Мониторинг и анализ профессиональных дефицитов педагогов в области психолого-педагогических компетенций, проявляющихся в условиях цифровой трансформации образования

Введение. Цифровая трансформация образовательного пространства повлекла за собой возникновение новой проблемной зоны, связанной с поиском решений, направленных на устранение имеющихся профессиональных дефицитов педагогов в области психолого-педагогических компетенций, проявляющихся в условиях цифровой трансформации образования.

Цель настоящей статьи — проведение мониторинга и анализ имеющихся профессиональных дефицитов педагогов в области психолого-педагогических компетенций, проявляющихся в условиях цифровой трансформации образования.

Материалы и методы. В опросе приняли участие 2451 учителя из 7 регионов Российской Федерации. В ходе опроса учитывались характеристики респондентов: место работы; пол; возраст; педагогический стаж.

Результаты исследования. Исследование показало, что присутствуют следующие профессиональные дефициты педагогов в области психолого-педагогических компетенций, проявляющихся в условиях цифровой трансформации образования: 25% опрошенных учителей демонстрируют низкий уровень развития способностей в области совершенствования педагогических стратегий для стимулирования самовыражения и творчества обучающихся в цифровой среде, обеспечения их безопасного поведения в сети Интернет; 51% респондентов осведомлены о психологических особенностях современных старшеклассников только на интуитивном уровне, а 9% не владеют знаниями в данной области. Потенциально проблемной зоной является способность педагогов организовывать эффективное взаимодействие и взаимопомощь учащихся, в том числе в развитии их цифровой компетенции.

Заключение. По итогам проведённого опроса педагогов даны следующие рекомендации: создание оптимальных условий труда учителей, способствующих повышению психолого-педагогических компетенций в условиях цифровизации образования; предоставление учителям широкого спектра методических материалов, позволяющих им совершенствовать педагогические стратегии для стимулирования самовыражения и творчества учащихся в цифровой среде; в рамках курсов повышения квалификации сосредоточение внимания педагогов не только на овладении цифровыми навыками, но и на методах, формах и средствах обеспечения интернет-безопасности школьников; реализация среди педагогических работников научно-методических и образовательных мероприятий, направленных на формирование представлений о психологических особенностях школьников на основании данных современных научных исследований; поощрение и мотивация не только начинающих, но и опытных педагогов в области самообразования по вопросам развития психолого-педагогических компетенций, связанных с применением в образовании цифровых технологий.

Ключевые слова: педагог, цифровая трансформация общего образования, цифровизация, профессиональные дефициты педагогов, психолого-педагогические компетенции

R. A. Galustov, I. V. Gerlach, M. N. Egizaryants, K. R. Kapieva, I. A. Tvelova

Monitoring and analysis of professional deficits of teachers in the field of psychological and pedagogical competencies, manifested in the conditions of digital transformation of education

Introduction. The digital transformation of the educational space has entailed the emergence of a new problem area associated with the search for solutions aimed at eliminating the existing professional deficits of teachers in the field of psychological and pedagogical competencies, manifested in the conditions of digital transformation of education.

The purpose of this article is to monitor and analyze the existing professional deficits of educational specialists in the field of psychological and pedagogical competencies, manifested in the situation of digital transformation of education.

Materials and methods. The survey involved 2,451 teachers from 7 regions of the Russian Federation. The survey took into account the characteristics of the respondents such as place of work; gender; age; teaching experience.

The results of the study. The study showed that there are the following professional deficits of teachers in the field of psychological and pedagogical competencies, manifested in the conditions of digital transformation of education: 25% of the surveyed teachers demonstrate a low level of development of abilities in the field of pedagogical strategies improvement to incite self-expression and creativity of students in a digital environment, ensuring their safe behavior on the Internet; 51% of respondents are aware of the psychological characteristics of modern high school students only on an intuitive level, and 9% do not have knowledge in this area. A potentially problematic area is the ability of teachers to organize effective interaction and mutual assistance of students, including in the development of their digital competence.

