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**ABSTRACT**

for the degree of Doctor of Philosophy

**PSYCHO-PEDAGOGICAL ISSUES OF THE IMPACT OF  
INNOVATIVE TECHNOLOGIES ON STUDENTS'  
EDUCATIONAL ACTIVITY**

**Speciality:** 6104.01 – Pedagogical psychology

**Field of science:** Psychology

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**B A K U – 2024**

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Azərbaycan Respublikasının Prezidenti yanında Ali Attestasiya Komissiyasının Bakı Dövlət Universitetinin nəzdində fəaliyyət göstərən FD 2.43 Dissertasiya şurası

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## INTRODUCTION

**Relevance and level of scientific development of research topic.** In modern times, the positions that people take in the educational space should be fully compatible with the general development line of society and the demands of globalization processes. Innovative development is the main line here. In order to ensure its progressive development, the humanity embarking on the journey of progress must always innovate in education, in the preparation of new generations for social life, and act in accordance with real requirements and conditions. For this, the philosophical-methodological foundations of the development of the modern society, first of all the education system, should be deeply studied, and the social-psychological characteristics of the development of the human personality should be determined. On this foundation only, a continuously renewing educational process can be ensured.

A number of important steps have been taken to implement innovative education in the educational system of Azerbaijan. It is known that the State Strategy for the development of education in the Republic of Azerbaijan was approved by the Decree of the President of the Republic of Azerbaijan Mr. Ilham Aliyev dated October 24, 2013.

Therefore, the President of the Republic of Azerbaijan I. Aliyev noted that "education is the future of every government. We must make sure that all children are educated and knowledgeable, that they can build a wonderful life and emerge as valuable citizens of our country<sup>1</sup>.

An important issue to be considered here is the psychopedagogical issues of the impact of innovative technologies on the student's mental well-being. It is known that the process of socialization continues at all stages of human life. However, individual subjectivity in childhood and youth possesses its own unique character. And one of the conditions for the correct and efficient

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<sup>1</sup>Ilham Aliyev's speech at the opening of the new building of secondary school No. 311 in Baku // <https://president.az/articles/21084/print>

establishment of teacher-student relations is the implementation of programs and projects grounded in diverse innovative approaches.

Every year in Azerbaijan, new rules and norms are introduced in education, in the management of professional pedagogical collectives, and organizational cultural norms are ensured. However, educational support for innovative training in places is not yet sufficient. Local government bodies rarely implement scientific projects and programs that meet the requirements of innovative education. In addition, the complex of innovative technologies is not fully developed in schools, here, the supervision, formation of knowledge, skills and habits of students as a result of educational activities aimed at the personality development of teachers and students are poorly studied and evaluated.

The application of innovative technologies is not systematic, new pedagogical tools, projects and technologies obtained here are applied by a limited number of teachers. The integration of training, upbringing and assessment, which can affect the student's mental well-being and its formation as a personality in accordance with the requirements of society, is not yet implemented, it is not reconciled with the goals, content and technologies of the students' education.

In Azerbaijani schools, the results of educational activities are not sufficiently evaluated from a social-psychological and social-pedagogical point of view, the activity and independence of students, cognitive and emotional-volitional areas are not analyzed and studied in depth, and as a result, fertile emotional-psychological conditions are not achieved. Motivation to an achievement is weak among students; there are difficulties in matters of formed purposefulness, free planning and organization of personal educational activities, the ability to systematize and analyze experience is at a low level. As a result, innovative activity almost does not help to solve the problems of the educational institution.

It should be added that the results of the victorious 44-day Second Karabakh War of 2020 have a positive effect on the studied area. Currently, the creation of new, innovative educational

institutions in the liberated territories is being implemented in accordance with the "Great Return" program<sup>2</sup>.

The psycho-pedagogical issues of the impact of innovative technologies on the student psyche were analyzed in several directions. A group of studies is related to the analysis of purely mental characteristics of children and students. Sh.Y. Abdullayeva, T.Kh. Aghajani, E.B. Beylarov, R.V. Jabbarov, G.S. Kazimova, K.R. Aliyeva, R.I. Aliyev, S.Y. Aliyeva, L.M. Aliyeva, G.G. Huseynova, R.H. Kadirova, F.B. Guksi, I.M. Mammadov, M.A. Mammadova, V.Q. Naghiyeva, C.Q. Verdiyeva, M.M. Valiyeva, S.E. Khalilova, Sh.I. Khankishiyeva and others<sup>3</sup> conducted their research in this field

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<sup>2</sup> The goal of the state is to fully implement the "Great Return" program // <http://idp.gov.az/az/news/950>

