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TEACHING GENERATION ALPHA IN THE CONTEXT OF DIGITAL TRANSFORMATION OF EDUCATION

Annotation

The digital transformation of education necessitates a rethinking of pedagogical approaches, taking into account the characteristics of Generation Alpha – children who have grown up in constant interaction with technology. Born after 2010, Generation Alpha is immersed in a digital environment from early childhood, resulting in high digital literacy, a strong demand for interactive and personalized learning, and shorter attention spans. The aim of this study is to explore how the cognitive, behavioral, and socio-emotional characteristics of this generation influence educational relationships in primary school. The novelty of the article lies in the fact that, for the first time at the empirical level, the impact of Generation Alpha's digital nature on the interaction between teachers, students, and parents is analyzed, helping to fill a gap in domestic research on this issue. A qualitative research design was employed. The sample included 48 teachers, 60 parents, and 72 primary school students aged 7 to 11. Data were collected using surveys, semi-structured interviews, and classroom observations. The findings show that students expect interactivity and personalized learning, requiring a rethinking of the teacher's role as a facilitator and mentor in the digital environment. The study also revealed increased parental involvement through digital platforms, despite their limited digital literacy.

The practical significance of the study lies in substantiating directions for adapting the educational environment: digital training for teachers, social-emotional development programs, and support for parents. Particular attention is given to the need to balance online and offline learning to minimize the risks of digital fatigue. Future research should focus on longitudinal and comparative studies to examine the long-term effects of digital learning on primary school students.

Keywords: Generation Alpha, digital transformation, primary school, digital literacy, personalized learning, facilitation, gamification, parental involvement, pedagogical practices.

Introduction. Generation Alpha – children born after 2010 – represents a unique segment of contemporary society, as they are immersed in a fully digital environment from birth. This is the first generation that has never known life without smartphones, Wi-Fi, social networks, and digital assistants. As noted by Patrawiwat K. et al., early exposure to technology fosters a high level of digital literacy in these children, as well as a preference for instant access to information, visual content, and personalized learning formats [1].

Researchers Dimock and Vogels emphasize that unlike Generations Y and Z, who witnessed the growth of technology, Generation Alpha was raised inside a digital ecosystem where artificial intelligence, augmented reality, and instant access to knowledge are the norm [2, 3]. According to Höfrová et al., such learners gravitate toward on-demand learning and prefer game-based, visually rich, flexible, and interactive approaches as opposed to traditional methods [4].

However, scholars also warn of potential risks related to teaching Generation Alpha, particularly a decline in concentration and cognitive overload. Budau C. argues that excessive exposure to a rapidly changing digital environment may reduce the ability to concentrate deeply and think critically [5]. Moreover, multitasking – often seen as a benefit – may hinder the depth of content assimilation and long-term retention (May K.E. & Elder A.D.) [6]. In this context, educational institutions must develop curricula that combine the advantages of digital engagement with strategies to promote focus, resilience, and deep understanding. The key question is how technology can enhance rather than undermine students' cognitive and social capabilities.

Personalized learning systems with AI-based adaptive tools align with Gardner's theory of multiple intelligences, enabling students to learn in accordance with their individual strengths (Marens M.) [7]. Similarly, Ryan R. and Deci's E.L. self-determination theory emphasizes the importance of autonomy, competence, and relatedness as key motivational factors, reflecting Generation Alpha's desire for control over their own learning [8]. Li et al. found that educational

programs incorporating these theoretical approaches – through inquiry-based learning, gamification, and experiential methods – contribute to higher engagement and motivation among Alpha learners [9]. However, challenges remain, including digital equity, teacher preparedness, and screen-time management.

Despite extensive international research on the characteristics of Generation Alpha, there is a lack of empirical data in the Kazakhstani context that reflects how primary education is being transformed under the influence of this generation. It is still unclear how teachers, parents, and students themselves perceive the ongoing changes in the educational environment, and what challenges and opportunities arise from the integration of technology, particularly in terms of addressing students' socio-emotional and cognitive needs.

