Source: Own study

The majority of teachers surveyed admit that they use artificial intelligence tools to create or improve the visualisation of their teaching materials.

The results presented in Tables 1 to 9 show that teachers currently often use modern technologies in schools, indicating that education is changing. IT tools are used for organisational and administrative work, but also as an aid in lesson preparation. In addition, many teachers use AI tools, which are a relatively new solution. This may indicate a desire to keep up to date with modern technologies, which will allow teachers to learn about both the positive and negative aspects of AI technologies.

Tables 10-11 present the profile of the respondents. Based on the collected data, the authors attempted, among others, to outline the profile of the respondent (teacher) by asking questions about their gender, age, place of work, type of the subject taught, and years of experience in the teaching profession.

Table 10. Type of the subject taught

Subject taught	Share %
Science subjects, e.g., mathematics, chemistry, geography, biology	47.09
Humanities subjects, e.g., Polish, English, history	16.14
School counsellor	13.45
Vocational subjects	9.42
Technical subjects, e.g., technology	8.97
Educational and physical subjects, e.g., physical education (PE)	2.69
Artistic subjects, e.g., art, music, dance	2.24

Source: Own study

Among the respondents, the largest group was teachers of science subjects (47.09%) and humanities subjects (16.14%). The smallest group of respondents were teachers of arts subjects (2.24%).

Table 11. Number of years of experience as a teacher

Number of years	Share %
0-4 years	6.28
5-9 years	13.90
10-14 years	14.80
15-19 years	12.11
20 years or more	52.91

Source: Own study

Most of the teachers surveyed have 20 or more years of professional experience (52.9%).

The profile of respondents shows that the vast majority of teachers surveyed have many years of experience. This shows that even older education workers use IT tools in their work. This may be a matter of wanting to update their teaching skills and adapt them to the needs of their students, or it may be due to the obligation to use specific tools at school, such as electronic registers.

Discussion

The educational experiences related to the COVID-19 pandemic have significantly influenced the perception of digital education both in Poland and in other countries (European Commission, 2022). In the first phase of the crisis, efforts focused mainly on providing ICT infrastructure and software that would enable the continuation of distance learning. Currently, more and more attention is being paid to the growth of digital competences (Najwyższa Izba Kontroli, 2022a). The OECD Digital Education Outlook 2023 report, on the other hand, draws attention to digital education ecosystems, which consist of three essential elements: digital tools for managing systems and institutions, digital tools for teaching, learning, and assessment, and the people who bring these tools to life and give them meaning (OECD, 2023). The above considerations of the authors show that there is currently a noticeable need to use IT tools in Poland.

As Anna Plusa notes in her report "Science in the digital world of technological transformation and global challenges," young people are very eager to use electronic tools. The bridge connecting contemporary teachers and students in the education process is not only teaching them how to use digital tools, but also showing young students how to use them properly. Artificial intelligence, which is currently developing very dynamically, deserves particular attention. Most of the respondents already have experience in working with it, and only a small percentage of them are afraid of using it. It is therefore worth considering introducing training for students on the principles of using artificial intelligence to counteract the spread of false information and harmful content.

As part of the Digital Transformation of Education Policy – a draft resolution of the Council of Ministers submitted for consultation – there are plans to introduce the role of Digital Education Coordinator in every school. This solution is an extension of an approach that does not focus solely on expanding IT infrastructure in schools but emphasizes the development of teachers' digital skills (Głos Nauczycielski, 2024). This direction is in line with the results of the authors' research, which emphasizes the importance of preparing teaching staff to use technology effectively in the education process.

In the literature on the digital transformation of education, modern school management is defined as the systematic use of information and communication technologies (ICT) to increase organisational efficiency, teaching quality and communication within institutions. Digital transformation in schools goes beyond the implementation of IT tools alone – it involves changing the organisational culture, improving the digital skills of staff, modernising administrative processes and introducing new forms of collaboration and learning (OECD, 2023).

Conclusions

Contemporary schools are confronted with constantly evolving challenges in education. One of them is the introduction of modern technology into teaching. What is more, apart from teaching itself, a significant number of schools are introducing

solutions to support administrative and management work. The most popular system used in schools is the electronic register, which allows teachers to check attendance, enter grades, plan tests, contact parents and students, and issue certificates. It streamlines the work of the headteacher and teachers in particular, but also helps parents to monitor their children's academic performance on an ongoing basis. The introduction of modern technologies in schools requires adequate funding, which comes from both subsidies provided by the Ministry and other public funds.

The research presented in this paper shows that IT tools and artificial intelligence are indeed used in schools. The teachers participating in the research mostly indicated that they consider IT tools to be important in their work in education and that most of them use them in preparing lessons and monitoring student progress. At the same time, there is a clear need for technical support and training, especially in areas related to digital security and the practical use of technology in education. Among the most popular tools used by teachers are electronic registers and word processors, graphics programs, and artificial intelligence, which is also becoming popular.

The next stage of research on Polish schools will focus on the availability of electronic equipment in primary and secondary schools.

This research shows that, alongside global technological development, education is also undergoing an IT-driven transformation. On the one hand, this helps streamline and accelerate work; on the other, it prepares students to participate in a digital society.

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Streszczenie: W artykule podjęto temat nowoczesnego zarządzania szkołą podstawową z wykorzystaniem narzędzi informatycznych. Wskazano znaczenie technologii cyfrowych w codziennym funkcjonowaniu placówki, obejmującym aspekty organizacyjne, administracyjne i pedagogiczne. Analiza została oparta na wynikach badań przeprowadzonych wśród nauczycieli ze społeczności OSEhero 2024/2025, które pozwoliły określić stopień wykorzystania technologii informacyjno-komunikacyjnych (TIK) w pracy dydaktycznej, administracyjnej oraz komunikacyjnej. Zidentyfikowano najczęściej stosowane narzędzia, ich obszary zastosowania oraz wyzwania związane z kompetencjami cyfrowymi kadry pedagogicznej. Wnioski wskazują, że wdrażanie nowoczesnych rozwiązań informatycznych wspiera skuteczność zarządzania szkołą, jednak wymaga systematycznego doskonalenia umiejętności nauczycieli oraz dostosowania infrastruktury technologicznej.

Słowa kluczowe: narzędzia cyfrowe, TIK w edukacji, zarządzanie szkołą