Conclusions. Based on the results of the survey of teachers, the following recommendations are given: to create optimal working conditions for teachers, to contribute to the improvement of psychological and pedagogical competencies in the conditions of digitalization of education; to provide educational specialists with a wide range of methodological materials ensuring the improvement of pedagogical strategies to stimulate digital self-expression and creativity of students; within the framework of advanced training courses, teachers should focus not only on mastering digital skills, but also on methods, forms and means of ensuring the Internet security of schoolchildren; to implement among educational specialists educational and scientific and methodological activities aimed at formation of the ideas about psychological characteristics of schoolchildren based on the data of modern scientific research; to encourage and motivate not only the beginners, but also the experienced teachers in the field of self-education on the development of psychological and pedagogical competencies related to the use of digital technologies in education.

Keywords: teacher, digital transformation of general education, digitalization, professional deficits of teachers, psychological and pedagogical competencies

For Reference:
Introduction

The ongoing technological breakthrough raises serious problems regarding the future systems of education and training, the search for relevant ways to solve the problem of pedagogical professionalism, the formation and growth of the psychological and pedagogical competence of teachers.

UNESCO's Global Initiative "The Future of Education", aimed at re-comprehension of the role of knowledge and education in shaping the future of humanity and the planet, draws attention to the fact that education is not limited to responding to changes in the world, it transforms the world. This initiative poses a question: “What can education become – and what can we become with its help?” [3]. Obviously, this is not only about education as a system or a result of mastering educational material. First of all, one is invited to think about who and how actualizes the educational process, to consider the training of modern teachers who should have the necessary competencies not only in subject matter but also in ethical, legal, managerial, communication, and other relevant areas. It is teachers who are tasked with creating such an educational environment, due to which graduates, having entered adulthood, will be able to “respond to emerging challenges and find non-standard solutions” [3].

The Conclusions on Effective Teacher Education of the European Union Council note that in a rapidly changing world, the role of teachers and the hopes laid on them are also changing as they face challenges related to new skill requirements, rapid technological development, and growing social and cultural diversity, as well as the requirement to meet more individual teaching and learning needs [17].

The 2021 Berlin Declaration on Education for Sustainable Development also highlights the importance of strengthening the capacity of educational specialists [16]. This idea is developed in the scientific papers of a number of Russian and foreign researchers, who believe that the professional training of teachers is important not only in the field of specialized knowledge and practical skills but also in the development of psychological and pedagogical competencies.

Thus, Symeonidis notes that “teachers can no longer be trained to be just instructors, passing on knowledge to their students, instead, they must use all their human potential in a dynamic process of response” to other subjects of the educational process [21, p. 8]. Kovacs draws attention to the fact that school practices are based on emotional relationships, which are often overlooked when introducing innovations. The strength of emotions is crucial, since learning is the behavior in relationships between different school subjects. The educator has a great influence on them and can make a difference, whether it has to do with the approach to the class, the cooperation with others, the relationship with the school leadership, or interaction with the students. Therefore, educational specialists in schools must have a clear understanding of their behavior. Teachers need to become more reflective; they must consider and question the success of their work and the reasons for this [19, pp. 99, 110].

Harju and Niemi, who studied the vocational training needs of teachers from four different countries: Finland, Great Britain, Portugal, and Belgium, draw attention to the
fact that the new situation requires strong professional competencies from teachers, and ensuring student success requires a new kind of teaching. A lot is studied by teachers in practice directly in the course of professional activities, since it is impossible to obtain all the necessary knowledge and skills within the framework of pedagogical education [18, p. 78]. At the same time, Croatian researchers Vlah et al. note that modern teachers must be experts in a wide range of competencies in an extremely complex environment, where every day they are required to make hundreds of important decisions [22, p. 143].

In Russian education, the professional competence of teaching staff is understood as a set of subject, methodological, psychological, pedagogical, and communicative competencies necessary to perform labor functions in the field of education, upbringing, and development [11].

Considering the essence of the psychological and pedagogical competence of a modern teacher, Ilyina and Loginova define it as an integral professional and personal characteristic of a teacher, which determines his/her readiness to solve professional problems in a changing professional environment [5, p. 204]. The key concepts of “competence” and “competency” should be separated. Competency is a specialist's knowledge, experience, and skills necessary for effective activity in a given subject area, and competence is a range of issues in which this specialist is well aware. Today, psychological and pedagogical competency is one of the fundamentals in the structure of the professional activity of a school teacher.

Gvildis, analyzing the content of the Federal project “Personnel for the Digital Economy of the Russian Federation” of the national program “Digital Economy of the Russian Federation”, notes that the goal of the project is to form a new personality of a teacher who is able to improve and is ready to solve the problems of professional activity [2].

