

## ABSTRACT

for the dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy (PhD) in the educational program 8D01101

– Pedagogy and Psychology

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**Research Topic:** “Psychological and Pedagogical Conditions for the Development of Soft Skills in High School Students.”

**Research objective:** To identify the patterns of soft skills development in high school students through psychological and pedagogical conditions

In accordance with the research objective, **the following tasks** were set:

1. Analysis of the psychological and pedagogical characteristics of high school students and the nature and content of soft skills based on foreign and domestic scientific literature.

2. To investigate approaches to the development of soft skills in high school students in the modern educational context and to identify the psychological and pedagogical conditions that facilitate their formation.

3. Development of a structural and content-based model for the development of soft skills in high school students.

4. Assessment of the initial level of development of soft skills in high school students and organization of pilot experimental work.

5. Analysis of the experimental results and development of scientifically grounded methodological recommendations for the development of soft skills in high school students.

### **Research methods:**

#### *Theoretical methods:*

– Systematic literature review—a comprehensive examination of information on the development of soft skills and the psychological and pedagogical conditions of high school students. This method allows for the systematic study of information and the identification of existing theoretical foundations related to the research topic.

#### *Empirical methods:*

– Pedagogical experiment: conducting a pedagogical experiment involving 10th-grade students. This method was used to study the process of developing students’ soft skills in real-world conditions;

– The modeling method aims to create a structural and content-based model for the development of soft skills in high school students. This method is based on real-world practice and facilitates the exchange of experience and the development of skills through modeling.

#### *Diagnostic methods:*

1. The “Assessment of Communicative and Organizational Tendencies (KOS-1)” methodology, developed by V.V. Sinyavsky and B.A. Fedorishin;

2. Stark’s “Critical Thinking” methodology;

3. The “Organization of Independent Activity” (OSD) methodology;
4. N. Hall’s methodology;
5. The “Eisenhower Matrix” method;
6. A.A. Rean’s methodology.

*Mathematical and statistical methods:* To test the statistical significance of differences in the soft skills of high school students, SPSS (Statistical Package for the Social Sciences) version 26.0 and the following statistical methods were used:

- Pearson’s chi-square test ( $\chi^2$ ) – used to test for independence between groups at a significance level of  $p < 0.05$ ;
- Fisher’s Exact Test – allows for a more reliable assessment of statistical significance (at a p-value  $< 0.05$ );
- Cramer’s V – used to assess the practical significance of differences. This measure ranges from 0 to 1, with a value closer to 1 indicating a stronger association between variables.

The research methodology employs a systematic and comprehensive approach, as the study utilizes theoretical, empirical, diagnostic, and statistical methods, enabling a thorough examination of the challenges in developing soft skills among high school students.

The research paradigm is based on identifying the psychological and pedagogical conditions that contribute to the development of soft skills in the educational process, as well as verifying the reliability of the results using statistical methods and practical data.

**Main theses to be defended (proven scientific hypotheses and other propositions constituting new knowledge):**

1. The development of soft skills in high school students is one of the key tasks of the modern education system and is aimed at fostering students’ personal development, communication skills, critical thinking, emotional intelligence, goal-setting, and time management skills.
2. The effectiveness of developing soft skills in high school students depends on the application of specially organized psychological and pedagogical conditions in the educational process, including the specific features of the learning process, family involvement, the use of digital technologies, and the application of special pedagogical methods.
3. The structural-content model for the development of soft skills in high school students is a comprehensive pedagogical system consisting of interconnected goal-oriented, content-based, organizational, and outcome-oriented components.
4. The "Soft Skills Workshop" program and teaching materials, developed based on the proposed model, enable the effective development of soft skills among high school students.
5. The results of the pilot study confirm the effectiveness of the proposed model and methodology in developing soft skills in high school students.

### **Description of the main research results:**

In the course of addressing *the first task*—analyzing the psychological and pedagogical characteristics of high school students, as well as the nature and content of soft skills based on foreign and domestic scientific literature—it was established that the development of soft skills in high school students is one of the important tasks of the modern education system and is aimed at fostering students' personal development, communication skills, critical thinking, emotional intelligence, goal-setting, and time management. This is because soft skills are formed and developed through purposeful learning and education.