<sup>3</sup> Abdullayeva Sh.Y. Emotional characteristics of the interaction of young schoolchildren with their peers: cand. of psychol. sciences ... dis. abstract: Baku, 2004. - 19 pp.; Aghajani T.X. The role of game activity in the mental development of young children: Doctor of Philosophy in Psychology. ... dis. abstract: Baku, 2014. - 20 pp.; Baylarov E.B. Psychological problems of the development of creative potential of children with special talents: doc. ... dis. abstract: Baku, 2013. - 37 pp.; Jabbarov R.V. Psychological analysis of the process of self-awareness in teenagers: cand. of psychol. sciences... dis. abstract: Baku, 2004. - 24 pp.; Kazimova G.S. The role of mutual relations in the adaptation of young schoolchildren to the team: Doctor of Philosophy in Psychology. ... dis. abstract: Baku, 2014. - 22 pp.; Aliyev R.I. Ethno-psychological foundations of student personality formation: cand. of psychol. sciences ... dis. abstract: Baku, 2004. - 58 pp.; Aliyev R.I. Ethno-psychological foundations of student personality formation: cand. of psychol. sciences... dis. abstract: Baku, 2004. - 58 pp.; Aliyeva S.Y. The role of parent-child relations in the formation of the personality of preschool children: cand. of psychol. science... dis. abstract: Baku, 2003. - 24 pp.; Aliyeva L. M. The role of parents and educators in the mental development of preschool children: Ph.D. in psychology. ... dis. abstract: Baku, 2014. - 22 pp.; Gadirova R. Experimental analysis of mutual relations between in-group favoritism and denigration of out-group // journal "Psychology", Baku, 2007, No. 2, pp. 71-86; Guseynova, G.G. Ethnopsychological features of social perception in youth groups: abstract of dissertation. ... cand. of psychol. sciences: Baku, 1995. - 31 pp.; Guksi F.B. Comparative socio-psychological analysis of the behavior of schoolchildren using the Internet: Tehran-Baku: Doctor of Philosophy in Psychology. ... dis. abstract: Baku, 2016. - 22 pp.; Mamedov I.A. System of work on psychological service in secondary school: abstract dis. ... Doctor of Psychology: Baku, 2005. - 62 p.; Mammadova M. A. Psychocorrection of deficits in the

in Azerbaijan. Children's psychology in various forms, cognitive activity, emotional state, intergroup relations during school and extra-school time were analyzed, and these issues were discussed in terms of teacher-pupil, child-parent relations. Undoubtedly, the scientific-theoretical and applied basis of all these studies played a supporting role for our research.

The problem that is investigated in M.M. Valiyeva's research is close to our research in a certain aspect (psychological characteristics of the formation of communicative and didactic abilities in teachers). The development of communicative and didactic abilities can help the innovative activity of the teacher<sup>4</sup>.

Other group of researchers, including H.I. Aliyeva, F.I. Aliyeva, S.H. Alizade, C.B. Kuliyeva, L.F. Mursalbayova, N.T. Rzayeva and others studied the analysis of social-psychological problems of school children and young people on the basis of solving many pedagogical-psychological issues<sup>5</sup>.

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intellectual development of preschool children: Doctor of Philosophy in Psychology. ... dis. abstract: Baku, 2013. - 18 pp.; Khalilova S.E. The role of interactions in learning materials in primary classes: Doctor of Philosophy in Psychology. ... dis. abstract: Baku, 2012. - 18 pp.; Khankishiyeva Sh.I. Psychological characteristics of the development of cognitive activity in adolescents: Doctor of Philosophy in Psychology. ... dis. abstract: Baku, 2014. - 22 pp. and so on.

<sup>4</sup> Valiyeva M.M. Psychological characteristics of the formation of communicative and didactic abilities in teachers: Doctor of Philosophy in Psychology. ... dis. abstract: Baku, 2014. - 22 pp.

<sup>5</sup> Aliyeva H.I. The role of teacher-student relations in the formation of adolescent personality: cand. of psychol. science ... dis. abstract: Baku, 2008. - 18 p.; Aliyeva F.I. Social-psychological aspects of the impact of the perception of fiction on personality development: Doctor of Philosophy in Psychology. ... dis. abstract: Baku, 2011. - 22 p.; Alizadeh S. H. Socio-psychological issues of the teacher's leadership style in school: Doctor of Philosophy in Psychology. ... dis. abstract: Baku, 2014. - 22 p.; Kuliyeva C. B. The Influence of the School Director's Management Style on the Formation of the Psychological Environment within the Collective: cand. of psychol. science... dis. abstract: Baku, 2008. - 21 p.; Mursalbekova L.V. Psychophysiological features of cognitive activity of students in the conditions of emotional stress: author's abstract. ... cand. of psychol. science: Baku, 2008. - 22 p.; Rzayeva N. T. Psychological concept of Azerbaijani enlightenment: cand. of psychol. science. ... dis. abstract: Baku, 2004. - 28 p.

Another research direction is the investigation of general psychological issues. A.T. Bakhshaliyev, A.A. Alizade, A.S. Bayramov, B.H. Aliyev, R.R. Javadova, M.A. Hasanova, H.K. Mammadov, I.A. Mammadov, S.M. Majidova, Z.A. Rzayev, S.I. Seyidov and other researchers<sup>6</sup> have helped to form the methodological and conceptual foundations of our research by investigating many areas of psychological problems.

The foreign experts' research on this field is almost quite extensive. First of all, in the problem of application of innovative technologies in school management, the names of the researches as N.B. Balobanova, V.P. Kvasha, O.B. Krushelnitskaya, V.A. Orlov, M.E. Sachkova, G.K. Rahimbeyova, V.V. Utyomov, J. Drewer, S. Carey, S. Keyes, S. Friedman, K. Clivington, R. Peterson, R. J. Sternberg, E.L. Grigorenko, S. Barros, F. Marcos, A.J. Gallard, J.F. Gallaxer, Z. Yong, A. Kenneth, F. Sabzian, A.P. Gilakjani, J. Bauer, J. Kenton, etc<sup>7</sup>. should be mentioned. The facts and conclusions

