

ANNUAL REPORT

Of “Nazarbayev Intellectual schools” AEO

2023 >>>



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2023

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15 YEARS OF SUCCESS – 15 YEARS OF RECOGNITION

In 2023 “Nazarbayev Intellectual Schools” AEO celebrates 15 years since its foundation.

For 15 years AEO has become an experimental platform for advanced educational practices, jointly with experts and international partners improving the educational programme, assessment systems and professional development of teachers. To date, more than 16,000 students have studied at Intellectual Schools, and about 18,700 have successfully completed their studies and continue their education at leading universities in Kazakhstan and around the world.

The schools’ developed research activities allow students to hold a significant number of patents and copyright certificates. The internationally recognised NIS-Programme demonstrates high effectiveness, as confirmed by the results of international research. The comprehensive system of assessment of students’ educational achievements includes various stages, providing individual feedback for each student.

The Intellectual Schools also succeed in intellectual and scientific competitions, recognised as the best olympiad team in science and mathematics in the country. In addition, students actively participate in creative and sports events, demonstrating a high level of competencies and talents.

Intelligent Schools has created a professional learning community of qualified teachers delivering the NIS-Programme and International Baccalaureate programmes in three languages.

Schools undergo international accreditation, confirming their compliance with high standards of educational services.

The AEO NIS has developed and transferred 3 state standards and more than 160 subject programs to the Ministry of Education. As part of the transition to the updated content of secondary education, a system of criteria-based assessment of students’ academic achievements was introduced, with the development of more than 40 thousand assessment tools and about 2 thousand methodological recommendations.

Advanced training courses for educators at all levels of education provide relevant professional information and a practice-oriented approach. The team of specialists at AEO NIS has developed over 260 educational programmes and trained more than 7,000 certified trainers according to international standards.

Since 2020, experience has been actively shared with rural schools, involving 79 educational institutions through a cascading method. This initiative aims to create a unified community of schools in Kazakhstan, facilitating the transfer of best practices and improving the quality of education.

The online platform «Educational Resource Portal» provides methodological support for teachers, having collected more than 400 thousand registered users and more than 100 million downloads of materials. The project with Bilim Media Group has created over 24,000 lessons and 550,000 assignments for the Online Mektep platform, serving over 5,000 schools, 2.3 million students, and 297,000 teachers.

10 MAIN ACHIEVEMENTS OF NIS AEO IN 2023

NIS GRADUATES >>>

Alumni NIS - **5 years!**

The number of graduates is about **19 thousand people**

Graduates have established the educational grant «Orken» for the first time for a student from the village of Shaulder

In 2023, Nazarbayev Intellectual Schools graduated 1,650 students, with 91.6% of them receiving university grants:

67,4% in domestic universities

24,2% in leading international universities



AEO ACTIVITIES >>>



THE AEO NIS IS ACCREDITED AS A SUBJECT OF SCIENTIFIC AND/OR SCIENTIFIC-TECHNICAL ACTIVITY

Accreditation enables participation in competitions for obtaining state funding for scientific projects and programmes, as well as in competitions for the awarding of scientific prizes and scholarships

In 2023, teachers and students received **118 patents and copyright certificates**

NIS | PISA >>>

The average score of students of Intellectual Schools in the PISA-2022 international study:

	NIS	ӘЫДҰ
Mathematical literacy	562	472
Reading literacy	490	476
Science literacy	536	485



IELTS | SAT >>>



The average score of the international IELTS exam among high school students of Intellectual Schools is **6.9**

The average score of the international SAT exam is **1299**, including 32 students of Intellectual Schools who scored a maximum **800 points** in maths

PARTICIPATION IN OLYMPIADS >>>

Students of Intellectual Schools have won **17 gold, 23 silver, 24 bronze medals** at international olympiads

117 students won prizes at the republican olympiads

For the sixth time, NIS was named the «Best Olympiad Team» in the country

The winners received a cash prize totaling **22 million tenge**



TEACHERS' ACHIEVEMENTS >>>



61 teachers of Intellectual Schools are winners and prize-winners of republican contests and olympiads

34 teachers have become speakers at international conferences

2 teachers became the best teachers in the country

KIVA® ANTI-BULLYING PROGRAMME >>>

NIS AEO obtained the right to implement the KiVa® antibullying programme in the countries of Central Asia

KiVa® is successfully implemented in more than 20 countries around the world

The KiVa® programme of the University of Turku (Finland) will be implemented in Intellectual Schools and rural schools across the country in 2024



DISSEMINATION OF NIS EXPERIENCE >>>

- **20 800** heads and teachers of educational institutions of the country have completed advanced training courses
- **220** teachers of the country have completed the unique program «Personnel reserve of school leaders: potential and development strategies»
- **50** teachers from foreign countries have been trained according to the CoE programmes



Project “Development of the potential of reference schools in rural areas”:

- **79** reference schools are participating
- **6 080** teachers have been trained
- **333** educators attended the NIS AEO international conference



SERVICE TO SOCIETY >>>



Serving the community at Intellectual schools
The students organised charity fairs and raised about **10 million tenge** to support those in need

A good deed is a vivid manifestation of social responsibility and humanity, which is the main mission of Intellectual schools

HIGH STANDARDS OF EDUCATION >>>

International School of Astana successfully passed CIS accreditation, 5 Intellectual Schools of Astana, Kokshetau, Semey, Oskemen passed reaccreditation

The Intellectual school in Astana has received authorization from the IB





Part 1

NIS:
in pursuit of excellence



1. STUDENT POPULATION

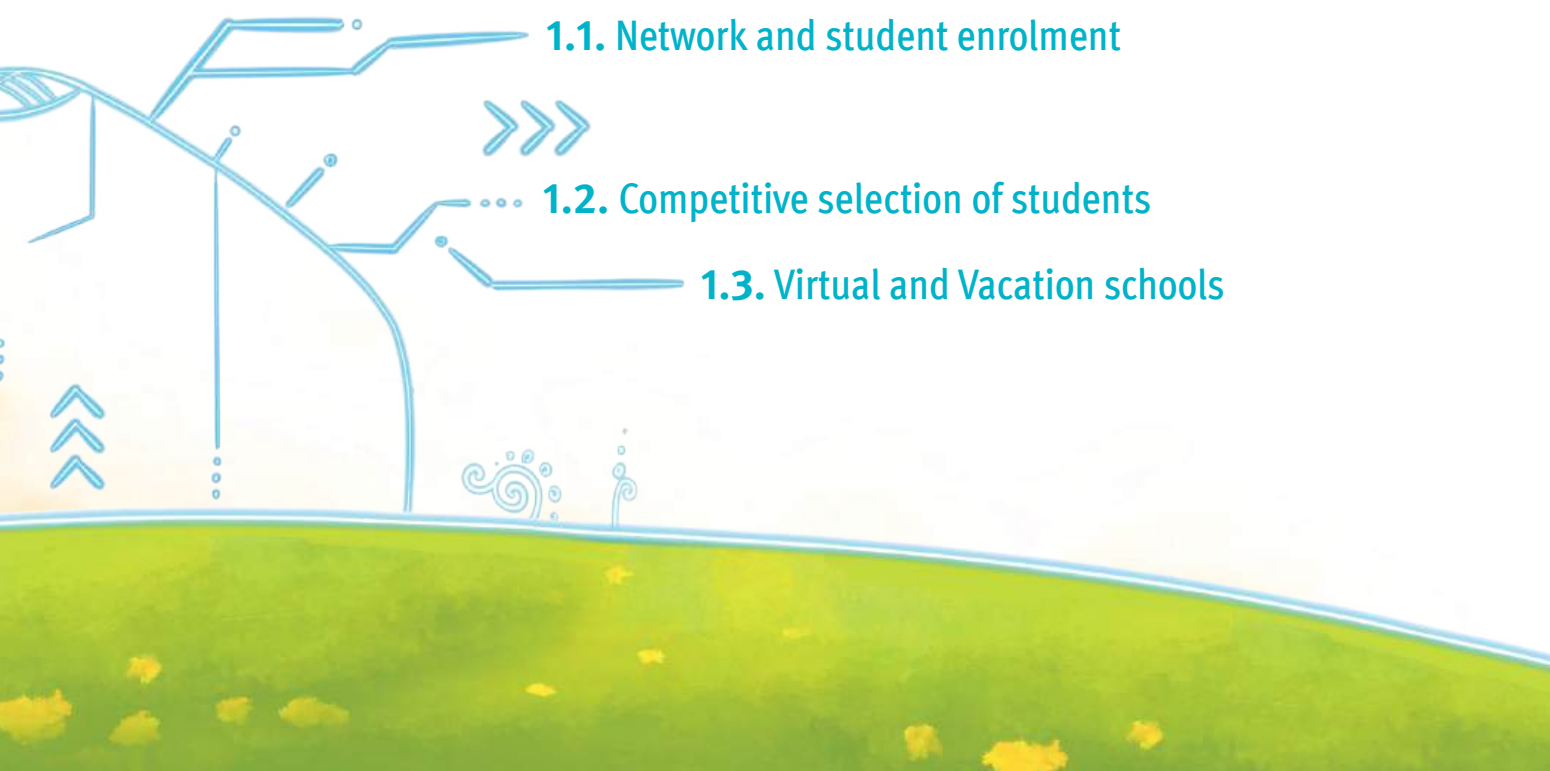


1.1. Network and student enrolment



1.2. Competitive selection of students

1.3. Virtual and Vacation schools



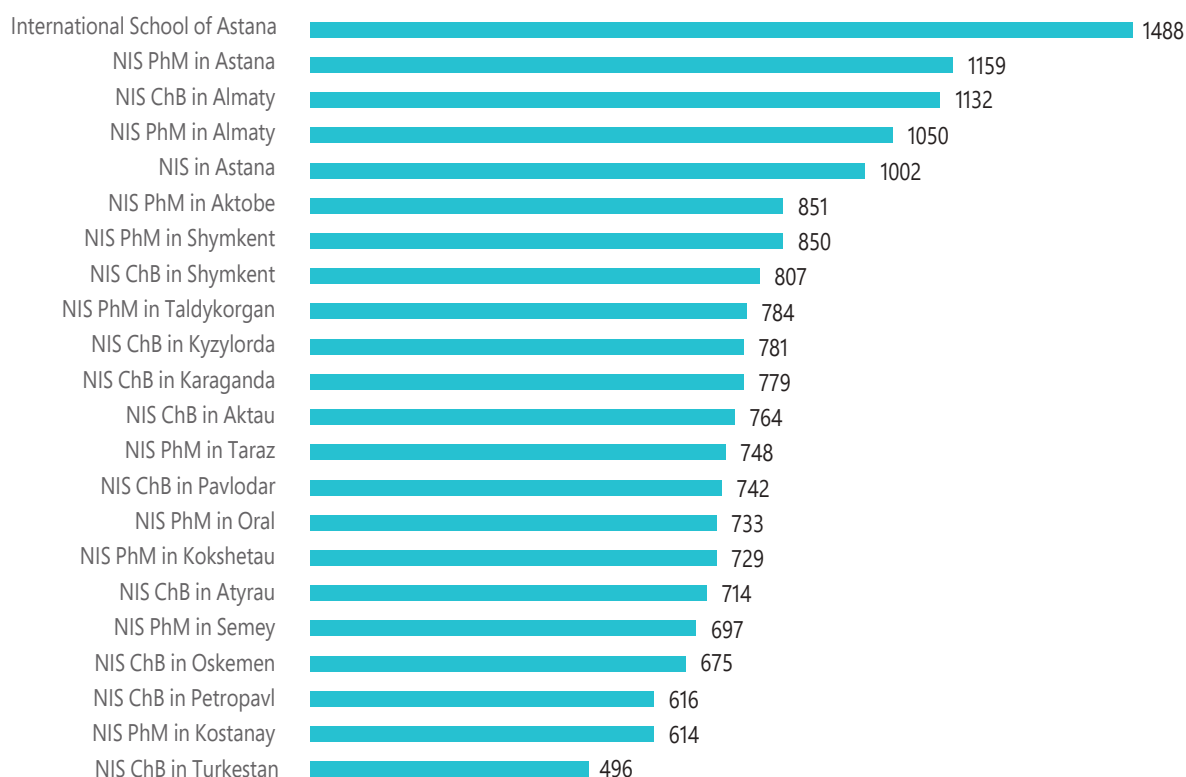
1. STUDENT POPULATION

1.1. NETWORK AND STUDENT POPULATION

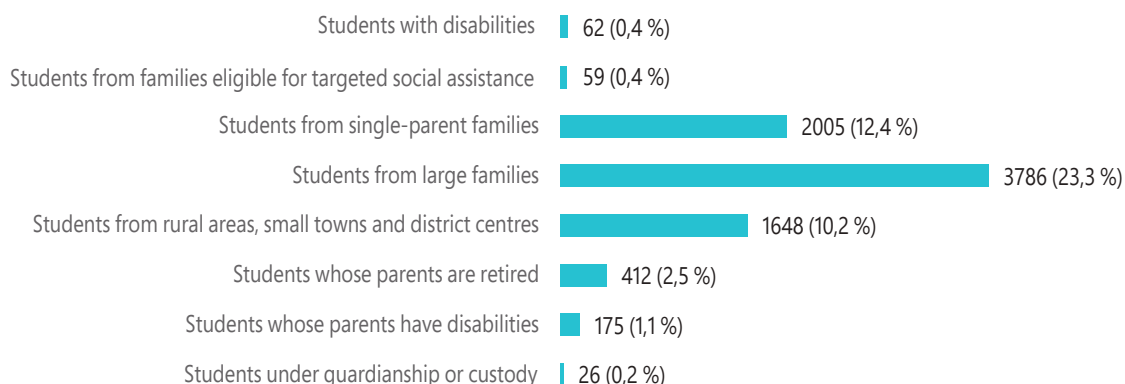
By the end of 2023, 16,723 students are enrolled in 21 Intellectual Schools (see the table), 1,488 in the International School of Astana, and 154 students in the kindergarten of the International School of Astana.

In three years, the number of students of Nazarbayev Intellectual Schools has increased by 8% (1,421 students).

The number of students in Intellectual schools broken down by Intellectual schools (as of December 8, 2023)



Socio-economic status of students of Intellectual schools



1.2. COMPETITIVE SELECTION OF STUDENTS

In 2023:

- The Rules for awarding and the amounts of the educational grant of the President of the Republic of Kazakhstan «Orken» for the payment of education for gifted children in the autonomous educational organization «Nazarbayev Intellectual schools» were approved by the Order of the Minister of Education of the Republic of Kazakhstan (No. 255 dated August 14, 2023);

- Amendments to the Rules for conducting a competition for awarding the educational grant of the First President of the Republic of Kazakhstan - Elbasy «Orken» for the payment of education for gifted children in the autonomous educational organization «Nazarbayev Intellectual schools» were approved by the decision of the Board of Trustees of the AEO NIS (No. 7 dated November 8, 2023).

The main changes in the Rules are as follows:

1. The educational grant of the First President of the Republic of Kazakhstan – Elbasy «Orken» has

been renamed the educational grant of the President of the Republic of Kazakhstan «Orken»;

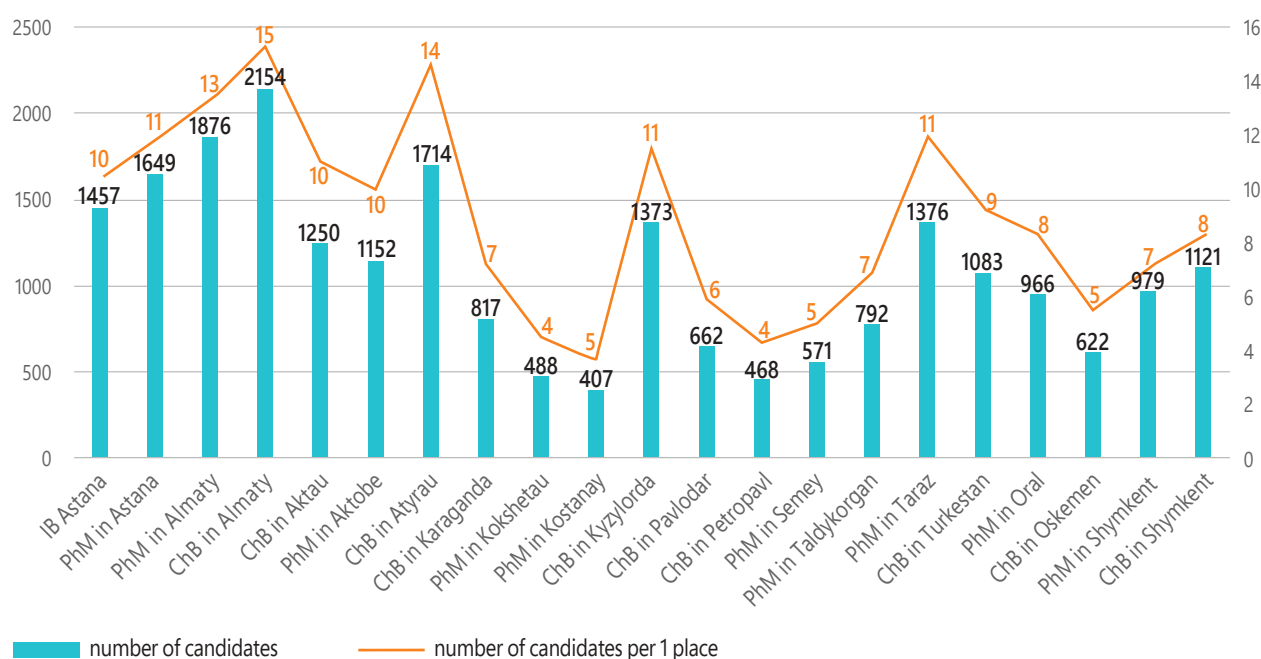
2. The distribution of grants between schools and the award of a grant is carried out by the decision of the AEO NIS Board;

3. The number of grants allocated is published on the official Internet resource of the AEO NIS;

4. Based on the results of the comprehensive testing, unified ranked lists of candidates are approved regardless of the language of instruction for specific schools among the participants who have achieved the threshold scores.

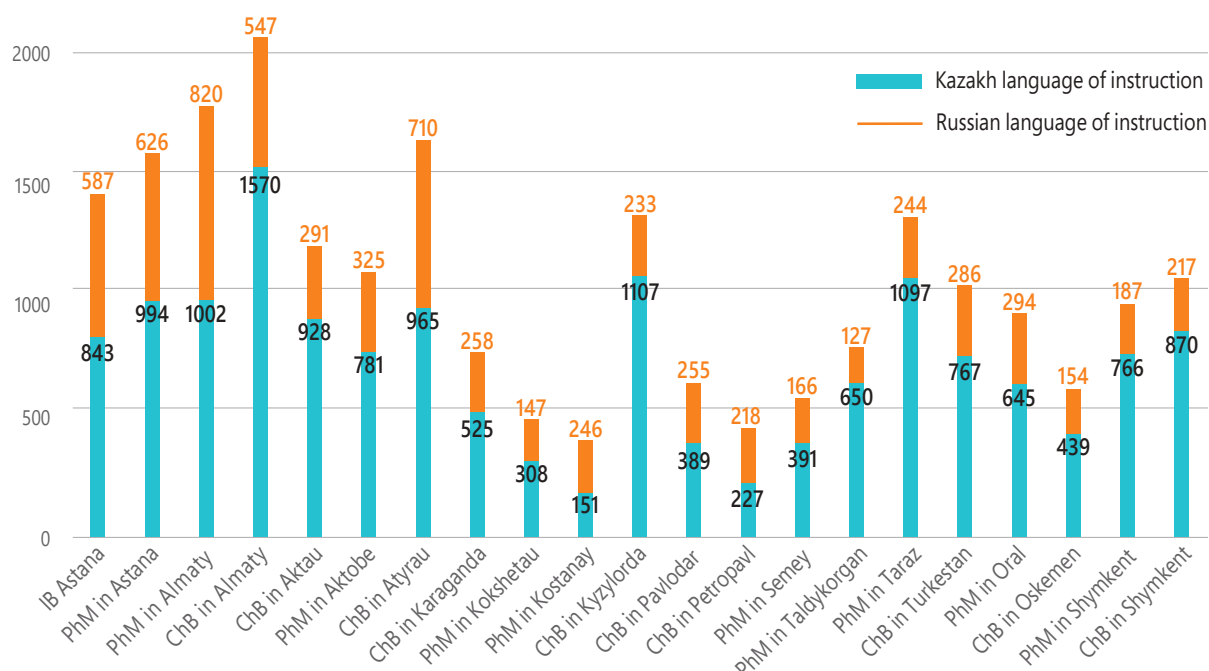
Applications from 22,977 applicants have been registered to participate in the competition. The competition for one vacancy averaged 9 applicants. In some regions (Astana, Almaty, Aktau, Aktobe, Atyrau, Kyzylorda, Taraz) the competition was from 10 to 15 people per one place.

The number of applicants and the competition for one place (2023)



In 2023, 22,353 applicants took part in the comprehensive testing, and as a result, 8,605 (38.5%) applicants were admitted to the competition: 5,315 (61.2 per cent) with Kazakh and 3,290 (38.2 per cent) with Russian language of instruction.

The number of applicants who participated in the competition



As per the decision of the Board of Trustees of the AEO dated April 11, 2023 (protocol No. 14):

1. Grants have been distributed among Intellectual schools;

2. Approved:

- unified ranked lists of school-specific applicants from among the contestants with threshold scores;
- lists of grant holders broken down by Nazarbayev Intellectual schools.
- reserve lists of applicants broken down by Nazarbayev Intellectual schools;
- general reserve list of applicants from all Intellectual schools.

2,664 grants have been allocated from the republican budget for the 2023-2024 academic year for education in Intellectual schools. As a result of the competition, 2,648 applicants became recipients of the «Orken» educational grant, including:

- 1,718 grants for students with the Kazakh language of instruction, which is 64.9% of the total number of grants;
- 930 grants for students with Russian language of instruction, which is 35.1% of the total number of grants.

Out of 445 applicants who participated in the competition at NIS ChB in Petropavl, only 104 scored a threshold score. In this connection, 16 vacant places were created for the award of the «Orken» grant.

On September 5, 2023 (Protocol No. 43), in accordance with the general reserve list, 16 grants were redistributed to the following Intellectual schools:

- NIS PhM in Astana – 13 grants,
- NIS PhM in Almaty – 3 grants.

In connection with the refusal of the grant «Orken» and the choice of other general education, specialised educational organisations, 394 grants were awarded from the reserve lists for vacant places by the decisions of the AEO NIS Board:

- 16 grants (dated May 23, Protocol No. 22);
- 162 grants (dated July 5, Protocol No. 32);
- 53 grants (dated July 28, Protocol No. 35);
- 38 grants (dated August 17, Protocol No. 39);
- 52 grants (dated August 31, Protocol No. 42);
- 10 grants (dated September 5, Protocol No. 43);
- 33 grants (dated September 13, Protocol No. 45);
- 18 grants (dated September 26, Protocol No. 47);
- 6 grants (dated November 6, Protocol No. 52);
- 6 grants (dated November 23, Protocol No. 54),

including 2 vacant places in the NIS ChB in Petropavl has been redistributed to the NIS PhM in Astana.

In total, 2,664 students became recipients of the educational grant for studying in the 7th grades of the Nazarbayev Intellectual schools from the 2023-2024 academic year.

Quantitative data on the results of the competitive selection in 2021-2023

Year	Number of applicants	The number of applicants who have scored threshold points*	Number of grant holders	Competition for one vacant place
2021	19 248	9 332	2 976	6,5
2022	24 045	10 452	3 182	8,8
2023	22 353	8 605	2 664	8,4

*applicants need to score threshold scores in the «Mathematics» section (35% or 140 points or more) and «Quantitative Reasoning» section (40% or 120 points or more) to be considered by the Committee.

The average score of all applicants for comprehensive testing in the reporting year was 739.6 points, which is 25.1 lower than the competitive selection index (764.7) in 2022.

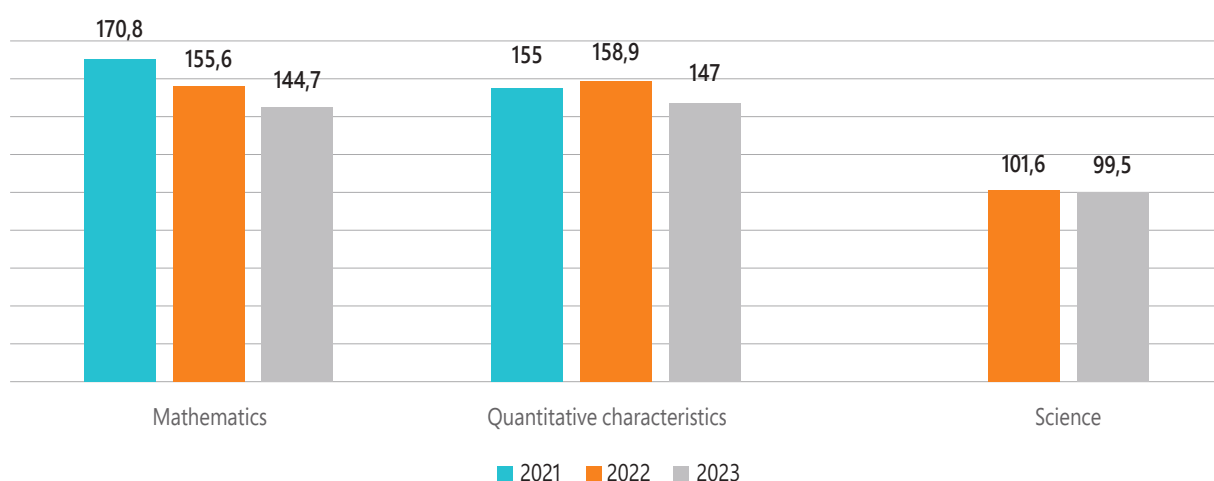
The results of applicants for comprehensive testing in 2021-2023

Year	The highest score	Scores of all applicants		The points of the applicants who scored the threshold score		Grant holders' scores	
		average scores	lowest score	average scores	lowest score	average scores	lowest score
2021*	1275	683,5	50	851,5	410	998,0	634
2022	1496	764,7	158	963,7	401	1147,1	767
2023	1461	739,6	204	968,4	440	1125,2	475

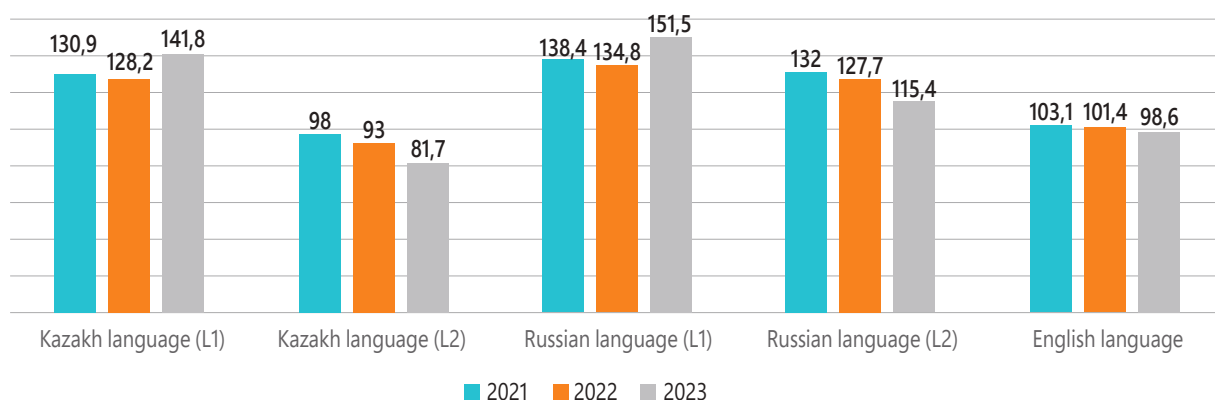
* In 2021, the maximum score was 1300 points, in 2022, 2023 – 1500 points.

A comparative analysis of the results of comprehensive testing over the past three years has revealed a decrease in the level of completion of tasks by applicants in 2023 in all sections of the tests, except for the sections «Kazakh language» (I1) and «Russian language» (I1).

The average scores of applicants in the sections of the tests «Mathematics», «Quantitative Reasoning», «Science» in 2021-2023



Average scores of applicants on the language test over three years
(max. score – 200 for each language)



By the decision of the AEO NIS Board dated December 26, 2023 (Protocol No. 59), additional grants were awarded to 660 applicants from the reserve lists of 20 Nazarbayev Intellectual schools.

Trial testing of the competitive selection of students

In the 2022-2023 academic year, 7,655 6th grade students participated in the trial tests of the competitive selection of students, which is 1,477 more students than in the 2021-2022 academic year. In the 2020-2021 academic year, trial tests were not

conducted due to the coronavirus pandemic. In 2023-2024 academic year it is planned to conduct 5 trial tests on the basis of 21 Intellectual School and International School of Astana.

Quantitative data of trial tests for 2021-2023

Year	Number of participants	Share of the number of competitive selection applicants	The total average score of the participants (max. score – 1250)
2021–22	6 178	17,6%	578,5
2022–23	7 655	23,5%	588,7

The results of the trial tests give applicants the opportunity to assess their current level of knowledge and skills and plan further preparation for participation in the competitive selection.

1.3. VIRTUAL AND VACATION SCHOOLS

The Virtual and Vacation School projects continued in 2023. In March 2023, registration was carried out in the Virtual School for students in the 5th grade, and in October, for students in the 6th grade of secondary schools.

During the reporting period, 5,398 students from secondary education organizations participated in the Virtual School.

The number of participants of the Virtual School, people

Nº	Intellectual school	Grade 5	Grade 6	Total
1	PhM in Astana	331	340	671
2	ChB in Aktau	102	103	205
3	PhM in Aktobe	141	142	283
4	ChB in Atyrau	120	116	236
5	PhM in Almaty	190	180	370
6	ChB in Almaty	104	103	207
7	ChB in Karaganda	203	194	397
8	PhM in Kokshetau	85	91	176
9	PhM in Kostanay	163	179	342
10	ChB in Kyzylorda	236	282	518
11	ChB in Pavlodar	69	82	151
12	ChB in Petropavl	99	107	206
13	PhM in Semey	71	84	155
14	PhM in Taldykorgan	52	48	100
15	PhM in Taraz	82	88	170
16	ChB in Turkestan	87	147	234
17	PhM in Oral	196	195	391
18	ChB in Oskemen	81	82	163
19	PhM in Shymkent	122	126	248
20	ChB in Shymkent	87	88	175
TOTAL		2 621	2 777	5 398

Students who have successfully passed the final test in a Virtual school are invited to study at a Vacation school in a regional Intellectual school for classes in competitive selection subjects.

The number of participants of the Vacation school, people

Nº	Intellectual school	Grade 5	Grade 6	Total
1	PhM in Astana	14	84	98
2	ChB in Aktau	7	24	31
3	PhM in Aktobe	10	30	40
4	ChB in Atyrau	13	29	42

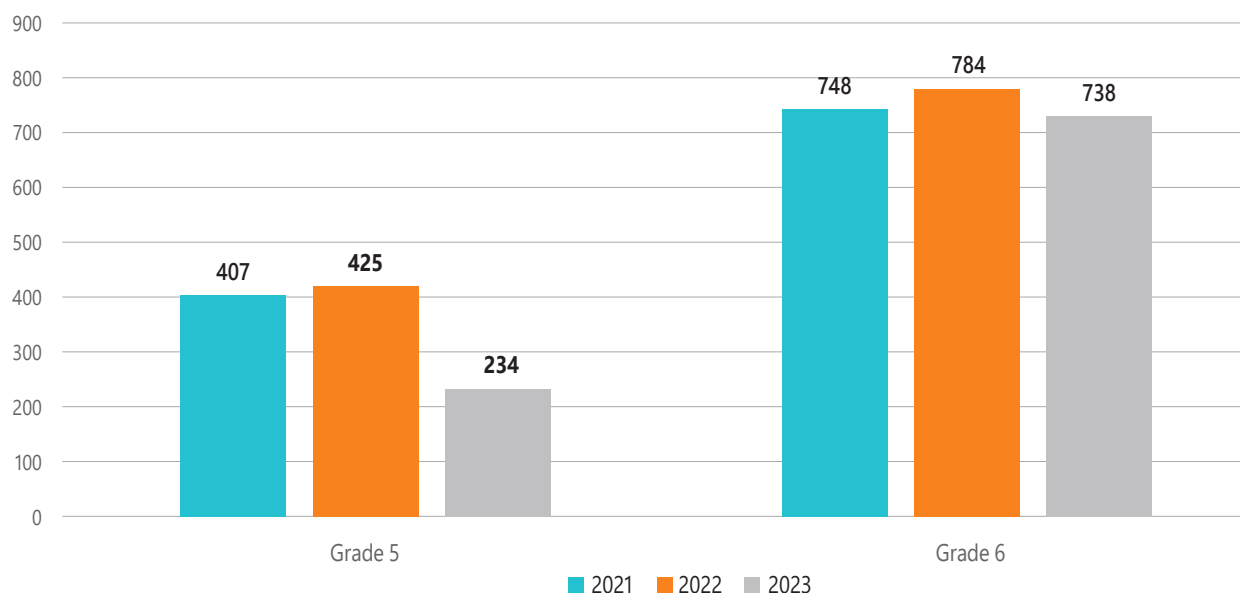
Nº	Intellectual school	Grade 5	Grade 6	Total
5	PhM in Almaty	16	35	51
6	ChB in Almaty	6	11	17
7	ChB in Karaganda	12	29	41
8	PhM in Kokshetau	5	18	23
9	PhM in Kostanay	12	45	57
10	ChB in Kyzylorda	67	184	251
11	ChB in Pavlodar	3	17	20
12	ChB in Petropavl	8	27	35
13	PhM in Semey	0	25	25
14	PhM in Taldykorgan	1	5	6
15	PhM in Taraz	3	14	17
16	ChB in Turkestan	10	51	61
17	PhM in Oral	24	56	80
18	ChB in Oskemen	6	19	25
19	PhM in Shymkent	13	27	40
20	ChB in Shymkent	4	8	12
TOTAL		234	738	972

Since 2012, the number of Virtual School participants has totalled more than 25,000 students of secondary education organisations in the Republic of Kazakhstan.

