| Research Article

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Innovative Technologies as a Tool for Managing Preschool Educational Organizations

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Abstract: The article examines modern approaches to the implementation of innovative technologies in the management of preschool educational organizations (PEOs). Key areas of utilizing information technologies (IT) to optimize management processes are analyzed, including personnel management, interaction with children and parents, planning children's activities, maintaining documentation, and reporting. An innovative management model for PEOs is presented, considering the specific administrative and pedagogical functions of the head.

Keywords: innovative technologies, preschool educational organization management, information technologies, educational administration, management model, digitalization of education.

Modern socio-economic conditions dictate the necessity of reforming the preschool education system. Managing preschool educational organizations (PEOs) requires the use of innovative technologies that enhance the quality of institutional operations, increase the efficiency of interactions among participants in the educational process, and optimize resource utilization.

Innovative information technologies (IT) have become an integral part of a manager's professional activities. Their implementation allows for the automation of routine processes, reduction of staff workload, instant access to information, and improved quality of services provided to children and their parents.

The reform of preschool education involves the integration of innovations into the management of PEOs. To transition from outdated management systems to a flexible and effective model suited to modern conditions, innovations that significantly improve institutional performance are essential. Currently, IT is regarded as such an innovation.

The areas of IT application in the management of PEOs are diverse and include:

➢ Developing an institutional profile (general information about the institution, material and technical resources, methodological support, generation of reports, etc.);

➢ Human resources management (maintenance of personnel files, tracking staff transfers, maintaining staff order logs, payroll records);

➢ Information on children and their parents (maintenance of personal records, attendance tracking, monitoring development, creating individualized educational plans for children, etc.);

➢ Scheduling children's activities (automated generation of activity schedules with options to choose the most optimal one);

➢ Library management (monitoring library inventory and its usage, maintaining electronic catalogs);

➢ Medical office operations (maintaining children's medical records and medical support documentation);

➢ Accounting (financial and statistical reporting);

➢ Methodological services (electronic portfolios for educators to store information about their achievements, presenting experiences, electronic reporting, etc.).

The primary goal of an innovative manager is to implement and utilize information technologies as a management resource within their activities.

Key tasks include:

➢ Updating and expanding information resources in the management processes of PEOs;

➢ Designing and testing new proprietary software and automated systems tailored to preschool educational institutions, enabling effective interaction among all participants in the educational process;

➢ Developing a system for self-education for managers to enhance their information and communication competencies. This involves forming a comprehensive set of knowledge, skills, motivational orientations, and professional qualities essential for successful performance in IT-driven management environments.

To establish an effective management model for preschools today, it is necessary to implement an innovative system for monitoring the activities of educational institutions. Let us consider some of the proposals in this area.

Russian developers have created an innovative "Educational Institution Activity Monitoring System" designed to achieve the following objectives:

1. Organize the most efficient management model for educational institutions.

2. Introduce innovative solutions into educational institutions, improving their operations to ensure better care, health, and upbringing of children.

3. Eliminate routine tasks for staff and the duplication of data across various departments of the institution.

4. Optimize and automate business processes in key areas of activity.

5. Provide an indispensable assistant for both staff and parents within the educational institution.

The system incorporates artificial intelligence (AI) to enhance user convenience in managing preschool operations through the "Educational Institution Activity Monitoring System" software. The AI addresses four key tasks for preschool educational institutions:

1. Create personalized dietary menus for each child, taking into account their individual characteristics and medical conditions.

2. Reduce the time required for creating and processing documents during a child's enrollment in a preschool educational institution.

3. Minimize the time needed for managers or users to navigate the system, access operational information, and generate documents efficiently.

4. Streamline the creation and processing of attendance records for children in the preschool educational institution and ensure accurate tracking of employee work hours.

The system's functionality enables managers to obtain reliable and comprehensive information about the status of each department within the educational institution for any specified period (see Fig. 5).

Figure 5. Components of the "Educational Institution Activity Monitoring System"

The implementation of this system in various regions of the Russian Federation demonstrated its ability to significantly reduce the time required for key management operations. Key improvements include:

➢ Reducing the time spent on monitoring the core activities of educational institutions by 30%.

➢ Cutting the time needed to control municipal task data and compile final reports for the Department of Education by 70%.

➢ Streamlining the preparation and management of attendance records for both primary and supplementary education by 80%.

➢ Decreasing the time spent on drafting contracts with parents and issuing orders related to children (enrollment, transfers, withdrawals, name changes, place reservations, etc.) by 70%.

➢ Reducing time spent on maintaining medical journals for health monitoring and prevention by 65%.

➢ Halving the time required for monitoring children's development and generating related reports.

➢ Improving occupational safety control and conducting safety training for children and staff by 60%.

➢ Enhancing the monitoring and execution of contracts by 65%.

➢ Ensuring 75% efficiency in task execution control.

➢ Reducing the time required for operational pedagogical and medical monitoring by 70%.

➢ Streamlining the preparation and calculation of bonus points for staff incentives by 30%.

Benefits for PEO Managers:

The system provides automated management controls for the following:

1. Recommended prices for procuring and receiving food supplies in educational institutions' storage facilities.

2. Contract execution with suppliers, facilitating procurement activities with automatic calculation of the minimum contract price. The system enables price comparisons with publicly available wholesale rates from online sources or city government websites.

3. Food inventory management, ensuring proper usage according to regulations and approved meal plans, while eliminating non-targeted consumption.

4. Dietary meals for children, excluding prohibited products and dishes based on individual dietary requirements.

5. Execution of directives and assignments from educational institution managers.

6. Children's nutrition in compliance with international standards.

7. Development of operational monitoring cycle plans and control charts for administrative, pedagogical, and medical activities.

8. Parental engagement via a personal account system to keep parents informed.

Figure 6. Functional Capabilities of the "Educational Institution Activity Monitoring System"

Currently, there are numerous similar applications available online. Examples include the Twigsee application, the Smart School Pro digital platform, and many others.

Figure 7. The Innovative Digital Platform Smart SchoolPro

Thus, the use of similar systems ensures comprehensive administration of preschools while integrating all communication channels into a single platform. By providing accessible information about children's activities, these systems increase parental awareness and engagement in the life of their children.

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