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<sup>6</sup> Bayramov A.S., Alizade A.A. Social psychology. Baku: Qapp, Polygraph Corporation, 2003, 365 pp.; Bakhshaliyev A.T. Formation, development and modern state of psychological thought in Azerbaijan. Baku: Nurlan, 2007, 528 p.; Alizade A.A. Psychological problems of the modern Azerbaijani school. Baku: Ozan, 1998, 368 p. ; Gadyrov A.A. Age psychology. Baku: Maarif, 2002. - 386 p. ; Mammadov H. K. Management psychology as the basis of effective activity in organizations: cand. of psychol. science ... dis. abstract: Baku, 2004. - 30 p.; Mamedov I.M. Psychological features of the formation of the personality of hard-educated teenagers in modern conditions: abstract of the thesis. ... PhD in Psychology: Baku, 2012. - 18 p.; Medzhidova S.M. Social-psychological types "69": Doctor of Philosophy in Psychology. ... dis. abstract: Baku, 2007. - 45 p.; Mursalbekova L.V. Psychophysiological features of the cognitive activity of students in the conditions of emotional stress: author's abstract. ... cand. of psychol. science: Baku, 2008. - 22 p.; Rzaev Z.A. Interpersonal relations in organizations in the aspect of management psychology: abstract of the dissertation. ... cand. of psychol. science: Baku, 2001. - 23 p.; Seidov S.I. Social psychology of creativity: Doctor of Philosophy in Psychology. ... dis. abstract: Baku, 1995. - 53 c.

<sup>7</sup> Balobanova N.V. the impact of educational environment on teenagers' intellectual and personal development. Dissertation work of Doctor of Pedagogical Sciences. Krasnodar, 2002.; Kvasha V. P. Management of innovative processes in education. Dissertation work of Doctor of Pedagogical Sciences. M.: 1994; Krushelnitskaya O.B., Orlov V.A., Sachkova M.E. Social psychology of education as a branch of

obtained by them in this field have fundamentally influenced the choice of our research direction and methods.

Researchers<sup>8</sup> such as M.V. Gamezo, L.A. Matveyeva, E.A. Petrova, S.L. Rubinstein, M.S. Tkachova, T.V. Gabay, L.S. Vygotsky, who investigated the methodological and theoretical aspects of general psychological and pedagogical problems, should be mentioned. The psychological and pedagogical knowledge and facts formed in this field have helped us in the general methodological structure of the dissertation work and in working on the issues.

However, in the pedagogical experience of the general and vocational education system, scientific work has not been carried out in the direction of innovations, innovative technologies, their impact

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scientific knowledge [Electronic resource] // Psychological science and education psyedu.ru. 2013. No. 2. pp. 1–14. URL: <http://psyjournals.ru/>; Raimbekova G. K. Modern innovative technologies in school education [Text] // Problems and perspectives of the development of education: materials VIII International scientific conference (Krasnodar, February 2016). — Krasnodar: Novatsiya, 2016. — pp. 179-183; Druer J. Schools for thought: A science of learning in the classroom. - Cambridge, MA: MIT Press; Carey S. Conceptual change in childhood. Cambridge. MA: MIT Press, 1985; Case R. Intellectual development: Birth to adulthood. N.Y.: Academic Press, 1985; Friedman S., Klivington K., Peterson R. The brain, cognition and education.-Orlando, Fl: Academic Press; Siegler R. Mechanisms of cognitive growth: Variation and selection// Mechanisms of cognitive development/Ed. R.J. Sternberg. NV.,1984; Sternberg, R. J., & Grigorenko, E. L. (2000). Teaching for successful intelligence. Arlington Heights, IL: Skylight Training and Publishing Inc.; Fouzieh Sabzian, Abbas Pourhosein Gilakjani. Teachers' Attitudes about Computer Technology Training, Professional Development, Integration, Experience, Anxiety, and Literacy in English Language Teaching and Learning // International Journal of Applied Science and Technology, Vol. 3 No. 1; January 2013, pp. 67-75; Bauer, J., & Kenton, J. (2005). Toward technology integration in the schools: Why it isn't happening. Journal of Technology and Teacher Education, 13(4), 519-546.

<sup>8</sup> Gamezo M.V., Petrova E.A., Orlova L.M. Developmental and educational psychology. – M.: 2003; Matveeva L.V., Anikeeva T.Ya., Mochalova Yu.V., Makalatiya A.G. Preschool and primary school aged children perception of images of heroes of domestic and foreign cartoons. // Vestnik of Moscow University. N 14. Psychology. - 2019. - No. 3 - pp. 105-123; Sergei Leonidovich Rubinstein. Essays. Memories. Materials. To the 100th anniversary of Ed. B. F. Lomov's birth. Moscow: Nauka, 1989; Vygotsky L. S. Pedagogical psychology. – M., 1982.



on the mental well-being of children, and the solution of a large number of psychological and pedagogical issues arising here. In the education system of Azerbaijan, quite difficult problems have been formed at the teacher-student, student-parent and other levels, which are waiting for their solution, and we will try to contribute to their solution in this dissertation work.

**The research objective** is innovative technologies, and the **subject of the research** is pedagogical-psychological issues of the impact of innovative technologies on the psyche of the student.

**The aim and tasks of the study** is to investigate the pedagogical and psychological issues of the impact of innovative technologies on the mental well-being of students.

The following **tasks** arise from this goal:

- to determine the content and essence of basic concepts, to examine their conceptual and methodological importance for the dissertation topic;

- to analyze the fields of activity, character, characteristics of the participants of the Azerbaijani education system in terms of innovation, the main development directions set by the state, and to make the necessary recommendations;

- examination of world experience in considering psychological factors in the application of innovative technologies, drawing comparisons with the realities in Azerbaijan

- studying the role of the teacher's personality in the application of innovative technology and obtaining opportunities through professional development;

- experimental study of the psychological aspects of the application of innovative technologies in primary, secondary and high school and generalization of the results;

- investigation of issues affecting the application of innovative methods of the process of subject relations in teaching.