In Kazakhstani pedagogical science, research also addresses the impact of digitalization on school education and primary students. Semenikhin V.V., Semenikhina S.F., and Utebaev I. [10], as well as Arenova A.Kh., Zhunusbekova A., and Asilbaeva R.B. [11], note that digital transformation significantly changes teachers' requirements, demanding mastery of modern technologies and key professional competencies. Ashimova D.I. and Orlova E.A. [12] emphasize the importance of considering the socio-emotional and cognitive traits of the younger generation in the context of rapid digital development. However, most domestic studies remain theoretical, with insufficient empirical data on how digitalization affects educational relationships in primary school. This study seeks to fill that gap.

In Kazakhstan, the digitalization of education is embedded in state policy. For example, the «Digital Kazakhstan» program (2018–2022) outlined key areas for digital transformation across major sectors, including education. This document confirms the state's commitment to integrating digital technologies into the learning process, developing digital competencies, and modernizing infrastructure. The introduction of electronic tools, the cultivation of digital literacy, and the use of online platforms have become essential elements of educational policy [13].

Moreover, the relevance of this research is reinforced by the Concept for the Development of the Education System of the Republic of Kazakhstan for 2023–2029, which emphasizes the need to transform educational content and teaching methods in response to changing cognitive and behavioral traits of learners. The Concept focuses on developing critical thinking, digital skills, and the implementation of interactive and personalized learning approaches. It places particular importance on the early development of digital competencies among children and the reconsideration of the teacher's professional role in the digital age [14]. Thus, the national educational strategy aims to prepare students for life in a high-tech world, requiring a shift from traditional teaching methods toward approaches that better meet the needs of Generation Alpha.

Nevertheless, despite a well-defined strategic framework, Kazakhstani schools still face difficulties adapting pedagogical approaches to the characteristics of the digital generation. Primary education often remains rooted in traditional models that do not sufficiently account for personalization, interactivity, and the socio-emotional and cognitive needs of learners. A particularly urgent issue is the readiness of teachers to take on new professional roles in a digital environment.

In practice, a contradiction emerges: on one hand, there is a growing digitalization; on the other, a lack of systemic implementation. Schools rarely conduct assessments of Generation Alpha's socio-emotional and cognitive needs, and there are no clear guidelines for teachers on how to revise their roles and methods accordingly.

Thus, there is a pressing need to explore the adaptation strategies of Kazakhstani schools to the realities of the digital age and the specific traits of Generation Alpha. This study aims to address that gap by examining empirical data from the Kazakhstani context and offering pedagogical recommendations.

Research aim: To explore the characteristics of teaching Generation Alpha in the context of digital transformation in education, taking into account their cognitive, behavioral, and socio-emotional traits.

Research objectives:

- To identify the cognitive, behavioral, and socio-emotional characteristics of Generation Alpha that influence the learning process.
- To analyze the impact of the digital educational environment on the learning of primary school students.
- To examine how parents and teachers perceive the specifics of educating Generation Alpha children.
- To highlight effective pedagogical approaches that support successful learning for Generation Alpha in a digitalized context.

Methods and materials. This study employed a mixed-method approach, combining quantitative and qualitative tools to comprehensively investigate the specific features of teaching Generation Alpha in the context of digital transformation in education. The primary method was a questionnaire-based survey aimed at exploring the perceptions, experiences, and viewpoints of key educational stakeholders – primary school teachers, parents, and students.

The survey included both closed-ended questions with pre-defined response options and open-ended questions, allowing respondents to elaborate on their opinions. This ensured a more in-depth understanding of the research problem. The survey was conducted in public general education schools.

Purposive sampling was used and comprised:

- 48 primary school teachers (Grades 1–4), with an average teaching experience of 9.5 years;
- 60 parents of children belonging to Generation Alpha (born after 2010);
- 72 students aged 7 to 11, representing the primary school age group.

Participants represented diverse demographic and social groups, enabling a multifaceted view of how the digital educational environment is perceived and experienced. The questionnaire addressed digital behavior patterns among children, the degree of digital involvement in families, shifts in teaching practices, and the identification of cognitive and socio-emotional challenges faced by students.

Collected data were analyzed using both quantitative and qualitative techniques. The findings are presented in tables and diagrams, illustrating the responses of all three groups and allowing comparison of their perspectives on changes brought by digitalization in education.

Results and their discussion. Data collection was carried out over eight weeks using three main methods: surveys, semi-structured interviews, and classroom observations. The aim was to comprehensively explore the characteristics of Generation Alpha's learning in a digital educational environment.