Data show that the success rate of students graduating from the Virtual school has increased each year.

Students who successfully passed the final testing in the Virtual school are invited to the Vacation school organised on the basis of the regional Intellectual school for classes in the subjects of the competitive selection.

Percentage of students who passed the final test at the Virtual School and were admitted to the Vacation School, by three-year cycle



The content of Virtual and Vacation Schools

In 2023, the Virtual School continued to offer online education to students. The development of educational materials was undertaken by the CEP subject specialists in collaboration with teachers from Intellectual schools. Each course of study covers a wide range of subjects: Mathematics, Science, Kazakh language, Russian language and English language for Kazakh-language learners; and Mathematics, Science, Russian language, Kazakh language and English language for Russian-language learners.

The course content comprises training materials and exercises aimed at reinforcing the acquired knowledge. Each lesson consists of a video clip, didactic material and methodological recommendations. The videos serve as explanations of theoretical material, while the didactic material includes tasks of varying levels of complexity, focusing on

fostering critical thinking and the application of knowledge skills.

As part of the enhancement of the teaching materials' quality, 30 lessons were reviewed in 2023 by teachers from Intellectual Schools who were not involved in their development. This process introduced an additional layer of quality control for the educational content offered.

Due to the extensive nature of the curriculum for secondary schools in Mathematics (340 hours in grades 5-6), new mathematics lessons were developed in 2023. Consequently, the total number of materials increased by 30 lessons in both Kazakh and Russian languages. The expansion of the Virtual School's educational resources offers students greater opportunities to explore and deepen their knowledge.



2. CONTENT OF EDUCATION



2.1. Educational programmes

2.2. Educational resources

2.3. The work of libraries

>>> 2.4. Pastoral work

2.5. Extended education

2.6. Student well-being

2.7. Career guidance work



2. CONTENT OF EDUCATION

2.1. EDUCATIONAL PROGRAMMES

The educational process in Intellectual Schools is conducted based on two educational programmes:

1. The educational programme «NIS-Programme» of the AEO «Nazarbayev Intellectual Schools» (hereinafter referred to as NIS-Programme), which is implemented in 20 PhM and ChB schools.

2. The International Baccalaureate programme, which is implemented in 2 schools: the International School of Astana and Nazarbayev Intellectual School of Astana.

NIS-Programme, educational programme of “Nazarbayev Intellectual schools” AEO

NIS-Programme has been operating in Intellectual Schools since 2012. NIS-Programme is designed to facilitate an in-depth study of STEM subjects and foster the development of research skills. The programme incorporated values, integrated, and communicative approaches into its framework. NIS-Programme is inherently applied, fostering the development of students’ functional literacy.

Worldwide educational practices confirm the necessity of cyclically updating programmes. In various countries, this cycle typically ranges from 5 to 10 years on average. In Intellectual Schools, to ensure that the content, assessment system, and pedagogy of the educational programme remain relevant to the continuously evolving world and cater to the needs of all students, the programme update cycle spans 10 years.

The ongoing process of enhancing NIS-Programme, emphasizing the formation and development of key competencies, which commenced in 2020, is still underway.

During the reporting period, efforts to ensure the effectiveness of implementing NIS-Programme encompassed:

- 1) improvement of NIS-Programme;
- 2) methodological support for the implementation of NIS-Programme;
- 3) development of elective courses;
- 4) monitoring of NIS-Programme implementation;
- 5) implementation of trilingual education.

1. Improving NIS-Programme

The previous NIS-Programme prioritized the development of a wide range of skills, whereas the updated programme signifies a higher level of curriculum focused on nurturing the formation of key competencies among students.

The educational programme is continuously reviewed and improved to align with modern educational standards and to cultivate the essential competencies required for students’ development. NIS-Programme aims to offer students opportunities for individual development and successful integration into the labour market.

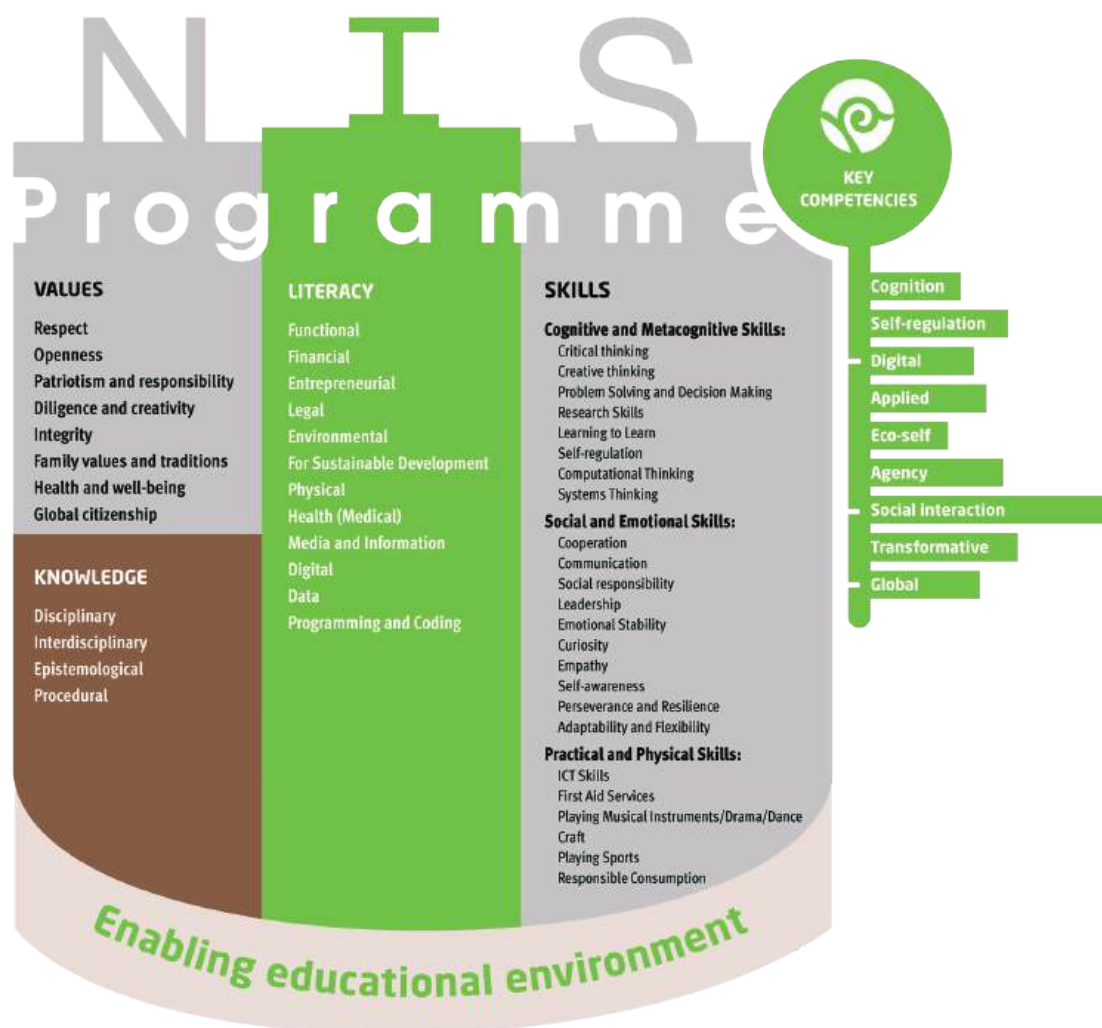
The renewal of NIS-Programme commenced in 2020 and involves modifying the curriculum to prioritize key competencies, updating curriculum content based on research findings from international organizations such as OECD, UNICEF, WB, etc., and incorporating additions to address the evolving needs of the labour market.

The improvement of NIS-Programme, including the definition of the «Key Competences Framework» and its structural components, was led by the CEP. This process involved considering the perspectives of students and teachers through the establishment of project groups comprising proactive teachers and school administrators, along with conducting express research to gather the opinions of students and graduates from Intellectual schools.

NIS-Programme, with a focus on the formation of key competencies, was approved by the decision of the NIS AEO Executive Board on 10 August 2023

(Minutes No. 37). Visualization of NIS-Programme “Key Competences Framework”:

NIS-Programme’s Key Competences Framework

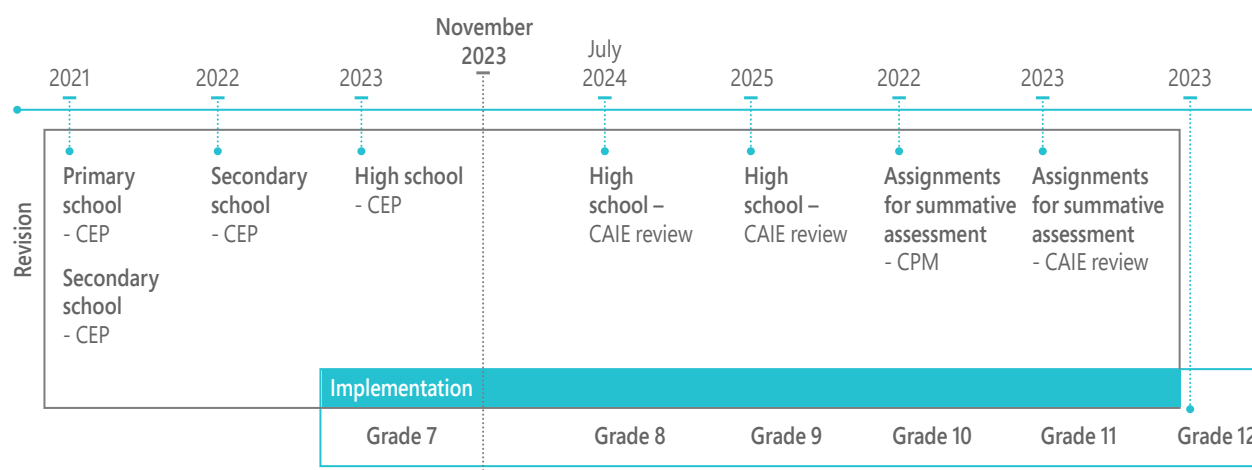


Detailed information on values, knowledge, types of literacy, skills, and key competencies is provided in the approved NIS-Programme framework document and the methodological guidelines on the implementation of NIS-Programme in Intellectual Schools for the 2023-2024 academic year.

According to the approved schedule for the revision and implementation of curricula the implementation of the revised curricula will be conducted in

stages from 2023 to 2028. This approach facilitates the harmonious adaptation of the educational process and better equips students for external summative assessments. A consistent transition ensures a step-by-step implementation of changes, which aids in preparing students for extended education. In the 2023-2024 academic year, the implementation of the updated NIS-Programme was carried out in 7th grades.

Schedule of revision and implementation of NIS-Programme



NIS-Programme, which was revised in 2023 maintain the general structure and content of previous versions but now emphasizes the development of a harmonious and creative personality with enhanced

key competencies. Due to these changes, the learning objectives were revised, and new sections and topics were created.

Number of revised curricula and course plans*

Documents/Year	2021	2022	2023
Curricula	22	11	22
Medium-term plans	46	59	35
Total documents	68	70	57

* In 2024-2025, it is planned to complete the revision process for 41 course plans of grades 11-12.

After the revision in 2024-2025, Cambridge Assessment International Education (CAIE) is scheduled to review high school curricula. This will ensure that the updated programmes are comparable to the international standards of the UK A/AS-level, providing a high level of education for students.

The mandatory curricula review by CAIE also ensures a reliable comparison of updated programmes with international education standards. This step underscores the commitment to providing high-quality global education and highlights the preparedness of Intellectual Schools graduates for extended education.

2. Methodological support for the implementation of NIS-Programme

The effectiveness of implementing NIS-Programme depends on methodological and resource support provided to teachers. Methodological and resource support encompasses conducting training sessions, developing methodological manuals and resources, and creating instructional materials.

Conducting training sessions

Training sessions for teachers are an important form of methodological work on the implementation of NIS-Programme. The aim is to familiarize teachers in a short time with the philosophy and innovative pedagogical concepts embedded in the curricula. The training sessions aim to equip teachers with fundamental skills and tools for use in their pedagogical activities.

During the reporting period, several types of training were organized, including subject-based training on course plans, sessions for new teachers as part of the Steps to Success project, webinars held during the August conference, and seminars focusing on the implementation of elective courses.

1. Subject-based training on course plans

From 2nd to 4th August 2023, at the NIS PhM Almaty, the CEP specialists conducted summer training sessions on updated curricula within the framework of NIS-Programme for 218 heads of methodological associations in all academic subjects.



The training sessions covered a range of topics, including updated curricula, ensuring integrity in education and upbringing, instilling values, and building key competences. Teachers received methodological recommendations and studied effective methods for organizing design and research work, as well as features of STEM learning, a communicative approach, and problem-oriented learning. Additionally, they learned techniques for the formation of reading, mathematical, science, digital skills, and media literacy. These trainings are part of an extensive plan to introduce updated curricula, starting from grade 7 in the 2023-2024 academic

year. The aim is to continuously improve the quality of education and prepare teachers for new educational challenges.



2. Trainings within the framework of the project «Steps to Success»

This year, continuing the tradition of the educational project «Steps to Success», a seminar was held for teachers starting their career path in Intellectual schools. The purpose of the seminar was to offer methodological support to teachers, aiding in their adaptation to the new educational environment. The seminar primarily focused on the features of NIS-Programme, encompassing its goals and objectives, the key competences framework, and approaches to the formation and development of skills, types of literacy, and values. Such events are especially important for young teachers who have theoretical knowledge but need practical experience to teach effectively.

Subject specialists regularly offer methodological support to teachers of Intellectual Schools, providing them with opportunities to ask questions through various communication channels. Answers to questions, in the form of explanations, exchange of experiences, and relevant information, are provided by both subject specialists and other teachers on the MS Teams platform.

Each MS Teams team has established a library of materials for individual subjects, comprising a media library, a database of tasks for the development of functional literacy, as well as short-term lesson plans, presentations, methodological guidelines, useful links, and other educational materials.



3. Seminars on the implementation of elective courses

To clarify the specifics of teaching professionally oriented elective courses and the course «Well-being and Safety», the CEP subject specialists conducted training sessions involving 450 teachers of Intellectual Schools held from November to December 2023.



Methodological manuals and resources

A methodical manual is an educational publication that systematizes information about the teaching goals and methods, content of a course, subject, section, or pastoral work. This allows teachers to convey the material to students informatively and comprehensively, making it interesting and accessible. In 2023, the CEP continued its efforts in developing methodological manuals and resources.

One of these manuals is a collection of tasks for differentiated English language teaching for 8th grade «Collection of tasks for 8th grade on differentiated learning on the 'English language' subject». The collection contains tasks tailored to the age and skill levels of students, enabling teachers to adapt educational material to individual needs and abilities, thereby fostering a more focused learning process.

Another useful resource is the «Collection of Digital Literacy Tasks for 7-9th grades students». The manual covers a variety of topics in the field of computer science and digital technologies, offering students the opportunity to develop and enhance their knowledge and skills in this domain. The solutions and answers facilitate independent study and review of the material, while also assisting teachers in organizing and implementing the educational process. The collection can serve as a supplementary resource to standard training programmes and as a foundation for the creation of personalized tasks.

To provide resource support to teachers of Intellectual schools, a task bank has been created specifically for the development of functional literacy NIS-Programme primary school subjects. As of now, the developed training materials in three languages have been uploaded to the CEP-Forum platform (<https://forum.cep.nis.edu.kz>) and to the subject teams on MS Teams. In 2024, efforts will continue on moderating the developed tasks and adding more tasks in subjects covering science, mathematics, linguistics, social and humanitarian studies, as well as complex aesthetic directions.

Development of methodological guidelines

The methodological guidelines (hereinafter referred to as MG) on the implementation of NIS-Programme in Intellectual Schools are annual publications designed for administration, teachers, and

specialists of the AEO branches. The MG include information about changes made to the educational process and curricula, as well as recommendations on pedagogical methods and techniques for each subject. The MG aim to provide teachers with a clear idea of the upcoming academic year.

The main components of the Methodological Guidelines for the 2023-2024 academic year:

1. Description of NIS-Programme's Key Competences Framework
2. The role of the PISA International Study in assessing the quality of education.
3. Features of the digital learning environment: NIS Online and NIS Lab platforms;
4. The specifics of implementing educational programmes revised as part of the enhancement of NIS-Programme, with a focus on fostering key competencies.
5. Methodological recommendations for the formation of functional literacy in teaching subjects.
6. Features of the implementation of primary school programmes.
7. Elective courses.
8. Textbooks.

3. Development of elective courses

Elective courses are an important part of the modern educational process, providing students with an informed choice in their studies and contributing to their professional guidance. Research confirms that elective courses play a pivotal role in shaping students as competent, independent-minded individuals, empowering them to make informed decisions about their future careers and life paths.

In 2023, the CEP, in collaboration with NIS teachers, continued the development and implementation of elective courses aimed at deepening and expanding students' knowledge in various fields. During the reporting period, ten professionally-oriented elective courses for grades 11-12, along with an elective course titled «Well-being and Safety» for grades 7-10, were developed. These courses are aimed at fostering knowledge and skills related to a healthy and safe lifestyle within the socio-humanitarian and natural mathematics domains.



The elective course «Well-being and Safety» emphasizes physical health, emotional well-being, safety in social environments, and the development of emotional intelligence. This course was developed jointly with Janice Atkin, an Australian international expert in the field of well-being and health of schoolchildren. On 19-23 June 2023, the relevant training seminar was held for deputy principals and curators, as well as 346 teachers of Intellectual Schools.

The course «Tour Management» was introduced in the field of tourism, aiming to develop analytical and managerial skills for pursuing a career in the tourism industry. The course helps students comprehend the principles and current trends of tour management, equipping them with valuable knowledge for their future professional endeavors.

The course «Copywriting» emphasizes the development of writing skills across diverse formats and styles, tailored to the interests and needs of the target audience. The course aids in developing skills for searching, selecting, and processing information, crucial abilities in today's information-driven society.

The course «Fundamentals of Investing» is designed for individuals interested in finance and investments. It aims to teach students the basics of investing and financial planning. This course provides an opportunity to master the skills of making independent decisions in the world of finance and investment.

The courses «Fundamentals of Graphic Design» and «Film Director» were developed for students with a creative orientation. The first course emphasizes the fundamentals of graphic design and practical skills in software, while the second course focuses on learning the basics of filmmaking and event staging processes.

The course «Nutritionology» is available in the field of nutrition and health, aiming to educate stu-

dents on the fundamentals of proper nutrition and its influence on health. It contributes to the development of knowledge and skills for making informed food choices.

As part of the math and science, the «Mobile Application Developer» is the key course, providing students with knowledge and skills for pursuing a career in the IT field, with a specific focus on programming mobile devices for the Android operating system.

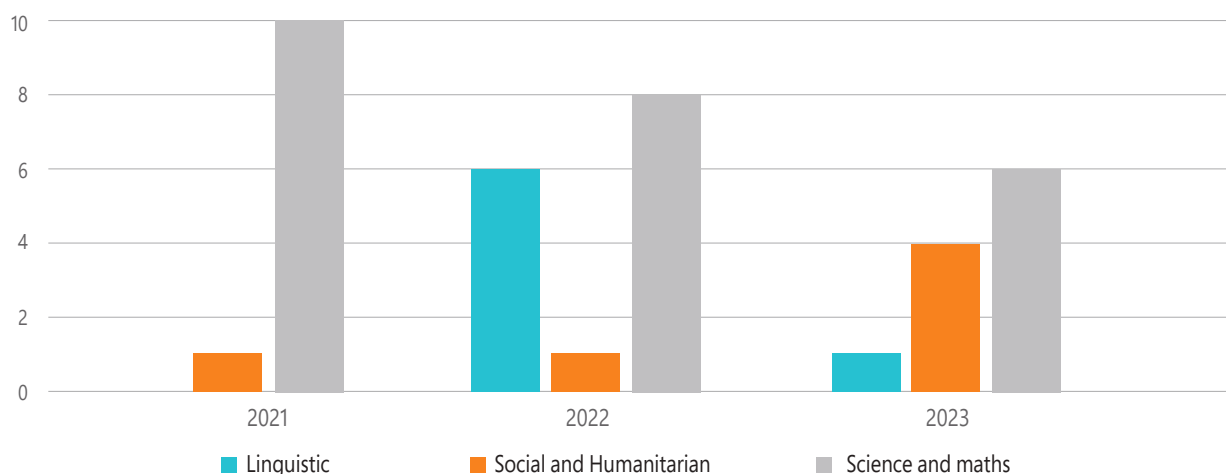
The course «Practical Electrical Engineering» is designed for high school students interested in exploring the field of electrical engineering and electronics. It encompasses both theoretical and practical aspects of electrical engineering, equipping students with the skills and knowledge necessary for future career opportunities in this field.

The course «Mathematical Methods of Collecting and Processing Statistical Data» focuses on developing skills in analyzing and processing statistical information, which is particularly significant in the era of big data.

The course «Chemical Analysis Laboratory Assistant» offers students the chance to enhance their understanding of chemistry and gain practical skills in conducting chemical experiments, thereby preparing them for careers in chemistry and related fields.

These courses provide students with the opportunity to cultivate their interests and competences in line with the demands of contemporary education and the job market, thereby making a significant contribution to their overall education and preparation for future professional endeavors.

Dynamics of development of elective courses in three areas



In 2022, the number of courses expanded to 15, with a notable increase in the linguistic direction, which saw the introduction of six courses focused on language skills development and creative writing. The science and mathematics field has also broadened to include courses on web development, information security, as well as new topics such as Urban Studies and Hydroponics.

In 2023, a total of 11 courses were offered, with notable advancements in the social and humanitarian

field, encompassing such topics as well-being, investment, and design. The science and mathematics field remains significant, offering six courses, including newly introduced courses in mobile engineering and electrical engineering.

Hence, the data illustrate the dynamic improvement and adaptation of elective course offerings, reflecting the evolving needs and interests of students, as well as broader trends in the educational landscape.

4. Monitoring the implementation of the NIS-Programme

To evaluate the effectiveness of the programme implementation and promptly make improvements, Intellectual Schools conduct monitoring studies on a regular basis. The monitoring of the programme implementation took place in November 2023, focusing on the examination of several issues:

1. The implementation of the updated NIS-Programme curricula in the 7th grade, aimed at fostering key competences.

2. The implementation and evaluation of the effectiveness of the new elective course «Well-being and Safety,» recommended for grades 7-10 students of Intellectual Schools.

3. Assessment of the need to transition from the existing 10-hour and 7-hour curricula in Mathematics to a unified 8-hour curriculum for grades 11-12.

In accordance with the Long-term Annual Work Plan for 2023, monitoring was conducted in 17 subjects and the elective course «Well-being and Safety,» covering both main and three high school subjects across 20 Intellectual schools. In total, the monitoring involved 9,600 students and 818 teachers, and 645 lessons were observed.

Monitoring in Intellectual Schools, 2023

Grades 7-10 >>> <ul style="list-style-type: none"> • Kazakh language (L1) • Kazakh literature • Kazakh language and literature (L2) • Russian language(L1) • Russian literature • Russian language and literature (L2) • English language • Mathematics • Computer Science • Physics • Chemistry • Biology • Geography • World History • History of Kazakhstan • Art • Physical Education • Elective course «Safety and Well-being» 	Grades 11-12 >>> <ul style="list-style-type: none"> • Mathematics • English language • Global perspectives and project work 	Online surveys >>> <p>NIS ChB</p> <ul style="list-style-type: none"> • Almaty • Aktau • Karaganda • Kyzylorda • Petropavl • Oskemen <p>NIS PhM</p> <ul style="list-style-type: none"> • Almaty • Aktobe • Kokshetau • Kostanay • Taraz 	Visits to schools >>> <p>NIS ChB</p> <ul style="list-style-type: none"> • Atyrau • Pavlodar • Shymkent • Turkestan <p>NIS PhM</p> <ul style="list-style-type: none"> • Astana • Oral • Semey • Shymkent • Taldykorgan
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According to the methodology and monitoring procedure approved by the CEP Scientific and Methodological Council, the following types of sources are used to collect and analyze information: results of external summative assessments, online surveys, lesson observations, analysis of short-term plans and other documentation, review of summative assessment works for a unit or term, focus groups, and interviews with students and teachers.

The monitoring study of the implementation of educational programs utilizes traditional monitoring categorization of problemmes: curricula, course plans, teaching methods, educational resources, and trilingual education.

1) The monitoring results of the updated NIS-Programme curricula implementation in grade 7, targeting key competency development, indicate a positive reception among teachers. Teachers emphasize the importance of developing key competences among students, highly appreciate the effectiveness of the introduction of a new format of long-term plans, which facilitates the process of lesson planning.

However, the monitoring reveals the existence of certain issues. Despite their excellent subject knowledge, young teachers encounter difficulties in organizing the methodological aspects of lessons and conducting practical work. Insufficient attention is dedicated to the cultivation of functional literacy and key competences. The development of the types of literacy, values, and meta-subject skills outlined in the curricula is not consistently manifested in practice, particularly during lessons.

Observers also highlight the insufficient level of English instruction by local teachers when teaching subjects in high school, as well as some lessons lacking engaging and pertinent educational materials.

The results were considered in the development of methodological recommendations and manuals, as well as during training sessions on teaching methods and lesson organization for teachers of Intellectual Schools. The CEP subject specialists consistently offer methodological support for the creation and utilization of engaging and relevant educational resources. Additionally, in the upcoming academic year, there are plans to develop an elective course on geography taught in a second language for 7th grade students.

It should be noted that in August 2023, recommendations were communicated to teachers in the form of methodological guidance regarding the organization of the educational process in Intellectual Schools for the 2023-2024 academic year. Additionally, these recommendations were discussed during training sessions at the August conference of Nazarbayev Intellectual Schools, themed «Development of the Professional Learning Community: Quality and Effectiveness».



2) November 2023 saw the monitoring process to evaluate the implementation and effectiveness of the new elective course «Well-being and Safety», recommended for grades 7-10 students of Intellectual Schools. A total of 90 curators and 1,692 students participated in an online survey aimed at assessing the level of satisfaction with the programme and identifying implementation issues. From 13 to 24 November 2023, visits were made to NIS PhM in Astana, Semey, Taldykorgan and to NIS ChB in Pavlodar, during which curatorial hours were attended, discussions were held with 55 curators and 75 students of 7-10 grades.

The curators and students positively assessed the programme. During the discussions, students emphasized several advantages of the course programme, including the cultivation of team spirit and social skills, the practical application of knowledge in real-life scenarios, emotional support, and the enhancement of emotion management skills. The curators observed a comprehensive coverage of topics pertaining to well-being and safety, including physical and psychological well-being, first aid, digital safety, and personal as well as public safety.

The format of conducting the classes in the form of training sessions, which minimised theoretical

material, was positively received. At the same time, during the interviews, the curators noted the shortage of teaching time, which hinders the implementation of the elective course programme. They also suggested increasing the number of classes on topics such as Vaping and Time Management.

The monitoring results indicate the successful implementation of the program. As additional methodological support, training for 86 curators of grades 7-10 was held on 11-12 December 2023 to discuss the features of the elective course programme, as well as methodological approaches to implementing its objectives. As part of the post-course follow-up, it is planned to create a virtual team on the Microsoft Teams platform to share experiences and discuss methods of teaching the course.



3) 201 students of 20 Intellectual Schools took part in the assessment of the necessity of transition from the current 10-hour (at the advanced level) and 7-hour (at the standard level) curricula in the subject «Mathematics» to the unified 8-hour curriculum in 11-12 grades. The results of the study led to the following conclusions:

- Program selection: students enrolled in the 10-hour curriculum are mainly motivated by the choice of an engineering specialty and the desire to study the subject of Mathematics more deeply (69.3%). It is noted that the majority consider this programme to be a good preparation for the External Summative Assessment. Students of the 7-hour program mostly choose the program because they are convinced of the optimality of its goals and topics for successful completion of the External Summative Assessment (45.9%).

- Attitudes towards learning mathematics: In response to the question of whether students believe that studying mathematics in depth will help them in their future careers or education, 59.7% of students in the 10-hour program answered affirmatively, while only 41.1% of students in the 7-hour program gave a positive response.

- Time cost analysis: The monitoring results show that students in the 10-hour program are willing to spend more time preparing for math lessons than their peers in the 7-hour program.

Thus, students in the 10-hour program show higher motivation and readiness to study mathematics. They set themselves the goal of enrolling in education for professions that require deep knowledge of mathematics. In contrast, students in the 7-hour program plan to successfully pass an external summative assessment and do not associate extended education at universities with in-depth study of mathematics.

In the light of the above data, the subject specialists of the CEP do not recommend switching to a single 8-hour curriculum, since this can negatively affect the quality of preparation for higher education of students in a 10-hour program.

5. Implementation of trilingual education

Trilingual education is an important component of the NIS-Programme. In the implementation of this education, much attention is paid to the «Subject-language integrated learning» (CLIL) approach for teaching subjects in the second/third language. During the reporting period, work on the implementation of trilingual education focused on the professional development of teachers in the CLIL approach.

In 2023, 115 teachers of Intellectual Schools were trained on the topic «Subject-language integrated learning (CLIL): Activities for developing students' skills» to teach the subjects «History of Kazakhstan»,

«Geography», «Fundamentals of Law» and «History of Kazakhstan (Kazakhstan in the Modern World)» in the Kazakh language. A seminar in English on the topic «CLIL: Activities for developing students' skills» was held for teachers of the subjects «Chemistry», «Biology», «Physics» and «Computer Science».

Conducting seminars in English also contributed to the development of teachers' oral speech skills. During the practical tasks, teachers mastered the skills of lesson planning with the integration of linguistic and non-linguistic goals, as well as organizing educational activities to develop students' listening, speaking, reading and writing skills.

2.2. EDUCATIONAL RESOURCES

In order to implement the strategic objectives up to 2030, the AEO is working on the development and revision of teaching and learning materials in accordance with the NIS-Programme educational programme.

In the academic year 2022-2023, the piloting of teaching and learning materials for Grade 12 has begun in Intellectual Schools. The approbation is organised simultaneously in 19 Intellectual Schools. The reports on the results of the approbation for the 1st and 2nd half of the year are presented by schools in the form of feedback. According to the results of the approbation, up to 10-20% of changes were made to the textbooks in order to improve the quality of content, presentation of material, design and supplement with tasks for the development of critical and logical thinking.

The textbook on the subject «History of Kazakhstan (Kazakhstan in the Modern World)» for grade 12 contains materials covering political science, geopolitics, sociology, economics, cultural studies, for the analysis and constructive assessment of events and processes in modern Kazakhstan. In addition, in the textbook of the 12th grade, the emphasis was on the country's foreign policy, which is associated with a more in-depth study of issues of modern geopolitics. The textbook on the subject of Geography for grade 12 examines in more detail

international economic relations and global problems of mankind.

Technical errors related to mathematical symbols and signs have been corrected in the subject of Mathematics. The remarks on the subjects «Kazakh language and literature» and «Russian language and literature» were of a recommendatory nature, where the authors supplemented the content of the textbook.

In connection with the revision of the NIS-Programme educational program in 2023, the textbooks (components «Textbook», «Teacher's Guide») for 7th grade students in the following subjects were finalized, supplemented and localized: «Mathematics», «Chemistry», «Biology», «Geography», «Physics», «Art», «Music», «World History», «History of Kazakhstan» and «Computer science». Changes have been made to the textbooks and new sections have been added aimed at the formation of key competencies. In this regard, additional double spreadsheets have been developed to implement the new objectives formulated in the NIS-Programme, tasks aimed at developing students' soft skills and functional literacy have been added. The content of the modified textbooks (educational texts, assignments, theoretical information, illustrative material) has a pronounced focus on instilling the values inherent in the content of the program. For example, the teaching materials

for humanities disciplines, with the aim of fostering patriotism (one of the key values outlined in the programme), use the works of new researchers of national science and create illustrations. The song repertoire, including works by Kazakhstani composers and poets, has been completely updated in the textbook on the subject of «Music». Each section concludes with a list of questions for organising SAUs, an intelligence map for consolidation, visualisation and structured presentation of the studied material.

The tasks are designed in accordance with the goals of the NIS-Programme and are aimed at the formation and development of complex skills of critical and systemic thinking, research and computing

skills, as well as skills of reasonable consumption of natural resources (subjects of the science and mathematical cycle).

New rubrics have been added to some textbooks. For example, the rubrics «This is interesting», «Discussion» have been added to the textbook on the subject of «Biology», «Do you know?», «Remember!», etc. to the textbook on the subject of «Chemistry».

This comprehensive approach to the development and revision of the textbooks makes it possible to ensure that the educational program meets modern requirements, effectively integrate key competencies, and provide high-quality education in Intellectual Schools.

2.3. THE WORK OF LIBRARIES

Formation of the library fund of Intellectual schools

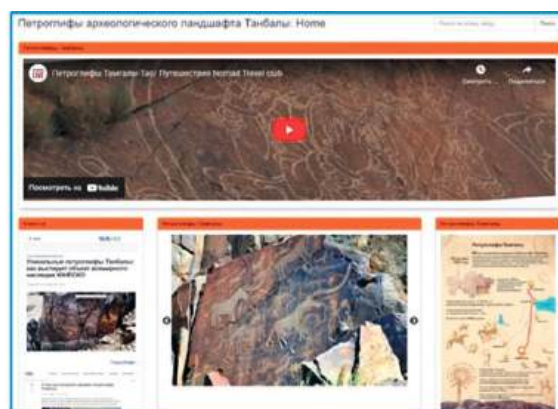
The library fund of Intellectual schools are formed according to the List approved by the AEO NIS Board, in accordance with the NIS Programme.