**The research methods.** General scientific methods of modern psychology, pedagogy, and methods and principles formed at the intersection of social and humanitarian sciences as a whole. This includes:

- system approach and analysis;

- the main ideas and principles of child and age psychology, the general propositions and ideas put forward so far in connection with the problem we are studying in pedagogical psychology, methodological works and recommendations related to the study of child psychology;

- the organization of educational work based on the approved development strategy in the education system of Azerbaijan and the characteristics of management and development arising from it.

As specific research methods, we have applied to the methods developed by foreign scientists and have already been approved.

### **The hypothesis of the study:**

The impact of innovative technologies on the student's mental well-being is contingent upon various factors, encompassing the implementation of active teaching methods, the cultivation of a creative educational environment, and the establishment of an effective feedback mechanism within the educational process.

### **The Key Assertions Defended:**

1.The influence of novel innovative teaching technologies is intricate, and affects not only the areas where experimental influence is systematically implemented, but also other structures of the student's personality that are not directly related to learning.

2.The implementation of new teaching technologies that fosters methodical interdisciplinary relations significantly contributes to the enhancement of students' intellectual capabilities.

3.The mental operations of generalization, crucial for the formation of theoretical and scientific concepts, are most profoundly influenced by the educational technology of coordinated training.

4.Proficiency in advanced pedagogical technologies and their integration into education is pivotal in ensuring that students can acquire more knowledge and skills. It is crucial to underscore the significance of motivation in this context.

**The Scientific Novelty of Research.** This study, which reflects the realities of Azerbaijan and is related to innovative

technologies in the science of pedagogical psychology, is the first in scientific practice. From this point of view, the results obtained here, the proposed recommendations constitute the scientific novelty of the dissertation topic.

1. Teaching is based on innovative methods, the formation of the collective as a social group, where the harmonious development of personal and collective goals is successfully realized, the process of motivation of activity is accelerated. The personal motivation of each individual moves towards some kind of common goal, forms unity with it. Based on this, the collective joins the activity more heartily, develops its creative potential.

2. The modern methodologies based on ICT and other achievements of science are rapidly finding their place in the activities of modern school staff. Their application fundamentally affects the cognitive development, motivation, and general activity of the students. The study showed that methodical approaches based on a democratic style increase children's interest in lessons, make them more active, proactive and visionary. On the other hand, a demanding and experienced teacher can achieve stronger discipline and responsibility based on traditional methods. At the same time, new technologies make the teaching process more flexible and efficient, and regulate teacher-student relations according to the requirements of the principles of working and friendship.

3. The problems of the psychology of thought in terms of the pedagogical effect of children of primary school age have been investigated. According to the results of research on different types of memory and the ability to make mental conclusions, the use of traditional methods by teachers, as well as the use of socio-psychological characteristics of the teacher's personality, has an important effect on the formation of certain characteristics of the child's personality. At the same time, the importance of the development of children's creative imagination and social activity in the social and school environment is important for the formation of necessary knowledge abilities in the future.

4. On the example of different schools, we tried to analyze the attitude of students to training and upbringing, their situation in the field of self-evaluation and motivation as a result of the innovative methods used by the teacher. The more the teacher-student communication in the educational process is established on a broad basis and takes into account the individual characteristics of each student, the more effective the result will be.

5. In both urban and regional settings, the working styles of students and teachers, the established modes of communication, and the chosen methodical approaches and strategies complement each other. The age, stage of life, character, temperament, volitional-emotional characteristics of the students in the class are taken into account by the teacher and used during the application of the technologies used. The teacher's age, experience, socio-psychological qualities and professional qualities create the basis for the higher professional use of the students' psychological individual qualities in the classroom, and help the students' self-confidence to remain in the average, i.e. normal limits.

**The theoretical value of the study.** The educational system, which ensures the development of society, intergenerational integration, and the inheritance of cultural transmission, must be constantly improved, and must be powerful in the education of a new person. The educational system, which plays an important role in preparing the young generation for life, should be based on the application of new, progressive, innovative technologies. In addition to the standard of living, the development of scientific and industrial fields, the efficiency and high quality of teaching in education is also very important. The teaching-learning characteristics of each period, along with many factors, the psycho-somatic condition affecting the moral-psychological condition of educators and students is related to their physical health, heredity, and the social environment in which they grew up.

One of the important tasks facing the education system of the independent Republic of Azerbaijan is bringing up of a comprehensively developed, broad-minded personality who can build his life path on acquired knowledge and skills. The mechanism of

acquiring knowledge and turning it into skills is quite complex. A specific subject is taught by a specific teacher, and there is a specific student personality who assimilates that information. Because all three parties are historically volatile, there are new issues in the education system race. Representatives of specific fields such as science and mechanics, pedagogy and psychology take part in solving these issues.

Education reforms in Azerbaijan are carried out consistently. As a result of these, all areas of activity implemented in the education system began to meet many requirements of the international education system. However, there are still many issues that need to be resolved.

**The practical significance of the study.** The practical significance is related to the conducted research and experimental research. The fact of the necessity of psychologically and pedagogically accurate training of the school staff based on innovative technologies has been revealed and proven. The applied methods should be adapted and used to the realities of Azerbaijan. In addition, the results of the research can be used in the professional training of teachers and in the teaching process.

**Approbation and application of the research results.** The obtained results were discussed at the Department of Social and Pedagogical Psychology of Baku State University, at local and international conferences.

