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А.БАЙТҰРСЫНОВ АТЫНДАҒЫ
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КОММУНАЛЬНОЕ ГОСУДАРСТВЕННОЕ УЧРЕЖДЕНИЕ "КОСТАНАЙСКИЙ ОБЛАСТНОЙ МЕМОРИАЛЬНЫЙ
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АЛТЫНСАРИН ОҚУЛАРЫ

«ИННОВАЦИЯ, БІЛІМ, ТӘЖІРИБЕ-БІЛІМ
БЕРУ ЖОЛЫНЫҢ ВЕКТОРЛАРЫ»
ХАЛЫҚАРАЛЫҚ
ҒЫЛЫМИ-ПРАКТИКАЛЫҚ
КОНФЕРЕНЦИЯСЫ

МАТЕРИАЛДАРЫ

І КІТАП

АЛТЫНСАРИНСКИЕ ЧТЕНИЯ

МАТЕРИАЛЫ

МЕЖДУНАРОДНОЙ
НАУЧНО-ПРАКТИЧЕСКОЙ
КОНФЕРЕНЦИИ
«ИННОВАЦИИ, ЗНАНИЯ,
ОПЫТ – ВЕКТОРЫ
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«Инновация, білім, тәжірибе-білім беру жолының векторлары»: 2023 жылдың 17 ақпандағы Халықаралық ғылыми-тәжірибелік конференция материалдары. I Кітап. – Қостанай: А.Байтұрсынов атындағы Қостанай өңірлік университеті, 2023. – 1081 б. = «Инновации, знания, опыт – векторы образовательных треков»: Материалы международной научно-практической конференции, 17 февраля 2023 года. I Книга. – Костанай: Костанайский региональный университет имени А.Байтұрсынова, 2023. – 1081 с.

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Жинаққа «Инновация, білім, тәжірибе-білім беру жолының векторлары» атты Алтынсарин оқулары халықаралық ғылыми-практикалық конференция материалдары енгізілген.

Талқыланатын мәселелердің алуан түрлілігі мен кеңдігі мақала авторларына заманауи білім беруді жаңғырту мен дамытудың, осы үдерісте қазақ ағартушыларының педагогикалық мұрасын пайдаланудың жолдарын, мұғалімдерді даярлаудың тиімді технологиялары мен форматтарын әзірлеу мен енгізу мәселелерін, ақпараттық қоғамдағы білім беру кеңістігінің ерекшеліктерін айқындауға, сондай-ақ педагогтердің инновациялық қызметінің тәжірибесін жинақтауға, педагогикалық үдеріс субъектілерін психологиялық-педагогикалық қолдауға мүмкіндік берді.

Бұл жинақтың материалдары ғалымдарға, жоғары оқу орындары мен колледж оқытушыларына, мектеп мұғалімдері мен мектепке дейінгі тәрбиешілерге, педагог-психологтарға, магистранттар мен студенттерге қызықты болуы мүмкін.

В сборнике содержатся материалы Международной научно-практической конференции Алтынсаринские чтения «Инновации, знания, опыт – векторы образовательных треков». Многообразие и широта обсуждаемых проблем позволили авторам статей определить векторы модернизации и развития современного образования, использования в данном процессе педагогического наследия казахских просветителей, вопросов разработки и внедрения эффективных технологий и форматов подготовки учителей, специфики образовательного пространства в информационном обществе, а также обобщения опыта инновационной деятельности педагогов, психолого-педагогической поддержки субъектов педагогического процесса.

Материалы данного сборника могут быть интересны ученым, преподавателям вузов и колледжей, учителям школ и воспитателям дошкольных учреждений, педагогам-психологам, магистрантам и студентам.

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Задание 3. Папа купил в магазине цветы. Рассмотрите таблицу и вычислите, сколько денег он потратил на покупку?





	20 тг.	
	10 тг.	
	30 тг.	