The total book fund for December 2023 is 637,737 copies of educational, methodological, fiction, additional literature, and periodicals. The majority of the fund consists of textbooks (51%), fiction (23%) and additional (12%) literature.

The Library of Nazarbayev Intellectual Schools as an information and resource center

Work was carried out in the LibGuides system during the year. Based on this online platform, there operates an informational online space, which serves as an interactive educational environment. Work has been done to organize the content in three languages, including the main page of the resource and the main sections at <https://nis-kz.libguides.com/mainpage>.

In 2023, a section titled «UNESCO World Heritage Sites in Kazakhstan» was developed, featuring comprehensive materials on the UNESCO World Heritage Sites located within Kazakhstan. The section «Memorable Dates» contains collections of famous personalities who celebrated memorable dates in Kazakhstan in 2023. In this section, you can find detailed information about notable figures, biographies, photos and videos, articles, and more.



The section «Bow to the Motherland» contains students' projects, information about authors and project leaders, winners in different categories, descriptions, photo and video materials, links, etc. At the moment there are 209 project guides created, the section has a constantly updated digest of media about the project.

The platform has also been updated with new guides on academic integrity and citation. The total number of subject and resource guides is 1,243. During this period, the website has seen active traffic, with a total of 34,067 views.

In 2023, the Intellectual Schools utilized both domestic and international academic resources from companies such as Bilim Media Group (BilimLand, Twig-Bilim) and Gale. These resources contain the most up-to-date and reliable materials, providing essential information for lesson preparation, homework

assignments, and research work at both elementary and advanced levels.

Databases are used in the educational process to carry out research activities, when studying the subjects «Global Perspectives and project work», and also contain additional materials for project work on the subjects «Economics», «Physics», «Chemistry», «Biology», «World History», «Mathematics», «Art» and «Social sciences» related to the use of a wide range of alternative sources.

The trainers from Gale's provider base conducted seminars on the use of these resources for teacher-librarians and methodological associations of Nazarbayev Intellectual Schools branches. The teacher-librarians of Nazarbayev Intellectual Schools conducted training sessions to familiarize and effectively utilize the databases of BilimLand, Twig-Bilim, and Gale for teachers and students.



Formation of reading literacy and development of reading culture



NIS libraries actively worked to develop students' interest in reading by involving them in active events as «Poem in Your Pocket», «Poetry Analysis», «WAKA», «Favorite First Page», «BookDingo», «BookBingo», «'Literary jam», «Book Taste», «1 book in 3 minutes», «Book Picture» and many others.

The promotion of reading and instilling an interest in reading as one of the leading directions of libraries is carried out by teacher-librarians through various activities, including those dedicated to significant anniversaries and dates in our country's history and in honor of famous personalities – Takhawi Akhtanov's 100th Anniversary, Muzafar Alimbayev's 100th Anniversary, Shakarim Kudaiberdiuly's 165th Anniversary, Sultanmahmut Toraygyrov's 130th Anniversary, Oralhan Bokeykhanov's 80th Anniversary, using such techniques as «Literary Jam,» «Shadow poetry,» «Keyword Hexagon,» «Find a Book,» «Wisdom Dictionary,» «Reading Man,» «Bloom's Daisy,» «Lego Poetry,» «Kangaroo Words,» «Literary Lotto,» and others.

As part of the READx project aimed at engaging students in reading, inspiring speeches about discoveries in reading were conducted. In 2023, at the READx conference, many schools began to conduct the project in a network format, involving speakers and audiences from different schools. As practice shows, the conference significantly increases students' reading activity, develops reading literacy skills and builds a reading culture.



It is also important to note the festival «100 Books» - theatrical performances on the works of the project (NIS PhM in Aktobe), «Library Quest» - an event with students of 7-9 grades (NIS ChB in

Almaty), «Library night». Students guessed proverbs and sayings using the «Tarsia» method, solved puzzles, played games, answered questions in the «Bibliocake» and participated in the «Sweet Quiz» (NIS PhM in Uralsk).

In 2023 there was also a Book Start charity event - as part of the campaign, children's illustrated books and educational toys collected by the school community by a group of activists are given to young mums and their babies in a maternity hospital or Mum's House.

Traditionally, as part of the celebration of the International Children's Book Day on April 21, 2023, a Book Surprise campaign «Kitap alemdi bagyndyrady» (The book conquers the world) was held in all Intellectual Schools. In 2023, the number of participants from Intellectual Schools who exchanged books amounted to 6,289 people.



Also, a new practice called «Online Libraries» has been introduced into the work of Intellectual Schools' libraries, including live broadcasts on social media platforms (Instagram and YouTube). The teacher-librarians made a live broadcast: «Illustrated books – reading at a new level» (PhM in Kokshetau), «For the 30th anniversary of the tenge. Best books on finance» (ChB in Petropavl).

Ақпараттық сауаттылық пен зерттеу дағдыларын қалыптастыру



The libraries of the Intellectual Schools conducted lessons on the formation of reading literacy both separately and in co-operation with teachers. These lessons used the Argumentative Article Analysis method to develop the required PISA reading literacy skills. The students conducted a detailed analysis of materials from various sources, both traditional periodicals and electronic ones.

Integrated lessons

Integrated lessons in libraries of Intellectual Schools are conducted not only together with teachers of literature, but also teachers of subjects of natural

Kangaroo Words, Read and write, QFocus, and Write around techniques were used in conducting lessons on the development of information literacy and research skills.

Special attention during these lessons was devoted to studying the reliability of information on the internet, academic integrity, and plagiarism.



direction, dormitory tutors and curators. The use of multimedia equipment, various games and techniques brings emotional colouring to the course of the lesson.

2.4. PASTORAL WORK

In Intellectual Schools, the key values of the educational process are respect, openness, patriotism, responsibility, industriousness and creativity, honesty, family values and traditions, health and well-being, and global citizenship. Values are formed at all stages of school life, including through the implementation of network projects: the student community «Shanyrak», local history research expedition «Bow to the Motherland», «TED*NIS Club» (a project in the format of «Ideas Worth Spreading»), «Wikipedia Club», «Smart Thursday», «Kazakh Songs», «History of 100 Kuys», «Akyns of the Great Steppe», «Songs of our contemporaries», «Intergen-

erational continuity», «Proverbs for Everyday life», school self-governance; community service projects; compulsory summer practices as «Take your child to work», «10 days at parents' company», and «Two weeks in the village».

Participation of students in network projects promotes proactive behavior, multidimensional development of individual abilities, as well as deepens knowledge and develops skills (cognitive, socio-emotional, practical, and physical). Throughout the year, deliberate, systematic, and planned activities are carried out to engage students in all network projects.

School community “Shanyrak”

The «Shanyrak» community (hereinafter referred to as Shanyrak), as the main form of organizing student community, is involved in all school events: social campaigns, creative competitions, festivals, sports competitions, Open Days, excursions, hikes, and charity fairs.

A key element of the successful activities of Shanyraks is mentoring based on the «1+1» formula, where all students in grades 7-8 receive mentoring

support from senior students in the school. In general, 335 Shanyraks operate in the system of Intellectual schools.

Shanyraks initiate their own projects, organize sports games, conduct workshops for parents, organize charity fairs and events, ecological initiatives, festivals, and quests for the development of extra-curricular education, as well as meetings with writers from each region.

Meetings with writers from each region



Creative competition «Two stars»



The evening of the retro song «Sagyndyrgan ander-ai» (The songs we've missed)



Spartakiada among parents «National sport is the key to the health of the nation»



Poster contest «We are against violence»



«Туған елге тағзым» өлкетану-зерттеу экспедициясы

In 2023, the traditional expedition programme included 22 routes in 22 destinations, covering all regions of the country. Participants had the opportunity to conduct research work on historical, geographical and cultural sites.

The expedition was attended by 528 students who distinguished themselves by good academic performance, exemplary behaviour, academic, creative or sporting achievements.

Based on the results of the research expedition, 394 projects were submitted to the network stage of the research project competition. On the 2nd round of the network stage of the competition of scientific projects passed 26 projects carried out in the framework of research local history expeditions «Bow to the Motherland». Schools of Uralsk ChB, Astana PhM, Taldykorgan PhM, Oskemen ChB, Shymkent PhM became the winners of the 1st place.

Second place was taken by schools of NIS of ChB in Karaganda, NIS of PhM in Uralsk, NIS of ChB in Kyzylorda, NIS of PhM in Taldykorgan, NIS of ChB in Petropavl, NIS of ChB in Almaty, NIS of ChB in Oskemen, NIS of ChB in Shymkent. Schools of ChB in Kyzylorda, PhM in Aktobe, ChB in Pavlodar, ChB in Petropavl, PhM in Taraz have the third prize-winning place.

The leader by the number of prizewinners and winners among 22 Intellectual Schools was NIS of ChB in Oskemen. The second year in a row on results of competition of scientific projects in the direction «Bow to the Motherland» the passing cup remains in NIS of ChB in Oskemen.

«Bow to the Motherland» for students of Intellectual Schools is the best example of patriotism, through the study and research of history, geography, economy, culture of the native land.



The Smart Thursday Project

In 2023, 308 meetings were held in various areas as part of the Smart Thursday project.

Meeting directions	Total number of meetings held	Student participation in the project during the year in %
Science	56	97%
Politics	23	
Arts	33	
Medicine	25	
Entrepreneurship	23	
Sport	26	
Career guidance	122	

The main activities of the project are science and education, medicine, sports, career guidance, business, ecology, art and politics.

This project gives teenagers the opportunity to communicate freely with specialists in their field, receive comprehensive answers to their questions, get acquainted with the peculiarities of a particular profession, and comprehend their participation in modern transformations taking place in our country and abroad.

Meetings within the framework of the Smart Thursday project are very popular with both students and school teachers, primarily because they are built according to a mechanism based on a dialogue of 3 parties: a guest who talks about his life strategy and the «formula for success»; a audience who asks his questions to a guest; presenters who are the mediators of the meeting. Thanks to this project, students develop skills such as applying theoretical knowledge in practice, competitiveness, educational research,

and free expression of thoughts in the audience. Adaptation to professional directions is formed thanks to this project.

An example of such meetings are interview dialogues between students of our schools with representatives of a number of well-known foreign universities, such as Harvard Medical University, University of Applied Sciences Würzburg-Schweinfurt, Politecnico di Milano, University of Tasmania, Monash University, as well as the best domestic universities headed by Nazarbayev University.

It has become a tradition to invite young people to meetings who graduate from school with honors, study with the best professors at prestigious foreign universities and successfully work in their desired profession. Within the framework of such meetings, children have the opportunity to design their educational activities when choosing a future profession. It is also important that the guests tell in detail about the admission rules.



«Kazakh songs»

The project is aimed at supporting and promoting the cultural heritage of the country and is dedicated to popularizing the 100 best songs in the history of Kazakh music.

Songs from the «Kazakh songs» list were played at all school events, morning assemblies, breaks. The participants of this project were not limited in the format of presenting vocal material: there were theatre

performances that reveal the meaning of songs and reflect national values, creative meetings with outstanding personalities, thematic literary and musical evenings, concerts, karaoke battles, broadcasts on the school radio, quizzes, challenges, competitions and festivals. The participants of such events were not only young intellectuals, but also teachers and parents of school students.



Intergenerational continuity

The social project «Intergenerational continuity» allows schools to create a stable platform for the relationship between two generations. As part of the project, students gain their first experience in social relationships, moral values, and humanism. Within the framework of the project, 85 events were held and 13,529 students and school staff were involved.

Students from the 10th and 11th grades of the Intellectual Schools conducted a course on computer literacy for grandmothers and grandfathers, teaching

them life hacks for convenient typing. Special thanks were expressed to the students who organized the course. On October 1st, a challenge of wishes for the elderly was organized, with videos and congratulations published on social media. The students read books together with their grandmothers and grandfathers at home, and afterwards, they held joint discussions about them. Much attention was paid to the educational aspect of the book. The books that were read were recommended to other students.



“100 kuydin tarikhy” (History of 100 kuys)

With the aim of fostering musical culture and moral qualities among students based on national music, preserving and strengthening cultural heritage, and nurturing a sense of unity and friendship, all Intellectual Schools concluded the academic year on May 24, 2023, with a unified «Dombra Lesson.» In the lessons, teachers of additional education, together with curators, teachers, shared information about the origins of kuys. As part of the project «History of 100 Kuys» in 2023, 163 events were held, involving 1,410 parents and 1,058 young dombra players.

The origin stories of the kuys «Akku» by N.Tlendi-
ev, «Elbasy tolgaуy» by Aibek Bekbosynov were inves-
tigated and studied. Every year, at traditional dombra

flash mobs, famous kuys are performed, including Kurmangazy’s «Balbyrauyn», N. Tilendiye’s «Alqis-
sa», «Elim-ai», «Mashbotoy», Tolegen Mombekov’s
«Saltanat», and folk kuys «Dombra-Dastan», «Keness
kuyi». In venues across all regions of Kazakhstan,
young dombra players perform kuys by renowned
composers such as Kurmangazy’s «Saryarka», «Adai»,
A. Zheldibaev’s «Erke sylqym», Daulatkerey’s «Kero-
gly», M. Aubakirov’s «Narkesken», and folk tunes like
«Tepen kok», «Nar agashi». Traditional flash mobs
not only evoke a festive atmosphere on the eve of
Independence Day but also foster a sense of pride in
the national heritage of one’s country. The creativity
of our ancestors is our heritage, our history.



«Community service»

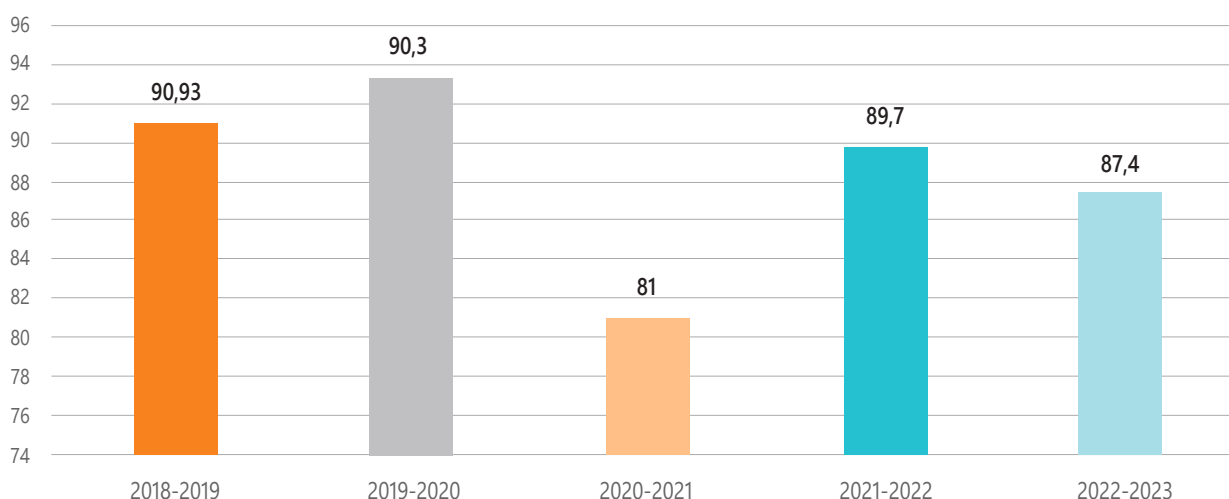
To ensure systematic implementation of the «Community Service» project in Intellectual Schools, school volunteer clubs have been established. These are voluntary associations of students oriented towards universal values and motivated by the desire to perform good deeds for the benefit of society. In many schools, «Club Regulations» have been developed, along with attributes such as the club's name, emblem, and motto.

The schools of the network have signed Memorandums of Cooperation with various social institutions in the regions: medical and social institutions for the elderly and people with disabilities, regional children's homes for children with disabilities, Mother's Homes, outlining the goals of volunteering, duties, and responsibilities of the parties involved. In 2023, among the students of Nazarbayev Intellectual Schools, there was notable activity and productivity. The level of volunteering activity increased by 4.2%.

Overall, the «Community Service» project is implemented through various directions: social, environmental, sports volunteering and health promotion (health and wellness), and intra-school activities. The implementation of this project involves active participation from the entire school community – students, teachers, parents, and school staff. The projects are implemented through various formats and forms of conducting activities.

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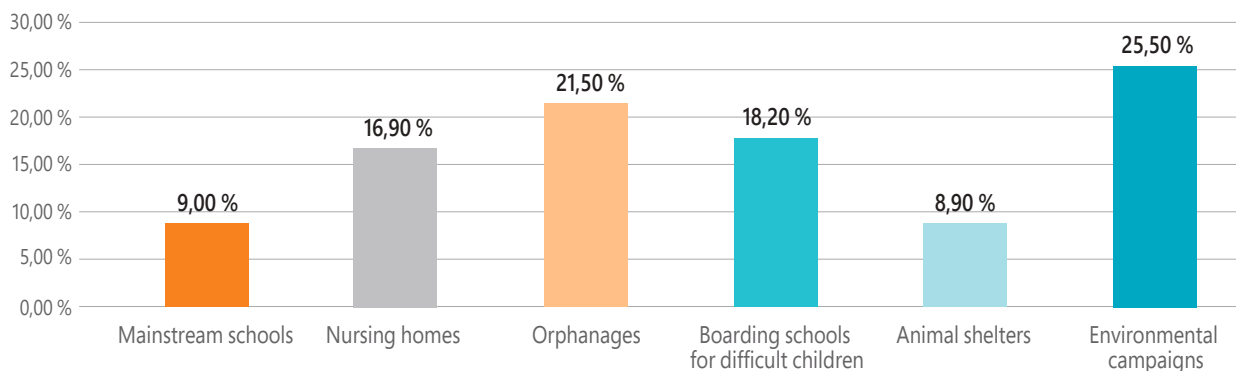
The activity in the «Community Service» project



From the schools of the Intellectual Schools system in the 2023 academic year, 21.5% of students participated in volunteer events and project activities organized for children from orphanages, while 16.9% of students were involved in activities aimed at collaborating with nursing homes and maternity homes.

Indicators of the results of cooperation with social institutions

List of cooperation partners



25.5% of the students from schools participated in school-wide traditional events involving the entire school community, which included activities such as:

- charity fairs;
- charity concerts with the participation of the whole school;
- inviting guests from nursing homes and orphanages;
- charity events to help children with diseases and children from low-income families.

The «Unified Day of school territory improvement» within the framework of the «Green School» programme has become a tradition. As a result of the actions carried out by the school's volunteer squads, the areas adjacent to the schools were cleaned up,

and landscaping of the sites was conducted. Every year, graduates leave behind avenues of apple trees, roses, and spruce plantings as a memory of their alma mater.

Like any competency developed by schools, social competence is based on the practice and experience of the students themselves. You can never teach a person to be socially active without participating in the activity itself. Research today shows that students who engage in volunteering demonstrate high personal qualities, social responsibility, and are less prone to «risky» behavior. «Community Service» positively influences interpersonal relationships, teaches trust, how to rely on the trust of others, and also how to be part of a team that contributes to improving society.



Parent University

The project “Parent University” operates in each Intellectual School with the aim of fostering responsible parental attitudes and positive parenting through information dissemination, changing thinking and behavior, developing communication skills with children, and enhancing parental awareness.

The following tasks were set to promote this project:

1) establishment of a system for continuous psycho-pedagogical education for parents, aimed at developing new parental competencies that meet the challenges of the times. This involves fostering an understanding of the need for personal growth for the benefit of the family, children, and the future of the country, promoting responsible motherhood and fatherhood;

2) revival of traditional Kazakh family customs and way of life, harmonization of marital relationships, affirmation of spiritual and moral values in the family and society, and popularization of positive experiences in family upbringing;

3) promotion of a healthy lifestyle, care for the health of students, correction of deviations, and enhancement of personal stress resilience.

To achieve the set objectives, various thematic webinars, seminars, and training sessions were conducted in all schools according to the plan. In 2023, 140 events involving 8,312 parents were held by all 22 Intellectual Schools.

Leaders’ Forum

Every year, the leaders of student self-government in the Intellectual Schools gather at the Leaders Forum. In 2023, the Intellectual School in the city of Aktoke hosted students and coordinators from December 7th to 8th.

At the «YOU LEAD - From Initiative to Action» Student Government Leaders Forum, 44 student presidents and vice presidents from schools and 22 coordinators participated.

During the Forum, prominent specialists from various fields, as well as graduates of the Intellectual Schools, delivered speeches. A meeting was organized with the Kazakhstani expert in artificial intelligence, Aydin Mautkhan, and media trainer, journalist Asel Dovgalyuk, along with Dinmukhamed Shakman, a graduate of the Intellectual School in Taldykorgan.

During the two days of the forum, participants analyzed the skills necessary for personal and team effectiveness development. The leaders of each Intellectual School presented successful projects in different directions, demonstrated creative approaches to solving various initiatives and tasks.

They also created eco-projects aimed at developing volunteer activities to solve environmental problems. In addition, the main topics aimed at strengthening national identity and preserving the cultural heritage of the country were discussed in the patriotic section. For example: the introduction of national culture into the education system, the creation of a trend for wearing Kazakh national clothes among young people, the use of modern propaganda methods to popularize great historical figures.

At the discussion platform, the leaders discussed the contribution of student self-government to the patriotic, intellectual, physical, and cultural development of students in the Intellectual Schools.

One of the most important moments of the Leaders Forum is the development of a logo reflecting the unity and values of intellectuals. The team worked on the design and came up with several logos. The logo chosen by the creative team was presented to the public at the closing of the forum.

Spartakiad

Clubs and sports sections contribute to the comprehensive development of students by fostering physical education, which includes promoting and engaging in a healthy lifestyle while maintaining and enhancing health. The participation of students in these clubs and sports sections is an indicator of the prestige of engaging in sports activities. For stu-

dents, this is an opportunity to showcase themselves in competitions and achieve success.

This academic year included stages of the Network Spartakiad in sports such as togyzkumalak, chess, and basketball. Togyzkumalak and chess were held in online format on the basis of Intellectual Schools of Astana and Aktau.

Results of the 2023 Network Spartakiad

Schools	Togyzkumalak			Chess						Basketball (region)		Basketball (final)	
				Girls			Young men			Gir	Boy	Gir	Boy
	3-6	7-9	10-12	5-6	7-9	10-12	5-6	7-9	10-12				
Astana PhM						1			1		2		
Astana IB								1	2	1	1	1	2
Aktau ChB		3	1		3								
Aktobe PhM								2			3		
Almaty PhM						3		3			1		1
Almaty ChB										3	3		
Atyrau ChB											1		
Karaganda ChB										2	2		3
Kokshetau PhM	1		2	2				2		3	3		
Kostanay PhM													
Kyzylorda ChB										3			
Pavlodar ChB										3	3		
Petropavl ChB										1	2	2	
Semey PhM		1			1	2					2		
Taldykorgan PhM	2	2		3	2		3						
Taraz PhM										2			
Uralsk NIS PhM										2	1		
Oskemen ChB										2			
Shymkent PhM			3							1	3		
Shymkent ChB										1		3	
Turkestan ChB													
ISA	3			1			1						

*Note

1st place –

2nd place –

3rd place –



“Proverbs for Everyday life”

In 2023, 236 events were held in Intellectual Schools, in which 12,961 students took part. Compared to 2022, the number of events increased

by 111, and the number of participants increased by 4,228. These indicators indicate an increased interest among children in the project.

“Wikipedia”

The “Wikipedia” project was launched in June 2011 and is being implemented in collaboration with the Kazakhstani Public Foundation “WikiBilim.” Writing an article is oriented towards principles of academic integrity and responsibility.

The number of published articles has exceeded 200 thousand. The pages of the Kazakh Wikipedia are viewed about eight million times a month. The number of active users writing and editing articles has grown from hundreds to thousands. Thanks to this, the Kazakh language rose from 125th to 33rd place in the ranking of Wikipedia languages and entered the forty so-called “mature” Wikipedia with 400,000 or more articles.

The organization of the Wikipedia project in Intellectual Schools contributes to informing the students of Intellectual Schools not only within the school but also in the scientific and informational work of intel-

lectuals in the general internet space. Active participants of the club share their knowledge with participants, such as adding sources, uploading images, working with dictionaries, adding translations, and working with media files. Wikipedia participants learn to write encyclopedic articles, familiarize themselves with information technologies and media resources, and have the opportunity for creative work and scientific research. By harnessing the rich potential of intellectuals and guiding them towards scholarly pursuits, the Kazakhstani wiki-space is enriched with research conducted by school students on new, yet-to-be-explored topics.

By participating in the “Kazakhstani Wikipedia” project, students not only learn the intricacies of article writing but also enhance their cognitive abilities, refine their skills in writing scholarly articles, and improve their critical thinking skills.

Master class with students of NIS PhM in Taldykorgan



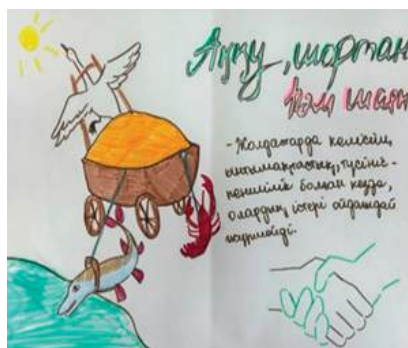
“Akyns of the Great Steppe”

The “Akyns of the Great Steppe” project is being implemented in schools in various forms. Thus, in the NIS ChB in Almaty, the work of poets is transmitted through NIS Radio. Curatorial hours and a minute of glory were held in the NIS ChB in Aktau. Within the framework of the project “Akyns of the Great Steppe”, a sweet quiz on the topic “The life and work of Magzhan Zhumabayev” was very interesting. A meeting dedicated to the work of Beimbet Mailin was also held.

At NIS ChB in Pavlodar, as part of the “Akyns of the Great Steppe” project, a Challenge Relay Read-

ing of excerpts from the works of the famous Kazakh poet, literary scholar, turkologist, educator, translator, and public figure Ahmed Baitursynov took place from October 16th to October 20th, 2023. The challenge was organized among students of grades 7-12 of the “Shanyrak” school community. The main idea of the challenge was to reveal the idea and content of the poem. The results of the challenge were published on the personal page of the Shanyraks. Based on the content of the presented poems and translations, each class was able to convey the content of the selected work in its own way, depicting it on A3 paper.





2.5. EXTENDED EDUCATION

The system of additional education in Intellectual schools is implemented through: enriched subject programs, clubs, studios of technical creativity and modeling, sections on team sports, studios, clubs, art centers. Additional education has the following areas: artistic, creative, technical, sports, intellectual.

The purpose of the additional education system is to reveal the talents and abilities of students, develop creative and cognitive motivation, career guidance in choosing a future profession, adapt to life, participate in the formation of a healthy lifestyle, create the necessary conditions for leisure.

In 2023, there were more than 400 interest groups\sections\clubs in Intellectual Schools, in which students revealed and realized their intellectual, creative, and athletic potential.

The results of extracurricular activities are characterized by the achievements of students of different levels: from urban to international. Namely, 32 creative groups (dancing, vocals, dombra) have received recognition at the international and national levels. Among them:

1. The Grand Prix was awarded to 13 groups (International Dance Competition “Talents of Ka-

zakhstan” of NIS in Aktoobe; “International Talent Festival-2023” on the theme of “Decorative and Applied Creativity”, Grand Prix, Samatqyzy Ayaulym, of NIS in Karaganda; International Festival-Competition “Rayan” Dombra Ensemble “Nur-Sazy” in the nomination “Instrumental Music” (senior group) in Almaty on March 25, 2023, and the International Competition-Festival “Turkestan Musik FESTIVAL” in the nomination “Instrumental Art” ensemble of folk instruments “Nur-Sazy” in Turkestan, November 4-5, 2023, of NIS PhM in Almaty, and others), with 52 students taking 1st, 2nd, and 3rd places.

At the national level, 65 students in creative fields took the Grand Prix - 20 places, 1st place – 16, 2nd place – 17, 3rd place – 5.

In the sports field, such sports as basketball, football, volleyball, chess, togyzkumalak, athletics are the most popular and effective in schools.

At the international level, 50 students of Intellectual Schools won victories in such sports as jiu-jitsu, taekwondo, karate, athletics, triathlon, etc. At the national level, 159 students of Intellectual Schools won victories in such sports as jiu-jitsu, basketball, karate, athletics, football, etc.

NIS Engineering

In the modern educational space, additional education at school is becoming an integral element of preparing students for a rapidly changing world. It goes beyond the usual curricula, providing students with the opportunity to expand their horizons of knowledge and acquire skills that will become key in the future. The importance of additional education at school is manifested in the fact that it not only provides theoretical knowledge, but also helps to use it in practical activities.

The “NIS Engineering” direction provides students of Intellectual Schools with the opportunity to engage with modern technologies, conduct research, and implement creative ideas from concept to the creation of the final product. The availability of high-

tech equipment such as 3D printers, laser machines and milling machines contributes to the practical application of knowledge.

Since 2022, NIS Engineering laboratories have been successfully operating in 22 Intellectual Schools, where students enthusiastically embody their ideas in projects. These works not only win prizes at regional, national and international competitions, but are also reflected in outstanding patents.

The main areas of research in the laboratories included in the NIS Engineering program are engineering, robotics, 3D modeling, aircraft modeling, biotechnology, artificial intelligence and DIY (do it yourself).

NIS Engineering Laboratory in the NIS PhM in Kostanay and the NIS ChB in Shymkent



Equipment, design and decoration of the space

The individual design of the NIS Engineering classrooms in each school is unique, corresponding to the characteristics of each room. All schools are equipped with the necessary technical equipment necessary for the successful implementation of STEM projects.

Participation in regional, national and international competitions

Students of Intellectual schools actively participate in international and national competitions, confirming their outstanding level in engineering and STEM projects. Their work is not only awarded prizes, but also makes a significant contribution to the development of innovative education at the global level.

Starting from the first year of study at the NIS PhM in Uralsk 7th grade students are actively involved in research activities through the organization of the Eureka family scientific competition (Hydroponics and cityferma, robotics in the era of the pandemic, cybersecurity and 5G wireless technologies).

The students of the school are particularly interested in the activities of the Aviation Modeling circle, which works with a focus on developing the skills of designing aircraft and rocket and space activities. Aruzhan Koptleu, a student from the school (currently studying at the Hungarian University of Space Research), designed a space vehicle with a returning module to Earth. For this achievement, she was awarded first place in both regional and national competitions and invited to an exhibition in London, UK. The school also has partnerships with Samara Aviation University named after Korolev, in one of the competitions initiated by the university, two students took the honorable III place in the section “Rocket technology”.

Innovative projects aimed at solving real problems and deserving honorary prizes at international competitions are being implemented in the NIS PhM in Taldykorgan. The rescue robot “Save at any Cost” took the first place in the Republican WRO in 2022 and entered the list of the 10 best design works in the international WRO in Germany in the same year. This is a robot for taking people out of an emergency zone, which can drive through fire, has an armored capsule, various sensors and a neural network for recognizing people. At the same time, the medical robot “Med-BOT” took the first place in the Republican

In NIS Engineering laboratories, students are actively engaged in prototyping, 3D modeling and programming. In addition, they are involved in a wide range of innovative projects, including robotics, electronics, aircraft modeling and other areas of engineering.

WRO in 2022 and entered the list of the 15 best design works in the international WRO in Germany in the same year. The robot can dispense prescription drugs, give injections, work as a courier and quartz rooms.

The “See the future” project took the first place in the Enactus Kazakhstan National Expo 2022 and the second place in the Caspian Startup 2023, at the same time taking the honorable II place at the XII Nauryz meetings. This project presents a vision system for people with visual impairments using AI, which helps to navigate in space by making audible signals about recognizable objects.

The Spider robot took the first place in the Republican WRO in 2023. The robot, developed in the NIS Engineering office, is designed to lay new wires along existing power transmission poles based on Artificial Intelligence.

In the NIS PhM in Aktobe, robotics projects annually become winners of the republican stage of the WRO (III place in the Future Innovators Senior category – D. Syrlybaev, M. Kosov), the republican competition of scientific projects “Daryn” (II place Tolegen A, Mustafa A “AR Zerthana”; III place Altai A, Kenzhebaeva A “Savvy window”). In 2022, the project “Nuret ss” by students Zhubanysh N., Ubniyazova A. took the first place and was awarded a prize of 4 million tenge.

Engineering education in NIS ChB in Kyzylorda is not just technical, it also embodies integration with the historical heritage. Here, a student of the 11th grade, Dina Zhanuzakova, created a project on the topic of “3D reconstruction of the northern city of Syganak” in the 2022-2023 academic year. The project won a financial grant in the amount of 3 million tenge at the contest “Tauelsizdik urpaktary” (Generations of independence), combining technical genius with a deep understanding of history. At the same time, a student of the 11th grade Munaitpasova Zhuldyzai took the III place at the XXII Nauryz meetings held

Rescue Robot “Save at any Cost”



Medical Robot Med-BOT



“See the future” project



Spider Robot



from March 15 to 17, 2023 on the topic “detection of heart defects through the Arduino platform”. As a result, according to the results of the republican IT project competition, she won a grant from Astana IT University.

Students of the HIS ChB in Shymkent, the project “HYDROPUMP ACCUMULATION” took part in the

International Robotics Championship US Open FIRST LEGO League, which was held in Worcester, USA. The project took the honorable III place in the nomination “Innovation Project Award”. This recognition confirms the outstanding innovative ideas and solutions presented within the framework of the HYDROPUMP ACCUMULATION project.

XII Nauryz meetings “Biomedicine, engineering and technology”

Nauryz Meetings are an annual traditional event held by the NIS AEO in order to develop research skills among students of general education and Intellectual schools, involve them in science and deepen their knowledge.

Nauryz meetings have been held since 2011 and have become a platform uniting schoolchildren with an interest in science and young inventors from all over the country

From March 15 to 17, 2023, the traditional 12th Nauryz meetings on the topic “Biomedicine, engineering and technology” (hereinafter – Nauryz meetings) were held on the basis of NIS PhM in Astana.