**The Institution where the dissertation work was performed.** Baku State University, Department of Social and Pedagogical Psychology.

**The total volume of the dissertation with a sign indicating the volume of the structural sections of the dissertation separately.** Dissertation consists of introduction, three chapters, conclusion, list of used literature. The introductory part of the dissertation consists of 8 pages, the first chapter 42 pages, the second chapter 51 pages, the third chapter 23 pages, the conclusion part 6 pages, the literature part 13 pages. The dissertation consists of 145 pages and 250 758 characters.

## THE MAIN CONTENTS OF THE WORK

In the **introduction**, relevance and level of scientific development of research topic, its object and subject, Aim and tasks of the study, methodology and theoretical foundations, the results of the author's research work, scientific novelty of research, the theoretical and practical importance of the work, the importance of applying the results and finally the structure of the dissertation are defined.

First, in the first paragraph ("**The role of the teacher's personality in improving the quality of teaching**") of the first chapter entitled "**Teaching process in pedagogical psychology: student-teacher relations**", the teaching profession, the teacher's personality, social-psychological qualities along with professional qualities are generally reviewed. The teacher conducts training with each student individually, taking into account his personality characteristics, including the type of thinking, character, temperament, and talent. In the history of classical pedagogical and psychological thought, the problem of teacher personality has been one of the research objects.

In modern times, along with the psychology of education, the field of social psychology of education is rapidly developing and becoming one of the important fields of psychology<sup>9</sup>. There are different teaching styles, taking into account the characteristics of many educations and competencies, and the existing interaction between school and society. Teachers should be directly involved in setting priorities in terms of real problems and choosing appropriate decisions<sup>10</sup>.

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<sup>9</sup> Krushelnitskaya O.B., Orlov V.A., Sachkova M.E. Social psychology of education as a branch of scientific knowledge [Electronic resource] // Psychological science and education psyedu.ru. 2013. No. 2. P. 1–14. URL: <http://psyjournals.ru/>

<sup>10</sup> Susana de Souza Barros and Marcos F. Elia. Physics teacher's attitudes: how do they affect the reality of the classroom and models for change? // Section D2, from: Connecting Research in Physics Education with Teacher Education An I.C.P.E. Book © International Commission on Physics Education 1997,1998

One of the educational features of the modern era is finding a way to the child's mind and heart by taking advantage of various technical and technological innovations. Such a demand and development in this direction is again for the teacher to achieve his goal by benefiting from both his own and the student's cognitive and emotional capabilities<sup>11</sup>.

The teacher mainly acts as a student's advisor, assesses his intelligence and original ability, encourages the student to be active, independent, and enterprising. Here, the mental factor that affects the teacher's attitude to the world has its own role. As an Azerbaijani, there are special cultural codes that are important in life for him (family, religion, beliefs, attitude to ancestors, home, children, elderly, etc.), which affect his psychological state.

In the second paragraph of the first chapter entitled **"Characteristics of the impact of modern information and communication technologies on teaching methods"**, modern technological possibilities are reviewed among the psychological and pedagogical factors in teaching methods, which is one of the important fields of pedagogical psychology.

It is known that training is always based on the skills and abilities of the learner, as well as his/her level of preparation and character. The characteristics of innovation technologies were such that the basic capabilities and cognitive efforts of the human mind are supported here, and at the same time, the process of discovering and using new tools, matching the teacher's efforts, his/her approaches and methods is carried out<sup>12</sup>.

The application of innovative methods in the Azerbaijani school is most often found in the form of interactive forms of training. In this case, the most successful forms of work with the student (separately, in small groups) are sought. Unfortunately, many teachers do not study the works of classics of psychology and pedagogy, do not understand the psychology of students. Also, the content of the taught

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<sup>11</sup> Gallard A.J. and Gallagher, 1994, J.F., A case study of a national science curriculum and teacher conflict, *Int. J. Sci. Educ.*, Vol 16, No 6, p.639.

<sup>12</sup> Vygotsky L. S. *Pedagogical psychology*. – M.: 1982

subject, the level of its mastery by the teacher, and the relationship between this and other subjects also have a certain meaning. Then, the nature of empathy between the teacher and the children, the spiritual and psychological climate in the school as a whole, in the region, the status of the teacher, education, and training in the country are of certain importance.

Thus, from the point of view of educational psychology, innovative technologies generally mean properly balanced approaches in educational psychology. Along with scientific and experimental research, practical steps are being taken in this direction as well in Azerbaijan (there are examples given with regards to this).

We addressed elementary school students and teachers working with them with 11 tasks. Our goal was to compare the level of cognitive development of two 4th grade children. These included various teachers (secondary school of Boradigah settlement, Masalli district; the research was conducted in the second semester of the 2016/2017 academic year, in classes 4<sup>a</sup> (23 people, 12 girls and 11 boys) (the teacher had 5 years of experience) and 4<sup>b</sup> (27 people, 10 girls and 17 boys). The teacher who taught in class 4<sup>b</sup> had 15 years of experience.

Answers to questionnaires and tests 8-12 out of 12 survey materials were analyzed according to the purpose set in this paragraph. Research and generalization work were carried out on the previous materials 1-7, and the final result is as follows: here the personal qualities of the teacher, his seniority and management style are of great importance in his work with the class. Only in the ability to draw mental conclusions, class 4<sup>a</sup> outperformed class 4<sup>b</sup>. Class 4<sup>b</sup> confidently passed class 4<sup>a</sup> on indicators of various types of memory. Thus, the class 4<sup>a</sup> is still on the way to the formation of good memory qualities, the teacher should work hard on himself in this regard. However, the modern information society requires more open, flexible thinking and approaches in assessing reality. Each of the presented pedagogical approaches has sufficient perspectives and advantages in this direction.