Kolykhmatov draws attention to the fact that a modern teacher needs new professional competencies that define his/her digital culture. He or she must be proficient in current educational technologies and use them actively in the educational process. At the same time, the full-fledged integration of a modern Russian teacher into the educational system is currently hindered by a number of obvious professional deficiencies, including insufficient possession of digital skills, which include not only the competent use of information and communication technology (ICT) but also the ability to transfer this knowledge and skills to students [8, p. 92], ensuring their security, psychological comfort, and safety, the formation and development of the necessary personal qualities.

The same problem from the standpoint of training highly qualified personnel is considered by Sedov, speaking about the fact that at the moment the required competencies in the possession of digital technologies are not formulated unambiguously, which complicates the task for higher education institutions (including pedagogical ones), which have nothing to rely on in the formation of new educational programs [13].

Ilyina and Loginova, examining the formation of the psychological and pedagogical competence of young teachers, note that “the ability to "follow the child", according to his/her interest and needs, to work with everyone and at the same time, not to be afraid of unpredictable actions of students are the necessary professional skills of a modern teacher, components of psychological and pedagogical competency as an integral professional and personal characteristics of a teacher, which determines his or her readiness to solve professional problems in a changing professional environment” [5, p. 203].
The substantive aspect of psychological and pedagogical competence for an educational specialist is set by professional and educational standards. Therefore, the study is based on the analysis of the following regulatory sources:

- Order of the Ministry of Labor of Russia dated October 18, 2013 No. 544n (as amended on December 25, 2014) “On the Approval of the Professional Standard “Teacher (Pedagogical Activity in the Field of Preschool, Primary General, Basic General, Secondary General Education) (Educator, Educational Specialist)” [10];
- Federal State Educational Standard 44.03.01 “Pedagogical Education”, approved by the order of the Ministry of Education and Science of the Russian Federation dated February 22, 2018 No. 121 [16].

A comparative analysis of these documents shows that the psychological and pedagogical competencies necessary for orientation in the modern information space, the use of ICT in solving professional problems in the above documents are presented as follows.

Federal State Educational Standard of Higher Education in the field of training 44.03.01 “Pedagogical Education” includes such competencies as:
- GPC-6 – ability to use psychological and pedagogical technologies in professional activities, necessary for the individualization of training, development, upbringing, including students with special educational needs;
- GPC-9 – ability to understand the principles of work of modern information technologies and use them to solve the problems of professional activity, which in the modern educational situation should be interconnected and reinforce each other.

The following labor actions are listed in the professional standard of a teacher among others: the formation of skills related to ICT and the regulation of the behavior of students to ensure a safe educational environment; moreover, the list of necessary skills indicates that the teacher must possess the following ICT competencies: ICT competency, general pedagogical ICT competency, subject-pedagogical ICT competency (reflecting professional ICT competency of the corresponding field of human activity).

The full implementation of the above federal state standards presupposes not only the organizational and technological re-equipment of education at all levels but also cardinal changes in the professional positions of the teacher, requiring in-depth study. In this regard, Uvarov et al. consider it necessary to update qualitatively the existing practice of pedagogical research, turning them into a tool for scientific and methodological support and support for the digital transformation of education [15, p. 16].

The authors hereof believe that in the modern educational situation, the research related to the identification of professional deficits in teachers arising under the influence of digitalization at the junction of the application of psychological, pedagogical, and ICT competencies deserves special attention. Professional deficits are understood herein as the absence or insufficient development of professional competencies of teaching staff, which causes typical difficulties in the implementation of certain areas of teaching [12].

The above determined the theme of the research "Professional deficiencies of teachers in the field of psychological and pedagogical competencies, manifested in the digital transformation of education."

The object of the research is the professional deficits of teachers in the field of psychological and pedagogical competencies.
The subject of the research is the professional deficits of teachers in the field of psychological and pedagogical competencies, which are manifested in the context of the digital transformation of education.

The purpose of the research is to monitor and analyze the existing professional deficiencies of teachers in the field of psychological and pedagogical competencies, which are manifested in the context of the digital transformation of education.