At the Nauryz meetings, the main stages of the development of biomedicine, research in the field of development of medical engineering technologies using artificial intelligence, prospects for the development of this branch of science in our country and the world were discussed.

This event was attended by 50 students from 17 rural mainstream reference schools and 100 students of Intellectual schools from all regions of our country, and 7 teachers from rural reference schools were invited. 98 projects of students of Intellectual schools and 6 projects of students of rural reference schools were presented at the competition of scientific projects. The project competition and exhibition were held in 6 directions

On March 15, 2023, a grand opening ceremony of the Nauryz Meetings took place, during which welcoming remarks were delivered to the participants by the Minister of Education of the Republic of Kazakhstan, G.B. Beisembayev, the Chairman of the Board of NIS AEO A.K. Zhangozin, Massimo Pignatelli, Vice President of Medicine, Dean of the School of Medicine at Nazarbayev University.

At the panel sessions, the participants were addressed by domestic and foreign scientists, leading employees of medical centers:

- **Massimo Pignatelli**, Dean of the Nazarbayev University School of Medicine, topic of the speech “The Face of modern Medicine”;

- **Atakan Varol**, Professor, Founding Director of IS-SAI at Nazarbayev University, topic of the presentation “Institute of Smart Systems and Artificial Intelligence, artificial intelligence, robotics and applications in the field of healthcare”;

- **Dastan Rustemov**, Head of the Department of Pediatric Surgery at the National Research Center for Maternal and Child Health, University Medical Center, the topic of the speech is “About surgery and not only...”;

- **Abduzhappar Gaipov**, Associate Professor at the Nazarbayev University School of Medicine, topic of the presentation “Epidemiology and prediction of infectious diseases in Kazakhstan using big data”;

- **Siamac Fazli**, Associate Professor, NU School of Engineering and Digital Sciences, the topic of the presentation is “Machine learning for drug discovery”;

- **Aigul Sadvakasova**, Candidate of Medical Sciences, Head of the Diagnostic Center of the Medical Center Hospital of the President’s Affairs Administration of the Republic of Kazakhstan, topic “Nuclear Medicine in Daily Clinical Practice”;

- **Vyacheslav Ogai**, Managing Director of Science at LLP “National Center of Biotechnology”, Professor, topic of the presentation “Development and clinical application of injectable biomaterial for the regeneration of articular cartilage defects”.

The competition was held in the format of a poster defense of projects right at the exhibition in front of all participants, members of the expert commission and guests. According to the results of the competition, the

names of the winners in each of the six nominations were determined.

The Nauryz meetings programme included events at ISSAI, School of Engineering and Digital Sciences, School of Medicine of Nazarbayev University, Kazakhstan International Training Centre for Robotic Surgery at the Medical Center Hospital of the President's Affairs Administration of the Republic of Kazakhstan in the form of introductory lectures and master classes for 100 participating students. This:

- Artificial intelligence, robotics are important for maintaining health. Computing resources for artificial intelligence, Atakan Varol, Professor at Nazarbayev University;

- ChatGPT for visually impaired and blind people, Askhat Kuzdeuov, Senior Researcher at ISSAI;

- ExoMem: improving human memory using artificial intelligence, Zhanat Mahatayeva, researcher, Ph.D., student of the School of Engineering and Digital Sciences;

- Tensegrity Robot: a new paradigm for designing robots, robots with the Tensegrity structure, an augmented reality (AR) warning system for industry based on the Laboratory of Advanced Robotics and Mechatronics Systems;

- Social robots developed at Professor A. Sandygulova's Laboratory;

- Humanoid robotics based on the Laboratory of Professor M. Forgereiter;

- A master class based on the digital anatomical hall,

- Demonstration of the structure of the human body and organ systems using the example of mummies,

- Master class at the biomedical laboratory;

- Master class on working with laparoscopic racks,

- Emergency care course training,

- Demonstration of the work of a robotic and sensory device for functional motor therapy Hocoma AG (Switzerland), a master class on the use of the Alter-G anti-gravity treadmill (USA), simulators for the development of limbs and joints, a robot-assisted surgical system "da Vinci".

As part of the closing ceremony, the participants of the Nauryz meetings were honored:

- 1) Six prize-winners who received 1st degree diplomas were awarded educational grants from ALMAU, KBTU, allocated by universities as sponsorship support for the participants of the competition. Thirteen participants who received second-degree diplomas and the Audience Choice Award were presented with commemorative prizes in the form of smartwatches.

2.6. WELL-BEING OF STUDENTS

Psychological services

During the reporting period, the psychological services of the schools worked within the following main directions to achieve the set goals and tasks: psychological diagnostics, psycho-correctional and developmental work, counseling for students, teachers, and parents, psychological prevention, enlightenment and psychoeducation, expert activities, organizational and methodological work.

In 2023, the psychological services of Intellectual Schools continued to implement a system of prevention and response to difficulties in social-emotional development, behaviour and learning through various programmes for students, parents and teachers.

As part of the Programme for the Prevention of autodestructive Behavior among Minors for grades 8-11, training sessions were conducted for newly hired school staff which included subject teachers, pedagogical organizers-curators, teachers of additional education, technical personnel, and security personnel—totaling 1,002 participants. Additionally, training sessions were held for parents aimed at increasing their awareness and responsible involvement in preventing self-destructive behavior among adolescents. Additionally, components of the program included identifying students experiencing psychological stress and various symptoms of destructive behavior, as well as training sessions for teenagers on the topic “Influence Your Mood and Improve It,” aimed at developing self-help skills and peer support. Thus, during the reporting period, 142 sessions of “Influence Your Mood and Improve It” were conducted for 8th-grade students.

To assist 11th and 12th-grade students in self-determination, sessions were conducted on the programs “Success Psychotechnology: My Plans for the Next 5 Years” and “Future Management: How to Easily and Quickly Adapt to Changes”.

To prevent pre-exam stress, sessions were held for students on “Coping with Anxiety” and “Exam without fear,” aimed at developing skills to overcome anxiety and exhibit appropriate behavior during the period before and during exams.

As part of the bullying prevention efforts, sessions were conducted for students on “Stop Bullying: I Know, I Understand, I Apply,” “Bullying, Cyberbullying,” and “Peer Bullying”. How to resist psychological pressure? What to do?

To develop adaptive behavior skills in newly enrolled 7th-grade students, 110 team-building training sessions were conducted in classes, along with psychological games, and sessions for parents and students titled “Guide to NIS.” An orientation week was conducted for 2,425 7th-grade students to facilitate their adaptation to school.

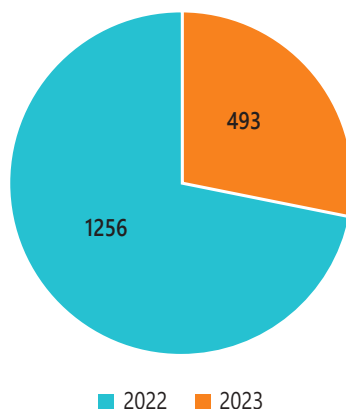
A large psychological game called “Kaleidoscope” was conducted for 2,425 7th-grade students from all Intellectual Schools. The aim of the game was to foster teamwork, promote mutual support, and address internal barriers such as fear of communication, communication difficulties, and self-analysis. In 2023, the personal development elective course “To Be Yourself and Live with Others”, developed last year, was continued in the amount of 17 teaching hours for 7th grade students to develop students’ self-identification and communication skills. Within the course, a total of 1,256 sessions were conducted. It is worth noting that in 2023, the number of conducted sessions significantly increased, influenced by the improved efficiency of delivery and the students’ increased interest.

Additionally, the Student Well-being Department and psychologists at the Intellectual Schools developed an elective course program for personal development for 8th-grade students. The elective course consists of 5 sections aimed at developing mindfulness and self-acceptance:

- * I am a teenager;
- * Influence Your Mood and Improve It;
- * Self-demand and perfectionism;
- * Communicate, make friends, love: how to build a relationship;
- * Choices and opportunities.

From January 2024, it is planned to conduct an elective course of personal development among 8th grade students.

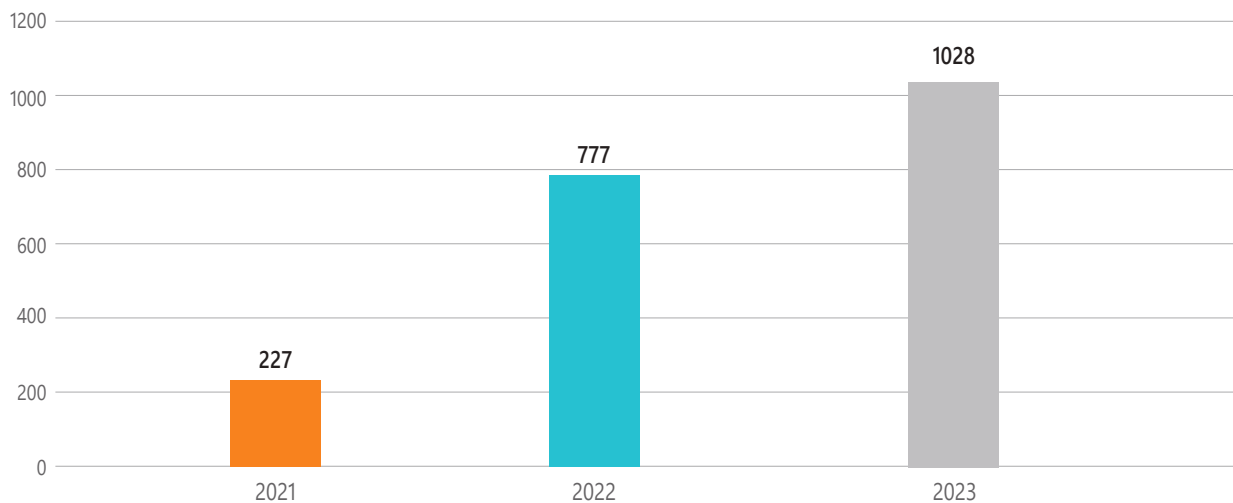
The number of sessions held within the course
“Being Yourself and Living with Others” (2022–2023)



As part of the program to strengthen child-parent relations “Strong Family” for students of grades 7, educational psychologists conducted training for teachers, organizers, curators and educators of the

dormitories, who then participated in the implementation of the program as facilitators. During the reporting period, classes of the program were held for 1,028 families.

The number of families who have completed classes under the “Strong Family” program (2021-2023)



The Strong Family program has been held since 2018. In 2021, for parents of 7th grade students, in connection with quarantine, distance learning courses on strengthening child-parent relations “We are just a family” were held, consisting of 7 sessions in which 1,901 families participated. At the same time, in the regions where sanitary requirements allowed, from October to December 2021 in the Intellectual schools of Kokshetau, ChB in Almaty, PhM in Almaty, Kyzylorda, Atyrau, Aktau, Taldykorgan implemented the

programme “Strong Family” in offline format, where 227 families participated.

In 2023, the number of families participating in the program increased by 24% compared to the previous period. The participants note that the program helps to bring children and parents closer together and reduce the number of family conflicts.

As part of helping students during the exam period, a series of 4 classes “How to stay calm and attentive during exams” was held for students in grades 10

and 12. Also, in order to increase parents' awareness of psychological support for students during the exam period, seminars and webinars were held for parents on the topic "What Parents Need to Know and How to Communicate with Children During Exam Preparation and Completion", "The Role of Parents in Supporting Children During Exam Preparation".

During the reporting period, 4 training seminars were organized to implement case management in the education system, aimed at early identification and collaborative support of students at risk due to various reasons including health conditions, academic performance, psychological state, difficult life situations, and others. From November 20 to 23 and from December 4 to December 7, 2023, offline seminars on the topic "Introducing Case Management in the School System" were held regionally in the cities of Aktau, Shymkent and Astana.

In order to provide individual assistance to students with special educational needs and students facing various kinds of difficulties, educational psychologists conducted consultations for students, their parents and teachers. Thus, a total of 7,282 individual consultations were conducted for students. The main requests of students for individual counseling related to the following topics – subjective feelings about dysfunctional relationships with others (shyness and fear that prevent communication, the desire to enjoy great success with peers, feelings of resentment against someone, etc.), problems at school (academic performance, low motivation, unwillingness to study, violation of rules, etc.), family relationships (misunderstanding on the part of parents, surveillance and strict prohibitions, the struggle of adolescents for independence, leaving home, family conflicts, concern about family members, etc.).

The main requests of parents for counseling were also related to school and subjective feelings about problems in their children's relationships with others. A total of 1,204 consultations with parents were conducted. Educational psychologists conducted 1,017 consultations for teachers on learning and teaching, interaction with students. The majority of teachers turned to the psychological service to solve the issues of supporting students with regard to academic performance (failure, academic motiva-

tion, issues of differentiated approach to students, psychological preparation of students for exams, olympiads, etc.).

A large number of requests from teachers concerned personal problems (worries about relationships with others, family problems, domestic violence, emotional burnout, psychosomatic health, feelings of resentment against someone, etc.) and interpersonal conflicts with students.

During the reporting period, attention was paid to improving the professionalism of teachers-psychologists. In addition to the above-mentioned training on case management, a training seminar on the programme "Strong Family" was held for 18 teacher-psychologists and 46 curators of Intellectual Schools, training in the methods of application of art therapy in the work of psychologists and art teachers within the framework of training "Art Therapy in dealing with emotional traumas of teenagers" (trainers Darius Radkevicius and Oistein Kristiansen).

Within the framework of the methodological day, training seminars were held on the topics "Monitoring the implementation of the Electronic Methodological Center (EMC)", "Conducting an elective course "To Be Yourself and Live with Others".

Teacher-psychologists of Intellectual Schools carried out work on providing methodological assistance and training to colleagues from mainstream schools. Thus, teacher-psychologists of Intellectual Schools took part in the workshop "Implementation of the educational component of the value-oriented educational process in schools", "School: education of personality", in regional seminars, training for trainers "Algorithm of actions of employees of educational organisations to prevent and respond to violence against children", for deputy directors, teacher-psychologists of schools, methodologists of regional departments of education, methodologists of district education departments, etc.

Within the framework of the project "Development of the potential of reference schools in rural areas", teacher-psychologists conducted a training seminar on "Prevention and crisis support for children and their families in difficult life situations" for school psychologists and social educators of 62 rural reference schools.

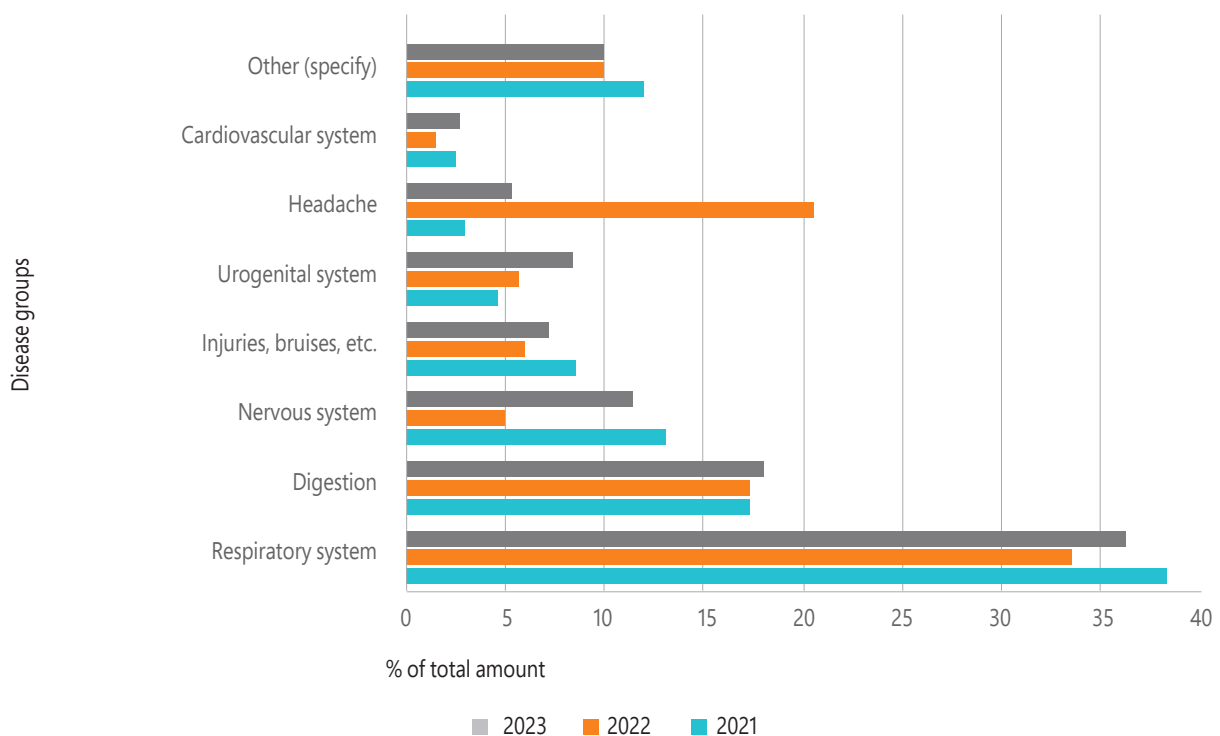
Medical service

School health referrals and student morbidity 2021-2023

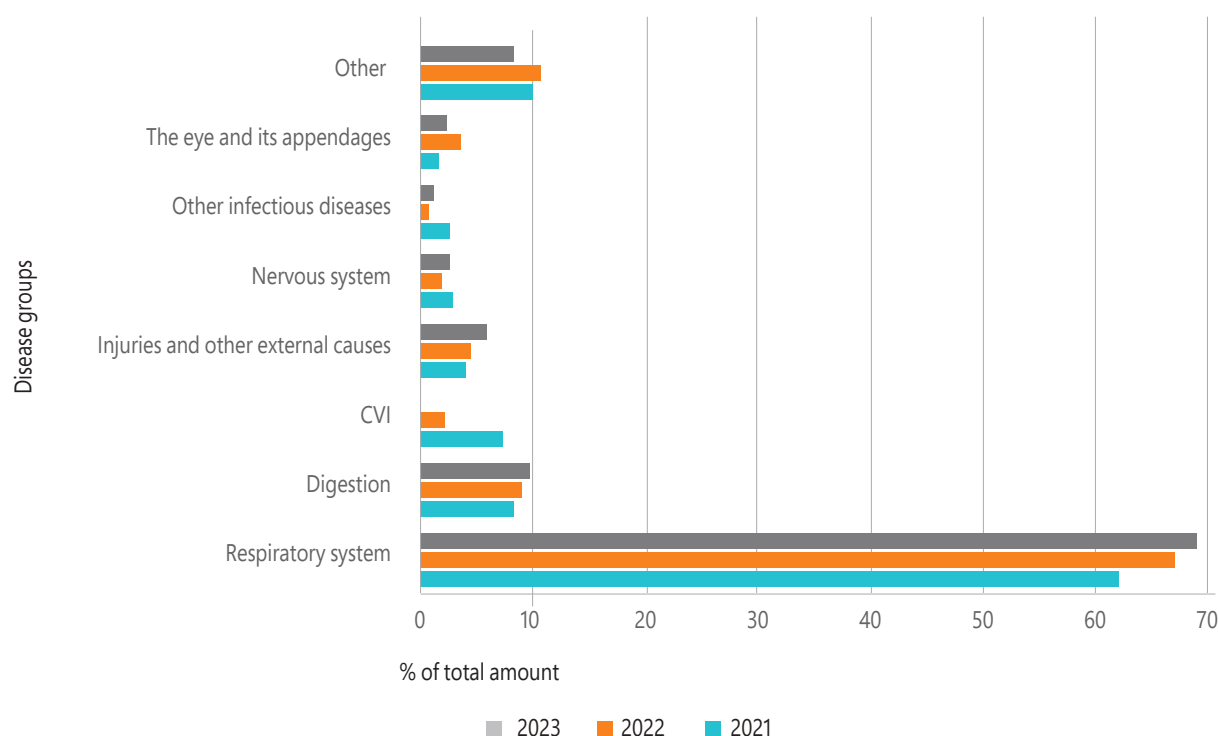
Medical centres of Intellectual Schools and Astana International School registered more than 58 thousand appeals during 2023. The main reasons for students' applications are complaints (symptoms) indicating diseases of the respiratory,

digestive, nervous system, genitourinary system, applications as a result of injuries (bruises, sprains) and other reasons. This structure of appeals is similar to the appeals to medical centers of schools for the period 2021-2022.

Referrals to school health centres by main causes
(2021-2023, in %)



Students' morbidity by main groups of diseases
(2021-2023, in %)



Analysis of morbidity based on more than 11,000 medical certificates issued by health care organisations on students' applications for 2023 showed that the main groups of diseases are respiratory diseases (acute respiratory diseases, rhinitis and others), digestive diseases, infectious diseases, injuries, diseases of the nervous system and others. The "Other Diseases" category includes surgical pathologies, endocrine diseases, blood diseases, allergic reactions and others.

Preventive medical examination and preventive vaccinations

As of December 2023, 83.2 per cent of students subject to preventive medical examinations in schools had undergone them (more than 9,400 students subject to them). Similar figures for 2021 and 2022 were about 81 per cent and 76 per cent respectively.

Students of Intellectual schools are subject to vaccination against diphtheria, pertussis, tetanus

and other infectious diseases in accordance with the National Calendar of Preventive Vaccinations, as well as tuberculinodiagnosis.

The vaccination coverage of age-eligible students against diphtheria and tetanus in 2023 was more than 55 per cent, and about 45.1 per cent of students were covered by tuberculinodiagnosis. For 2021-2022, 58 per cent and 67 per cent of eligible students were vaccinated against diphtheria and tetanus, while tuberculinodiagnosis covered 31.5 per cent and 54.6 per cent of age-eligible students. Also, the vaccination coverage against morbilli, parotitis and rubella in the current year within the framework of additional vaccination of some students was more than 71 per cent.

The main reasons for non-vaccination are the informed refusal of students' legal representatives to be vaccinated and medical refusals for indications, as well as the unavailability of diphtheria and tetanus vaccine in medical institutions.

Information and explanatory work

Information and explanatory work on the prevention of diseases, promotion of healthy lifestyle issues are one of the main activities of the medical services of schools. These events are held for students, school staff, parents and are aimed at preserving and strengthening the health of students, forming a healthy lifestyle.

Given the significant share of respiratory diseases in the structure of morbidity among students, during the school year and during the epidemic season, school medical services hold lectures, talks, develop and distribute videos, presentations and health bulletins on the prevention of acute respiratory diseases.

Throughout the year, Intellectual Schools take measures to prevent infectious and non-communicable diseases. There are also classes for students on the importance of personal hygiene, daily routine,

injury prevention, and the importance of maintaining immunity. One of the main directions and topics in the framework of awareness-raising work in schools are healthy and balanced nutrition (the benefits of salads, cereals, fruits and vegetables), the benefits of physical activity, prevention of smoking, including electronic cigarettes, the use of surfactants and other topics.

In addition, during the school year, school medical staff, together with teachers, organized and conducted health festivals, sports relay races and other events aimed at preventing major diseases among adolescents and children.

Since 2023, a project to improve school nutrition has been implemented jointly with a nutritionist. It is planned to carry out a number of activities aimed at improving the quality of nutrition of students, correcting eating behavior, as well as preventing diseases of the digestive and endocrine systems.

2.7. CAREER GUIDANCE WORK

Career guidance work is carried out in Intellectual Schools from grades 7 to 12 on a systematic and comprehensive basis. The work is carried out by career guidance counsellors through close cooperation with educational psychologists, teacher-organisers-curators, teacher-librarians and teachers.

During the reporting period, teacher-psychologists according to the approved schedule conducted professional diagnostic tests, which are designed to diagnose the types and traits of character, abilities, aptitudes of students, etc. Meetings with representatives of different professions were also organised within the framework of the programme “Smart Thursday”, such companies as Amazon, JSC “National Centre for Space Research and Technology”, “Meloman” LLP, Forbes Kazakhstan, JSC “Kazakhtelecom”, Cultural Centre of the Embassy of India, British Embassy, etc. Visits to various enterprises in the regions were organized to familiarize students with different professions. These visits included trips to the National Center for the Quality of Road Assets, the Pavlodar Regional Cardiology Center, the Ulbinsky Metallurgical Plant, PetroKazakhstan Oil Products LLP, BI Group Holding, Borte

Milka LLP, Chemical and Pharmaceutical Plant JSC, among others.

Throughout the year, career consultants held meetings with representatives from leading universities in Kazakhstan, including Nazarbayev University, the Kazakhstan-British Technical University, Maksut Narikbayev University, Astana IT University, North Kazakhstan State University named after M. Kozibayev, Civil Aviation Academy, Astana Medical University, and others. Additionally, meetings were organized with experts from top foreign universities such as the University of Manchester, Durham University, Hong Kong Polytechnic University, University of Illinois, Tokyo International University, Shanghai University of Transportation, South China University of Technology, and many more.

At the same time counsellors within the framework of their work actively assisted 12th grade students in applying to foreign and Kazakhstani universities through various systems (UCAS, Common app, etc.), including writing motivation letters, going through interviews, providing letters of recommendation.

In order to provide methodological assistance to NIS AEO schools, recommendations have been devel-

oped to prepare students of Intellectual schools to choose their future profession and enter universities in Kazakhstan and abroad by ensuring effective and efficient career guidance work at school.

The recommendations provide an algorithm of school activities, brief information about professional diagnostic tests, and the specifics of preparation for admission depending on the choice of profile subjects and higher education institution.



As part of career guidance activities, the following events were held in 2023

On **29 March 2023**, NIS AEO held its annual online “University Fair” (CIS University Exploration Day – Eurasia). This event was organised for the third time together with strategic partner CIS for students of Intellectual Schools in order to provide them with an opportunity to meet representatives of universities, learn about the conditions of admission and study, receive information about grants and scholarships, as well as to increase the awareness of the NIS brand among universities abroad. The event was attended by 23 HEIs from the USA, Canada, the UK, the Netherlands, and the PRC included in the top universities list according to QS rankings (Cambridge University, Glasgow University, Carleton University, Arizona State University, Hong Kong University of Education and others).

The fair was attended by over 1400 students of grades 7-12 and 13 parents of Intellectual Schools. It is planned to organise this event annually.



From 29 October to 5 November 2023 during the autumn holidays of the 2023-2024 academic year within the framework of the signed Memorandum with the Representation of the Korean Tourism Organization in Almaty under the Consulate General of the Republic of Korea and the Education Centre under the Embassy of the Republic of Korea, an educational tour for students of Intellectual Schools and their parents, as well as career guidance counsellors was organised and conducted.

During the tour the leading universities of Korea (Gangwon National University, Kore University,

Yonse University, etc.) were visited. The tour provided an opportunity to visit the campuses and residences of the universities, get acquainted with the educational programmes, meet representatives of student admissions, visit the engineering laboratories, meet the graduates of the Intellectual Schools and learn about their history of admission and study in Korea.

As part of the tour, the participants also visited the sightseeings of Seoul to get a better understanding of Korean culture and history.



To ensure the professional development of guidance counsellors, the following activities were carried out this year

In the period from 5 to 11 March 2023 with the support of partner British Council Kazakhstan took part in the training tour “Wider Europe Study Tour for school counsellors, Study UK”. The purpose of participation in the Study UK programme is to visit 8 top UK universities (University of Manchester, University of Nottingham, University College London, King’s College London, Imperial College London, City University London, Queen Mary University of London and Brunel University London) to better understand British education and study the entry requirements for international students, as well as to establish links with universities on the recognition of NIS Grade 12 Certificate.

The tour was attended by specialists from Kazakhstan, including the Senior Manager of the Department of Education Quality Assessment and International Accreditation of NIS AEO (Issabekova A. A.), Uzbekistan and Turkey.



At the annual August conference of NIS AEO on **23 August 2023**, an online session was held on the topic “Ways to develop and improve career guidance work in Intellectual Schools”. In order to share experience, the counsellors analysed and discussed various cases on working with lower-secondary school students, on strengthening interaction with parents, discussed the role of interpreting the results of diagnostic tests, as well as the importance of knowing the normative-legal acts of NIS AEO and the country related to admission to higher education institutions.



South Korea is one of the most sought-after countries for the graduates of Intellectual Schools. Therefore, in August 2023, career counsellors visited top universities in the Republic of Korea, such as Korea Advanced Institute of Technology (KAIST), Goryeo University, Seoul University, Seoul Women’s University, Woosong University, and others, to review university curricula.

During the visit, the career counsellors met with representatives of academic and international departments of universities and student admissions departments. Also, the counsellors:

- visited laboratories and student residences;
- liaised with admissions officers;
- learnt about the life of international students in the country;
- assessed the opportunities South Korea offers for young scholars and future leaders.

The lessons learnt will enable the career counsellors to better assist and advise students from the Intellectual Schools in the process of choosing and applying to universities in Korea.



On **9–10 November 2023** the annual seminar for career guidance counsellors of Intellectual Schools and International School of Astana was held in Astana. Guests from the World Bank, the project office of the Ministry of Science and Higher Education of the Republic of Kazakhstan on the programme “My profession is my future”, the National Testing Centre, JSC “National Centre for Research and Evaluation of Education “Taldau” named after Akhmet Baytursynuly”, as well as the staff of NIS AEO spoke at the seminar. The speakers spoke about the changing labour market, popular professions, career expectations of NIS students according to the results of PISA-2018,

the regional standard “Mamandygym – bolashagym” (“Profession is a path to the future”), new elective courses developed within the framework of NIS-Programme, the importance of using the results of professional diagnostics and much more.

In addition, representatives of OpenEdu, Campus France, Studiare in Italia and Smartestprep delivered a speech on preparation and admission to universities in Germany, Austria, Italy, the Netherlands, France and others. As part of the seminar, the counselors visited the leading universities of Astana to get acquainted with bachelor’s degree programmes, summer schools, classrooms and laboratories.





Also, **from November to December 2023**, career guidance counsellors took a refresher course “I am a Career Guidance Counsellor” conducted by the International Association for Career Guidance of Schoolchildren of Kazakhstan. This course provided a deep understanding of the work of a career guidance counsellor

at school, up-to-date knowledge of trends in the labour market in Kazakhstan and in the world, and new tools for work, including professional diagnostic tests such as Digital Human, Gallup test and ProfConsultant. Upon completion of the course, all career guidance counsellors received a Certificate of Professional Development.





3. TEACHING STAFF



3.1. Professional staff potential
(Competitive selection of teachers,
Qualitative composition of teaching staff)

3.2. Professional development and growth (Professional development system, Certification of teaching staff, Achievements of teachers)

3. TEACHING STAFF

3.1. PROFESSIONAL STAFF POTENTIAL

Competitive selection of teachers

Admission of teachers to Intellectual Schools shall be carried out on the basis of an open competition in two stages in accordance with the Rules of competition for vacant positions and formation of personnel reserve of teachers in Intellectual Schools carrying out educational activities, approved by the decision of the AEO NIS Board.

The competition for vacant positions of teachers in 2023 was held from 15 May to 31 August in three streams (AEO Order No. 157/OD of 16 May 2023). The first stream was held in June with the participation of 803 applicants, of which 198 applicants successfully passed to the second stage, the second and third streams were held in August: the second stream involved 649 applicants, of which 105 applicants passed to the second stage, the third stream - 653 applicants, of which 124 applicants passed. A total of 2105 applicants participated, of which 427 applicants passed the first stage and were admitted to the second stage, which is 20 per cent (%) of the total number of applicants. At the end of the second phase, 210 teachers were hired for vacant positions, which is 10 per cent of the total number of participants.

The first stage of the competition is held by the Centre for Pedagogical Measurements (hereinafter - CPM) in the online format at one time on the basis of Intellectual Schools on the TAO platform in two parts: computer testing of subject knowledge and writing an essay to determine the methodological readiness of the applicant in the state, Russian, English languages of the applicant's choice.

The second stage of the competition is conducted by the competition committee of the Intellectual School in the format of an interview.

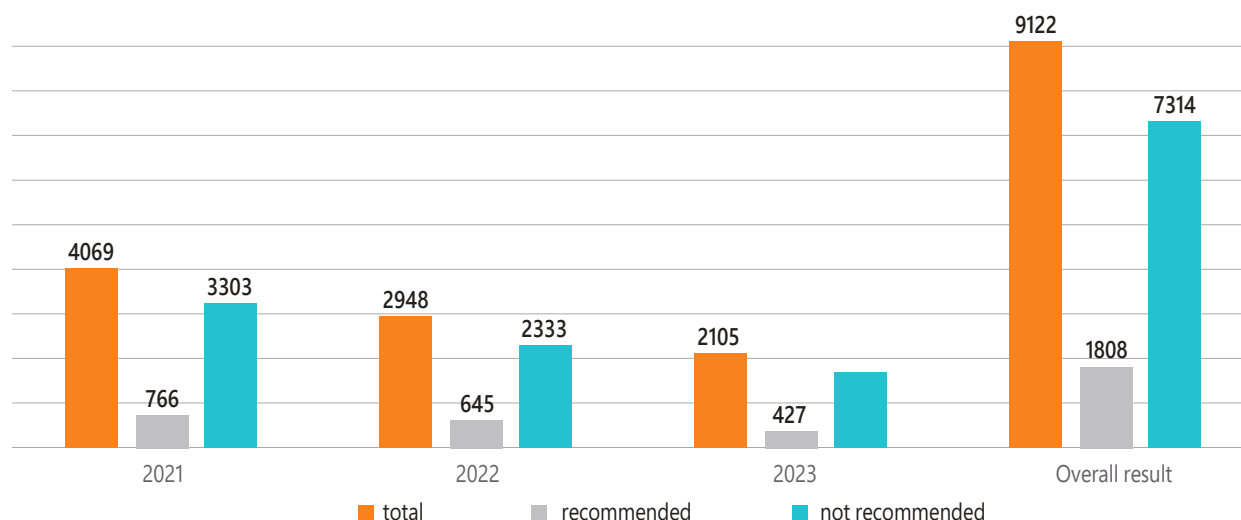
In 2023, for the first stage of the competitive selection process, the specifications of tests in 19 subjects in Russian and Kazakh languages were updated and 2,250 tasks and 200 resources were developed. Test specifications and samples of test tasks are available on the website career.nis.edu.kz in the section «Competitive selection of teachers».