Surveys. A structured questionnaire with closed Likert-scale items was administered to identify teachers' and parents' opinions regarding the effectiveness of digital tools, changes in student behavior, and specific features of interacting with Generation Alpha children in a digitalized context. The survey involved 48 teachers and 60 parents, resulting in a total of 108 responses.

Semi-structured interviews. To gain deeper insights into the perception of digital learning and communication, interviews were conducted with a subsample of the survey participants: 18 teachers, 15 parents, and 12 primary school students aged 7–11. The questions addressed personal experiences with digital platforms, changes in teaching and learning, expectations regarding educational technologies, and emerging challenges.

Classroom observation. Ten observations of primary school lessons were conducted, during which interactions between teachers and students, the nature of digital device use, and students' reactions to digital versus traditional instruction were recorded.

The qualitative data from the interviews were analyzed using thematic analysis. Recurring themes were identified, including «teacher as facilitator», «Generation Alpha's digital habits», and «parental uncertainty in the digital environment». These themes reflect how different stakeholders perceive the impact of digitalization on the educational process.

Moreover, the comparison of qualitative data with survey results revealed differences in the level of acceptance of digital technologies by teachers and parents. Overall, teachers expressed greater

readiness for digital transformation, while parents more often showed concern about the impact of technology on children's psycho-emotional development. The findings are visualized in Figure 1.

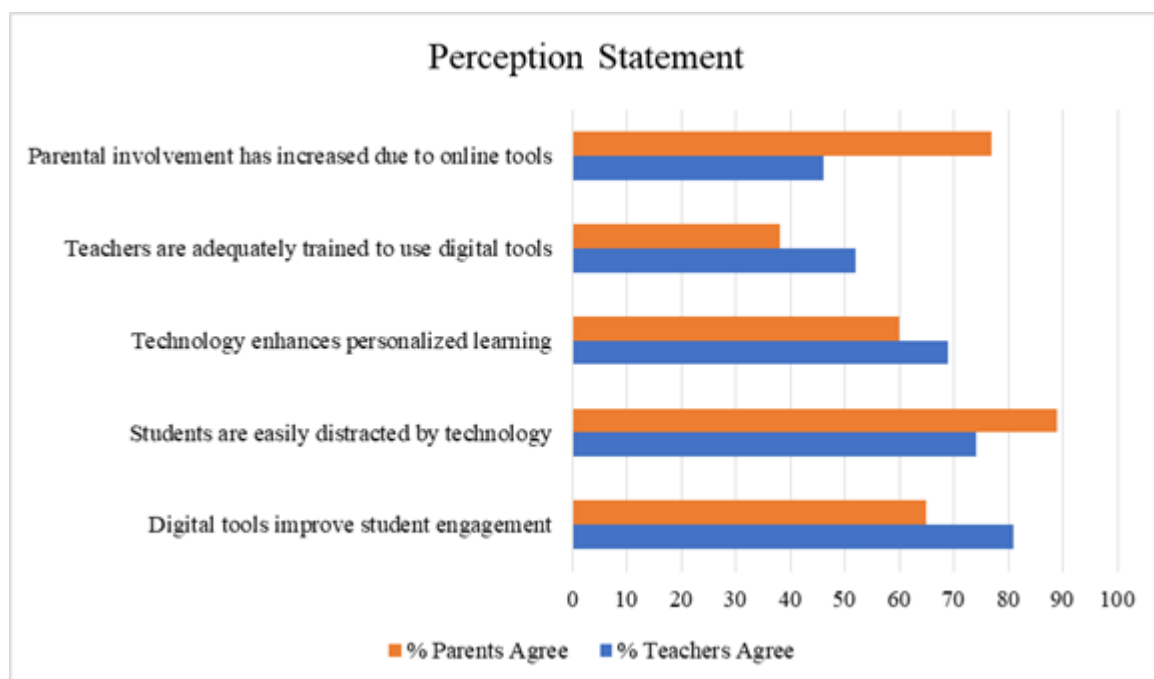


Figure 1. Comparative perception of the effectiveness of digital tools by teachers and parents in Generation Alpha's learning

Source: compiled by the author

The bar chart illustrates the comparative perceptions of teachers and parents regarding the use of digital tools in supporting Generation Alpha's learning. Firstly, it can be seen that a higher proportion of teachers (81%) agreed that digital tools improve student engagement compared to parents (65%). Moreover, both groups acknowledged that students are easily distracted by technology, with parents (89%) expressing greater concern than teachers (74%).