Materials and methods

The study involved 2,451 people (teachers of the Russian language, mathematics, social studies) from educational institutions of 7 regions of the Russian Federation: Belgorod Region, Volgograd Region, Krasnodar Territory, Lipetsk Region, Rostov Region, Stavropol Territory, Chechen Republic.

In the course of the study, the authors used a set of theoretical, practical, and mathematical methods of scientific knowledge, such as a survey using closed-ended questions, registration, rating assessment, data generalization, mathematical and statistical data processing (ranking, calculation of percentages). The survey was conducted remotely in the form of self-diagnosis of professional deficits based on the reflection of professional activity. The questionnaire questions are published on the below websites:

- The questionnaire for social studies teachers https://clck.ru/ZLLqz;
- The questionnaire for teachers of mathematics https://clck.ru/ZLLXJ;
- The questionnaire for Russian language teachers https://clck.ru/ZLLno.

The questionnaires include several sections containing tasks and questions to identify various professional deficiencies of teachers in the terms of the digital transformation of lifelong teacher education. This article presents an analysis of the survey results in Part 1, Digital, psychological, pedagogical and communicative competencies of teachers in the context of digitalization: p. 3. Psychological and pedagogical competence.

To increase the reliability of the information obtained during the survey, the authors of the study took into account the following characteristics in organizing work with respondents: the constituent entity of the Russian Federation, in which the educational organization of the survey participants is located; place of work of survey participants; gender of survey participants; age of survey participants; teaching experience of survey participants; the subject taught by the survey participant; the volume of the survey participants' workload.

The relevance of the study is due to the fact that its results can be used to determine the professional deficits of teachers in the field of psychological and pedagogical competencies, which are manifested in the situation of digital transformation of education.

Results

The results obtained in the course of the survey are presented below.

1. Generalized characteristics of respondents – teachers of educational organizations.

The emergence of professional deficits of teachers in the field of psychological and pedagogical competencies, manifested in the digital transformation of general education, is
often associated with the existing labor and socio-cultural conditions in which teachers find themselves.

Therefore, in order to assess the results of the study, it is important to know where, in a city or a rural settlement, the place of work of the survey participants is located. Sixty-two percent of survey participants were teachers in rural schools, and 38% – in urban schools. Of these, 94% of survey participants were women, and 6% were men.

The age of teachers has a direct impact on their perception of the process of digitalization of education, on which the formation of the psychological and pedagogical competencies of teachers depends. Twenty-eight percent of survey participants were representatives of the age group from 41 to 50 years old, 26% were young people aged 20 to 30. Twenty-three percent were representatives of the older age group: from 51 to 60. Seventeen percent were middle-aged people from 31 to 40 years old. Six percent were representatives of the age category over 61.

A significant factor influencing the development of the psychological and pedagogical competencies of teachers is the pedagogical experience of the survey participants. The results obtained were ranked for the purposes of the study. Thirty-six percent of respondents had more than 25 years of experience. The second place in terms of the number was occupied by the young teachers, whose work experience was up to 3 years (20%). The third place was occupied by the teachers with experience from 20 to 25 years (13%), the fourth – by the teachers with experience of 5 to 9 years (10%), the fifth – by the teachers with experience of 10 to 14 years (9%), the sixth – by the teachers with experience from 15 to 19 years (8%), the seventh – by the teachers with experience from 3 to 4 years (4%).

The information about the volume of the study load of the survey participants is highly important for the assessment of the results. Fifty-nine percent of survey participants worked at more than 1 rate, 33% worked at 1 rate, 8% worked less than one rate.

2. Psychological and pedagogical competency of teachers in the context of digital transformation of education

The teacher's ability to reflect, discuss, remake and update pedagogical strategies, to stimulate digital self-expression and creativity of students is a significant psychological and pedagogical competence that is formed among teachers in the situation of digitalization of education. Analysis of the survey results shows that 28% of respondents considered this kind of work important, but 50% of them noted that it took a lot of time and effort. Fifteen percent did it occasionally, when they remembered about it, 6% did not consider it necessary to pay attention to this issue, 4% indicated that they could not perform this activity.

In the context of the digital transformation of education, one of the leading responsibilities of an educational specialist is teaching students to apply the rules and norms of safe and responsible behavior in the online environment. Sixty-eight percent considered it important. Nineteen percent of the respondents answered that they did it, but spent a lot of time and effort, 10% solved this professional problem occasionally, from time to time, 3% of the respondents did not do it, including because they did not consider such work necessary.