The results of the first stage of the competition selection are formed on the basis of statistical processing of test results and essay evaluation. Applicants have been provided with individual reports that include recommendations for developing skills in the subject area and teaching methodology.

Quantitative information on the results of the first stage of competitive selection of teachers to Intellectual Schools

Line names	Total	Recommended	Not recommended
2021	4 069	766	3 303
2022	2 948	615	2 333
2023	2 105	427	1 678
The overall result	9 122	1 808	7 314

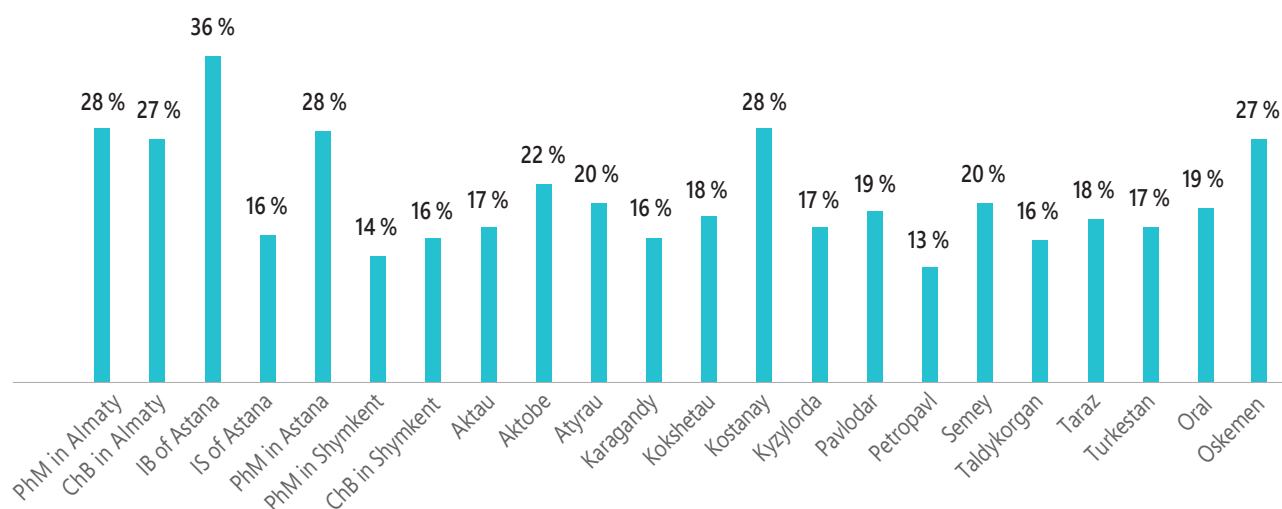
Competitive selection of teachers 2021-2023



In 2023, 2,105 applicants took part in the first stage of the competitive selection process, of which 20 per cent (427 applicants) passed the threshold.

Information on the number of applicants in terms of cities of republican significance and the capital, regional centres is presented below (Figure X).

Number of applicants meeting the threshold by school in 2023 (%)



According to the data, the number of applicants meeting the threshold score varies by school. The highest number of applicants who passed the threshold level is in Astana (IB) - 36 per cent, Almaty (PhM), Astana (PhM), Kostanay (PhM) - 28 per cent; the lowest is in Petropavl (ChB) - 13 per cent, Shymkent (PhM) - 14 per cent. At the same time, in Turkistan city the total number of applicants was 301. The threshold level averaged 17 per cent.

In general, the essay assessment results demonstrate relevance to the topic, the ability to

explain the choice of teaching methods and the possibility of their use in the classroom, with little reflection of the subject focus, effectiveness of teaching methods for the development of research skills of students.

Based on the results of the first stage of the competition, 2,105 individual reports were submitted, as well as recommendations to applicants hired to work in schools to develop skills in the subject area and teaching methodology.

Comparative data of the first stage of the competition for the years 2021–2023

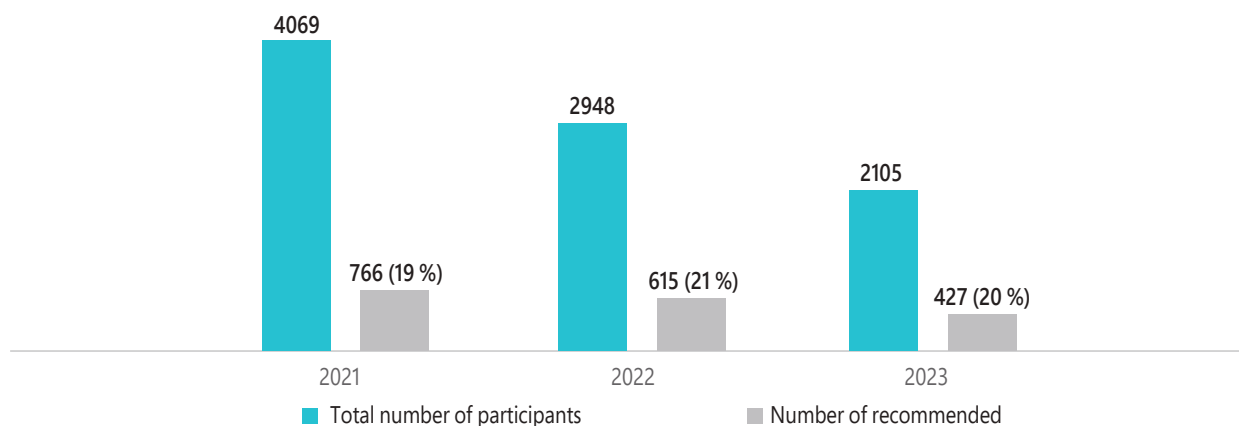
Quantitative data on the results of the first stage of the competition by schools

No.	School	2023		2022		2021	
		total	recommended	total	recommended	total	recommended
1	ChB in Aktau	93	16	93	12	168	30
2	PhM in Aktobe	68	15	92	19	161	25
3	PhM in Almaty	107	30	139	47	314	84
4	ChB in Almaty	148	40	221	65	118	34
5	IB Astana	72	26	99	25	58	17
6	IS Astana	183	30	197	46	190	41
7	PhM in Astana	150	42	138	41	128	33
8	ChB in Atyrau	30	6	41	9	55	7
9	ChB in Karaganda	68	11	122	24	132	22
10	PhM in Kokshetau	65	12	133	23	137	20
11	PhM in Kostanay	25	7	83	25	61	14
12	ChB in Kyzylorda	35	6	87	10	104	22
13	ChB in Pavlodar	79	15	145	40	125	24
14	ChB in Petropavl	78	10	156	32	197	26
15	PhM in Semey	80	16	74	23	107	20
16	PhM in Taldykorgan	94	15	177	19	217	17
17	PhM in Taraz	121	22	159	25	211	42
18	ChB in Turkestan	301	52	358	57	795	180
19	PhM in Oral	83	16	87	18	195	33
20	ChB in Oskemen	48	13	100	15	137	20
21	PhM in Shymkent	71	10	68	15	158	24
22	ChB in Shymkent	106	17	179	25	301	31
Total		2105	427	2948	615	4069	766

The data reflect uneven distribution of applicants in the context of cities, we can note the largest number of applicants in Turkestan (301 - 2023, 358 - 2022, 795 - 2021), the smallest - in Kostanay (25 - 2023, 83 - 2022, 61 - 2021), Atyrau (30 - 2023, 41 - 2022, 55 - 2021).

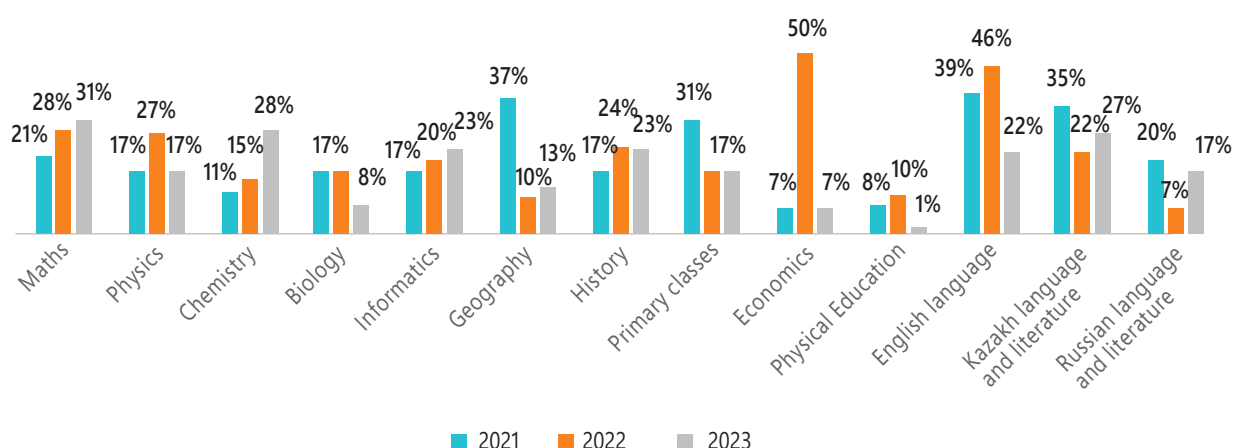
The threshold level averaged between 19-21% across years, confirming the validity of the assessment tools and the reliability of the procedures

Comparative data in terms of number of applicants and pass rate



The results of the passing score may be associated with the low preparedness of the applicants and insufficient work experience.

Results by subject



Analysis of the data shows that over the last three years there has been a positive dynamics of the test pass rate in maths, chemistry and computer science, compared to 2022 in maths and computer science - by 3%, chemistry - by 13%. The instability of the test passing rate in individual subjects is reflected.

For example, in physics, the indicator increased to 27% in 2022, and decreased to 17% in 2023. In this regard, the instruments of competitive selection for inconsistency of the difficulty level of tasks with the test specification will be revised.

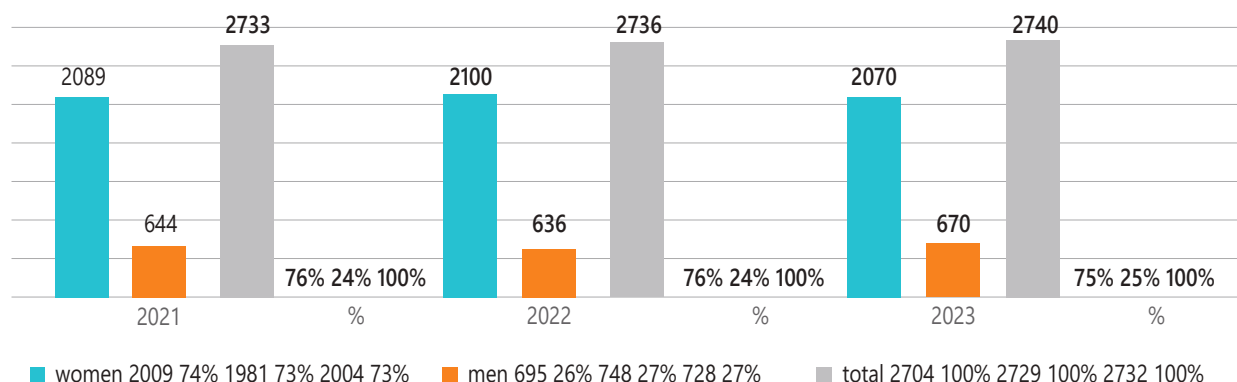
The qualitative composition of the teaching staff

As of December 31, 2023, the number of Kazakhstani teachers in Intellectual Schools and the International School amounted to 2,740, of which 2,547 teachers in Intellectual Schools and 193 teachers in the International School.

Gender composition of teachers

By gender, the quantitative ratio between female teachers (75%) and male teachers (25%) remains unchanged.

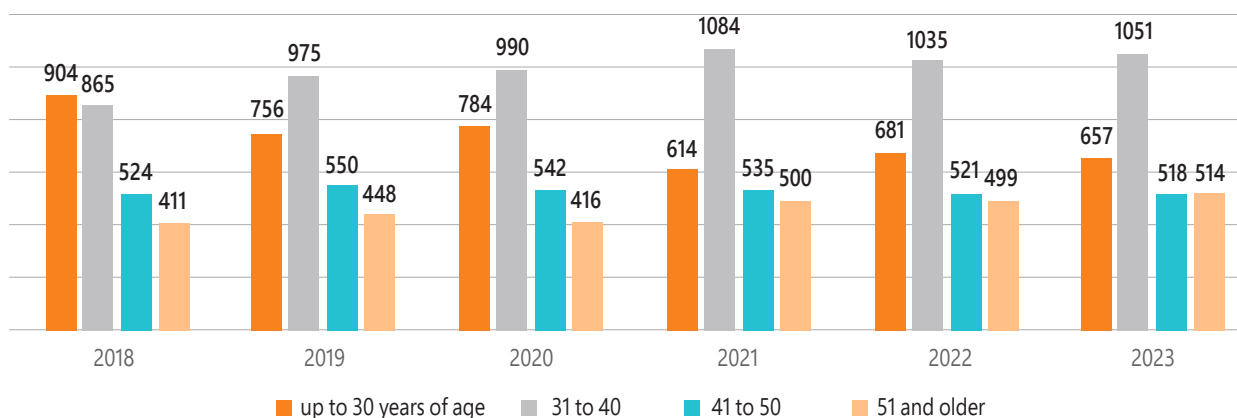
Gender composition



Age composition of teachers

In terms of the age composition of teachers in the reporting year, as in the previous year, the group of teachers under 40 years of age prevails and accounts for 63 per cent of the total number of teachers.

Age group



Quantitative composition of teachers by levels of pedagogical excellence

Years	NIS Teacher-trainee	NIS Teacher	NIS Teacher-moderator	NIS Teacher-expert	NIS Teacher-researcher	NIS Teacher-master	Total
2018	445	1096	1058	265	6		2870
2019	381	924	1172	317	5	1	2800
2020	293	910	1194	396	5	1	2799
2021	311	924	1189	480	5	1	2910
2022	301 (11%)	800 (29%)	1107 (40%)	520 (19%)	7 (0,3%)	1 (0,04%)	2736
2023	257 (10%)	839 (31%)	986 (35%)	649 (24%)	8 (0,3%)	1 (0,04%)	2740

In 2023, compared to the previous year, there was a 1% decrease in the number of NIS teacher-trainees, a 2% increase in NIS teachers, a 5% decrease in NIS teacher-moderators, a 5% increase

in NIS teacher-experts, a 0.3% increase in NIS teacher-researchers, and the number of NIS teacher-masters remained constant.

Quantitative composition of teachers by level of education

Intellectual schools	Masters	Graduates of universities: NU, «Bolashak», leading foreign universities	Studying at master's and doctoral programmes	PhD	Candidates of Sciences	Internship under «Bolashak»	Total number of teachers
ChB in Aktau	31	3	1	1	1	-	140
PhM in Aktobe	51	10	2	1	1	3	106
PhM in Almaty	64	3	10	2	4	1	153
ChB in Almaty	93	4	2	1	3	4	147
IB Astana	71	25	3	2	-	5	167
IS Astana	86	19	10	1	1	2	193
PhM in Astana	87	16	11	1	1	4	179
ChB in Atyrau	31	6	1	-	-	-	102
ChB in Karaganda	51	18	9	2	1	--	110
PhM in Kokshetau	47	8	1	1	-		117
PhM in Kostanay	34	4	4	-	-	2	97
ChB in Kyzylorda	54	11	4	-	2	-	120
ChB in Pavlodar	58	5	7	1	-	3	104
ChB in Petropavl	53	17	2	-	1	-	106
PhM in Semey	54	13	7	1	-	-	114
PhM in Taldykorgan	35	4	3	-		-	122
PhM in Taraz	65	8	5	-	1	2	110
ChB in Turkestan	39	2	3	1	1	-	82
PhM in Oral	39	8	-	-	1	1	120
ChB in Oskemen	63	3	9	2	1	1	103
PhM in Shymkent	70	7	4	-	-	3	126
ChB in Shymkent	64	6	4	1	1	-	122
Total	1240	200	102	16	20	31	2740

Of the total number of teachers, 45% have a Master's degree, 1.3% have a PhD/candidate, 7% are graduates of NU, Bolashak, leading foreign universities. To date, 4% are enrolled in master's and doctoral programmes.

A total of 31 teachers were trained under the Bolashak programme, of which 22 teachers completed a 6-month internship in 2023 from March to August.

International teachers

In 2023, work will continue on maintaining a trilingual learning environment, building the capacity of Kazakhstani teachers in the academic level and methodology of teaching core subjects such as Physics, Chemistry, Biology, Computer Science and subjects of the International Baccalaureate programme in English, with the involvement of international teachers.

The search for international teachers was carried out in co-operation with strategic partners in foreign recruitment: Teacher International Consultancy (Great Britain), Search Associates (Canada), as well as through direct search of candidates. Over 100 CVs of international teachers were reviewed, 65 interviews were conducted, 23 teachers were invited to schools for teaching activities for the beginning of the 2023-2024 academic year.

When hiring foreign teachers, the selection is carried out in 2 stages, by selecting teachers according to the established qualification requirements and conducting interviews at the level of AEO «Nazarbayev Intellectual Schools» and Intellectual Schools. Candidates' CVs and questionnaires are reviewed, the documents required to conclude an employment contract and apply for a C3 work visa are checked, including letters of recommendation from previous places of employment, a certificate of absence of information on the commission of a criminal offence, a medical certificate of fitness to teach, certificates

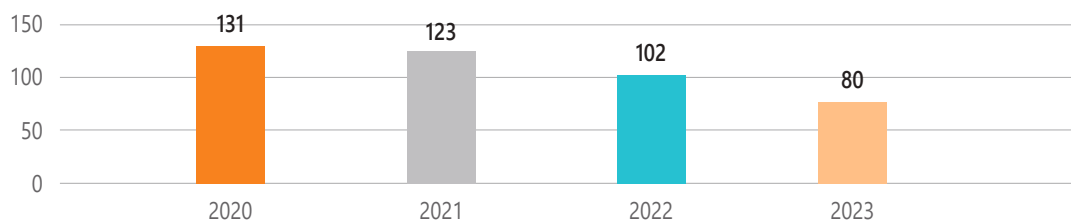
confirming qualifications (IBDP, A Level, MYP, PYP, etc.), teaching experience in accredited international schools on Level and IB programmes, methodological leadership, mentoring in team teaching, and other relevant documents.

As of 31 December 2023, 80 international educators were operating in Intellectual Schools, of which 8 are PhDs, representing 10% of the total, 45 are Masters (57%), and 55 (68%) hold international certificates (PGCE, IBDP, TESOL, ESL, TEFL, CELTA).

Methodological support of Kazakhstani teachers by international teachers is realised through joint lesson planning, team-teaching, reflection on lessons, development and moderation of assignments for SAU and SAT, as well as through in-school courses for teachers, joint lesson studies, participation in preparation of the school for international accreditation, dissemination of the Intellectual Schools' experience to general and rural schools. The procedure for selection of international teachers to Intellectual Schools shall be regulated in accordance with the Rules for Recruitment of International Teachers to Nazarbayev Intellectual Schools, approved by the decision of the AEO NIS Board.

The policy of replacing international teachers with Kazakhstani teachers is being implemented through a phased reduction in the number of international teachers and improving the qualifications of teachers at Intellectual Schools.

Number of international educators recruited in 2020-2023



3.2. PROFESSIONAL DEVELOPMENT AND GROWTH

Professional development system

The main strategic objective of the professional development system is to develop network capacity, to build up the pool of highly qualified teachers to ensure a high standard of education in Intellectual Schools.

This goal is achieved through the development of professional interaction in the educational communi-

ty; methodological support provided by the Centres, training of teachers with international certification.

The content of professional development is aimed at developing teaching, language and leadership competencies, improving the well-being of the school community, and ensuring the safety of the educational process.

Number of professional development courses and trainees

№	Directions	2021		2022		2023	
		Number		Number		Number	
		PD	trainees	PD	trainees	PD	trainees
1	Training of teachers under the IB program (including abroad)	24	55	13	25	16	24
3	Language courses for subject teachers	1	80	2	135	1	233
4	Training of subject teachers	7	2019	6	516	5	205
5	Training to ensure the educational process	3	612	7	1098	7	1177
6	Training teachers	5	162	0	0	4	584
7	Training for press secretaries, lawyers, accountants, media and IT specialists	5	93	7	179	6	197
Total		45	3021	35	1953	39	2420

In the reporting year, training was conducted for employees of Intellectual Schools on ensuring a safe educational process (with mandatory certification in accordance with the legislation of the Republic of Kazakhstan), with 1173 participants trained. To implement the International Baccalaureate program and in accordance with its requirements for teachers at the Nazarbayev Intellectual School in Astana, professional development courses were conducted for 22 teachers.

In May of the reporting year, in order to develop methodological knowledge, two teachers of English language of Intellectual Schools of Atyrau and Turkmenistan successfully completed the course «Methods of teaching English CELTA» on the basis of the letter of

invitation of the strategic partner of the British Council, which was held on the basis of International House, London.

At the invitation of the Corporate Foundation «Caravan of Knowledge», which develops STEAM-education in Kazakhstan, the republican trainer on STEAM-learning, biology expert teacher of NIS PhM in Taraz Aksonova I.V. successfully completed the course «Fundamentals of critical and creative thinking. Training of trainers of thinking».

The PD course «Art Therapy in the Development of Emotional Intelligence of Adolescents» was organised for 61 school educational psychologists and art teachers on methods of teaching art therapy to prevent mental disorders ranging from aggressive and risky

behaviour to substance use (SUD) and self-harming, suicidal behaviour.

A course on «Depression in adolescence and prevention of suicidal behaviour» was organised for 21 paediatricians from Intellectual Schools.

In order to train teacher-organiser-mentors for the implementation of the elective course «Safety and Well-being» for students of grades 7-12 in the new academic year, a course «Safety and Well-being» was organised for 350 teachers, which included principals, deputy principals for pastoral care, teacher-organiser-mentors, educators of Intellectual Schools.

To prepare computer science teachers from Intellectual Schools for problem-solving strategies at the Olympiad level and to organize school and network stages of the World Robot Olympiad 2023, a training session was organized in Astana from February 20 to 24 for 23 computer science teachers by the efforts of teacher-trainers from Intellectual Schools in Almaty and Taldykorgan.

Due to the inclusion of CISCO elements in the content of the NIS Programme for the subject of «Computer Science,» a course on «IT-Essentials from the Cisco Networking Academy» was organized from June 2 to June 30 for 138 computer science teachers.

In order to develop skills necessary for development of corporate technological solutions and implementation of innovations, the course «Microsoft Power Platform Fundamentals and Functional Consultant» was organised for three IT employees of the branch of NIS ChB in Petropavl from 14 to 19 August.

In connection with the need to update the skills of press secretaries of Intellectual Schools in crisis management, reputational risks, and social media management, a course on «Multichannel Crisis Communications Using Internet Platforms and Social Networks» was conducted from August 11 to August 13 for 21 press service employees of Intellectual Schools.

In accordance with the changes made to the educational programme for the subject «English Language», a distance learning course «Future English Online Teacher Community Programme» was held for 233 English teachers on modern approaches to distance learning on the British Council Online Teacher

Community platform. The course was organized by the British Council free of charge.

Due to significant updates in the composition of the personnel inspectors of Intellectual Schools, training was conducted for 21 inspectors on the courses «Personnel Management and Personnel Accounting with the software product 1C ZUP Corp., edition 2.0» and «Personnel Records Management Taking into Account the Latest Labor Code Amendments».

For 39 accountants and economists of Intellectual Schools was organised a course «Changes in tax legislation of the Republic of Kazakhstan in 2023 and from 2024, «Financial modelling».

In order to improve the effectiveness of communication with different partners through negotiation strategies and conflict management, a distance course «The Art of Effective Negotiation» was organised in December for 21 principals and 21 deputies for scientific and methodological work of Intellectual Schools.

For 37 lawyers and procurement specialists, in December of the reporting year, in Astana, a course on «Innovations in procurement of Nazarbayev Intellectual Schools on the Eurasian e-portal» was organised.

In order to provide methodological support on 20-24 November 2023 master-classes for teachers of Chemistry and Biology of Intellectual School in Turkestan were held by teacher-researcher of Biology and teacher-expert of Chemistry of Intellectual School in Oskemen.



Lesson study and practice research have traditionally been seen in Intellectual Schools as tools for developing and improving lesson and teaching practice. For example, the network collection «Teacher-researcher» is published annually. In the reporting year, it included 110 articles by teachers who presented the results of Lesson study and Action research projects implemented in Intellectual schools since 2012. In 2023, Collection No. 7 was prepared by the Intellectual School of Petropavl.

Every year, up to 150 (6%) teachers of the network receive confirmations from academic committees to present their abstracts in international conference programs. Thus, in 2023, 15 teachers presented the results of action research at the International Conference of Educational Researchers - ECER (Glasgow, UK), 19 teachers at the International Conference on Lesson Study - WALs (Zwolle, Netherlands), 3 abstracts were presented at the international conferences of the Association for Assessment in Education IAE Aand AEA-Europe, titled «Assessment reform journeys: intentions, enactment, and evaluation», held in Malta.

Annual August conference of teachers of Intellectual Schools and International School was held on 17-22 August 2023 on the basis of Nazarbayev Intellectual School of Chemical and Biological Direction of Turkestan on the theme «Development of professional learning community: quality and efficiency» with the purpose of implementation of complex methodological support of Intellectual Schools. The conference was organized in a hybrid format and covered all aspects of organizing the educational process in the new 2023-2024 academic year, ensuring a well-being professional community in a safe school environment.

The plenary session and thematic platform on «School community as an environment for self-realisation of students» covered the following issues: «Key competences: students' readiness for the complexities of the modern world», «Integrity of approaches in upbringing and education of students», «School-wide approach in ensuring children's well-being», «How assessment stimulates students' academic achievements», «Introduction of adaptive learning in Intellectual Schools».

For teachers, practical online platforms were conducted on the topics of «Implementation of the NIS Programme with a focus on the formation of key competencies» and «The impact of assessment on students' academic success and teachers' professional development», «Transmission of professionalism: mastery and assimilation of pedagogical experience through dissemination», «Use of Beyim and Canvas platforms in the educational process» for pedagogical organizers-curators, educators, additional education teachers, librarian-teachers - «Organization of the educational process in the school community for the well-being of students», for pedagogical psychologists - «Integration of digital psychological services to support students of Intellectual schools», for career guidance consultants «Development and improvement paths of career guidance work in Intellectual schools», for medical workers - «Approaches to organizing school nutrition».

In accordance with the conference theme aimed at developing professionally learning communities in schools, offline trainings for school leaders were conducted on topics such as «Supporting individual student progress in the school community», «External summative assessment: from data analysis to research», «From knowledge to competencies», «School management: situation analysis and problem-solving», «Professional learning community of the school: rethinking methodological work», «Pedagogical interactions: effective transmission of experience in education», «Strengthening the school community as a factor in the social well-being of students», «Case management in schools: collaborative planning for student support». Based on the training outcomes, a poster session was organized where each school team, represented by their leaders, presented posters outlining the development plans for their schools for the 2023-2024 academic year.

Additionally, offline training sessions were conducted for teachers of the Nazarbayev Intellectual School of Chemical and Biological Direction in Turkestan, the youngest school, on the following topics: «Organization of the educational process in the 2023-2024 academic year», «Individual trajectory of professional development for teachers», «Organization of educational work within the school community»,

«Case management: collaborative planning for student support in the school», «Implementation of the NIS-Programme focusing on the development of key



Traditionally, the annual network competition «Panorama of Best Practices», an online exhibition of successful cases of teachers of Intellectual Schools that proved their effectiveness, was held as part of the August conference. This year, the participants presented 133 group and individual cases.

All cases were divided into 6 subject categories, the winners of which were determined by online voting of the participants of the August conference. The voting took into account the extent to which the

competencies», «Ensuring a balance between internal and external assessment», «Professional community of teachers based on effective school teams».



presented practice was new for teachers, how relevant and interesting it was, whether teachers were ready to apply it themselves and recommend it to their colleagues.

More than 3,000 teachers from Intellectual Schools and the International School took part in the online voting.

According to the total number of opinions, the winners of the main nominations were determined in 6 subject categories: «Innovative Case», «Relevant Case», «Evidence-Based Case».

In the category**«Computer Science and Geography»:**

«Innovative Case» - «Classroomscreen» - an innovative widget by teachers Aray Talgatovna Nurbayeva and Perizat Darkhanqyzy Daribay from Nazarbayev Intellectual School of Chemistry and Biology in Kyzylorda.

«Relevant Case» - Louiza Ruslanovna Bizhanova, Shadiyar Kurashevich Tajgurazov, English Language and GPPW teachers, and Computer science teacher at Nazarbayev Intellectual School of Physics and Mathematics in Aktobe, with the theme: «Research Guide: Formulating a Research Question».

«Evidence-Based Case» - Ansar Bürkitbekuly Akim, Nuriya Anuarovna Panshayeva, teachers of Computer science at the Nazarbayev Intellectual School of Physics and Mathematics in Taraz, with the theme: «Online resource for preparing students for external summative assessment.»

In the category**«Chemistry and Biology and physical education»:**

«Innovative Case» - Irina Mikhailovna Babich (Nazarbayev Intellectual School of Physics and Mathematics in Pavlodar), Aliya Akhatovna Boratova (Nazarbayev Intellectual School in Astana) with the theme «CIE-ebook» for those who study and teach Chemistry in English.

«Relevant Case» - a group of biology teachers from the Nazarbayev Intellectual School of Physics and Mathematics in Kostanay: Galina Vasilievna Vartanyan, Asel Tanatkanovna Nurgazina, Yevgeniy Vladimirovich Podgaynyy, Ruza Tajbaevna Tashenova with the theme «Chat GPT as a tool for subject-language integration development».

«Evidence-Based Case» - Alimanna Ongarbekkyzy Narymbetova, Jazira Almakhambetovna Kurmanaliyeva, Aynash Madibekkyzy Turmakhanbet, and Zhanar Aidarbekovna Dinislamova, teachers of Physical education, Biology, and a pediatrician at the Nazarbayev Intellectual School of Physics and Mathematics in Taraz, with the theme «Study of changes in the shape of the foot arch of students and its prevention».

In the category**«Physics and Mathematics»:**

«Innovative Case» - Bekbolat Sailauovich Khairullin, Aliya Maksutovna Konurova, and Guldana Tlekovna Demeugaliyeva, Physics teachers at the Nazarbayev Intellectual School of Physics and Mathematics in Oral, on the topic «Possibilities of establishing quick and efficient communication with students using the Socrative platform».

«Relevant Case» - Rustem Kabdykarymovich Tyulyubergenev, Mathematics teacher at the Nazarbayev Intellectual School of Chemistry and Biology in Oske-men, on the topic «Constructing cross-sections in the GeoGebra software».

«Evidence-based Case» - Yernur Erlanduly Chakenov, Physics teacher at the Nazarbayev Intellectual School of Chemistry and Biology in Almaty, on the topic «Goldberg Machine in practice for the Summer School».

In the category «Russian language and literature, visual arts, well-being, primary classes»:

«Innovative case» - Aygul Zulkarnaykyzy Tolegenova, Art teacher at the International School of Astana, with the topic «Using the ‘Spatial’ platform in art lessons».

«Relevant case» - Zhuldyz Mukhambetovna Batpanaeva, Russian language and literature teacher at the Nazarbayev Intellectual School in Kostanay, with the topic «Need a good conversationalist? Easy!!!»

«Evidential case» - Zulfia Tagirovna Gubaidullina, Lazzat Beimbetovna Nigimetyova, Aktoty Serikovna Kazbekova, school psychologists at the Nazarbayev Intellectual School in Oral, with the topic «A Comfortable Environment - Mental Well-being».

Category «English language»:

«Innovative Case» - Madina Kalykkyzy Zhusipova, Aktorgyn Alibekkyzy, English language teachers at the Nazarbayev Intellectual School of Chemistry and Biology in Aktau.

«Relevant Case» - Aydana Tulegenovna Kuanyshkalieva, Aliya Esetayevna Sergalieva, English language teachers at the Nazarbayev Intellectual School of Physics and Mathematics in Oral, with the theme «Reading comprehension and analysis platform for classroom and self-study use».

“Evidence-Based Case” - Saltanat Erbolatovna Alimgaziyeva, Anastasiya Alexeevna Barkova, Aliya Alievna Kurmasheva, English language teachers at the Nazarbayev Intellectual School of Physics and Mathematics in Semey, with the theme “Gamification as an extrinsic motivation tool”.

Category

«Kazakh language and literature, history»:

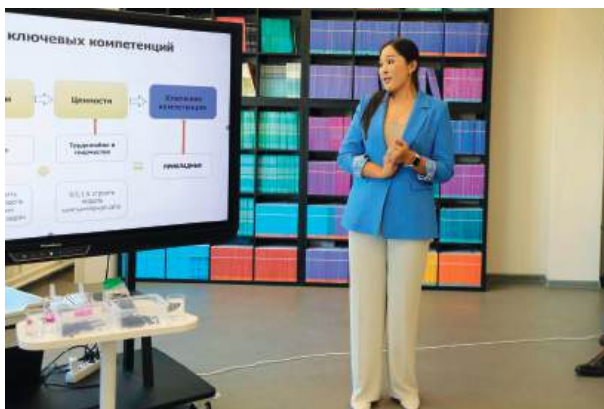
“Innovative Case - Possibilities of FLIX GRADE Application” by Bibigul Beibitkyzy Erkembek, History teacher at the Nazarbayev Intellectual School of Physics and Mathematics in Almaty.