In addition, when asked whether technology enhances personalized learning, 69% of teachers agreed, which is slightly higher than the 60% of parents who shared this view. Furthermore, only 52% of teachers felt adequately trained to use digital tools, whereas an even lower percentage of parents (38%) believed teachers had sufficient training.

Finally, parental involvement was perceived to have increased due to online tools by 77% of parents, which is notably higher than the 46% of teachers who observed this trend.

During the interview analysis, teachers and parents repeatedly mentioned the use of various digital educational resources. Among the most frequently cited platforms were Google Classroom, Zoom, Quizlet, LearningApps, and Kahoot, which are used for interactive learning, feedback, and online communication. These platforms support the individualization of learning, maintain student engagement, and enable collaborative work in both synchronous and asynchronous formats. Teachers noted that the integration of digital tools requires new pedagogical approaches, including facilitation, digital literacy, and monitoring of student engagement in the online environment.

Teachers, parents, and students mentioned various themes related to Generation Alpha learning during interviews, with teacher as facilitator, digitally native behaviors, and parental uncertainty being the most frequently reported (Figure 2).

The pie chart presents the frequency of key themes mentioned across interviews with teachers, parents, and students. Firstly, the theme «teacher as facilitator» was the most frequently mentioned, accounting for 26% of all responses. Secondly, «digitally native behaviors» was highlighted in 22% of interviews, reflecting the recognition of Generation Alpha's technological fluency.

Additionally, «parental uncertainty» comprised 18% of the responses, indicating concerns regarding parents' confidence in supporting their children's digital learning. Moreover, «reduced

attention span» was noted in 15% of interviews, suggesting it as a significant challenge associated with digital learning environments.

Furthermore, «preference for interactive tools» was mentioned in 11% of responses, highlighting students' demand for engaging digital content. Lastly, the theme «concern about screen time» accounted for 8%, indicating it as the least frequently mentioned issue among participants.

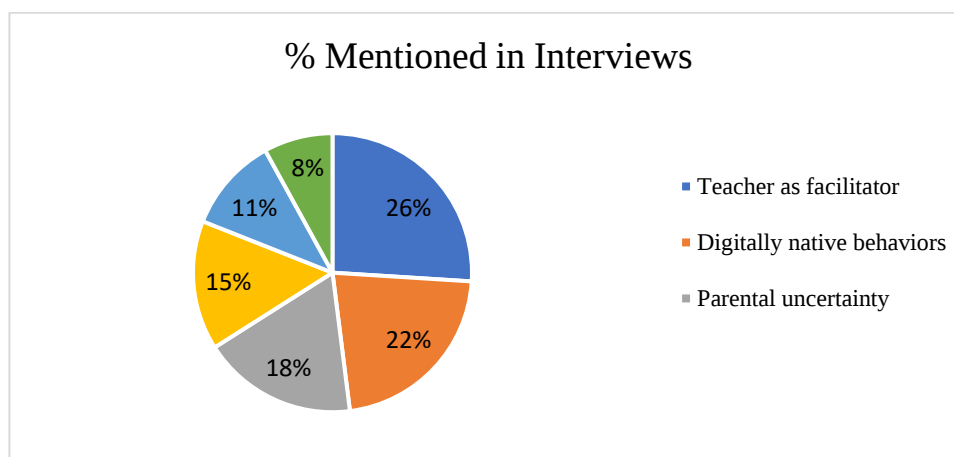


Figure 2. Frequency of key themes mentioned in interviews with teachers, parents, and learners
Source: compiled by the author

The conducted empirical research made it possible to identify how the characteristics of Generation Alpha – digital nativeness, high sensitivity to visual and interactive content, and emotional receptivity – influence educational behavior, the perceptions of teachers and parents, as well as the transformation of the teacher's role in the context of digitalization of primary education. The obtained data are detailed in Figures 1 and 2: Figure 1 illustrates the differences in the evaluation of digital tools by parents and teachers, while Figure 2 reflects the frequency of key themes mentioned by interview participants.