The teacher's ability to raise awareness of students that digital technologies can both positively and negatively affect health and well-being, for example, encouraging them to define behavior (their own or someone else's) that can please or grieve, as professional psychological and pedagogical competency, is an integral part of the educational work of
a modern teacher. Seventy-six percent of the teachers surveyed considered it important, 15% noted that they spent a lot of time and energy on it. Seven percent of the respondents indicated that they did this educational work occasionally, only when they remembered about it. Two percent of the teachers surveyed did not do this, including because they did not consider it necessary.

The teacher's ability to help students understand the advantages and disadvantages of the openness of the Internet as the implementation of concern for the safety of children, including information security, is crucial. Analysis of the data obtained makes it possible to conclude that 79% of respondents did this, because considered it important. Thirteen percent of the teachers surveyed noted that they spent a lot of time and energy on this. Six percent of the respondents indicated that they carried out this educational activity only occasionally, when they remembered about it. Two percent did not engage in this professional activity, also because they do not consider it necessary.

The manifestation of the teacher's ability to offer students effective measures to limit or counteract the inappropriate behavior of the students themselves or their peers can serve as a kind of indicator of the formation of psychological and pedagogical competencies. As the results of the survey show, 70% of the respondents did this, because considered it important. Twenty percent noted that they had to spend a lot of time and effort on this. Seven percent suggested such measures from time to time when they remembered about it, and 3% did not engage in this educational work, also because they did not consider it necessary.

The authors hereof believe that the teacher's ability to develop strategies for preventing, detecting, and responding to digital behavior that negatively affects the health and well-being of students (for example, cyberbullying) is one of the central psychological and pedagogical competencies of a modern teacher. Forty-six percent of the teachers surveyed worked with...
the above pedagogical problem, considering it important. Twenty-eight percent agreed with them, but noted that they spent a lot of time and energy on it. Eleven percent noted that they dealt with this problem occasionally, when they remembered about it, and 15% did not do it, also because they did not consider it necessary. The results are shown in Fig. 1.

The teacher’s willingness to help students understand the risks and threats of the digital environment (identity theft, fraud, stalking, phishing) and offer them ways to respond appropriately is an important psychological and pedagogical competence. It is associated with the formation of students’ ideas about the digital security of personal data. Seventy-five percent of the teachers surveyed did this because they considered it important. Fourteen percent of respondents indicated that they were engaged in this professional activity, but it took a lot of time and effort. Seven percent did it occasionally, when they remembered about it, and 4% did not do it, also because they did not consider it necessary. The data obtained are presented in Fig. 2.

**Figure 2** Teacher’s readiness to promote students’ understanding of the risks and threats of the digital environment

The teacher’s ability to organize effective interaction and mutual assistance in students, including in the development of their digital competency, is an important component of the teacher’s educational work, contributing to the creation of a favorable psychological climate in the children’s collective. Sixty-four percent of survey participants considered it important to encourage students to help each other develop their digital competencies. Six percent did it occasionally when they remembered about it. Twenty-seven percent of respondents believed that students coped with this task on their own, and 3% did not do it, including because they did not consider it necessary.

Knowledge of the psychological characteristics of modern high school students is an integral basis for the development of the psychological and pedagogical competencies of teachers. Answering the question on their awareness of this issue, 51% of the teachers surveyed, which is the majority of the respondents, gave the answer “yes, I work with them”. Forty percent of survey participants answered positively and indicated that they were trying to monitor scientific research in this area. Eight percent chose the option “hard to say, the children are not the same they used to be”, 1% noted that they did not know the
psychological characteristics of modern high school students and did not understand them, indicating that the main thing is to know one’s subject well.

![Figure 3](image1.png)

**Figure 3** Awareness of respondents of the psychological characteristics of modern high school students

![Figure 4](image2.png)

**Figure 4** ICT use by respondents when carrying out extracurricular activities

In modern conditions, teachers are provided with a wide range of ICT during extracurricular activities. Fifty percent of the interviewed teachers sometimes organized and conducted extracurricular activities using ICT. Forty-seven percent of respondents did it all the time, and 3% of teachers did not see the need to use ICT for extracurricular activities.