“Relevant Case - “Effectiveness of the KazLingua Application” by Asem Balgabayevna Isina, Mentai To-leukhanovna Kozganbayeva (Nazarbayev Intellectual School of Physics and Mathematics in Kostanay), Al-

magul Turbayevna Utesheva (Nazarbayev Intellectual School of Physics and Mathematics), Aynur Moldashevna Kalieva (Petropavl), Roza Husainova (Nazarbayev Intellectual School of Physics and Mathematics in Taldykorgan) - teachers of Kazakh language and literature.

“Evidence-Based Case - Elmira Zhandarqyzy Moldabek, teacher of Kazakh language and literature at Nazarbayev Intellectual School of Physics and Mathematics in Taraz, with the topic “Integration of Interdisciplinary Connections and Differentiation in the Kazakh Language Discipline”.

The panorama, combining the potential of the entire pedagogical community of Intellectual Schools, has created an electronic hub for new ideas, interesting methods, and ready-made digital products.



Certification of teaching staff

In 2023, teacher certification was organized and conducted in three stages from January 5 to June 30, in accordance with the Rules of Teacher Certification in branches of the “Nazarbayev Intellectual Schools” autonomous educational organization conducting educational activities (Orders No. 414 of January 20, 2022, and No. 153 of May 15, 2023).

In the 2023 certification, 401 teachers participated, assessed across six levels of pedagogical mastery, and 160 educators were assessed across two levels of pedagogical mastery. Out of 401 teachers, 288 candidates confirmed and 113 candidates did not confirm

the declared level, which corresponds to 72% and 28%, respectively.

The first stage involved school-based assessment through observation of lessons/activities of the candidates focusing on planning, teaching, assessment of student learning outcomes, and lesson quality evaluation conducted by school leadership and teacher trainers for professional development.

The second stage involves independent assessment, where teachers provide a reflective lesson report that is evaluated based on three key assessment criteria corresponding to the level of pedagogical excellence

Criteria for evaluating a Reflective lesson report

Criteria	Description of the criterion
Criterion 1 Analysis	Analysis of planning, teaching, and evaluation of students' academic achievements based on pedagogical experience
Criterion 2 Evaluation	Evaluating lesson effectiveness by analysing the planning, teaching, assessment of students' learning achievements
Criterion 3 Synthesis	Predicting changes in teacher performance based on findings from analyses and evaluations of planning, teaching, assessment of student learning achievements

In 2023, 402 reflective lesson reports (RRs) were assessed, of which 175 achieved the threshold score for the stated level of teaching excellence (Table X).

In terms of levels of pedagogical skills, the largest number of RRs is represented at the level of “NIS teacher-expert”. At the same time, by subject, the highest number of RRs is by teachers of English and maths

Quantitative data in the context of subjects and levels of pedagogical excellence

Subject	NIS Teacher		NIS Teacher-moderator		NIS Teacher-expert		NIS Teacher-researcher		The overall result
	total	rec	total	rec	total	rec	total	rec	
English language	7	5	24	12	18	9	2	-	51
Biology	-	-	13	4	23	12	-	-	36
Geography	1	1	4	2	7	5	-	-	12
GPPW	-	-	-	-	1	-	-	-	1
Design	-	-	1	-	1	-	-	-	2
Computer science	-	-	7	4	16	7	1	1	24
Arts	1	-	3	-	5	3	-	-	9
History	1	-	9	2	12	5	-	-	22
Kazakh language and literature	2	1	4	4	16	6	-	-	22

Subject	NIS Teacher		NIS Teacher-moderator		NIS Teacher-expert		NIS Teacher-researcher		The overall result
	total	rec	total	rec	total	rec	total	rec	
Mathematics	2	-	19	10	48	25	1	-	70
Music	-	-	-	-	1	-	-	-	1
Primary classes	-	-	2	-	13	5	-	-	15
Russian language and literature	1	-	7	2	21	11	-	-	29
Social Sciences	-	-	3	2		-	-	-	3
Physics	4	4	15	7	18	3	1	-	38
Physical Education	1	1	10	2	17	2	-	-	28
Chemistry	4	2	15	7	20	9	-	-	39
The overall result	24	14	136	58	237	102	5	1	402

Based on the results of the RR assessment, recommendations are proposed:

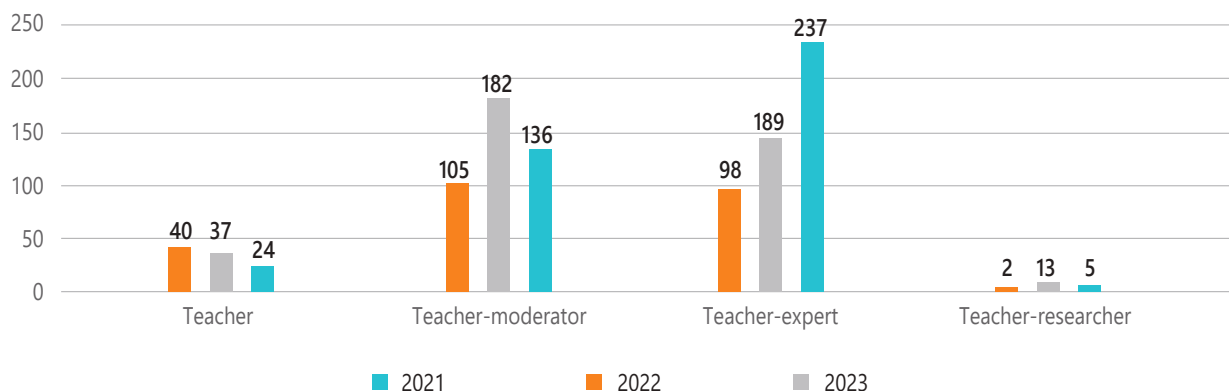
- use assessment and monitoring tools aimed at supporting students with different abilities;
- conduct reflection after each lesson and receive feedback from various sources, including feedback from students, colleagues and the school administration;
- use diagnostic tools, including testing to identify students' starting knowledge and skills, in order to select appropriate resources, tasks and assessment tools when developing a curriculum;
- ensure effective interaction of students within the lesson ("student-lesson material", "student-student" and "student-teacher");
- develop elective course programs for in-depth study of subjects and expansion of students' knowledge and skills, conduct testing at a school or a network of schools, and provide evidence of the positive impact of the program on improving the quality of education.

- plan and implement research approaches:

- 1) select a topic and research question based on methodological difficulties or problems in teaching and indicators of teaching quality;
- 2) selection of research methods and tools (such as surveys, modelling and observation);
- 3) evaluate the effectiveness of the research undertaken to address a particular problem, discussing it with colleagues and planning next steps to develop practice.

A comparative analysis of assessment results for 2021-2023 showed that the number of teachers who applied for the "NIS teacher-moderator" level increased by 73% in 2022 and decreased by 25% in 2023; for the "NIS teacher-expert" level there is an increase of 93% in 2022 and 25% in 2023, which allows us to conclude that the professional level of teachers in general has increased.

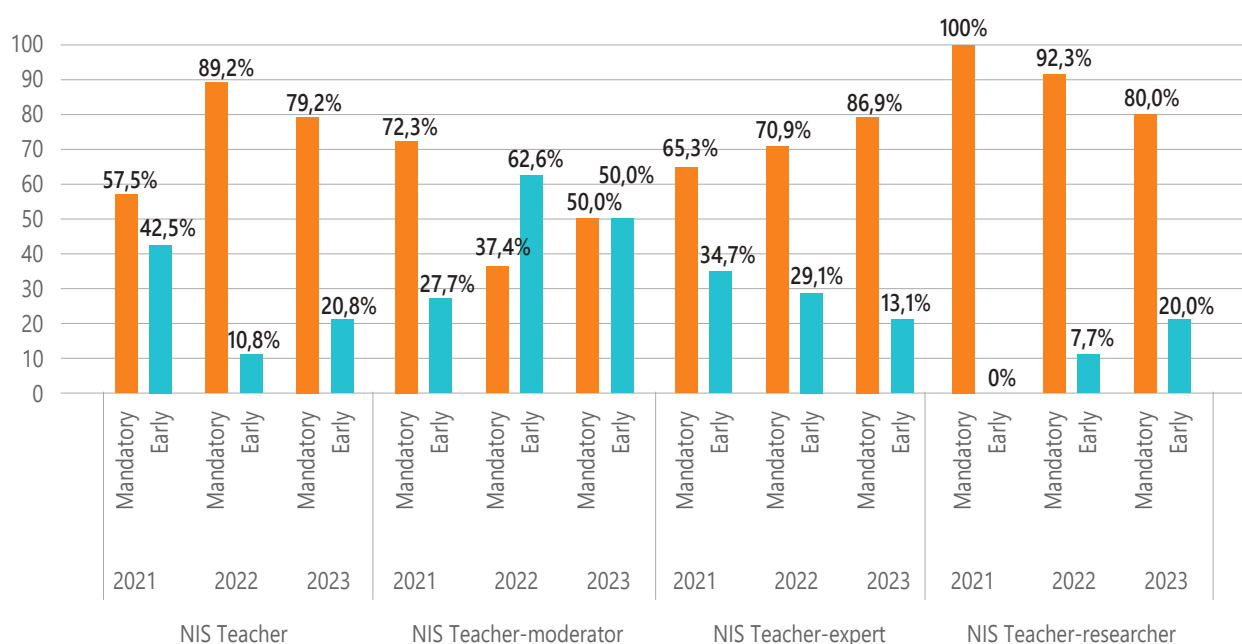
Comparative data in the context of the levels of pedagogical excellence



In terms of mandatory and early certification, there is an increase in the share of teachers undergoing mandatory certification to the level of “NIS

teacher-expert”, the share of teachers undergoing early certification to the level of “NIS teacher” in 2023 increased by 10%.

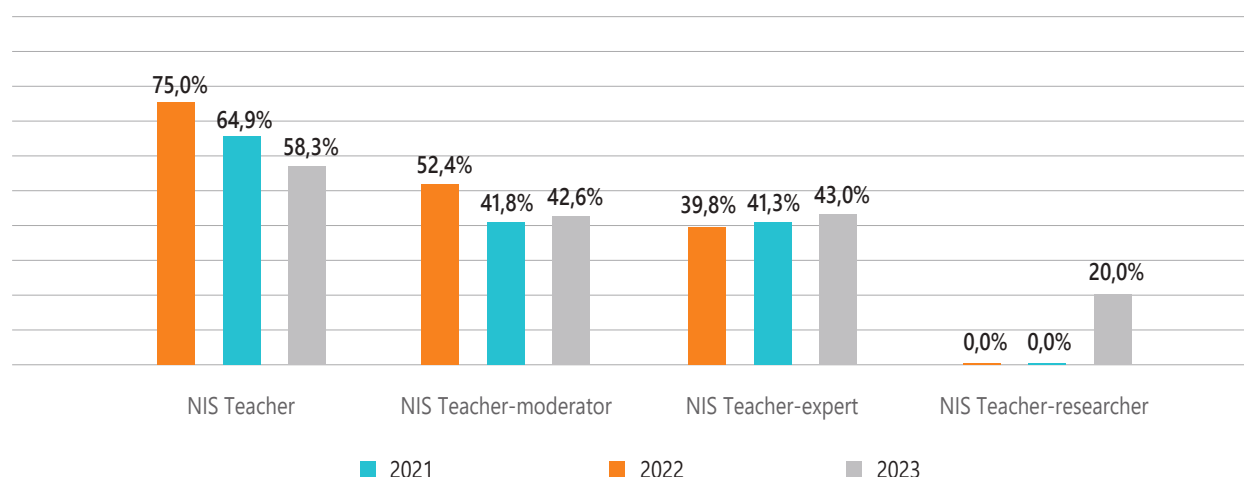
Participation in compulsory and early certification in terms of pedagogical excellence levels



The number of teachers who reached the passing score for the “NIS Teacher” level decreased by 10.1% in 2022 and by 6.6% in 2023, whereas there

has been an annual growth rate of 1.5% on average for the “NIS Teacher-expert “ level.

Comparative data in the context of the levels of pedagogical excellence



Professional development trainers play an important role in supporting the professional development of educators. Their practice is monitored annually, the main objectives of which are to stimulate the professional growth of trainers, improve the effectiveness and quality of support for the professional development of teachers, and identify areas for the development of their own practice.

As part of the methodological support for teachers on the CPM platform (<https://courses.cpi-nis.kz/>) in 2023, 110 teachers were trained on the course “Managing the development of own practice”, 16 of them were recommended for further training as professional development trainers for teachers, 66 teachers were

trained on the programme “Professional Development Trainer for Teachers”.

Trainers are systematically supported: group and individual counselling is provided, feedback is provided on the basis of practice observation. The recertification procedure was completed by 60 trainers.

Third stage – interview and evaluation of the presentation according to the criteria of quality of knowledge and students’ achievements, interaction in the professional community, management of the development of own pedagogical practice, dissemination of experience with certified teachers to the AEO certification committee with consideration of the portfolio.

Achievements of teachers

One of the indicators of the qualification of teachers in Intellectual Schools is their success and achievements in professional competitions at the republican and international levels.

In 2023, an online competition “Best NIS Teacher 2023” was organised.

The participants of the network competition were the winners of the first, school stage and were represented by the following composition:

- 1) **Nurzhan Askaruly Sailaukhanov**, teacher-moderator of physics at NIS PhM in Astana;
- 2) **Asset Viktorovich Strelkov**, teacher-moderator of physics of the NIS IB Astana;
- 3) **Venera Amangeldievna Kalieva**, teacher-moderator of the Kazakh language and literature of the NIS PhM in Almaty;
- 4) **Makpal Abusadykkyzy Mukanova**, teacher-moderator of Computer science at the NIS ChB in Almaty;
- 5) **Saniya Aibolatkyzy Dautalieva**, teacher-moderator of the Kazakh language and literature of the NIS ChB in Aktau;
- 6) **Bauyrzhan Sailaugaliuly Shokanov**, teacher-moderator of Computer science at NIS PhM in Aktobe;
- 7) **Rakhymzhan Pirlibayevich Kosanov**, teacher-expert of chemistry at NIS ChB in Atyrau;
- 8) **Dauren Timurovich Kzylov**, teacher-moderator of the History of Kazakhstan at the NIS ChB in Karaganda;
- 9) **Gulmira Muratovna Konspaeva**, teacher-moderator of Chemistry at the NIS PhM in Kostanay;
- 10) **Kuanys Akylbekovich Samenov**, teacher-moderator of Mathematics at the NIS ChB in Kyzylorda;
- 11) **Kurmanali Guldana Kuantkankyzy**, teacher-moderator of Chemistry at the NIS PhM in Kokshetau;
- 12) **Nursultan Ruslanovich Zhakupov**, teacher-expert of Physics of the NIS ChB in Pavlodar;
- 13) **Dinara Muratovna Mukanova**, teacher-moderator of the Kazakh language and literature of the NIS ChB in Petropavl;
- 14) **Zhamzagul Kalimbekovna Orazgalieva**, teacher-expert of Biology at NIS PhM in Semey.
- 15) **Mirlan Tolegenovich Dzhusambayev**, teacher-expert of Physics at the NIS PhM in Taraz;
- 16) **Yedilzhan Yerzhanuly Kambarov**, teacher-moderator of Physics at the NIS ChB in Oskemen;
- 17) **Zhansaule Arturovna Maksutova**, teacher-expert of the Kazakh language and literature of the NIS PhM in Uralsk;
- 18) **Akmaral Kosherbaevna Rysbaeva**, teacher-moderator of Chemistry at the NIS PhM in Taldykorgan;
- 19) **Altynai Asilbekovna Asilbekova**, a teacher-expert of Chemistry at the NIS PhM in Shymkent;
- 20) **Korkem Nurlankyzy Ybyraeva**, a teacher-expert of English language at the NIS ChB in Shymkent;
- 21) **Shyngys Yesengarauly Darkhan**, teacher of Kazakh language and literature of the NIS ChB in Turkestan.

The contestants passed through six competitive stages with dignity, demonstrating a high level of professional excellence and commitment to the teaching profession.

The competition committee, consisting of directors of Departments and Centres, evaluated the first task in online format - video clips “Conversation with Students”, “Conversation with Parents”, visited lessons (stage “Parade of Planets”), became participants of the exhibition “My Pedagogical Credo”, viewed the business card “I am a Person, I am a Teacher”, which included the task “Oratory”. The competition concluded with the stage “Pedagogical Situation”, during which the participants presented their solutions to problem situations in school practice.



At the end of the Competition, the Competition Committee, having reviewed and discussed the results of the six competition tasks, determined the names of the winners:

Grand Prix was awarded to Makpal Abusadiqyzy Muqanova, teacher-moderator of Computer science of Nazarbayev Intellectual School of chemical and biological direction in Almaty;

1st place was taken by Mirlan Tolegenovich Dzhusambayev, expert-teacher of Physics at Nazarbayev Intellectual School of Physics and Mathematics in Taraz;

2nd place was awarded to Bauyrzhan Sailaugaliuly Shokanov, teacher-moderator of Computer science at Nazarbayev Intellectual School of Physics and Mathematics direction in Aktoobe;

3rd place was taken by Shyngys Esengarauly Darkhan, teacher of Kazakh language and literature of Nazarbayev Intellectual School of chemical and biological direction in Turkestan.



A good conclusion of the competition for all participants of the “Best Teacher of the Year NIS 2023” was the participation in a unique, first time organised in Kazakhstan Teachers Summit, an international initiative of the Nobel Festival, aimed at developing interaction between teachers, parents and school administrations. At the Summit program held in Astana from October 5th to 8th, leading education experts, nominees, and winners of the Global Teacher Prize participated. Among them, Asqat Zhumabekov, a teacher-researcher at NIS, shared his experience in developing students’ research skills. He was a Finalist in the TOP-50 Global Teacher Prize in 2021, an Ambassador for the Global Teacher Prize, and the recipient of the “Best Teacher 2018” award from the Ministry of Education and Science of the Republic of Kazakhstan.

Participants particularly highlighted the presentations of international speakers Abraham Arkavi, Incumbent of the Lester B. Pearson Professorial Chair Department of Science Teaching The Weizmann Institute of Science; Douglas Hartman, Professor of Technology and Human Learning at Michigan State University; and William Schmidt, Distinguished Professor at MSU and Director of the Center for the Study of Curriculum Policy.

Participation of teachers of Intellectual Schools in the Summit contributed to the improvement of technological literacy, familiarisation with new world trends in education, development of understanding that teachers all over the world are able to influence social processes and act as agents of change.





In 2023, about a thousand teachers of pre-school, secondary, technical and vocational education organisations, regardless of their form of ownership and departmental affiliation, took part in the national contest “Best Teacher 2023”. The best in their profession were 64 teachers of pre-school, secondary, technical and vocational

education organisations. Among them are Boris Zelenov, NIS teacher-researcher of Computer science of Nazarbayev Intellectual School of Physics and Mathematics in Kostanay and Zaure Dilmanova, a teacher-moderator of Chemistry of Nazarbayev Intellectual school of Chemistry and Biology in Almaty.



Every year, teachers from Intellectual Schools demonstrate high performance in the International Open Creative Competition for Teachers and Trainers of Olympic Reserve in Mathematics, Physics, and Informatics – IMPACT Olympiad, organized by the non-profit joint-stock company “Republican Physics and Mathematics School” with the support of the Ministry of Education of the Republic of Kazakhstan. In the reporting year, the IMPACT Olympiad took place for the fifth time from February 3rd to 5th, where more than 300 teachers from Kazakhstan, Russia, Georgia, and Mongolia participated. 71 teachers of mathematics, Computer science, and physics from Intellectual Schools took part in the competition, which also included a professional development course on solving practical tasks at the Olympiad level. The best results were shown by Mathematics teachers: Aibyn Sadi (NIS PhM, Almaty) and Aibol Orazgaliev (NIS ChB, Almaty) - 1st place; Akram Mukhitov (NIS PhM, Shymkent) and Bekarys Dauletbaev (NIS PhM, Almaty) - 2nd place; Stanislav Kozlovsky (NIS PhM, Kostanay) and Daniyar Uraztaev (NIS ChB, Shymkent) - 3rd place; Physics teachers: Saliya Tuktubaeva (NIS PhM, Kostanay) - 2nd place; Askhat Nuraly (NIS Turkestan) and Serik Zharmukhanbetov (NIS ChB, Shymkent) - 3rd place; Computer science teachers: Askar Beder (NIS PhM, Aktobe), Makhset Audanov (NIS ChB, Aktau), and Zhasulan Amezhanov (NIS PhM, Semey) - 3rd place.

In the X Republican Creative Competition of Teachers and Trainers of Olympic Reserve in Mathematics, Physics, and Computer science, held on December 2-3, 2023, by the Republican Public Association “Kazakhstan Association of Mathematics Teachers” with the support of the Ministry of Education of the Republic of Kazakhstan and the RSPC “Daryn”, 48 teachers

participated. All 4 teams (consisting of 12 teachers each) of Intellectual Schools of Almaty (PhM, ChB), Shymkent (ChB) and Taraz (PhM) took prizes. First team place - Almaty (PhM, ChB), second team place - Shymkent (ChB) and third team place - Taraz (PhM).

In individual competition 1 place was taken by maths teacher Aibol Orazgaliev (ChB in Almaty), computer science teacher Ramazan Sultan (PhM in Almaty), maths teacher Nursultan Hajimuratov (PhM in Almaty), maths teacher Alexander Shakiev (PhM in Almaty), maths teacher Daniyar Uraztayev (ChB in Shymkent).

Following the Republican Mathematics Olympiad for Mathematics Teachers “Mathematical Regatta” conducted by the RSPC “Daryn” of the Ministry of Education of the Republic of Kazakhstan on March 28-29, 2023, in the city of Aktobe, among 20 teams, the collective team of the Nazarbayev Intellectual School took the 3rd prize. The team consisted of Mathematics teachers: Saydi Aybyn, a teacher-expert of Mathematics at Nazarbayev Intellectual School of Physics and Mathematics in Almaty, Tursyngazin Nurgazy, a teacher-expert of Mathematics at Nazarbayev Intellectual School of Physics and Mathematics in Semey, Shoybekov Abdumalik, a teacher-moderator of Mathematics at Nazarbayev Intellectual School of Chemistry and Biology in Shymkent, Kozlovsky, a teacher-expert of Mathematics at Nazarbayev Intellectual School of Physics and Mathematics in Kostanay, and Orazgaliev Aybol, a teacher-expert of Mathematics at Nazarbayev Intellectual School of Chemistry and Biology in Almaty.

At the final stage of the annual Republican competition “Best Author’s Programme” in 2023, among 140 submitted projects of author programs including



elective courses, applied courses, elective courses, special courses, and electives:.



Programmes on the following topics were awarded I degree:

- elective course “Mathematics+. Solving Developmental Problems” in the field of natural sciences and mathematics, taught by mathematics teacher-moderator Lyudmila Valerievna Ustinova from the Nazarbayev Intellectual School of Chemical and Biological Direction in Petropavl.

- “Development of Students’ Research Skills through Solving Non-Standard Experimental Problems Using Design Thinking Tools” by teacher-expert Sergey Petrovich Koshkin from the Nazarbayev Intellectual School of Physics and Mathematics Direction in Kokshetau.

- “Modeling Geographic Data Using Geographic Information Systems” by teacher-expert Nurzhan Auelkanovich Baiburov from the Nazarbayev Intellectual School of Chemical and Biological Direction in Oskemen.

Programmes on the following topics were awarded II degree:

- “Development of Programming Skills in Solving Financial Problems” by teacher-researcher Boris Alexandrovich Zelenov from the Nazarbayev Intellectual School of Physics and Mathematics Direction in Kostanay.

- “Development of Experimental Analysis and Data Processing Skills in Solving Physics Problems” by expert teacher Mirat Qorganbekuly Ospanov from the Nazarbayev Intellectual School of Physics and Mathematics Direction in Aktope.

- “Preparation for the Kazakh Language and Literature Olympiad (Based on the methodology of step-by-step comprehensive analysis by N. Orazakynova)” by teacher-expert Zhamzagul Tlepbergenovna Tazhigaliyeva from the Nazarbayev Intellectual School of Physics and Mathematics in Oral. The elective course program titled “Research Design” by expert teacher Dulat Muratbekovich Turarbekov from the Nazarbayev Intellectual School in Astana was awarded the III degree.

The Republican Festival of Pedagogical Ideas. On March 4–6, 2023, the republican competition “Festival of Pedagogical Ideas” took place in the city of Almaty, organized by the RSPC “Daryn” with the support of the Ministry of Education and Science of the Republic of Kazakhstan. Among 230 participants, teachers from the Nazarbayev Intellectual Schools won 6 prize places.

The first place diplomas were awarded to Rashit Shabdinovich Tatimbekov, Deputy Director of the Nazarbayev Intellectual School of Physics and Mathematics in Kostanay, for presenting the electronic platform “Lesson Observation System”, and to Irina Nikolaevna Kuzmina, a computer science teacher, for the topic “Case Study: A New Format”.

The second place diplomas were awarded to Nurbolat Rysbekovich Temirov, a History teacher-expert at NIS ChB in Pavlodar, for the topic “Big Data: Historical Data Analysis”, in which he discussed techniques for developing students’ critical thinking skills, and to Erbol Yesenaluly Sandybayev, a Physics teacher-moderator at NIS ChB in Almaty, for his idea “Sci-Fi in Physics Lesson”, where he shared methods for increasing students’ interest in the subject.

The third place diplomas were awarded to Asel Serikovna Zhakypzhanova, a Kazakh language and literature teacher at NIS PhM in Oral, for her topic “Storytelling: 3 Steps to Writing”, which focused on the use of storytelling methods to develop creative writing skills, and to Gulnur Salamatkyzy Kenzheeva, a Physics teacher at NIS ChB in Atyrau, who explored ways to develop flexible skills using STEAM educational methods in her presentation “STEAM Technologies: New Learning Environments”.

To promote science and advance STEAM education in Kazakhstan, the “Caravan of Knowledge” corporate



foundation, website: <https://pronrg.kz/ru/>, organized the National stage of the Science on Stage Europe festival for teachers and stakeholders in STEAM education from March to July. The event followed the guidelines of “Science on Stage Europe” (<https://www.science-on-stage.eu/science-stagefestival-2024>), resulting in the selection of 50 semi-finalists from across Kazakhstan.

In the final, 50 teachers from across Kazakhstan presented their innovative ideas within the framework of STEAM education. All the projects presented at the festival were research-based approaches to education.

According to the international jury, some of the winners of the national stage were teachers from

the Nazarbayev Intellectual Schools, who along with other winners will represent Kazakhstan at the global final in Finland in 2024.

The winners of the National Stage are: Inna Valeriyevna Aksenova, an NIS biology teacher-expert from NIS PhM in Taraz, with the project “SMART WALL”; Ayzhan Kaibaldiyevna Omarhanova, an NIS Russian language and literature teacher-moderator, with the project “Literature through science: How to deal with the sands?”; and Sholpan Sharipbayevna Abisheva, an NIS chemistry teacher-moderator from Nazarbayev Intellectual School of Chemistry and Biology in Almaty, with the project “STEAM in Education: Our formula for inventiveness”.





4. RESEARCH PROJECTS



4. RESEARCH PROJECTS

GAINING THE STATUS OF A SUBJECT OF SCIENTIFIC AND SCIENTIFIC-TECHNICAL ENTITY

In 2023, in accordance with the Law of the Republic of Kazakhstan No. 407-IV “On Science” dated 18 February 2011 and “Rules for Accreditation of Scientific and (or) Scientific-Technical Entities” approved by the Resolution of the Government of the Republic of Kazakhstan No. 834 dated 24 November 2021, NIS AEO submitted an application to acquire the status of a scientific and scientific-technical entity. On 14 June 2023, NIS AEO was accredited as a scientific and research entity for a period of 5 years. Thus, scientific, and technical activity of NIS AEO was officially recognised as complying with the requirements and standards established by the legislation of the Republic of Kazakhstan.

Certificate Series MK №000227 on accreditation of NIS AEO as a research entity gives NIS AEO the opportunity to expand its research activities and participate in state programmes for grant funding of education development. Thus, in 2023, NIS AEO departments and branches took part in competitions for grant funding for scientific and (or) scientific-technical projects of the Science Committee of the Ministry of Science and Higher Education of the Republic of Kazakhstan.

CPM implements the scientific project “Study of professional development of teachers in the framework of certification” within grant funding of scientific projects for 2023-2025 years (Order №111-nzh KN MNVO RK dated 18.07.2023).

Scientific and methodological analysis of the process of teacher evaluation within the framework of certification (international and Kazakhstani experience), professional training and professional development of teachers was carried out during the project imple-

mentation. Based on the results of the research data analysis, the article “Teacher attestation: identifying the factors influencing teacher reflective skills” was published in the Bulletin of Abai KazNPU recommended by the Committee for Quality Assurance in Science and Higher Education.

The methodology and evaluation tools were developed for conducting questionnaires and forming focus groups to determine the impact of the certification process on the development of competences and professional growth of teachers. The approach was based on the arguments of M. Kane (2004), which made it possible to structure the elements (statements) of the methodology according to the stages of certification, in order to identify/evaluate the reliability and validity of their results.

To identify the reliability and validity of the methodology and assessment tools, they were piloted with the participation of 171 teachers. A test group of teachers representing different subject areas, experience and qualification categories was selected. According to the results of reliability analysis of the assessment tool (questionnaire), the Cronbach’s alpha coefficient was more than 0.9, which shows high internal consistency of the questions. Based on the feedback from the participants of piloting, changes were made to the methodology and assessment tools.

Interim results of the study were presented at the international research-to-practice conference of Nazarbayev Intellectual Schools AEO in 2023. The materials presented at the conference were published in the journal “Pedagogical Dialogue” No. 4-46 2023 Centre of Excellence.

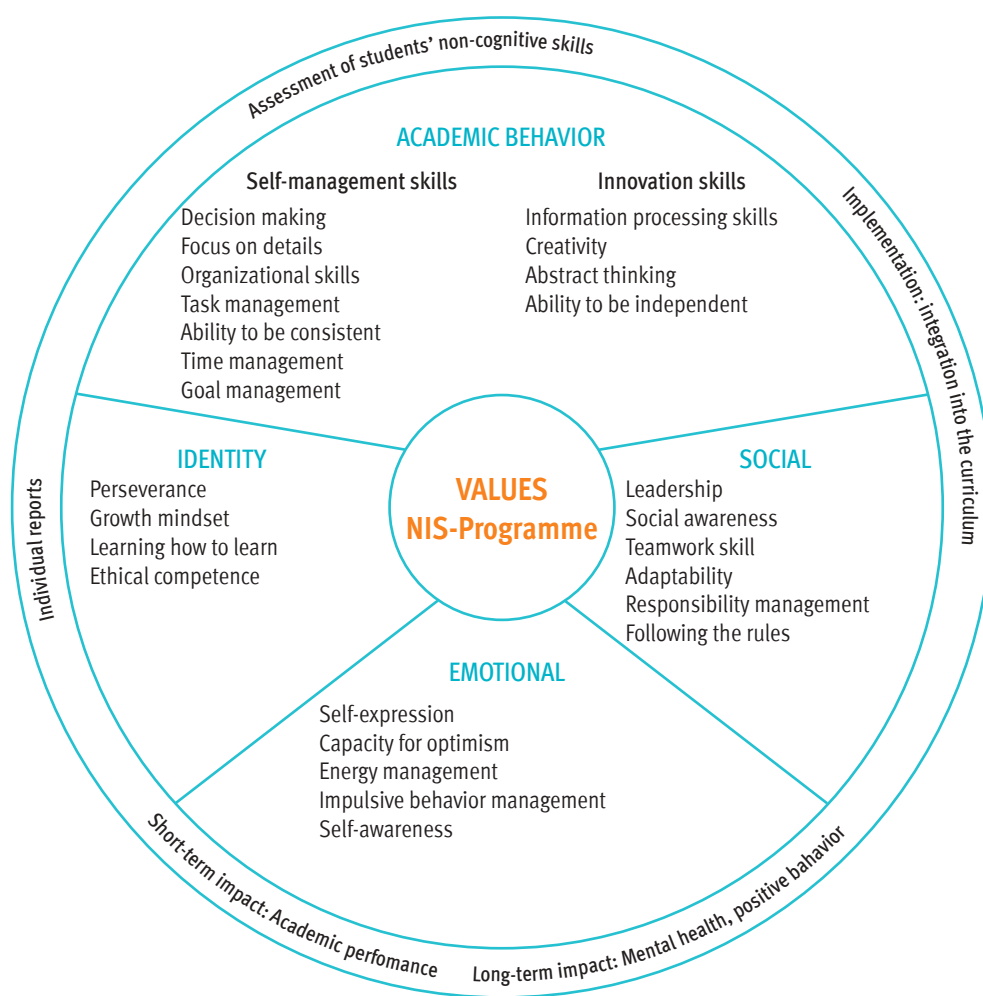
Assessment of non-cognitive skills of students of Nazarbayev Intellectual Schools

These days we see an increased interest in the personal, social, and emotional development of students within the educational context. Students with well-developed emotional, interpersonal and cognitive skills are able to regulate their behaviour and emotions. They find it easier to communicate with peers and teachers and adapt to school, which contributes to improved learning outcomes. Assessing students' non-cognitive skills enables teachers to make decisions about how best to develop and support students.

In April 2023, the second stage of piloting the assessment tools for students' non-cognitive skills was conducted, involving 1 565 students from grades 7-12 and 288 teachers of Nazarbayev Intellectual Schools

in Astana, Aktau, and Kostanay. The analysis of the results allowed assessing the reliability and validity of the assessment tools adapted to Kazakh and Russian languages, which is confirmed by a high Cronbach's alpha coefficient. Factor analysis identified 26 skills and 4 areas of non-cognitive skills that influence students' academic achievements. Based on the results and the study of relationships between various skills and their impact on students' academic performance, a conceptual framework for assessing non-cognitive skills was developed. The framework includes four areas of non-cognitive skills: social, personal, emotional, and academic behaviour, providing a structured basis for understanding and assessing them.