From the results obtained from questionnaires 8-12, it can be concluded that the answers of class 4<sup>a</sup> are more precisely distributed,



while the answers of class 4<sup>b</sup> are observed with somewhat sharp differences. This means that the self-assessment here is quite objective and balanced. High self-esteem is expressed in children who study well and are active. Class 4<sup>b</sup> answers are more complex. We believe that such distribution of answers has also had an effect on the methods of training and education conducted with them. A certain limitation and shackle are felt in their consciousness. There is no such detail in class 4<sup>a</sup> indicators. The reason lies in the different methodology of the work conducted with the student's mindset. All students (except one) demonstrated good visual memory. However, the visual memory of 4b graders (especially boys) was slightly weaker than that of 4<sup>a</sup> graders. Class 4b has more variety. The next test showed that, on the whole, elementary school students have good short-term memory.

There are children with unique memory in both classes. At the same time, the boys and girls of the class (4b) with a generally more experienced teacher were slightly behind the children of the 4<sup>a</sup> class in both cases (in terms of following the sequence). However, students with high indicators showed themselves more often in class 4b. Therefore, the class of a teacher based on more advanced experience is characterized by average indicators.

In the last paragraph of the first chapter ("**Consideration of psychological factors in the application of innovative technologies: world experience**"), the relationship between the application of innovative technologies and psychological factors is examined in terms of the modern meaning of innovative technologies. In accordance with modern scientific approaches, the directions of innovative teaching technologies and various pedagogical innovations are considered in the dissertation. It is shown that this primarily depends on established traditions and the status of the enterprise, as well as motivation, which is a psychological factor.

One of the ways of psychological impact of the innovative forms of training currently implemented in Azerbaijani schools is the impact on classroom development. The effect of the teaching work is that the classroom is not more about individual applications, but works at the level of micro groups, which increases intra-group and inter-group solidarity and integrity.

In the second chapter of the dissertation entitled "**The Psychological foundations of the use of innovative methods at different stages of education**", firstly, "**The Psychological aspects of the application of innovative technologies in primary school**" are investigated. It is shown that in each period, the preparation of new generations for social life is carried out in a unique way. However, there are general principles without which the teaching process cannot be successful. One of the basics is the principles and rules of pedagogical psychology. In accordance with the didactic requirements of teaching, student-teacher relations are based on special psychological ethics. The social status of the teacher, his position in society, and the conditions in which he lives determine many psychological characteristics of his work. In this regard, technological development and methodical innovation affect the formation of new psychological characteristics of teacher-student relations, including motivation.

On the basis of special tests, the ability of students of both classes to collect and acquire cognitive knowledge was checked. It turned out that higher results were achieved in the classroom where didactic principles and strict discipline were followed (where the teacher-student relationship is dominated by an authoritarian style). Specifically, we are talking about the ability to make conclusions. At that time, concepts were both generalized and some were excluded. In solving the tests according to his age and class program, Sh.Q. earned superior responses.

Because he spent his main energy on delivering necessary materials to the class and checking knowledge. In the approach of one of the teachers based on problem-based teaching, more efficient distribution of educational material by modules, creation of strong motivation when setting new tasks for students, preference for independent, free and creative work, complementing each other of self-control and teacher control are predominant issues. The result is also different.

Need to take into account that students studying in primary school are especially attached to their first teacher. In their

imagination, the teacher's personality is quite unique, unique and worthy of love and respect.

It can also be noted that student-teacher relationships are similar to child-parent relationships in the family. It should be taken into account that the status of a teacher (especially in primary school) is very high in the imagination of the family and society as a whole.

There are a number of pedagogic-psychological qualities, in the balance of which, if some quality is preferred, a certain difference arises in the innovative technologies that the teacher wants to convey. A.H. due to his relatively young age, he cannot use his suggestive skills widely enough. That is why he is a little behind the other class leader in having an emotional-volitional influence on the class. Due to the fact that the democratic style of management is more often demonstrated in the classroom, children spread their ideas, get away from the main point and cannot achieve the necessary results.

One advantage should also be mentioned: differences in the age and seniority of teachers. Both teachers and students of this school, located in the southern region, are from the local population. Here, certain differences from other regions are evident in traditionalism, faith (religious belief), expectation of traditions, status of women and men.

The answers to the self-assessment test distributed among the students of both classes showed that there is a difference in the psychological characteristics of the children from class to class. It turned out that the mastery of active students is usually slightly above the average, they have a high motivation regarding the lesson and the school environment.

On the other hand, the introduction of new technologies increases the importance of the psychological factor. Here, attention, memory, thinking is subjected to various pressures and changes. Technology resources do not fully guarantee teachers' language instruction. Only through experience can teachers determine which of these resources are useful and ineffective in improving teaching and learning.

According to the results of the research on different types of memory and intellectual ability, the use of traditional methods of

teachers, as well as the socio-psychological characteristics of the teacher's personality, has an important effect on the formation of certain characteristics of the child's personality.

In the next paragraph entitled "**Educational activity and mental state of students under the conditions of applying innovative technologies in middle classes**", the technologies of innovative activity are consistently examined. The application of methods in schools depends on the experience and status of the school. Also, the process of teaching a student depends on many factors. Observations show that the successful organization of teaching has a positive effect on the formation of logical thinking in children, attention and its ability to concentrate become stronger, short-term memory, the ability to perceive colors in children improves, the volume of the vocabulary of native and foreign languages is transitioning more dynamic from passive to active, the child's spatial perception changes, small movements (fine motor skills) develop, etc.