**Discussion**

The study showed that most of the survey participants were female teachers of rural schools. Most of them were representatives of the age group of 41–50 years old, as well as young people aged 20 to 30 years. A significant number of respondents were representatives of the older age group: from 51 to 60 years old. It is worth noting that while conducting similar studies, Sarfo et al. and obtained ambiguous and even somewhat contradictory
results, which do not allow building a direct relationship between the age, gender, and computer self-efficacy of teachers in public schools [20].

The majority of respondents had over 25 years of experience, the second place in terms of the number was occupied by young teachers with up to 3 years of experience.

Most of the survey participants worked at more than 1 rate. The workload of teachers affects the decrease in motivation to improve their psychological and pedagogical competencies, and, therefore, is a significant factor in the formation of professional deficits in this area, which are manifested in the context of the digital transformation of lifelong pedagogical education.

The majority of respondents noted that the need to reflect, discuss, redesign, and update pedagogical strategies to stimulate digital expression and creativity of students took a lot of their energy and time, and 10% of respondents did not do it at all.

Most of the respondents considered it important to teach students to apply the rules and norms of safe and responsible behavior in the online environment, but 13% of respondents solved this professional problem only rarely, when they remembered about it, or did not do it at all. The relevance of this competence is confirmed by the results of a study conducted by the Internet Development Foundation together with the Moscow Institute of Psychoanalysis as part of a comprehensive program for the prevention of destructive behavior on the Internet among adolescents and young people “We are responsible for the digital world” [9]. The research materials indicate that the active use of the Internet significantly changes social and cultural practices, primarily among the most active users of digital technologies – adolescents and young people. The Internet is becoming a space not only of opportunities but also of risks, including the risks of destructive and self-destructive behavior. The high level of digitalization, as well as age-specific psychological characteristics, make adolescents and young people the most vulnerable to the above risks.

Most of the teachers surveyed considered it important to raise awareness among students that digital technologies can both positively and negatively affect health and well-being, for example, by encouraging them to define behaviors that can please or upset, but 9% solved this educational problem occasionally, when they remember about it or did not do it at all.

Most of the respondents considered it important to help students understand the advantages and disadvantages of the openness of the Internet, but 8% solved this educational task only occasionally or did not do it at all.

Most of the respondents considered it important to offer students effective measures to limit or counteract the inappropriate behavior of schoolchildren themselves or their peers, while a significant number noted that they had to spend a lot of time and energy on this, and 10% solved this educational task only occasionally or did not do it at all. The relevance of this competence of a teacher is confirmed by the results of research by Russian and foreign scientists. So, Kazdanyan and Jaladian, analyzing the deviant behavior of high school students in Yerevan schools, note a wide range of reasons that require teachers to control and help schoolchildren, to provide effective psychological and pedagogical support. Among them are inadequate self-esteem and self-comparison, an excessively high or low level of claims and motivation, borderline states, excessive anxiety, tension, frustration, etc. [7, pp. 288-289].
The majority of teachers surveyed believed it is important to develop strategies to prevent, detect, and respond to digital behaviors that negatively affect the health and well-being of students (for example, cyberbullying), but a significant number said that they had to spend a lot of time and energy on this, and 26% solved this educational problem only occasionally or did not do it at all. It was not by chance that the authors included this question in the questionnaire. Its relevance stems from the fact that paragraph 5.34 of the 2019 UNESCO Education Commission Report draws attention to the importance of creating a safe, respectful, and inclusive school environment and emphasizes that preventing and combating school violence and harassment, including cyberbullying, should be pursued by all means, including the global mobilization of all participants [4].

Most of the teachers surveyed considered it important to help students understand the risks and threats of the digital environment and offer them ways to adequately respond, but a significant number noted that they had to spend a lot of time and effort on this, and 11% solved this educational task only occasionally or did not do it at all. The relevance of studying the formation of this competency among teachers is also confirmed by the results of research conducted by the Internet Development Fund. They show that a third of Russian adolescents are at risk of inappropriate storage and dissemination of personal data and may suffer from threats related to personal information; therefore, teaching children and adolescents to protect personal data in the digital world should become one of the priorities of parents and schools in the education of the culture of using the Internet [6].

Most survey participants considered it important to encourage students to help each other in developing their digital competence, but 36% did it only occasionally, when they remembered or did not do it at all, including because they did not consider it necessary.