Рисунок 7. Покупка цветов

Таким образом, из всего сказанного, можем сделать вывод, что преимущества интегрированного урока перед традиционным монопредметным очевидны. На таком уроке можно создать более благоприятные условия для развития самых разных интеллектуальных умений учащихся, через него можно выйти на формирование более широкого синергетического мышления, научить применению теоретических знаний в практической жизни, в конкретных жизненных, профессиональных и научных ситуациях. Интегрированные уроки приближают процесс обучения к жизни, натурализируют его, оживляют духом времени, наполняют смыслом. Он ориентирован на достижение целей самих учащихся, и поэтому он уникален. Он формирует невероятно большое количество умений и навыков, и поэтому он эффективен.

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THE PRESCHOOL TEACHERS' PROFESSIONAL GROWTH BY MEANS OF USING THE TECHNOLOGY OF ARTIFICIAL INTELLIGENCE

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Abstract

The relevance of the topic under study can be defined as due to the gap between the level of information and communication skills of modern teachers and children, starting from preschool age. The authors show the possibility of using artificial intelligence technology in the form of various applications in working with older preschool children. They also present this technology as an effective means of teachers' professional growth.

Key words: digitalization, preschool education, teacher, professional growth, artificial intelligence.

Аңдатпа

Зерттелетін тақырыптың өзектілігі мектепке дейінгі жастан бастап қазіргі педагогтар мен балалардың ақпараттық-коммуникациялық дағдыларының деңгейі арасындағы алшақтыққа байланысты. Авторлар жасанды интеллект технологиясын үлкен мектеп жасына дейінгі балалармен жұмыс істеуде ертүрлі қолданбалар түрінде пайдалану мүмкіндігін көрсетеді. Мақалада бұл технология мұғалімдердің кәсіби өсуінің тиімді құралы ретінде де берілген.

Түйінді сөздер: цифрландыру, мектепке дейінгі тәрбие, мұғалім, кәсіби өсу, жасанды интеллект.

Аннотация

Актуальность исследуемой темы обусловлена разрывом между уровнем владения информационно-коммуникационными навыками современными педагогами и детьми, начиная с дошкольного возраста. Авторы показывают возможность использования технологии искусственного интеллекта в виде разных приложений в работе с детьми старшего дошкольного возраста. Также в статье представлена данная технология как эффективное средство профессионального роста педагогов.

Ключевые слова: *цифровизация, дошкольное образование, педагог, профессиональный рост, искусственный интеллект.*

Today's children are significantly different from their peers, those that were a decade ago. Now you can see how a child at the age of 2–3 years old quite skillfully uses various gadgets (smartphones, tablets, laptops, game consoles, SMART watches), at a time when not all adults have yet introduced them into everyday life. Children cannot imagine their life without playing on the phone, watching videos (cartoons, etc.) with an interesting content. They know what subscriptions, donations, chats are. All this is so actively included in their lives that other activities simply fade into the background. Children are rarely interested in books and are increasingly addicted to digital devices. The teacher, in turn, must know a lot, master the methodology of preschool education, constantly work on himself, possess certain skills and knowledge, constantly improve his skills, master innovative technologies, non-traditional methods, know a computer, be able to use Internet resources. The list can be continued indefinitely. Of course, he must be able to meet the demands of society in the field of education. After all, the main mission of the teacher is to create conditions for the comprehensive development of the child. All this together leads to the need for changes in education.

The purpose of the article is to show the possibility of using modern artificial intelligence technology in working with children of senior preschool age, as well as to present artificial intelligence technology as an effective tool for the professional growth of teachers.

The national project «Education» aims to bring Russia into the world's top ten countries in terms of the quality of general education within nearest six years. There will be technology lessons on the basis of leading companies and children's technoparks «Quantorium». All educational organizations will be provided with the Internet, and virtual reality and digital twin technologies will be used in the classroom. For schoolchildren, training programs will be developed according to individual plans, including distance learning, and support centers will be opened for talented children in all regions [1]. Modern education is impossible without the use of digital technologies. The digitalization of education implies a transition from traditional forms of education to modern, digitalized ones.

The Federal Law №273 (dated December 29, 2012) «On Education in the Russian Federation» (hereinafter referred to as the Federal Law) classifies preschool education as one of the general levels. In addition, in the Federal Law, along with such a function as caring for and looking after a child, preschool organizations are obliged to carry out educational activities that are allocated as a separate service. In accordance with the law, today any school has the right to implement preschool education programs [2]. Hence, there is a need for a unified approach to the professional competencies of a preschool teacher. At the legislative level, there is a need to improve the quality of education, to provide organizations and institutions with highly qualified specialists.