The findings indicate that successful teaching of Generation Alpha in the context of digital transformation requires the implementation of specific pedagogical approaches. First, the teacher should assume the role of a facilitator, organizing the learning process in such a way that students independently search for and acquire information, while the teacher guides their actions and provides feedback. Second, it is important to apply elements of gamification (points, rankings, challenge-based tasks), which increase interest and engagement among primary school students. Third, blended learning proves to be effective, as it combines digital platforms (such as Google Classroom, Quizlet, and LearningApps) with traditional methods, thereby maintaining a balance between online and offline activities and preventing digital fatigue. Fourth, particular attention should be given to socio-emotional development: conducting joint mini-projects, pair and group discussions fosters empathy, collaboration skills, and resilience to stress.

Thus, the study demonstrates that the practical adaptation of pedagogical methods to the characteristics of Generation Alpha can be achieved through facilitation, gamification, blended learning, and the integration of socio-emotional practices. These recommendations are tailored to the Kazakhstani school context and can serve as practical guidelines for teachers working in a digital educational environment.

The traditional paradigm of hierarchical teacher-student gives way to a facilitation model, where teachers are facilitators and not sole dispensers of information. Generation Alpha, born with ubiquitous access to digital data, no longer relies on teachers as the sole sources of learning material (Höfrová A. et al.) [4, p.4]. Instead, Budau C. asserts that Generation Alpha expects interactive, inquiry-based learning classrooms where students learn content independently with teachers' facilitation [5, p. 1602]. It has been researched that teachers, who use technology in instruction, such as AI tutors, gamification of learning, and project-based learning, enhance student motivation and foster critical thinking (Li M. et al.) [9, p.2]. Additionally, the teacher's role has been expanded to that

of a digital literacy instructor, helping students navigate misinformation and ethics online. Although this is a welcome development, it calls for professional development modules that equip teachers with the capacity to balance technology use with human-centered instruction.

Generation Alpha actively learns in digital and collaborative educational environments. Their interactions go beyond the traditional classroom through platforms such as Google Classroom, Zoom, and interactive applications, which foster teamwork skills and global interconnectedness. At the same time, researchers highlight risks related to digital etiquette, cyberbullying, and reduced face-to-face communication. According to Mulenga R. and Shilongo H. [15], hybrid learning models that combine online communication with in-person interaction help develop both technological and interpersonal competencies. Effective methods include digital debates, peer review, and online games that promote social engagement and cognitive development.

Parental involvement in learning has significantly transformed due to digital learning technology that enables instant access to student performance. Generation Alpha parents, usually Millennials or older members of Generation Z, are more involved in children's school life through online platforms, apps, and social media communication with teachers, as Pattrawiwat K. et al. describe [1, p.8]. Studies by Li Z. and Qiu Z. and Lau E. et al. have shown that children are more engaged and perform better when parents are constructively involved with online learning [16, 17]. However, excessive monitoring can ruin students' autonomy, and a middle path has to be adopted. Parent digital literacy is also crucial, and parents are not trained to use online learning tools optimally (Sarker M. et al.) [18, p.454]. Parent training courses and online content should be provided to schools to bridge the gap, allowing parents to offer education support to children without technology or schools.

Learning among Generation Alpha is primarily affected by their social-emotional needs, influenced by a more technologically advanced world. Research by Tootell H. et al. shows that they require learning environments that are personalized, emotionally supportive, and interactive [19]. In addition, as Pattrawiwat K. et al. explain, instructors must be trained to identify evidence of digital fatigue, anxiety, and disengagement to give the students proper course instruction and emotional support [1, p.9]. Schools can strive to create an equilibrium, integrative learning environment that supports academic success and individual development by emphasizing social-emotional well-being.

Digital technology has become an integral part of modern education, especially for Generation Alpha, who have been immersed in virtual environments since birth. According to Budau C., schools are shifting from structured and auditory methods to multimodal strategies that rely on visual, interactive, and digitally enriched approaches. The use of infographics, video presentations, and digital interaction enhances student engagement and reflects the need to adapt learning environments to their specific needs [5, p.1603]. AI-powered assessment tools and learning analytics enable teachers to track progress more effectively, providing timely and tailored instructional content.