Most of the teachers surveyed believed that they knew the psychological characteristics of modern high school students because they worked with them. Forty percent of survey participants indicated that they were trying to keep track of modern scientific research in this area, and 9% found it difficult to answer, indicating that the main thing is to know one’s subject well. The relevance of this competence correlates with the results of the research conducted by Bezenkova et al., who note that teachers often show formalized communication, inability to build trusting relationships with students, unwillingness and lack of readiness to accept high school students, taking into account their age-psychological characteristics. These reasons do not allow teachers to see the difficult situations in which students find themselves, to assess the degree of their importance to them, and to provide support in time. In turn, this creates an excessive distance between students and teachers, making the educational process as a whole less productive [1, pp. 179-180].

Most of the interviewed teachers sometimes or constantly organized and conducted extracurricular activities using ICT, only 3% of teachers did not see the need to use this educational resource.

**Conclusion**

Based on the results of the study, the following professional deficits of teachers in the field of psychological and pedagogical competencies, which are manifested in the context of the digital transformation of education, were identified:
insufficiently developed abilities of teachers in the field of improving pedagogical strategies to incite digital self-expression and creativity of students, to ensure their safe behavior on the Internet;

insufficiently high level of awareness of teachers of the psychological characteristics of modern high school students, based not on the knowledge of the results of modern scientific research in this area, but on the confidence that they “know everything about it”, because they work with this age group.

The formation of such relevant competence as the teacher's ability to organize effective interaction and mutual assistance of students, including in the development of their digital competence, also causes some concern.

In connection with the above, the authors hereof have formulated the following recommendations:

• to create optimal working conditions for teachers, contributing to the improvement of psychological and pedagogical competencies in the context of digitalization of education;

• to provide teachers with a wide range of teaching materials that allow them to improve pedagogical strategies to incite student self-expression and creativity in the digital environment;

• within the framework of advanced training courses, teachers’ attention should be focused not only on mastering digital skills but also on the methods, forms, and means of their application to improve the quality of educational work, including to ensure the Internet safety of schoolchildren;

• to implement scientific, methodological, and educational activities among educational specialists aimed at forming ideas about the psychological characteristics of schoolchildren on the basis of data from modern scientific research;

• to encourage and motivate not only beginners but also experienced teachers in the field of self-education on the development of psychological and pedagogical competencies associated with the use of digital technologies in education.

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**Information about the authors**

**Robert A. Galustov**  
(Armavir, Russia)  
Professor, Dr. Sci. (Educ.), Professor of the Department of Theory, History of Pedagogy and Educational Practice  
Armavir State Pedagogical University  
E-mail: rgalustov@mail.ru  
ORCID ID: 0000-0002-1325-4611  
Scopus Author ID: 57188670757  
ResearcherID: T-4218-2018

**Irina V. Gerlach**  
(Russia, Armavir)  
Associate Professor, Cand. Sci. (Educ.), Associate Professor of the Department of Theory, History of Pedagogy and Educational Practice, Researcher at the Research Institute for the Development of Education  
Armavir State Pedagogical University  
E-mail: irina_gerlah@mail.ru  
ORCID ID: 0000-0002-7123-9778  
ResearcherID: AAX-1326-2021

**Marina N. Egizaryants**  
(Russia, Armavir)  
Associate Professor, Cand. Sci. (Psychol.), Associate Professor of the Department of Social Pedagogy and Psychology  
Armavir State Pedagogical University  
E-mail: marina-egizaryanc@mail.ru  
ORCID ID: 0000-0002-8882-5685  
ResearcherID: ABC-9686-2021

**Knarik R. Kapieva**  
(Russia, Armavir)  
Associate Professor, Cand. Sci. (Psychol.), Associate Professor of the Department of Social Pedagogy and Psychology  
Armavir State Pedagogical University  
E-mail: brilliananka09@mail.ru  
ORCID ID: 0000-0002-3819-3130

**Irina A. Tvelova**  
(Russia, Armavir)  
Associate Professor, Cand. Sci. (Psychol.), Associate Professor of the Department of Social Pedagogy and Psychology, Researcher at the Research Institute for the Development of Education  
Armavir State Pedagogical University  
E-mail: tvelova.i@yandex.ru  
ORCID ID: 0000-0002-1723-9048