The Professional Standard of a Teacher is a fundamental document containing a set of personal and professional competencies of a teacher. This is a document that details the specific knowledge and skills that a teacher needs to possess, and also describes in detail his work activities. That is, it regulates what teachers should be like, what methods and forms they should use in work, what qualities and skills they should possess. The same document defines the terms related to the teaching profession, for example "professional competence" is defined as the ability to successfully act on the basis of practical experience, skills and knowledge in solving professional problems [3]. Based on this, it should be noted the importance of the teacher's knowledge of information and communication technologies (ICT), the willingness to use modern tools in working with children. Professional competencies are one of the criteria for assessing the professional growth of a teacher. Further we consider this component in more detail. Professional ICT competence is the qualified use of ICT tools that are common in this profession in developed countries in solving professional problems where necessary [4].

E.A.Yamburg interprets the term «professional growth» as a process of constant striving for self-development and self-improvement, which contains such a natural need as the realization of creativity in working with students [5]. According to A.M.Mudrik, the concept of "professional growth" reflects the growth of certain social attitudes, methods, as well as knowledge and skills that are necessary to some extent to solve certain pedagogical problems and situations [6]. Summarizing the definitions of professional growth, it can be noted as the development of a person in his field of activity, the acquisition of new skills and work experience that can help achieve career success. Professional growth is important for several reasons: interesting and varied work avoids routine and job dissatisfaction; specialists with extensive knowledge and qualifications who regularly learn new things are valuable personnel and their monetary compensation is always higher; improving professionally, over time, you can apply for a higher position.

The teacher must simultaneously solve several problems, organize various activities, maintain each child's interest in studying. In research and educational activities the question often arises: Where can I get information? Often preschool children answer that they can ask their mother, look in a book or an encyclopedia. Some say that they can ask «Alice». Alice is a well-known voice assistant, the first example of artificial intelligence. Every day brings us new discoveries, and now the technology of artificial intelligence (hereinafter referred to as TAI) is ready to help the teacher. TAI is a system or machine that can mimic

human behavior in order to perform tasks and gradually learn from the information it gathers [7]. This definition was first given by the American computer scientist John McCarthy in 1956. Examples of TAI in everyday life: sites and applications with chatbots; social means of communication; web search, "Alice"; online stores; offline experience. TAI in the work of a teacher with children is the future education of a child. The purpose of using TAI is, firstly, the development of intellectual abilities in children in the process of cognitive activity, and secondly, involvement in scientific and technical creativity (from the development of imaginative thinking and research abilities to intellectual operations, the development of imagination and social intelligence). The use of this technology by teachers throughout the training plays an important role in his development, allows him to create effective training programs for each child, taking into account his individual characteristics and needs. AI technology makes it possible to make the learning process more efficient and convenient for children and teachers; increases engagement through gamification; allows automating the learning process as much as possible, and the methodology effectively consolidates the material covered. Also, artificial intelligence can analyze both the emotional and physical state of the child at the time of activity and the teacher's professional skills. Experience has shown that this technology is possible and available for inclusion in the educational process in a preschool educational institution. This once again emphasizes the importance of a teacher to master his skills in this technology. TAI has the right to be considered as a means of teachers' professional growth.

One of the author, being a modern young preschool teacher, has a desire to work with this technology and independently evaluate the benefits of working with preschoolers and track how much the knowledge gained by children in a preschool educational institution will facilitate the learning process at a school where this technology is no longer innovation. And also, there is an opportunity to teach this technology to other preschool teachers, to show the diversity of ICT, in order to introduce it into the educational process of a preschool educational institution for the children's comprehensive development. As part of the work on TAI, a project for children of older preschool age was implemented. In the form of a Google-survey, work was carried out with parents. It was proposed to answer several questions: «How often does a child use a tablet/smartphone? Do you know what games your child plays? How do you feel about educational games on a tablet/smartphone/laptop? Do you allow you the possibility of using ICT tools in the educational process in preschool educational institutions?» An analysis of the responses showed that all children are addicted to gadgets, but few actually use them for developmental purposes.