A conceptual framework for assessing students' non-cognitive skills



A non-cognitive skills assessment was conducted in 21 Intellectual Schools between September and November 2023, involving 13 740 students and

976 teachers. After analysing the data, reports were provided to the schools with recommendations for further holistic development of students.

Institutional studies

NIS AEO gradually builds capacity to conduct institutional studies aimed at improving the quality of education at Intellectual Schools. NIS AEO institutional studies aim to collect and analyse evidence-based data to improve the effectiveness of management decisions and policy changes related to the development and quality of education in Intellectual Schools.

Analysing the well-being and academic workload of students in Intellectual Schools

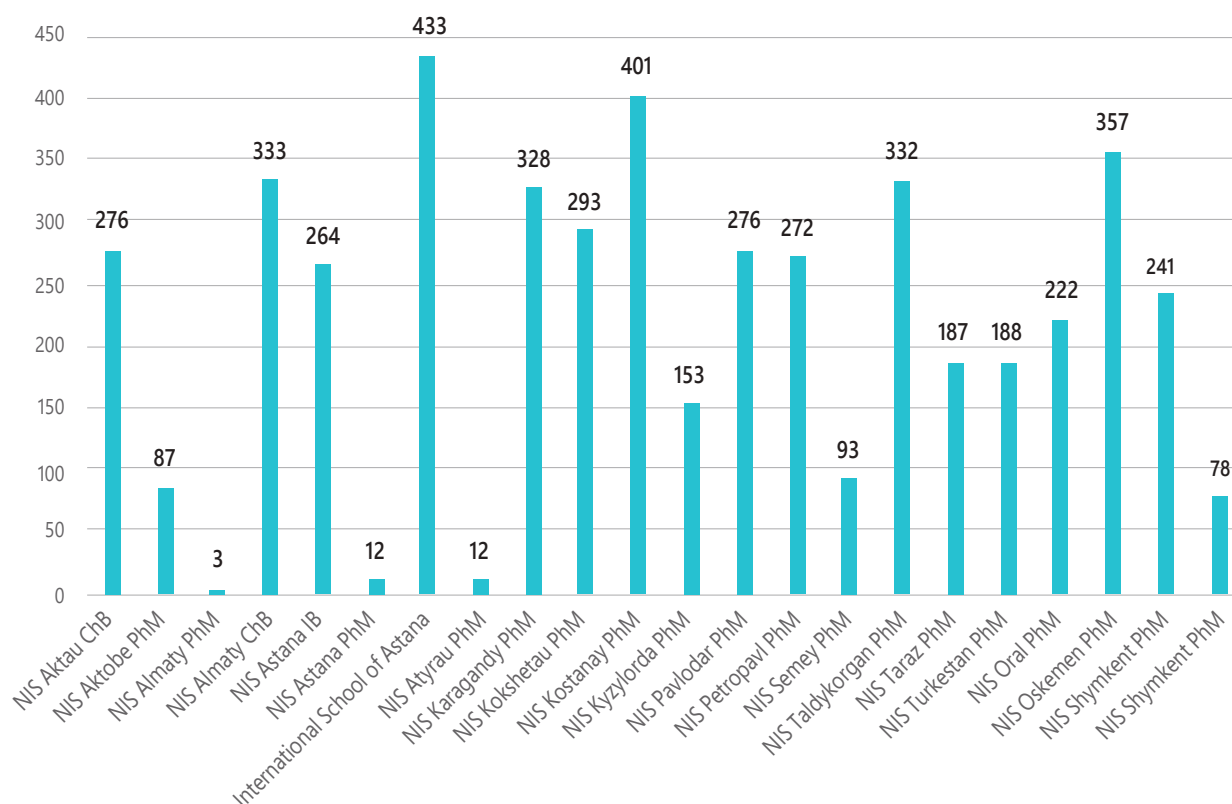
In June 2023, NIS AEO conducted research on the workload and well-being of students of Intellectual Schools. The issue of well-being and workload of students of Intellectual Schools always draws the interest of the Kazakhstani public both from parents and representatives of government agencies, non-governmental organisations and other stakeholders of secondary education. Taking into account the fact that the most talented students with high academic achievements are selected to Intellectual Schools, NIS-Programme provides for more challenging content (curriculum) and a greater workload of specialisation

subjects compared to general educational schools in the Republic of Kazakhstan. At the same time, the constantly changing environment poses new challenges to the development of modern educational content. Increasing demands on the scope and new directions of students' knowledge, skills, competences, and values, contribute to the continuous improvement of NIS-Programme and further increase in academic workload.

This study, designed to analyse students' sense of well-being and workload factors, was initiated in June 2023 to answer questions arising from the need for changes in the educational content of students in Intellectual Schools, and to inform evidence-based management decisions to improve student well-being.

Students from all 22 Intellectual Schools in grades 7 to 12 were invited to participate in the workload study on a voluntary basis, 4 841 students participated. There was a high degree of heterogeneity in the distribution of respondents by school, year and gender.

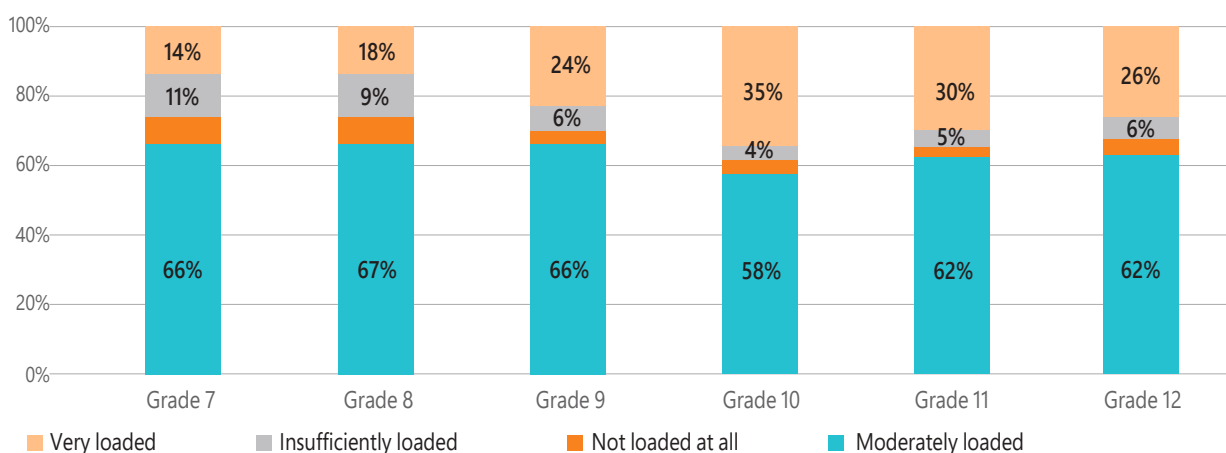
Distribution of respondents by school



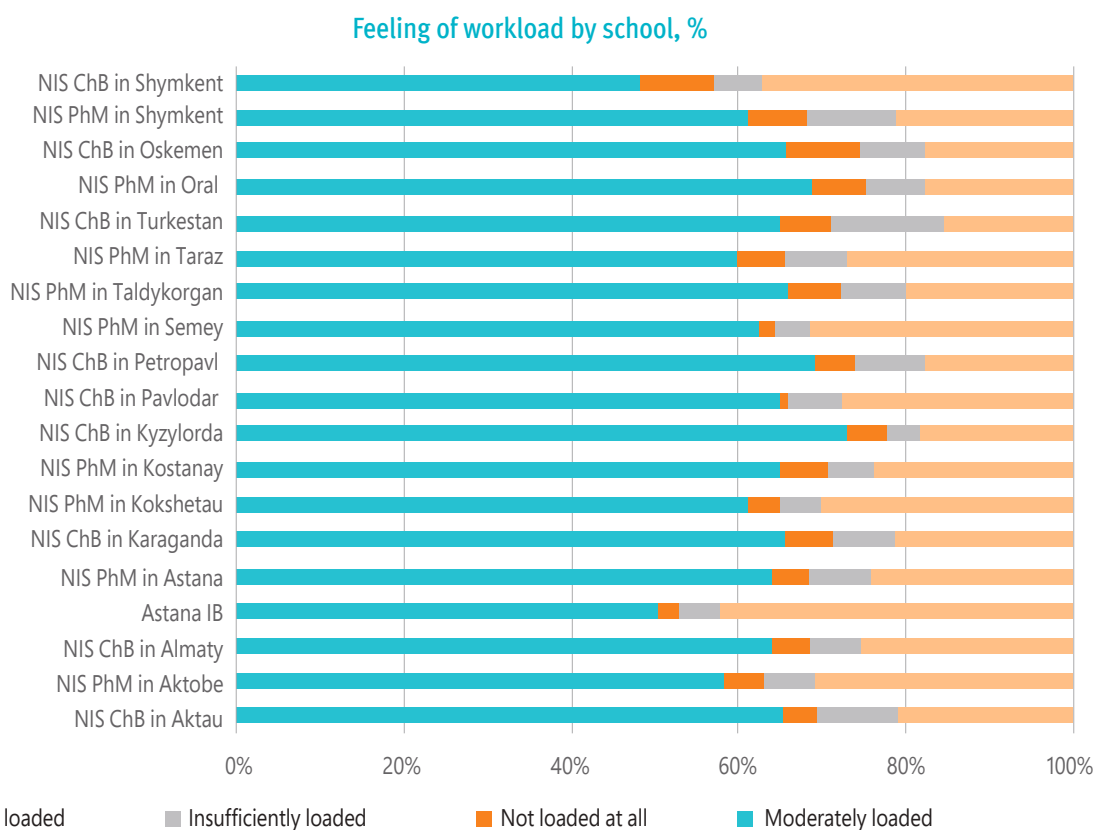
Contrary to the assumption of a high workload of Intellectual School students, the vast majority of respondents (on average 64% of students from all NIS schools and grades) feel that they are moderately loaded. 66–67% of students in Grades 7, 8 and 9 also

feel that they are moderately loaded. Grade 10 students feel busier than students in other grades: only 58% of Grade 10 students chose the answer “Moderately Busy”, while 35% feel they are very busy (chose the answer “Very Busy”).

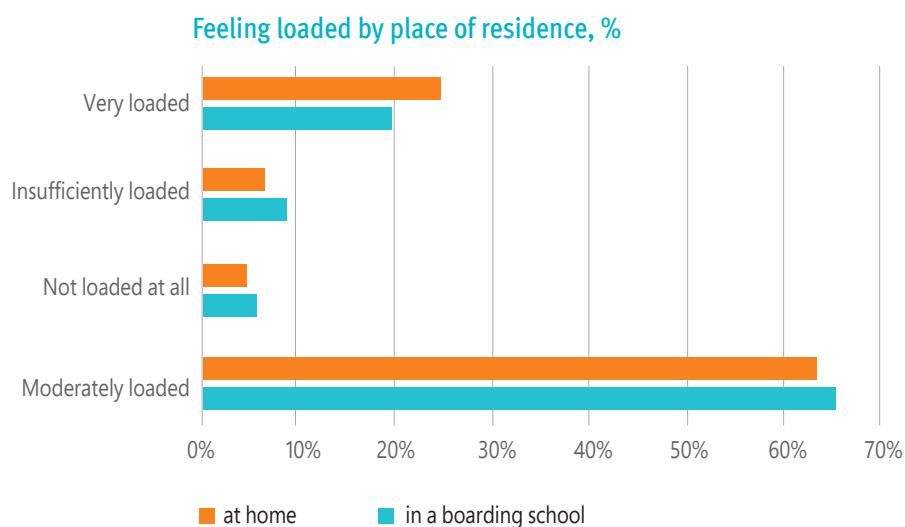
Feeling the workload by grade level



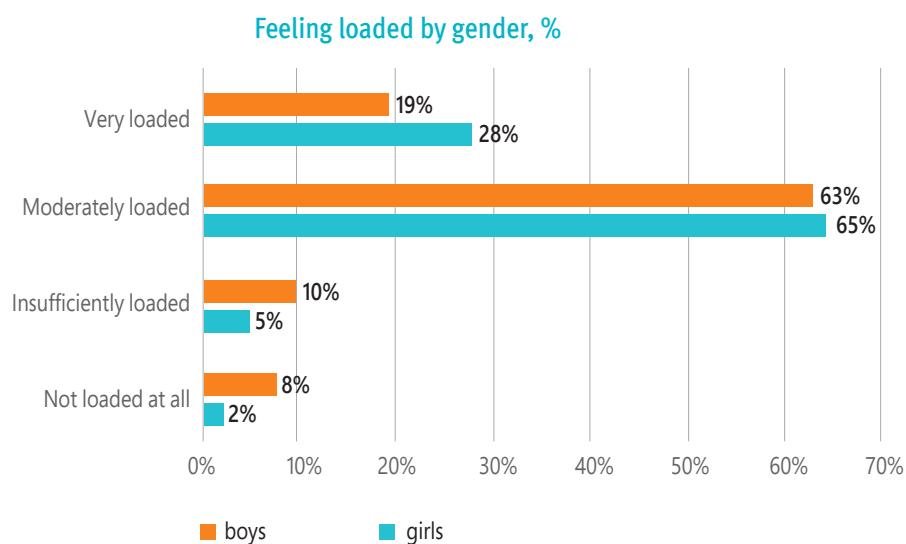
In terms of schools, students of the following schools feel the busiest: Astana IB (42%) and Shymkent ChB (37%) compared to the average value (24%). Students of the following schools feel the least loaded: Kyzylorda ChB, Petropavl ChB, Oral PhM, Oskemen ChB (each school – 18% compared to the average value of 24%).



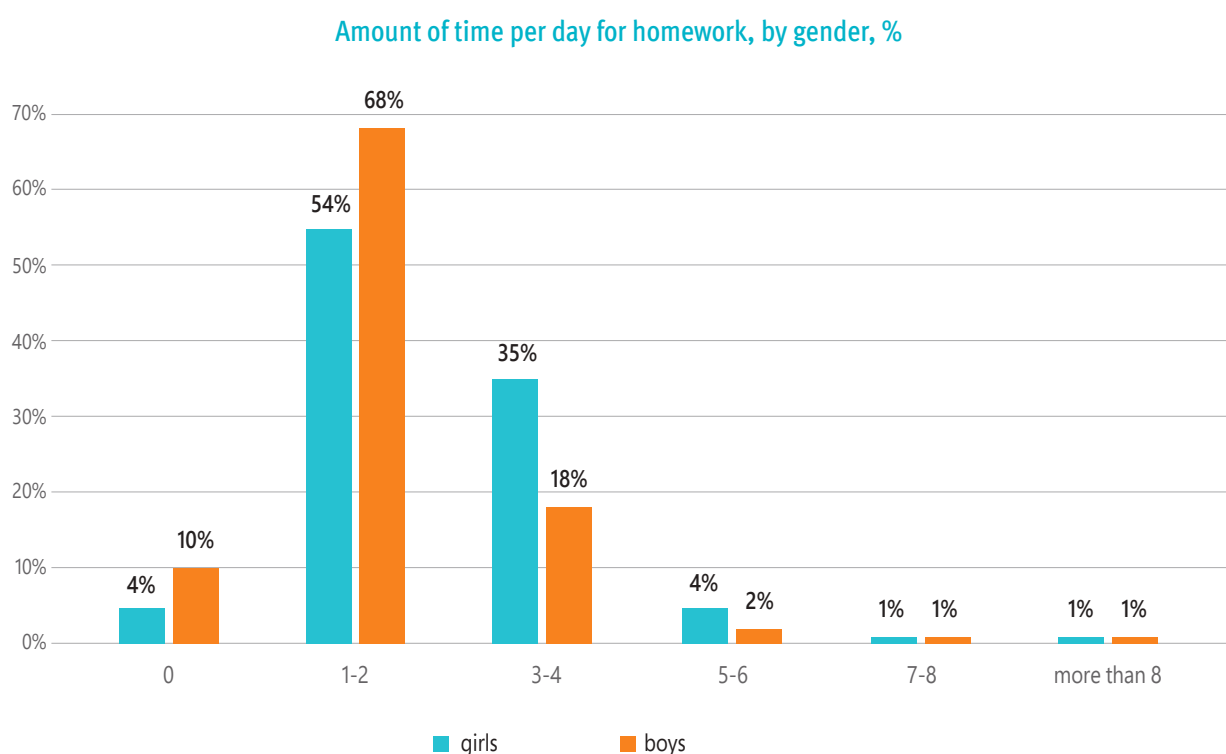
The factor of residential accommodation does not strongly influence students' perception of workload. 64% of students living at home and 65% of students living in a boarding school answered, "Moderately busy", 25% of students living at home and 20% of students living in a boarding school answered "Very busy".



Girls feel busier than boys (28% of girls and 19% of boys chose the answer "Very Busy").



Most students (54% of girls and 68% of boys) spend 1-2 hours a day doing homework. Girls spend more time doing homework (35% of girls (compared to 18% of boys) spend 3-4 hours per day doing homework).



Along with the study on student workload, a survey on the well-being of students in grades 7-12 was conducted among 22 Nazarbayev Intellectual Schools, 5 962 students participated.

The purpose of this survey was to determine students' self-perceived anxiety, motivation, and relationships with peers, parents, and teachers.

According to the results of the survey, 47.11% of the respondents found schooling interesting and engaging, 48.96% actively seek opportunities to learn and expand their knowledge beyond what is required and 57.21% felt that they actively set goals and work towards achieving them.

Teacher research

Participation in SHARE project on "Action Research"

In 2023, teachers of NIS PhM in Astana and International School of Astana joined the SHARE project, which involves general educational schools of Astana. The SHARE (School Hubs for Action Research) project was initiated in 2019 to develop the capacity of teachers of schools in the capital city using Action research methodology. The project is implemented in partnership with the Astana Akimat, as well as a team from the Faculty of Education, University of Cambridge, working with Bottisham Village College. The project includes post-semester workshops and mentoring sessions for team members in each participating school, a field module in Cambridge with a visit to Bottisham Village College and local sessions run by local network coordinators.

The main objectives of the project are:

- Improving the quality of education for every student through increasing school teachers' awareness of their role and their professional development;
- Improvement of teachers' critical thinking in practice;
- Creation of a professional community of teacher-researchers.

Based on the knowledge and skills gained, each SHARE school builds and pursues its own goals to change and improve teacher practice. To do this, team members attend and observe each other's lessons, keep reflective diaries, meet periodically, share their observations, reflections and suggestions for research and practice improvement with their colleagues and implement changes.

42.81% of the respondents answered that they feel overwhelmed and stressed when preparing for exams, and only a minority (11.04%) experience physical symptoms of anxiety.

The majority of respondents answered that they feel well treated by their peers, can rely on their help, and feel engaged in the social environment (over 65%).

Participation in ECER-2023 conference

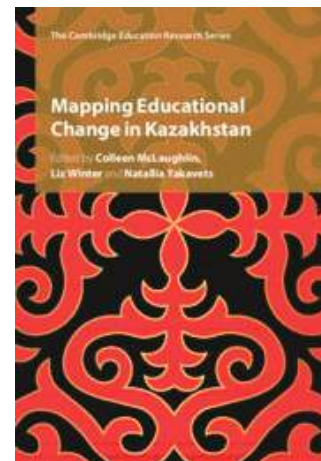
At the conference of the European Educational Research Association ECER-2023, held on 22-25 August 2023 in Glasgow, UK, biology teacher of Nazarbayev Intellectual School of Chemistry and Biology in Almaty Gulmira Bessenbayeva received an award for the best poster on the topic "Developing functional reading literacy of students in biology lessons through the use of high-order questions".



Publication of NIS research findings

Mapping Educational Change in Kazakhstan, edited by Colleen McLaughlin (University of Cambridge), Liz Winter (University of Exeter) and Natalia Yakovets (University of Cambridge), was published by Cambridge University Press in 2023. The book presents various aspects of the development of Nazarbayev Intellectual Schools and shows their role and impact on reforming the entire Kazakhstani education system. Based on an in-depth ten-year study, the book examines the reform of Kazakhstani education system, from the initial plans and models of change to their implementation at all stages and in all parts of the education system. Drawing on a wide range of data, it presents the problems, models, challenges, measures and successful changes in Kazakhstan's education sector. The book encompasses the views of all stakeholders. Collaboration with leading scholars and publication of the research finding by a prestigious publishing house emphasises the recognition of the unique experience and achievements of Kazakh-

stani education system, with Nazarbayev Intellectual Schools becoming the flagship and experimental platform during the period of reform. The publication of joint works of Kazakhstani and international scholars strengthens the reputation of Nazarbayev Intellectual Schools as an innovative and advanced system and confirms its role in the world educational community. The research presented in the book has become an integral part of the global discussion on the future of education and its impact on various levels of the educational system in Kazakhstan and beyond.



International Research-to-Practice Conference “Rural school prosperity is a key to community wellbeing”

On 2-3 November 2023 the International Research-to-Practice Conference of “Nazarbayev Intellectual Schools” AEO on the theme “Rural school prosperity is a key to community wellbeing” (hereinafter – the Conference) was held. The Conference was organised jointly with partners - public funds “For the People of Kazakhstan” and “Fund for Sustainable Development of Education” within the framework of implementation of the joint project “Development of the potential of reference schools in rural areas”.

In 2023, more than 300 teachers from 79 rural reference schools from 17 regions of Kazakhstan participating in the project took part in the Conference. In total, the Conference was attended by about 600 participants offline and 2 200 participants online. All

plenary, breakout and discussion sessions, master classes, as well as all Conference materials were available online via NIS Conf mobile application. Online participants included teachers from rural reference schools, Intellectual schools, general educational schools of Astana, as well as teachers-psychologists and social teachers of general educational schools.

The Conference speakers were leading world experts in the field of education from 7 countries.

During the two days of the Conference there were 3 plenary sessions, 7 breakout sessions, 14 master classes, 3 book presentations by international and Kazakhstani scholars and specialists, panel discussion “Playing in one team: teachers, technologies and rural communities”, exhibition of educational resources.



>>> Colleen McLaughlin

Honorary Professor of Education, University of Cambridge
(Great Britain)



>>> Victoria Charbonneau

Co-founder of the Foundation
Kamkor Zhurek – family home in Taraz
(Kazakhstan)



>>> Elizabeth Turnock

Co-founder of the Foundation
Kamkor Zhurek – family home in Taraz
(Kazakhstan)



>>> Darius Radkevicius

Psychiatrist, certified transactional analysis therapist and
crisis management expert
(Lithuania)



>>> Oistein Kristiansen

Cartoonist, designer
(Norway)



>>> **Christina Salmivalli**

Professor at the
Turku University, author of KiVa® Antibullying Program
(Finland)



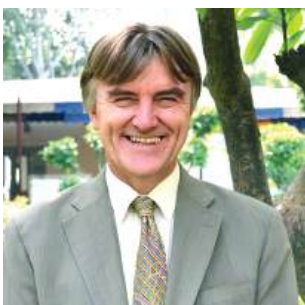
>>> **Kate Evans**

CEO-Founder of Anglian Learning
Multi Academy Trust
(Great Britain)



>>> **Толонду Тойчубаев**

Founder of the Bilimkana Foundation
(Kyrgyzstan)



>>> **Graham Ranger**

Expert of the Council of International Schools (CIS)
(Netherlands)





5. ASSESSMENT OF THE QUALITY OF EDUCATION



5.1. Student performance monitoring



5.2. Criterion-based assessment system



**5.3. External summative
assessment of students
in grades 5, 10-12**

5.4. Accreditation of Intellectual schools



5. ASSESSMENT OF THE QUALITY OF EDUCATION

5.1. MONITORING OF STUDENTS' ACADEMIC ACHIEVEMENTS

Monitoring of students' learning achievements is carried out in order to observe individual progress in students' learning, to identify problem areas and adjust individual learning paths, to provide all stakeholders with reliable information about students' current knowledge and skills.

Monitoring in language subjects (Kazakh/Russian language and literature (L2), English language) is conducted for students of grades 7-10, in mathematics – for students of grades 7-12.

Monitoring tasks in language subjects are aimed at assessing four language skills of students (listening, reading, speaking, writing), in mathematics – at determining residual knowledge and skills in five strands of the curriculum (Numbers, Algebra, Geometry, Statistics and probability theory, Mathematical modelling and analysis).

Monitoring of students' academic achievements in mathematics

In 2023, the monitoring was conducted in January for students of grades 7-11 and in September for students of grades 7-12.

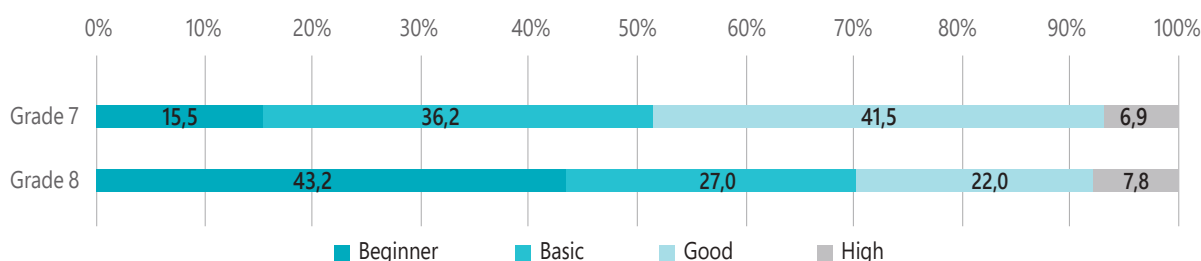
In January 2023, 13 044 students of grades 7-11 from 20 intellectual schools took part in the monitoring. During the monitoring, computer adaptive testing on the Concerto platform was piloted with students of grades 7 and 8. This platform allows to create a test that adapts to students' abilities in real time by selecting different questions from a bank of tasks and provides a more accurate measurement of their ability level on a common scale. The focus on students' abilities allows for more accurate measurements and reduces the test administration time compared to a traditional test.

250 tasks have been developed and reviewed for monitoring, and 156 tasks have been digitised for computer adaptive testing.

Three seminars were held with the participation of 12 mathematics teachers of Intellectual Schools to review and digitise tasks, discuss the monitoring results, set assessment standards and describe students' learning achievement levels.

Monitoring results are analysed using statistical and psychometric methods, whereby each student's results are placed on an ability scale that allows tracing the learning trajectory and providing timely support. Also, by means of the "Bookmarks" method, students' results are categorised into four levels of learning achievements: "Beginner", "Basic", "Good", "High".

Monitoring results in grades 7 and 8

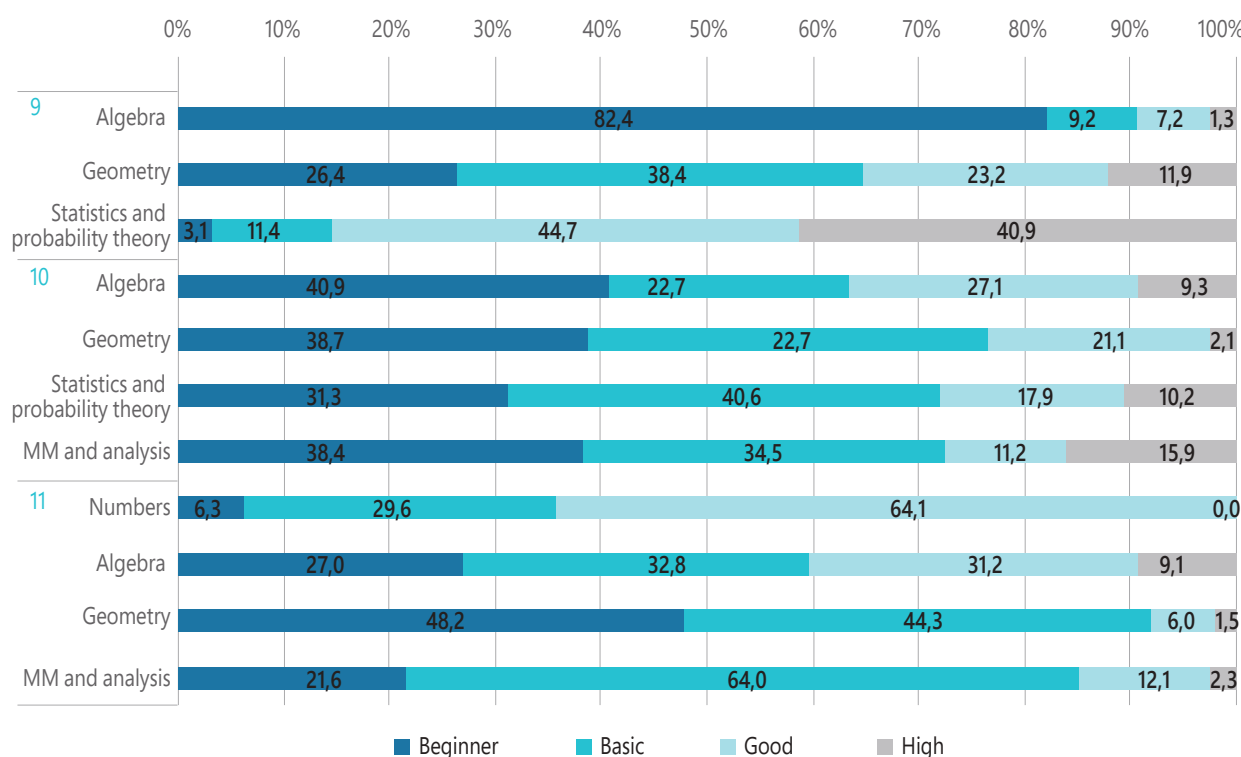


The monitoring results showed that the majority of grade 7 students have the “Good” level. This confirms the ability to define mathematical terms, apply basic mathematical formulas and techniques when solving problems. The majority of grade 8 students have the “Beginner” level, i.e. they know the definition of mathematical terms, know basic mathematical formulas, and solve simple problems.

Analysis of the results of monitoring of students in grades 9-11 showed high results of students’ academic achievements in the following strands:

- “Statistics and probability theory” – grade 9;
- “Algebra” and “Statistics and Probability Theory” – grade 10;
- “Numbers” and “Algebra” – grade 11.

Monitoring results in grades 9-11

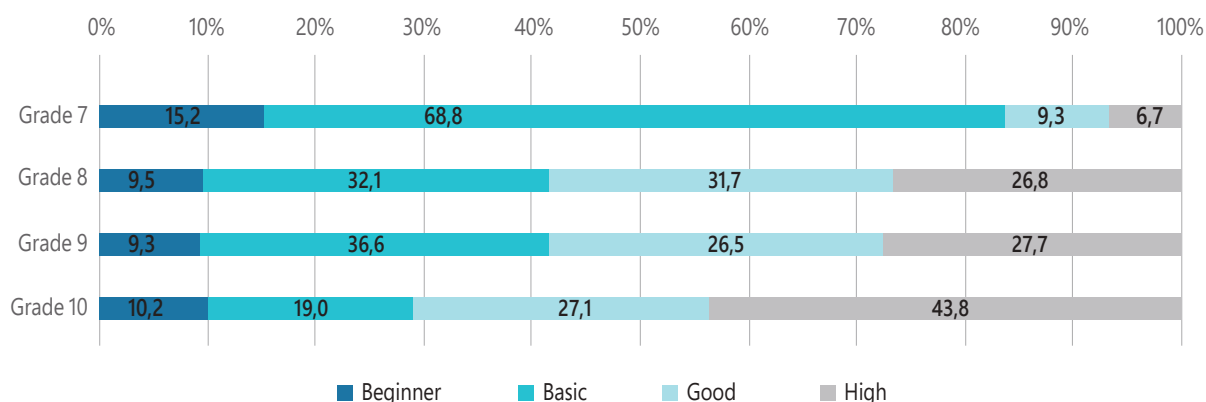


To organise further work with students, Intellectual Schools have been provided with:

- 38 276 individual detailed reports;
- 32 708 individual reports on dynamics;
- 760 detailed reports at the level of grades and parallels;
- analytical report.

In September 2023, 14 737 students of grades 7-12 of 21 Intellectual Schools took part in the monitoring. For students of grades 7-8 the monitoring was conducted in the format of computer adaptive testing, the computer adaptive testing was piloted in grades 9-10.

Monitoring results in grades 7-10



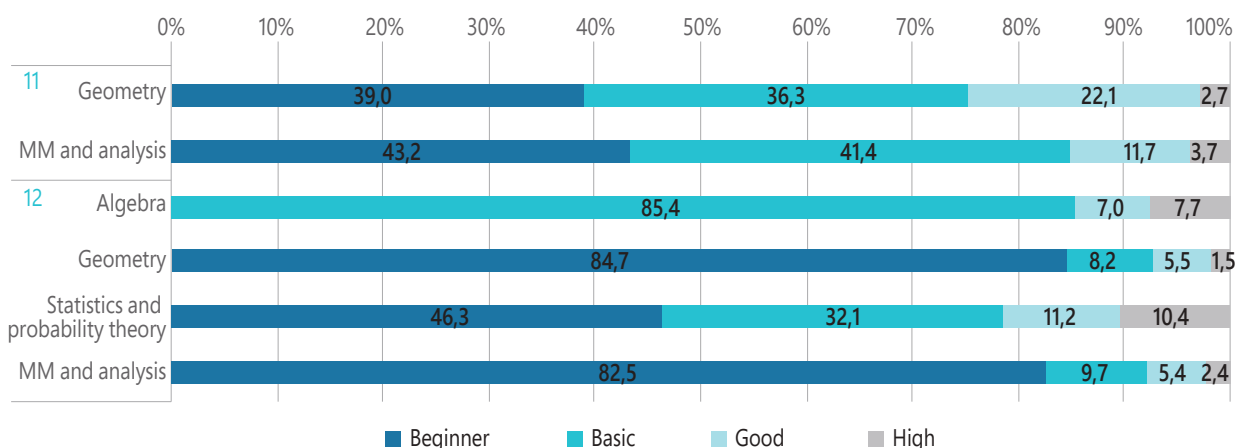
The monitoring results showed that the majority of Grade 7 students have the “Basic” level. This confirms the ability to identify patterns and apply knowledge in standard situations, the majority of Grade 8 students have the “Good” and “High” levels, i.e. they are able not only to identify patterns and apply knowledge in standard situations, but also to operate mathematical terms and concepts, select and apply mathematical techniques in various situations. More than half of grade 9 students also demonstrated the “Good” and

“High” levels, i.e. they are able to identify patterns and apply knowledge in standard situations. Grade 10 students have the “High” level, i.e. they are able to analyse data, solve non-standard problems and draw their own conclusions.