Gamification and augmented reality (AR) transformed Generation Alpha's interaction with learning material. Research conducted by Li M. et al. suggests that gamified learning, using points, badges, leaderboards, and challenges, boosts motivation and engagement [9, p.3]. Augmented reality facilitates a more profound understanding of concepts through the ability to visualize abstract ideas with interactive 3D models (Koumpourous Y.) [20]. Interactive learning tools like learning apps, VR simulations, and AI-based chatbots allow learners to engage with content interactively and be immersed. These technologies facilitate experiential learning and make abstract subject matter concrete and achievable.

The major problem of instructing Generation Alpha is managing screen time and what impact it might have on the attention span. According to Lodge J.M. and Harrison W.J., digital device overuse could result in reduced attention span, reduced deep focus, and difficulty with continued learning [21]. Unlike previous generations, Generation Alpha has been exposed to constant digital stimulation since childhood, with immediate feedback and highly interactive media. While technology enables learning through interactivity, over-screen exposure may compromise cognitive growth, social acumen, and critical thinking (Lodge J.M. & Harrison W.J.). Parents and teachers must strike a balance by incorporating systematic screen time regulations, enabling offline learning opportunities,

and engaging in mindfulness practices to drive focus and interest in online and offline learning environments.

Online learning provides blanket disparities in technology access, particularly among socio-economically disadvantaged students. Although Generation Alpha is typically described as a digitally native generation, not all students have equal access to high-speed internet, personal devices, or advanced learning software. The digital divide disproportionately targets rural and poor communities, preventing access to technology-enabled learning. Limited access to essential tools enhances education disparities, bringing achievement differences between wealthy and poor students. Governments and institutions ought to remedy such issues by concentrating on digital equity initiatives, such as subsidizing internet access, providing institution-provided devices, and implementing low-tech learning methods to enable all students to benefit from digital gains in education.

The expedited integration of digital technology within education requires the teacher to adjust frequently to technological changes, while many instructors recognize that they remain unready to execute those innovations correctly. The outdated education methods usually lack rich digital literacy strands, causing the teachers to navigate how to fit AI-powered learning platforms, gaming, and collaboration tools into a teaching model. As noted by Shanmugasundaram M. and Tamilarasu A., without professional growth, there is potential for the inefficient use of technology, with apathy rather than enhanced learning outcomes [22]. Ongoing training in technology teaching must be a top priority for schools and policymakers as they strive to prepare teachers for a continually changing education environment. In addition, developing a culture of lifelong learning among teachers will ensure that pedagogy keeps pace with Generation Alpha learners' needs.

While technology enables personalized and scalable learning, it also risks eroding the human touch at the center of learning. The shift towards virtual and mixed approaches to learning might restrict interaction between teachers and students on the face-to-face plane, compromising social-emotional learning and intersocial knowledge or group-learning capacity. Dille K.B. and Røkenes F.M. identify that online teaching must be deliberately designed to create rich relational interactions, enabling access to emotional well-being and expert guidance even where screen ubiquity dominates [23]. Further, teachers can sustain human relationships by integrating live conversations, collaborative assignments, and feedback channels that put the well-being of students first. Additionally, blending SEL programs with digital resources will equip students with interpersonal skills for academic success and the future work environment.

A case in point among such education innovation geared towards Generation Alpha is that of the United States AltSchool network. The schools use a project-based and interdisciplinary learning model fueled by artificial intelligence technology to track students' live performance and modify teaching for successful deployment. Interdisciplinary and project-oriented lessons promote critical thinking, collaboration, and innovation, values that align with Gen Alpha's learning style. Teachers act as facilitators, leading students through inquiry-based exercises on tablets, augmented reality terminals, and virtual laboratories. Similarly, Finland's primary education system remains the benchmark for using phenomenon-based learning, where students immerse themselves in issues of the real world outside school subjects, utilizing technology to collaborate and ask questions. Both models show how to modify content and presentation for Generation Alpha to boost participation and long-term learning outcomes.