As part of *the second task*—investigating approaches to developing soft skills in high school students within the modern educational context and identifying the psychological and pedagogical conditions that facilitate their formation—it was established that the effectiveness of developing soft skills in high school students depends on the application of specially organized psychological and pedagogical conditions in the educational process, including specific features of the learning process organization, family involvement, the use of digital technologies, and the application of special pedagogical methods.

Pedagogical conditions and means for developing soft skills constitute a complex of tangible and intangible elements used to achieve set educational goals. The following were identified as basic approaches: self-directed learning; receiving external feedback; studying the practical experience of others and mastering it through interaction with mentors; targeted exercises and improvement through practice. Game-based practices and small-group organizational activities were identified as important tools. A key indicator of development is the focus on self-formation as an active participant through seminars and training sessions. New forms and technologies of supplementary education in the form of short-term online courses, as well as digital tools used primarily in extracurricular activities, were recognized as effective means of development. The main psychological and pedagogical conditions for the development of soft skills are: the mandatory involvement of the family in the process of the child's education and upbringing; specific features of the organization of learning. The following were identified as the psychological conditions themselves: the importance of creating an optimal psychological climate; periodic assessment and monitoring of students' mental development and competence; and methodological and informational support for teachers. At the same time, the process of developing soft skills is accompanied by specialized educational content and the use of digital technologies.

In addressing *the third task*, a structural-content model for the development of soft skills in high school students was developed, representing a comprehensive pedagogical system consisting of interconnected goal-oriented, content-based, organizational, and outcome-oriented components. It includes educational programs and self-development strategies. The content component of the model includes materials from the developed informational website [Soft-skills.guide.kz](http://Soft-skills.guide.kz),

the “Soft Skills Workshop” training program, as well as programs for developing high school students’ soft skills designed for school psychologists, subject teachers, and parents. The organizational-activity component plays a central role in the development of soft skills among high school students, as it is this component that ensures the practical implementation of the entire model. The model is implemented in two stages: preparatory (theoretical, practical, and psychological) and implementation (introductory; theoretical-cognitive; practical-formative). Results are determined by various forms, methods, and assessment tools designed to monitor and analyze high school students’ achievements in each area of study.

In the course of addressing *the fourth task*—diagnosing the initial level of development of soft skills among high school students and organizing pilot experimental work—insufficient development of soft skills was identified among students in this age group. Since these soft skills do not develop spontaneously, the need for the targeted development of high school students’ soft skills within the school curriculum was substantiated in the form of a theoretical structural-content model based on modern, effective psychological and pedagogical conditions. As a result, high school students in Group A, whose baseline data across all indicators (communication; critical thinking; goal setting; emotional intelligence; time management; motivation) corresponded to the similar characteristics of Group B, which served as the control group, were included in the planned experiment on the development of soft skills.

In the final stage, during the resolution of *the fifth task*—the analysis of the experiment’s results and the development of scientifically grounded methodological recommendations for developing high school students’ soft skills—it was demonstrated that the “Soft Skills Workshop” and the methodological resources developed based on the proposed model enable the effective development of soft skills in high school students. The results of the experimental study confirm the effectiveness of the proposed model and methodology for developing soft skills in high school students. Upon completion of the experiment, the results of the comparative final assessment demonstrated the effectiveness of the program implemented in Group A in developing all soft skills. Statistical analysis confirmed the statistical significance of the differences between Groups A and B across all six areas of soft skills development for high school students, as the magnitude of the difference and effect sizes ranged from moderate (communication skills, critical thinking, goal setting) to very high (emotional intelligence, time management, and motivation), which indicates the high practical significance of the differences observed in Groups A and B.

**Alignment with scientific research priorities or government programs:**

The main idea of the dissertation is in accordance with the Law of the Republic of Kazakhstan. The dissertation references the following state regulatory documents:

1. Law of the Republic of Kazakhstan “On Education” dated July 27, 2007, No. 319-III ZRK (with amendments and additions introduced by Order No. 487-IV ZRK dated October 24, 2011). [https://adilet.zan.kz/kaz/docs/Z070000319\\_](https://adilet.zan.kz/kaz/docs/Z070000319_)
2. Order of the Minister of Education of the Republic of Kazakhstan dated August 3, 2022, No. 348. On the Approval of State Mandatory Standards for Preschool Education and Training, Primary, Lower Secondary, General Secondary, Technical and Vocational, and Post-Secondary Education. <https://adilet.zan.kz/rus/docs/V2200029031>
3. Order of the Minister of Science and Higher Education of the Republic of Kazakhstan No. 2 dated July 20, 2022. On the approval of state mandatory standards for higher and post-secondary education. <https://adilet.zan.kz/rus/docs/V2200028916>
4. Order of the Minister of Education of the Republic of Kazakhstan No. 92 dated April 29, 2025. On the Approval of the Rules for the Operation of Psychological and Pedagogical Support Services in Educational Institutions. <https://adilet.zan.kz/rus/docs/V2500036047>
5. Law of the Republic of Kazakhstan “On Science and Technology Policy” No. 103-VIII ZRK dated July 1, 2024. <https://adilet.zan.kz/kaz/docs/Z2400000103>

**Description of the doctoral student’s contribution to the preparation of each publication:**

The research results and conclusions were published as 1 article in the Web of Science database, 2 articles in the Scopus database, 11 articles in journals recommended by the Committee for Quality Assurance in Science and Higher Education of the Republic of Kazakhstan, and 4 articles in international conferences:

*Web of Science:*

1. Impact of utilizing the project method in the school educational environment on the development of soft skills in high school students // European Journal of Contemporary Education. 2024. 13(1): 162-171. [https://ejce.cherkasgu.press/journals\\_n/1711731426.pdf](https://ejce.cherkasgu.press/journals_n/1711731426.pdf) (Co-authored with B. Matayev, A. Matayeva, N. Fominykh)

*Scopus:*

1. The Views of Kazakh Teacher Candidates on Children's Rights // Participatory Educational Research (PER) Vol. 11(1), pp. 105-120, January 2024 Available online at <http://www.perjournal.com> ISSN: 2148-6123 <https://dx.doi.org/10.17275/per.24.7.11.1> (Co-authored by Ömer Faruk Sönmez, Hüseyin Mertol, Nurmagambetova Botagoz Amangeldinovna, Murzatayeva Altnai Kanatova, Najmeddinov Ahmad Rahmatovich)
2. Fostering emotional intelligence and self-regulation in gifted high school students: experimental evidence from a soft skills development program// Frontiers in Education, Psychology in Education. Volume 10 - 2025 |

<https://doi.org/10.3389/feduc.2025.1733922> (Co-authored by Berik Matayev, Assemgul Kalimova, Meruyert Utegenova, Lira Ibraimova)

*In journals recommended by the Committee of the Republic of Kazakhstan:*

1. Theoretical Issues of Developing Soft Skills in Future Teachers. Toraygyr University Bulletin. Series: Pedagogical. – 2022. – No. 3. – pp. 211–219. – ISSN 2710-2661. – DOI: <https://doi.org/10.48081/aoLv1530> (Co-authored by Tulkina R. Zh., Aplashova A. Zh.)

2. Psychological and Pedagogical Conditions for the Development of Soft Skills in High School Students // Bulletin of the Abay Kazakh National Pedagogical University. Series: Pedagogical Sciences. – 2022. – No. 3 (75). – Pp. 197–205. – DOI: <https://doi.org/10.51889/5765.2022.45.98.017> (Co-authored by Aplashova A. Zh., Kudychева A. A.)

3. Development of soft skills of high school students as an opportunity to implement the requirements of modern education // Bulletin of Karaganda University. Pedagogy Series. – 2023. – No. 1 (109). – Pp. 108–116. – DOI: <https://doi.org/10.31489/2023ped1/108-116>. (Co-authored by A.A. Kudysheva, Z.K. Kulsharipova, L.S. Syrymbetova, A.G. Shaimerdenova)

4. Networking as a Means of Developing Students' Soft Skills// Scientific and Analytical Journal of the Higher School of Kazakhstan. – 2024. – No. 1 (45). – Pp. 32–42. – DOI: 10.59787/2413-5488-2024-45-1-32-42. (Co-authored with Kudysheva A., Fominykh N.)