The acquaintance of preschoolers with TAI takes place in their free time from educational activities, taking into account the interests of children. To begin with, we offer the voice assistant «Alice» as a well-known and affordable tool. The application «Akinator», where the genie literally reads our thoughts. It is proposed to guess a character, answer a series of questions with multiple answers («yes», «no», «I don't know», «maybe»). After about 8–10 answers, a picture with the image of the hidden hero appears on the screen. It is worth confirming the genie's guesses or giving him the opportunity to once again show his abilities. Isn't it magic for kids?

The next example of using TAI is the «AutoDraw» application. It allows you to use TAI to create professional drawings. This is a new web tool that assists a person draw with the help of machine learning and using drawings by talented artists. The program makes drawing easier. As children draw, hints and tools are provided to suggest improvement in the sketch. It is possible to return to any stage of the drawing to finish, color and save your «masterpiece». The application can be used on a tablet or laptop and is completely free. And if you create a game situation, it will bring a touch of novelty and relevance to the educational process and diversify the usual forms of work. As an example, this program can be used in the role-playing game «Shop». The buyer is invited to come to the store and, without naming the goods, draw what he wants to purchase, the seller must guess what to sell to the buyer. The TAI will give a hint on the top line and, when pressed, will give the answer – a clear image of the object drawn by the child.

A huge opportunity for the development of preschool children is provided by the Sberbank Online application. On its platform, there is a chat bot (assistant) to which you should say: «Salute, Sber, show me the games». Or you can enter the «games» section on your own and choose the one that suits your age and development goals. So, for example, the game «Finbo» is an excellent assistant in the financial literacy for senior preschool aged children. To do this, the Sberbank assistant should say «Salute, Sberbank, launch Finbo». Captain Finbo offers to go on an exciting journey through the islands and archipelagos, to learn the secrets of the «world of finance and economics», which not even all adults know. The game «The sea worries once» is great for the physical activity of a large group of children. It can be used as an independent outdoor game, as well as a dynamic pause. The game «Why don't crocodiles fly» invites children to use non-verbal communication gestures, facial expressions, pantomime to describe and show a hidden creature or object. The application also presents a variety of games «Patters», «Read a poem» (the minus of this game is that the robot reads the poem, without expressive reading), the game «Say the opposite» and others that perfectly develop the speech of preschoolers, expand vocabulary, sound culture of speech, in particular the ability to rearrange sounds in words to obtain new words.

The Google Experiment website presents various entertaining applications and mini-games, such as the «Virtual Sandbox» and its analogues, which will allow children not only to engage in fun online sand

painting, but also to study the properties of some natural resources. So a child can see what will happen to the sand if the wind blows (add the «wind» effect), what will happen if it rains and others [8]. Upon request, it is possible to find applications that recognize an object from a photo using a smartphone or tablet camera, determine it with an accuracy of up to 99% and name it, and also offer to get acquainted with the properties of this object. Recognition of birds is an excellent assistant in the research activities of preschoolers. It works like a «voice recorder», it records the sound of birds, and accurately gives their name and characteristics. It is difficult to ignore such applications that recognize printed text and convert it into an electronic version, as well as recognize speech and provide the ability to type text with your voice without using the keyboard. These and much more are excellent modern tools in the work of a teacher. In the context of the workload of the teacher, the last proposed TAI skills are simply necessary. This, first of all, saves time, simplifies the educational process, and is convenient.

This technology brings its own «zest» and «novelty» in the joint activities of a teacher and children, comprehensively develops the personality of a child, and serves as a modern means of teachers' professional growth. In the future, it remains important to improve knowledge in the field of this topic, systematically work in the chosen direction, develop and implement original interactive games, since the world does not stand still, children as well as requirements and methods of work change. It is necessary to share the experience with colleagues at various events, because by improving himself, a person can give serious motivation for colleagues to learn the previously unknown. A preschool teacher should not leave aside cooperation with the pupils' parents: inform and involve them in the digitalization of education in a timely manner, talk about the possibility of using modern ICT tools not only for entertainment, but for the development of their children, teach them to select games and applications directly for teaching and educating the younger generation. Today, project activities are carried out at the main stage of the experiment, but the intermediate results of the introduction of TAI make it possible to understand that we are keeping up with the times and are not going to stop there.

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