Our extensive research in Azerbaijani schools (the survey included questions about both students and teachers) showed that, depending on the content of the lesson, the age of the children and the level of preparation, the innovative possibilities of the training were used to a different degree, and as a result, the characteristics of its effect were different. The students who participated in the survey (seven students from each grade, about one-third of the class) were divided into groups of grades 5-8 and 9-11. Accordingly, we have analyzed the answers in separate subsections.

This survey was conducted among teachers and students respectively. Here, the main goal is to determine the interests of students studying in schools in education, reading, and intellectual self-development. Also, students' after-school activities, interests, social life, planned goals, main indicators of self-confidence make up the general content of the survey. Some of the students tried to highlight their positive aspects in the survey, while others preferred more realities. The survey includes a number of psychological factors. The survey was compiled in the form of tests and questionnaires for students, teachers and parents to correctly assess the mentioned questions.

The conducted survey shows that mutual relations play a key role in communication between teachers and students. The results of the survey also show that the main goal of education is the formation of moral qualities, patriotism, and respect for values in students.

The teacher reflects an equal attitude in the approach to the team, and tries to form positive personal qualities in students with a weak sense of confidence and difficulty in self-evaluation. The final results of the survey show that the educational norms are correctly applied and, along with the education of the students, attention is also paid to their education in a good environment and their moral formation.

The research was carried out with the participation and assistance of Baku State University students from different regions of Azerbaijan. We managed to conduct research in 18 schools of Baku city, two schools of Ganja city, one school of Sumgayit city and one school of Salyan region.

Self-confident students make up the majority of students who pass the "Self-Assurance Self-Assessment" test. According to the results, the main noticeable point in students belonging to the upper level of average self-confidence is the need to discuss their actions and plans with close friends. This issue becomes somewhat relevant in the age period when the need for communication is formed. In the opinion of many students, who should I choose as a friend? Who would understand me better? Who would want to be my friend? Who would my interests coincide with? and so on. such questions arise. There is a need to create wide conditions for increasing communicative opportunities.

The class tutor's methodology aimed at the development of children's personality is at an average level. He conducts both theoretical and practical work for students in order to increase their independent activities. Although information technologies are not widely used, they enable students to acquire these skills. From time to time, he gives the right direction to the students about their future, conducts enlightening and motivational conversations. In case of a problem in the classroom, he uses his personal skills to make a diagnostic assessment and draw an objective conclusion. The teacher

always prefers the methodology based on professional activity methods.

Thus, on the example of these schools, we tried to analyze the students' attitude to education and upbringing, self-evaluation and motivation as a result of the innovative methods used by the teacher. In general, the communication characteristics of the teacher with the student are one of the main conditions that support educational achievements.

In the next paragraph of this chapter, "**On the state of educational technologies in upper classes (results of an experimental study)**", certain features of the application of educational technologies in upper classes are analyzed. An experimental study was conducted for this.

Students of grades 9-11 are moving towards adulthood at the upper stage of adolescence, taking new steps in the field of socialization. The fact that the taught subjects are more complex also imposes new tasks on teachers. Among the innovation technologies, the most widely applied critical thinking development technology, problem-based lecture system, technology of using game methods, special inspection methods, project method, etc. can be shown<sup>13</sup>. Opportunities for exchanging ideas, working in groups and individually are widely used here.

In this paragraph, we present the information we have obtained about how the educational process affects the psychological state of high school students, the inculcation of skills and abilities. The survey was conducted in seven schools in Baku, one in Sumgayit, and three in separate regions. How does the use of methodical tricks, opportunities and skills chosen by the teacher in the lesson affect the students' interests, needs, motivation, knowledge, wishes and desires?

We also conducted a survey to check which innovative technologies the teacher uses in the teaching process. It became clear that the teacher widely uses innovative technologies in the process of teaching and learning with children. During the teaching process, he

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<sup>13</sup> Martynova O.V. Application of innovative technologies in Russian language and literature classes // <https://nsportal.ru/shkola>

uses diagnostic tests and information technologies to assess knowledge from role-playing and business games, and notes that this makes it easier for students to understand the lesson. It became clear from the survey that the level of organization of educational services for the implementation of innovation measures in educational institutions is average and unsatisfactory.

The form (level) of self-confidence of the students is evaluated in the subsequent survey. It is true that the results are not too low, but I think they could have been higher. In some cases, it seems that the children also had a low level of confidence to succeed in the future.

According to the results of the survey conducted with teachers, it can be concluded that teachers try to use innovative technologies and new teaching methods. There is a need for further improvement of their knowledge and skills in this field, and the use of technologies according to new standards every year.

The necessary skills for the use of the information means of innovation should be revealed in the students' methodical, that is, in the various lessons conducted in the classroom.

Thus, the working style of the students and teachers from the city or different regions, the formed nature of communication, selected methodical approaches and tricks complement each other. The age, stage of life, character, temperament, volitional-emotional characteristics of the students in the class are taken into account by the teacher and used during the application of the technologies used. The teacher's age, experience, socio-psychological qualities and professional qualities create the basis for the higher professional use of the students' psychological individual qualities in the classroom, and help the students' self-confidence to remain in the average, i.e. normal limits.