Various international policy frameworks demonstrate rising recognition of how Generation Alpha students must be taught. The Digital Education Revolution of Australia focuses on preparing students for modern skills through wireless network expansions combined with teacher certification and individual learning technologies. Through its Digital Education Action Plan (2021–2027), the European Commission works to develop inclusive, high-quality digital education by supporting AI applications with gamification and adaptive educational technologies in schools (European Commission) [24]. The need for comprehensive digital literacy and well-being programs becomes crucial because they will help protect users from risks stemming from extended screen duration. In Singapore, the Ministry of Education has introduced the Student Learning Space, an online portal

designed to enable autonomous and collaborative learning using multimedia content, in line with Gen Alpha's web-centric preferences. Such forward-thinking policies illustrate how governments align the education system to become more attuned to generational change.

Conclusion. This study contributes to a deeper understanding of how the cognitive, behavioral, and socio-emotional characteristics of Generation Alpha are transforming pedagogical practices in primary schools within the context of digital transformation. The novelty of this research lies in the fact that, for the first time at the empirical level, the impact of Generation Alpha's digital nature on the interaction between teachers, students, and parents has been analyzed, helping to fill a gap in domestic research on this issue.

The findings revealed that the high level of digital literacy, the desire for interactivity, and the demand for personalized learning among Generation Alpha students are radically changing traditional approaches to education. The role of the teacher is also evolving—from a knowledge transmitter to a facilitator, a mentor in the digital environment, and a mediator in students' social-emotional development. Moreover, the study identified a growing involvement of parents in the learning process through digital platforms, alongside their concerns and insufficient digital competence.

The practical significance of this study lies in substantiating directions for adapting the educational environment to new demands: the need for targeted digital training for teachers, the implementation of programs aimed at developing students' socio-emotional skills, and support for parents in mastering online learning tools. In addition, the findings make it possible to outline practical recommendations for parents: to regulate children's screen time and establish a sustainable routine that combines digital and traditional activities; to create an emotionally supportive home environment where children can openly discuss challenges and achievements related to learning; and to cooperate with teachers on the use of digital tools. These guidelines enhance the practical value of the study and contribute to more harmonious family-school interaction in the context of digital transformation.

Thus, the research objectives have been achieved.

The first objective – to identify the cognitive, behavioral, and socio-emotional characteristics of Generation Alpha – was accomplished by determining their high level of digital literacy, their preference for interactivity, and their need for personalized learning.

The second objective – to analyze the impact of the digital educational environment – was realized by identifying both positive effects (motivation, engagement) and risks (digital fatigue, reduced concentration).

The third objective – to examine the perceptions of parents and teachers – was addressed through evidence of parents' insufficient digital competence and the transformation of the teacher's professional role toward that of a facilitator.

The fourth objective – to highlight effective pedagogical approaches – was achieved by substantiating the use of facilitation, gamification, blended learning, and socio-emotional practices.

Future research directions include conducting longitudinal and comparative studies to explore the long-term cognitive, behavioral, and emotional effects of digital learning, as well as developing effective models of inclusive and safe digital education for primary school students.

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БІЛІМ БЕРУДІҢ ЦИФРЛЫҚ ТРАНСФОРМАЦИЯСЫ ЖАҒДАЙЫНДАҒЫ АЛЬФА ҰРПАҒЫН ОҚЫТУ

Аңдатпа

Білім берудің цифрлық трансформациясы педагогикалық тәсілдерді Альфа ұрпағының ерекшеліктерін ескере отырып қайта қарауды талап етеді. 2010 жылдан кейін туған Альфа ұрпағы жастайынан цифрлық ортаға бейімделіп, технологиялармен үнемі өзара әрекетте өседі, бұл олардың жоғары цифрлық сауаттылығына, интерактивті және жекелендірілген оқытуға деген жоғары сұранысына, сондай-ақ назарын шоғырландыру уақытының қысқаруына алып келеді. Осы зерттеудің мақсаты – бұл ұрпақтың когнитивтік, мінез-құлықтық және әлеуметтік-эмоциялық сипаттамаларының бастауыш мектептегі білім беру қатынастарына әсерін анықтау. Мақаланың ғылыми жаңалығы – алғаш рет эмпирикалық деңгейде Альфа ұрпағының цифрлық табиғатының мұғалімдер, оқушылар және ата-аналар арасындағы өзара әрекеттестіктерге ықпалы талданды, бұл осы мәселе бойынша отандық зерттеулердегі олқылықтың орнын толтыруға мүмкіндік береді.