5. Developing soft skills through career counseling for graduate students // Scientific and Analytical Journal of Higher Education in Kazakhstan. – 2024. – No. 2 (46). – Pp. 68–76. – DOI: 10.59787/2413-5488-2024-46-2-68-76 (Co-authored with Askar Azhenov, Tomas Cech)

6. Critical thinking as a factor in the development of soft skills // Bulletin of Abai Kazakh National Pedagogical University. Series: Psychological Sciences. – 2024. – No. 2 (83). – Pp. 94–104. – DOI: 10.51889/2959-5967.2024.79.2.009 (Co-authored by A.R. Yermentayeva, Zh. Duissekeyeva, A.A. Saduakassova)

7. Synectics as a method for developing soft skills in high school students // Bulletin of Abai Kazakh National Pedagogical University. Series: Psychology. – 2024. – No. 3 (80). – Pp. 109–118 (Co-authored with Fominykh N., B.A. Matayev, and Kudysheva A.)

8. Emotional intelligence as a way to develop soft skills of high school students // “Gumilyov Journal of Pedagogy.” – 2025. – No. 2 (151). – Pp. 113–130. <https://doi.org/10.32523/3080-1710-2025-151-2-113-130> (Co-authored by Fominykh N., Kudysheva A., Zhigitbekova B., Matayev B.A.)

9. Soft skills and artificial intelligence: how technology is changing the requirements for high school students // Toraihyrov University Bulletin. Pedagogical Series. – 2024. – No. 4. – Pp. 256–269. – ISSN 2710-2661 (Co-authored by Fominykh N. Y., Kaziyev K. O., Azamat T., Matayev B. A.)

10. Reflection as a tool for self-improvement in the development of high school students' soft skills // *Bulletin of the Khalel Dosmukhamedov University of Atyrau*. – 2024. – Vol. 75, No. 4. – Pp. 167–180. – <https://doi.org/10.47649/vau.24.v75.i4.15> (Co-authored by Kazyiyev K. O., Makhmetova N. K., Matayev B. A.)

11. Gamification as a Method for Developing Soft Skills in High School Students // *Bulletin of the National Academy of Sciences of Kazakhstan*. – 2025. – Vol. 414, No. 2. – Pp. 225–239. – <https://doi.org/10.32014/2025.2518-1467.923> (Co-authored with Ayapbergenova, G., Abildina, S.)

*Presented and discussed at international scientific and practical conferences:*

1. Problems of studying emotional intelligence and soft skills development strategy // *Science, Society, Personality: Problems and Prospects of Interaction in the Modern World: Proceedings of the International Scientific and Practical Conference (October 18, 2021)*. – Petrozavodsk: MCNP “New Science,” 2021

2. Effective Management – An Indicator of Emotional Intelligence // *BEST SCIENTIFIC AND INNOVATIVE WORK 2021: Collection of Articles from the II International Scientific Research Competition (September 14, 2021)*. – Petrozavodsk: MCNP “New Science,” 2021. – 229 p.: ill. – Collective authorship (Co-authored by D.A. Omarova, A.M. Aldzharova)

3. Technologies for Developing Soft Skills in High-Achieving Students// *Scientific Information and Analytical Journal of Pavlodar Pedagogical University "Pedagogical Bulletin of Kazakhstan"*. – Pavlodar, 2023. – No. 4. – Pp. 33–47. – DOI 10.52301/1991-0614-2023-4-33-46 (Co-authored with O.F. Sonmez, A.A. Kudysheva)

4. Pedagogical Technologies for the Development of Soft Skills in the Educational Process // *Scientific Information and Analytical Journal of Pavlodar Pedagogical University "Pedagogical Bulletin of Kazakhstan"*. – Pavlodar, 2024. – Vol. 3, No. 76. – Pp. 63–77 (Co-authored with A.D. Zhigitbekova<sup>1</sup>, B.D. Zhigitbekova<sup>1</sup>)

*Copyright certificates for inventions have been obtained:*

1. Training program “Soft Skills Workshop” // Certificate of Entry into the State Register of Rights to Copyrighted Works dated December 23, 2025, No. 65669

2. Guidelines for School Psychologists on Developing Soft Skills in High School Students // Certificate of Entry into the State Register of Rights to Copyrighted Works dated January 19, 2026, No. 66469

3. Guidelines for Subject Teachers on Developing Soft Skills in High School Students // Certificate of Entry into the State Register of Rights to Copyrighted Works No. 66504 dated January 20, 2026

4. Guidelines for Parents on Developing Soft Skills in High School Students // Certificate of Entry into the State Register of Rights to Copyrighted Works dated January 23, 2026, No. 66636