In the first paragraph of the thought-provoking chapter entitled **"The role of teacher's professional qualities in improving teaching indicators in secondary schools"** ("**The impact of the organization of professional development in Azerbaijan on the improvement of innovative methods**"), the role of innovative methods applied in the system of in-service training in the formation of teachers' professional qualities is analyzed.

Training of specialist personnel is one of the important issues of universities and scientific institutions. Effective use of these personnel depends first of all on the quality of their training.

Currently, specialist personnel must meet high moral, social and political, as well as scientific and professional requirements: every person who can work and live in the democratic society we have built must use his knowledge and skills in terms of public benefit, so that he can benefit from it.

As a result of the special training of teachers conducting classes on the latest innovative technologies, the noticeable difference is related to the allocation of time to types of activity. Classroom teachers speak less, convey less information, use more visual aids, and rarely solve problems for students. Instead of answering the questions, they leave it to the readers. They ask more and explain less.

The second paragraph of the 3rd chapter of the dissertation is called **"The influence of the process of interdisciplinary integration in teaching and the professional training of teachers on the application of innovative methods."**

As we know, interdisciplinary relationships play an important role in creating new ways of thinking and help to systematize fragmented knowledge. Training based on interdisciplinary connections allows you to see different perspectives and achieve a synthesis of different disciplines as the ultimate goal. Interdisciplinary learning, which removes the unique limitations of one field of knowledge, enables students to think critically, be creative, collaborate, and communicate. As a result, the main directions of the organization of interdisciplinary education are formed through dialogue and integration of knowledge.

**Our conclusions** based on the research are as follows:

- The development of a teacher's personality in terms of the formation of professional and moral-psychological qualities fundamentally depends on his own education. Therefore, it is necessary to create a turnaround in the work of secondary and higher education levels, to achieve new quality indicators.

- New methodologies based on ICT and other achievements of science are rapidly finding their place in the activity of modern school



staff. Their application fundamentally affects the cognitive development, motivation, and general activity of the students.

- The use of innovative technologies in the classroom also affects students' wealth tendencies. At the same time, improving the working conditions of the teaching staff affects their desire to work, that is, their motivation. When we say working conditions, first of all, the nature of relations with co-workers, objectivity in the assessment of teacher's work, mutual relations with management are meant, which, as the research shows, are not so satisfactory in reality. For some reason, teachers (especially those who teach different subjects) rarely use opportunities such as exchange of experience, joint leisure time, mutual assistance, and the methodological importance of interdisciplinary relations is forgotten.

- The problems of the psychology of thought in terms of the pedagogical effect of children of primary school age were investigated. According to the results of research on different types of memory and the ability to make mental conclusions, the use of traditional methods by teachers, as well as the use of socio-psychological characteristics of the teacher's personality, has an important effect on the formation of certain characteristics of the child's personality.

- The more the teacher-student communication in the educational process is established on a broad basis and takes into account the individual characteristics of each student, the more effective the result will be.

- The work style of the students and teachers from both the city and different regions, the formed character of communication, selected methodical approaches and tricks complement each other. The age, stage of life, character, temperament, volitional-emotional characteristics of the students in the class are taken into account by the teacher and used during the application of the technologies used. The teacher's age, experience, socio-psychological qualities and professional qualities create a basis for the higher professional use of students in the classroom than the mental individual qualities of students.

**The main content and provisions of the dissertation are reflected in the following scientific works of the author:**

1. Влияние инновационных технологий на развитие когнитивных способностей учащихся в средних школах Азербайджана // Том 2 № 1 (2017): Науковий вісник ХДУ Серія Психологічні науки, с.81-3.

2. Проблемы инновативных технологий обучения в педагогической психологии // «Исторические, социологические, политологические науки: история, современное состояние и перспективы исследований». 22–23 сентября 2017 года, Херсонский государственный университет. Международная конференция.

3. Нормативно-правовые и социально-педагогические основы применения инновативных технологий в азербайджанской школе // Теорія і практика Сучасний психології, с.105-106

4. Tədrisdə müəllimin psixoloji imkanları və onlardan istifadə yolları // Bakı, Bakı Qızlar Universiteti, Elmi əsərlər. 2017. №3. s.119-125.

5. İbtidai məktəbdə yeni təlim texnologiyalarının tətbiqində psixoloji amilin rolu // Bakı, Azərbaycan Respublikası Təhsil İnstitutu, Elmi əsərlər. 2017. №5. s.129-135.

6. Особенности организации коррекционной работы с родителями учащихся // Украина, Габитус. 2022. № 39. с.89-94.

7. Развитие психики дошкольника под влиянием современных информационно-коммуникационных технологий // Казань, Взаимодействие науки и образования в системе управления знаниями. Сборник научных трудов. 2022, с.6-10.

8. Müasir təhsil sistemində müəllim-şagird münasibətlərinin kommunikativ əsasları // Elmdə innovasiyalar cəmiyyətin sosial dinamikasının təzahürüdür. Gənc tədqiqatçıların respublika elmi-praktik materialları. Bakı. 20 oktyabr 2022. s.40-44.

The defense of the dissertation will be held on March 15, 2023 at 14:00 at the meeting of the FD 2.43 Dissertation Council of the Higher Attestation Commission under the President of the Republic of Azerbaijan, operating under Baku State University.

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The dissertation is available for review at the Baku State University library.

Digital copies of the dissertation and its abstract can be found on the official website of Baku State University.

The abstract has been submitted to the necessary addresses on February 13, 2024.

Signed for printing: 01.02.2024

Paper format: 60x84 <sup>1</sup>/<sub>16</sub>

Volume: 40321

Number of hard copies: 20