Зерттеуде сапалық зерттеу дизайны қолданылды. Іріктемеге 7–11 жастағы бастауыш мектептің 72 оқушысы, 48 мұғалім және 60 ата-ана кірді. Деректер анкеталау, жартылай құрылымдалған сұхбаттар және сабақтарды бақылау арқылы жиналды. Нәтижелер оқушылардың интерактивтілік пен жекелендірілген оқытуға деген жоғары сұранысын көрсетті, бұл мұғалім рөлін цифрлық ортадағы фасилитатор және тәлімгер ретінде қайта қарауды талап етеді. Сонымен қатар, ата-аналардың цифрлық платформалар арқылы оқу процесіне қатысуының артқаны анықталды, дегенмен олардың цифрлық дайындық деңгейі жеткіліксіз.

Зерттеудің практикалық маңыздылығы – білім беру ортасын бейімдеудің бағыттарын негіздеуде: педагогтарды цифрлық даярлау, оқушылардың әлеуметтік-эмоциялық дағдыларын дамыту бағдарламаларын енгізу және ата-аналарды онлайн-ресурстарды меңгеруде қолдау. Онлайн және офлайн оқытудың теңгерімін сақтау, цифрлық шаршаудың алдын алу және экран алдында ұзақ отырудың теріс әсерін азайту қажеттілігі ерекше атап өтілді. Болашақ зерттеулердің перспективалары – бастауыш сынып оқушыларына арналған цифрлық оқытудың ұзақ мерзімді әсерлерін зерделеуге бағытталған лонгитюдтік және салыстырмалы зерттеулер жүргізу.

Түйінді сөздер: Альфа ұрпағы, цифрлық трансформация, бастауыш мектеп, цифрлық сауаттылық, жекелендірілген оқыту, фасилитация, геймификация, ата-аналардың қатысуы, педагогикалық тәжірибелер.

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ОБУЧЕНИЕ ПОКОЛЕНИЯ АЛЬФА В УСЛОВИЯХ ЦИФРОВОЙ ТРАНСФОРМАЦИИ ОБРАЗОВАНИЯ

Аннотация

Цифровая трансформация образования требует переосмысления педагогических подходов с учётом особенностей поколения Альфа – детей, выросших в условиях постоянного взаимодействия с технологиями. Поколение Альфа, рождённое после 2010 года, с раннего детства погружено в цифровую среду, что приводит к высокой цифровой грамотности, сильной потребности в интерактивном и персонализированном обучении, а также более короткой концентрации внимания. Целью настоящего исследования является выявление того, как когнитивные, поведенческие и социально-эмоциональные характеристики этого поколения влияют на образовательные отношения в начальной школе. Научная новизна статьи заключается в том, что впервые на эмпирическом уровне проанализировано влияние цифровой природы поколения Альфа на взаимодействие между учителями, учениками и родителями, что позволяет восполнить пробел в отечественных исследованиях по данной проблематике.

В исследовании использован качественный дизайн. В выборку вошли 48 учителей, 60 родителей и 72 учащихся начальной школы в возрасте от 7 до 11 лет. Сбор данных осуществлялся с помощью анкетирования, полуструктурированных интервью и наблюдений за уроками. Результаты показали, что учащиеся ожидают интерактивности и персонализации обучения, что требует переосмысления роли учителя как фасилитатора и наставника в цифровой среде. Кроме того, было выявлено усиление вовлечённости родителей благодаря цифровым платформам, несмотря на их недостаточную цифровую подготовку.

Практическая значимость работы заключается в обосновании направлений адаптации образовательной среды: цифровая подготовка педагогов, программы социально-эмоционального развития и поддержка родителей. Особое внимание уделено необходимости сбалансировать онлайн- и офлайн-обучение, минимизируя риски цифрового переутомления. Перспективы будущих исследований связаны с проведением лонгитюдных и сравнительных работ для изучения долговременных эффектов цифрового обучения на учеников начальной школы.

Ключевые слова: поколение Альфа, цифровая трансформация, начальная школа, цифровая грамотность, персонализированное обучение, фасилитация, геймификация, родительская вовлечённость, педагогические практики.

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