Analysis of monitoring results of grade 11 and 12 students showed good indicators of students’ academic achievements in the following strands:

- “Geometry” – grade 11;
- “Statistics and probability theory” – grade 12.

Monitoring results in grades 11–12



To organise further work with students, Intellectual Schools have been provided with:

- 55 663 individual detailed reports;
- 55 663 individual progress reports;
- 1 940 detailed reports at the level of grades and parallels;
- analytical report.

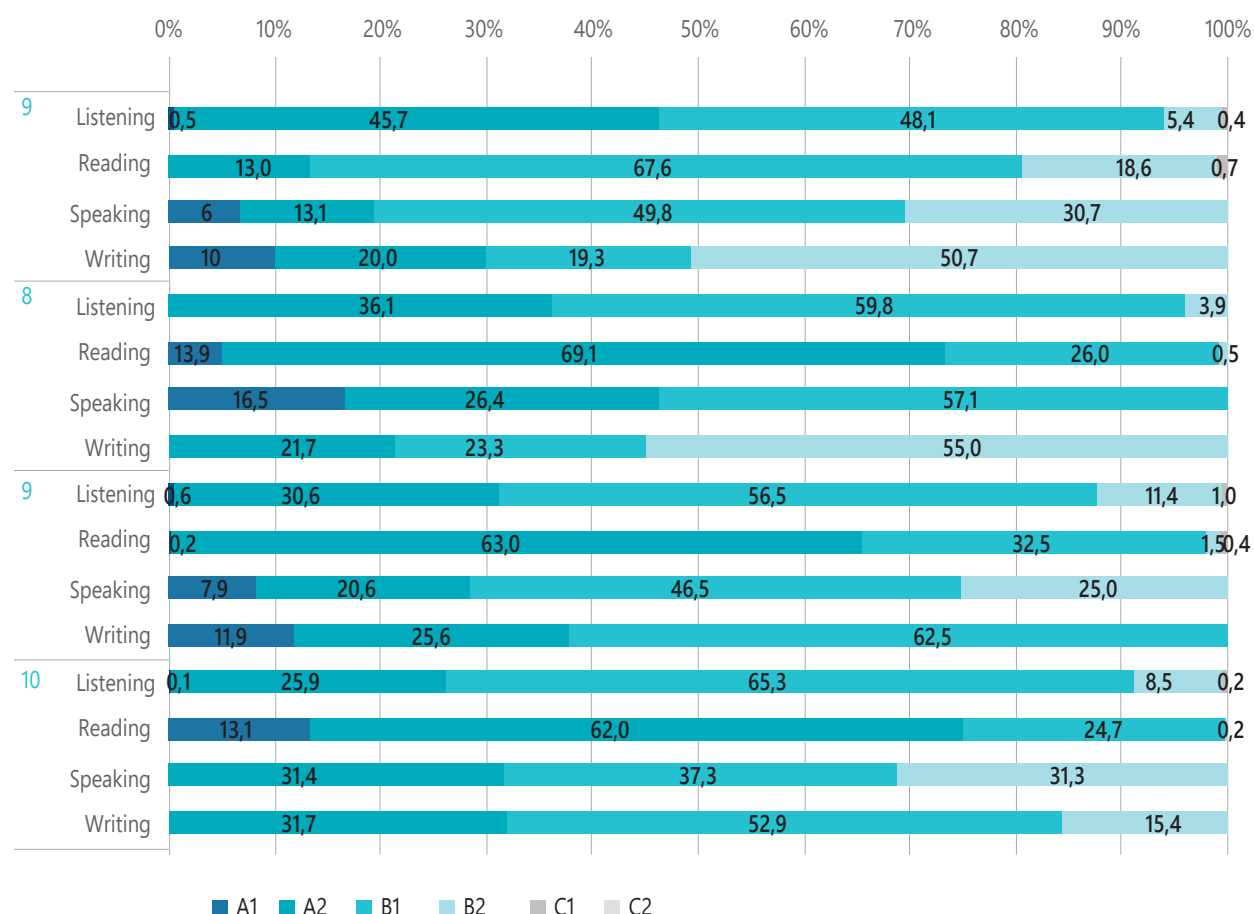
Monitoring of students' learning achievements in language subjects

In 2023, monitoring was conducted in April for students in grades 7-10 and in September for newly admitted students in grades 7.

To organise the monitoring procedures, 150 tasks and 60 resources were developed and reviewed, an online seminar was held attended by 5 language teachers.

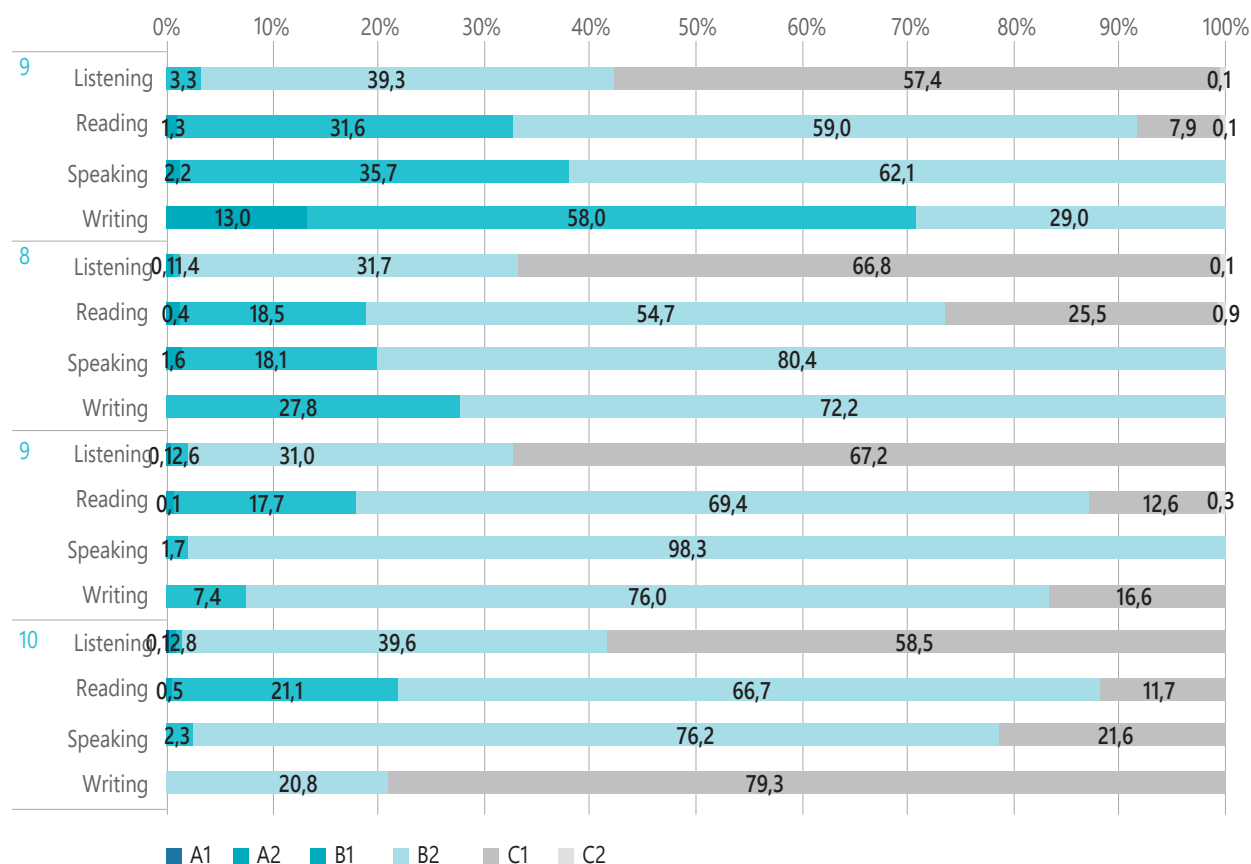
4 194 students in grades 7-10 participated in the monitoring conducted in April in the subject “Kazakh language and literature (L2)”. According to the results of the monitoring, there are high indicators for Speaking skill (see the diagram).

Results of monitoring in the subject “Kazakh language and literature (L2)” in grades 7-10



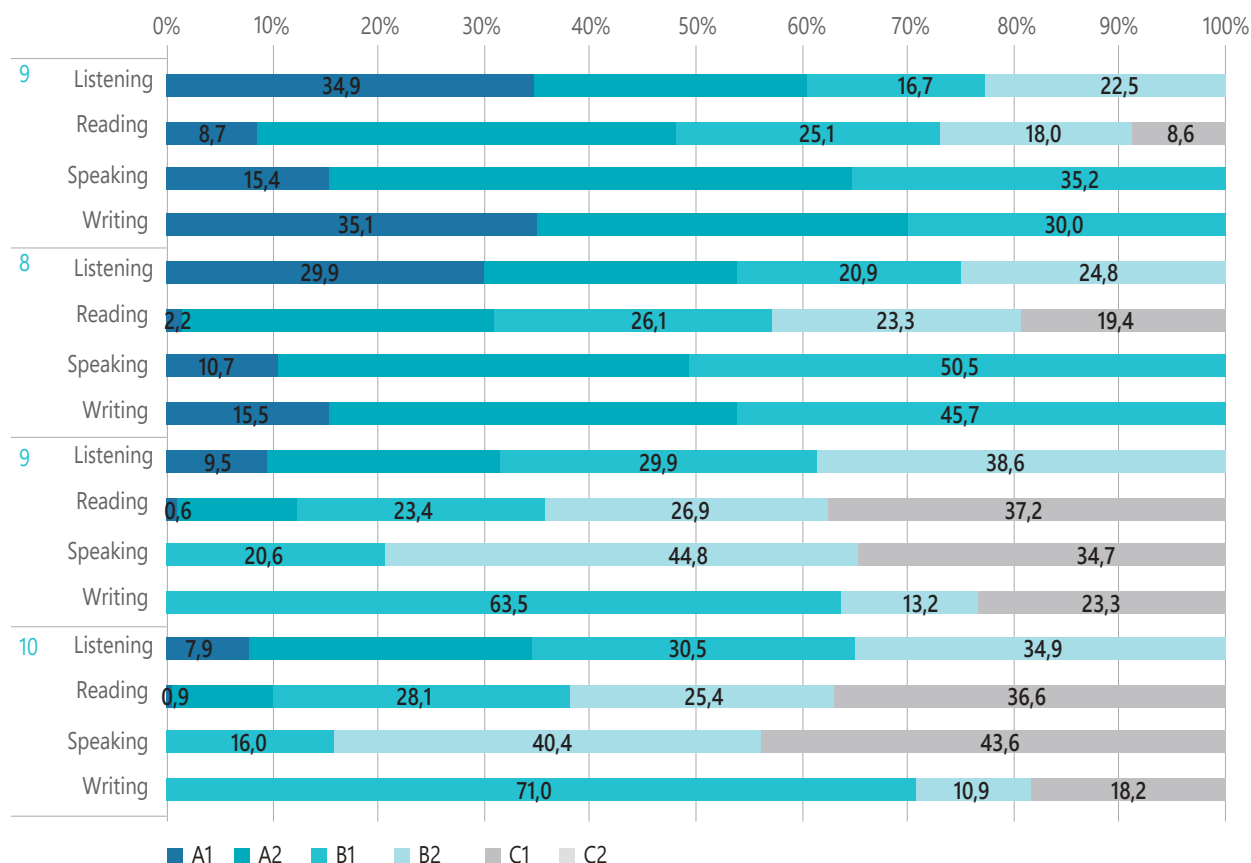
The monitoring in the subject “Russian language and literature (L2)” involved 6 969 students in grades 7-10. According to the results of the monitoring, there are high results in the skills “Listening”, “Reading” and “Speaking”.

Monitoring results in the subject “Russian Language and Literature (L2)” in grades 7-10



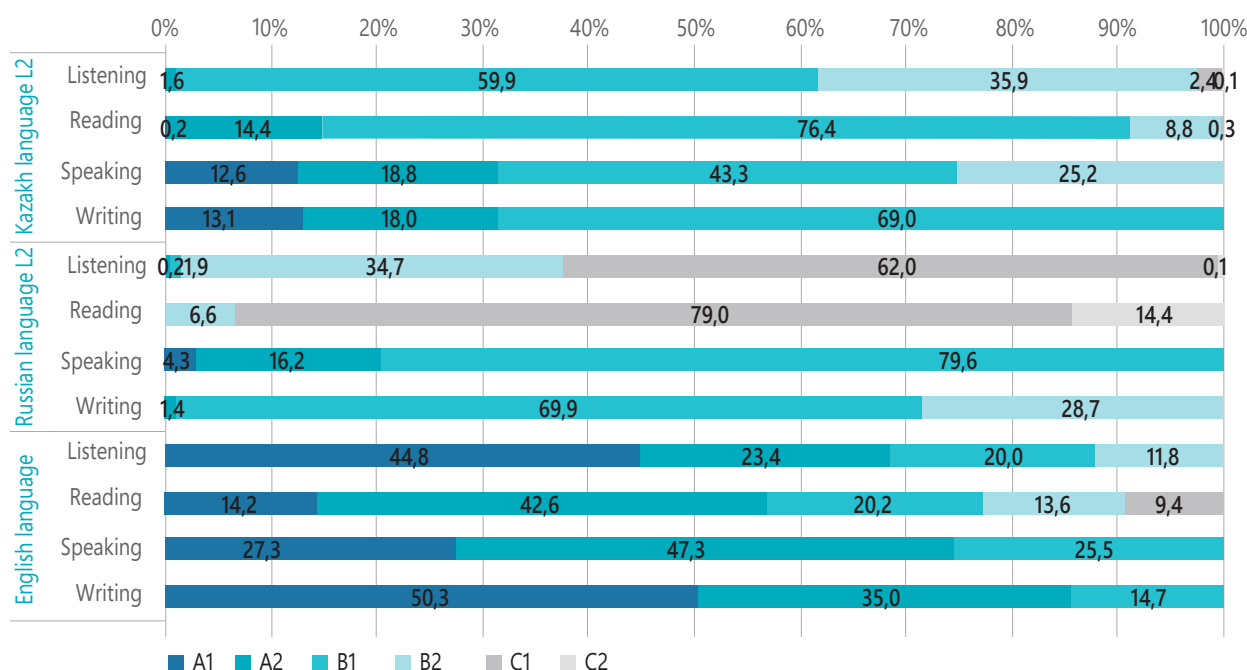
11 163 students in grades 7-10 took part in the English language subject monitoring. According to the results of the monitoring, the growth of indicators for all skills is observed, and it should be noted that students show high results in “Reading” and “Speaking” skills.

Monitoring results in the subject “English language” in grades 7-10



2 791 grade 7 participated in the monitoring conducted in September. Analysis of the results for all three subjects showed that high results were observed in “Speaking” skill.

Results of the monitoring of grade 7 conducted in September 2022



To organise further work with students, Intellectual Schools have been provided with:

- 105 846 individual detailed reports;
- 27 807 individual reports on dynamics;
- 492 detailed reports at the level of grades and parallels;
- analytical reports.

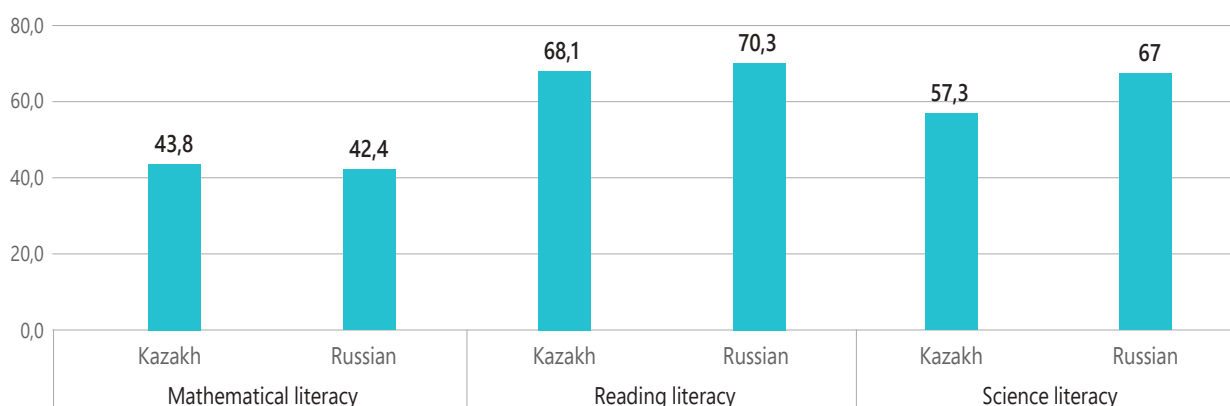
Functional Literacy Assessment Test for 14-year-old students

The Functional Literacy Assessment Test was administered in March 2023 to 5 777 students born in 2008 and 2009, and in November 2023 to 2 895 students born in 2009.

To conduct the test, 120 test items and 60 test resources were developed and reviewed in three areas of the test – mathematical, science and reading literacy.

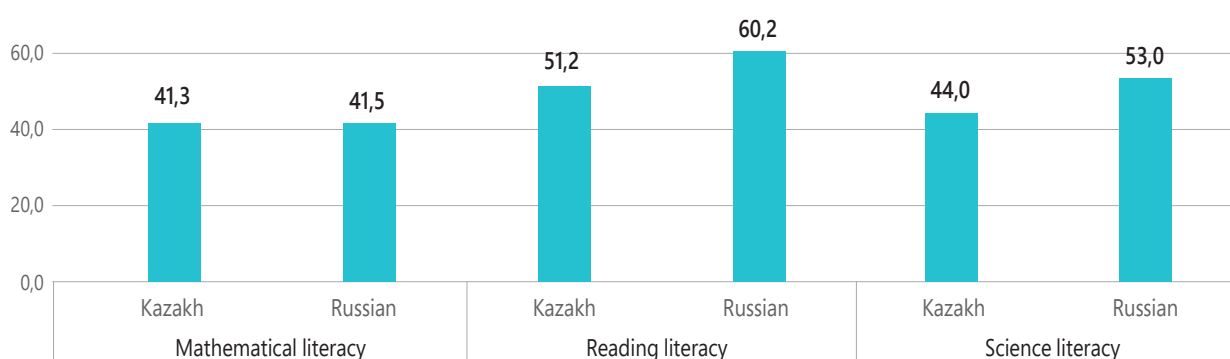
The results of students who participated in the test in March 2023 by language of instruction are presented in the figure below.

Results of students who took part in the test in March 2023, by language of instruction



Analysis of students' results has shown that the highest results were demonstrated by students in reading literacy.

Results of students who took part in the test in November 2023, by teaching language



Analysis of students' results has shown that the highest results were demonstrated by students in reading literacy.

To organise further work with students, Intellectual Schools have been provided with:

- - 25 902 individual detailed reports;
- - 170 detailed school-level reports.

5.2. CRITERIA-BASED ASSESSMENT SYSTEM

As part of the improvement of NIS-Programme, specifications of the summative assessment for the term by subject are updated annually in accordance with the schedule of updating and implementing subject programmes. In the current year, 71 specifications of summative assessment for the term in subjects of grades 7 and 11 were updated in Kazakh, Russian and English languages.

To ensure the quality of assessment tools, an external online expert review is carried out via the information system “Assessment” (hereinafter – ISA) <https://se.nis.edu.kz/> involving CPM employees and teachers of Intellectual Schools, as well as the approval of summative assessment materials for the term.

Quantitative data on external online review of summative assessment materials for the term in IS “Assessment”

Year	Amount of materials
2021	5 580
2022	9 052
2023	9 125

To build a common understanding of the standards and develop teachers’ assessment practices, samples of students’ formative and summative assessment work are uploaded annually to the Central Archive section of the ISA. The purpose of using

the materials of the Central Archive is to ensure the quality of assessment procedures and methodological support for teachers in making decisions on the assessment of expected learning outcomes.

KQuantitative data on uploading student work samples to the Central Archive

Year	Amount of materials
2021	2 009
2022	1 441
2023	1 135

This year, a seminar on “Criteria-based Approach in Assessment” was held for 46 teachers of NIS ChB in Turkestan. During the seminar, CPM experts observed

lessons, analysed student portfolios by subject, and provided individual feedback to teachers on improving assessment practices.

Formative assessment platform “Proactive Maps”

CPM developed the Proactive Maps platform <https://proactivecards.cpi-nis.kz/> to create lesson plans with a focus on formative assessment. Teachers have access to 24 maps that include key principles for implementing formative assessment strategies, a variety of assessment methods and forms of feedback recommended for use at different stages of the lesson.

The benefits of using the platform include the ability to create and edit lesson plans through the online constructor, store and have constant access to lesson plans and materials (methods, feedback forms, long-term plans, etc.).



Methodological support for teachers is provided annually at the August Conference. This year at the August conference of teachers of Intellectual Schools “Development of professional learning community: quality and efficiency” in the framework of the practical online platform “Impact of assessment on academic success of students and professional development of teachers”, the employees of CPM conducted webinars by subject on “Proactive maps: improving the practice of formative assessment” by means of MS Teams platform.

The participants of the conference along with the CPM staff learnt about the structure of the platform, discussed the possibility of using proactive maps,



lesson builder in developing a short-term plan with a focus on formative assessment.

Within the framework of this platform, webinars were also held by subject on the “Results of external summative assessment: from analysis to planning”, where participants discussed the results of the 2023 external summative assessment examinations and the internal moderation of assessment tools. Based on the results of the work, an action plan for working with external summative assessment data was developed.

As part of the Steps to Success - Young Teacher project, CPM conducted a webinar for 90 young teachers of Intellectual Schools on the system of assessment of students’ learning achievements.

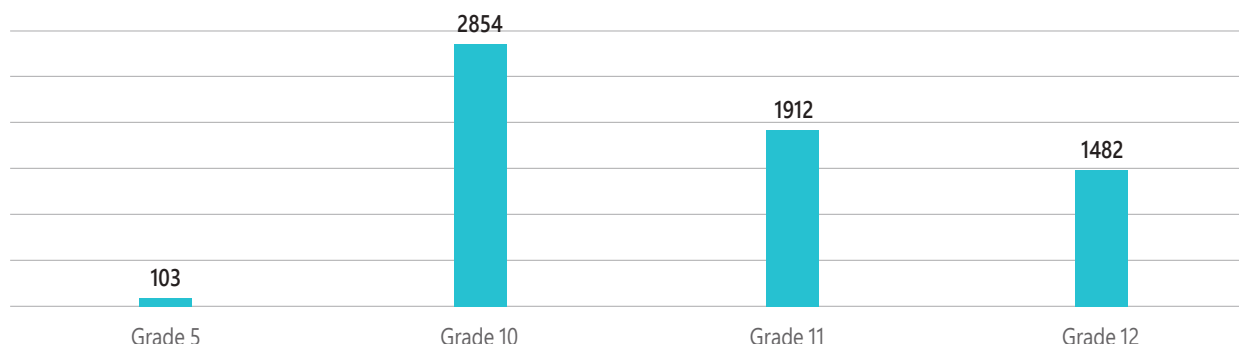
5.3. EXTERNAL SUMMATIVE ASSESSMENT OF STUDENTS IN GRADES 5, 10-12

Annually, Intellectual School graduates take external summative assessment examinations conducted in partnership with an independent international organisation, Cambridge Assessment International Education (CAIE). For the purpose of external control, CAIE undertakes accreditation of external summative assessment procedures: from the development of assessment instruments to scoring and standard setting.

CPM independently develops and examines examination materials for grades 5, 10 and 11; examination materials for grades 12 (AS-level and A-level) are developed by CPM in co-operation with CAIE.

The examinations are conducted in one of the three languages of instruction – Kazakh, Russian and English – and consist of compulsory and elective subjects. The content of examination materials aims to determine the level of mastery of the primary, lower secondary and upper secondary school curriculum, as well as the level of skills and abilities of students through the implementation of research projects, laboratory and practical work, problem solving, essay writing and the preparation of coursework.

Student enrollment in grades 5, 10-12 in the 2022-2023 academic year



1 780 tasks and 322 resources were developed for the examinations, and 2 828 tasks and 580 resources were reviewed. Checking and marking of exam papers of external summative assessment of grade 10 and 11 students of Intellectual Schools was conducted online on a specially developed platform. 41 618 examination papers of students were checked by 439 teachers of Intellectual Schools.

The platform developed for online checking and marking has become a shortlisted finalist for the international EdTech Cool Tool Awards, featuring the most competitive educational technologies.

To conduct laboratory and experimental works of external summative assessment of grade 10 students in “Physics” (946 students) and “Chemistry” (554 students), a simulator was piloted in 20 NIS schools.

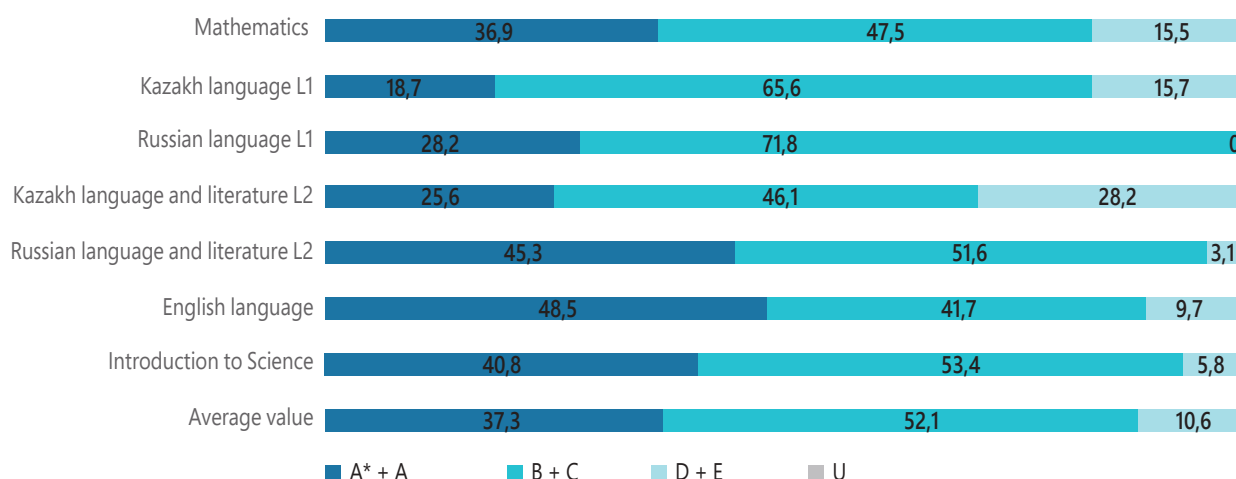
The format of the exam was updated in grade 12 in “Computer Science” and “Geography”:

In Computer Science, instead of coursework, students performed written work with structured tasks assessing programming skills;

In Geography, the exam consisted of two exam papers instead of three in accordance with the format of the international standard AS-level.

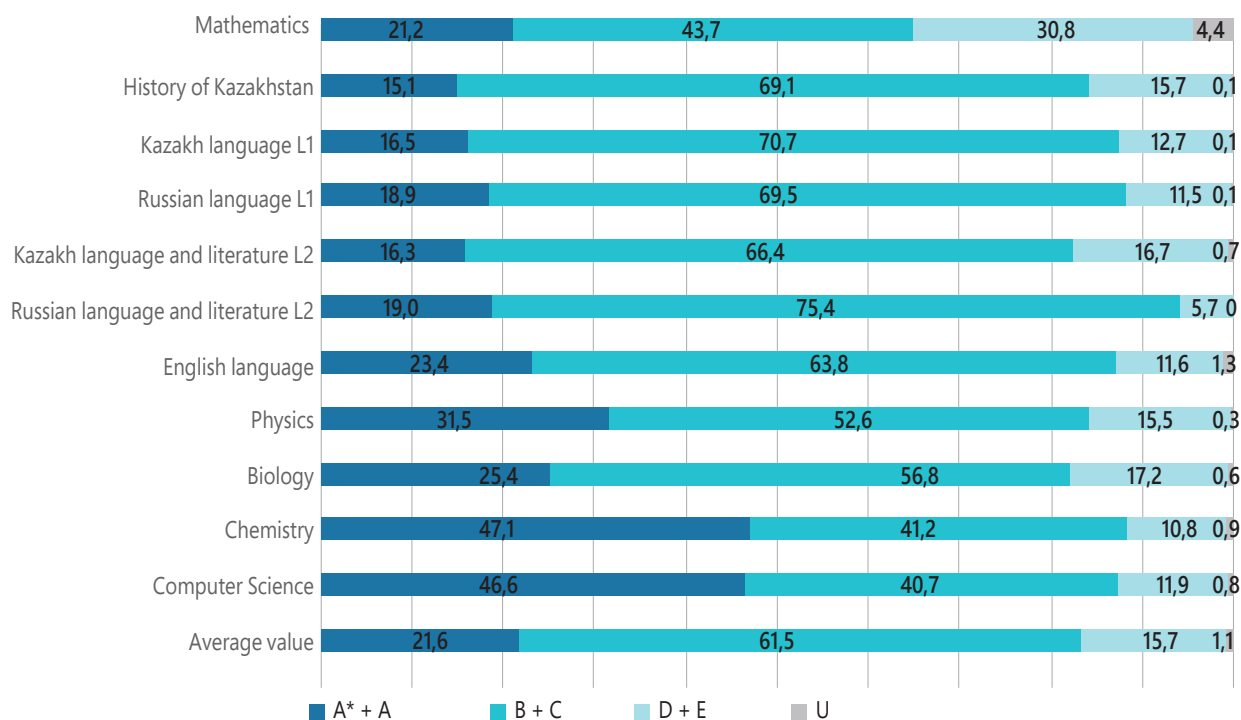
The analysis of grade 5 students’ examination results has shown that the amount of A* and A grades above the average was demonstrated in “Russian Language and Literature (L2)”, “English Language” and “Introduction to Science”.

Results of grade 5 students by subject and aggregated letter grades



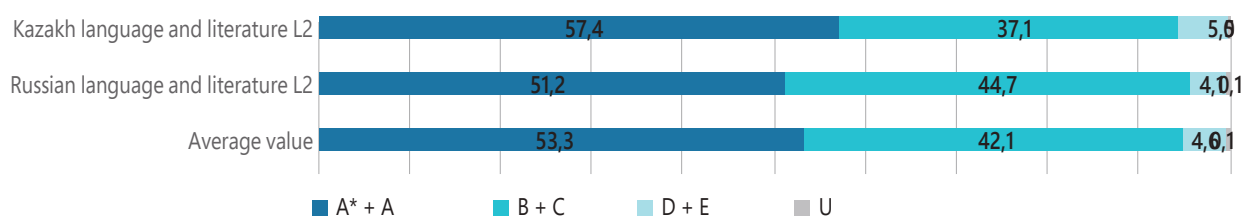
Analysis of the results of grade 10 students’ examinations has shown that the amount of A* and A grades above the average was demonstrated in English, Physics, Chemistry, Biology and Computer Science.

Results of grade 10 students by subject and aggregated letter grades



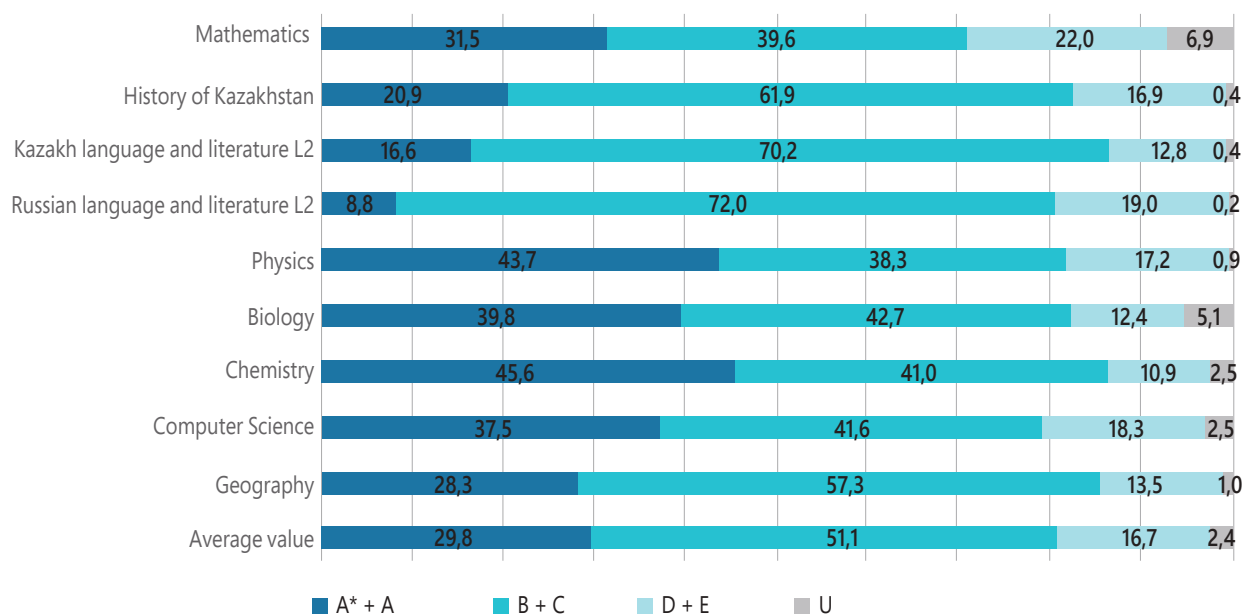
Analysis of the results of grade 11 students' examinations has shown that the amount of A* and A grades above the average was demonstrated in "Kazakh language and literature (L2)".

Results of grade 11 students by subject and aggregated letter grades



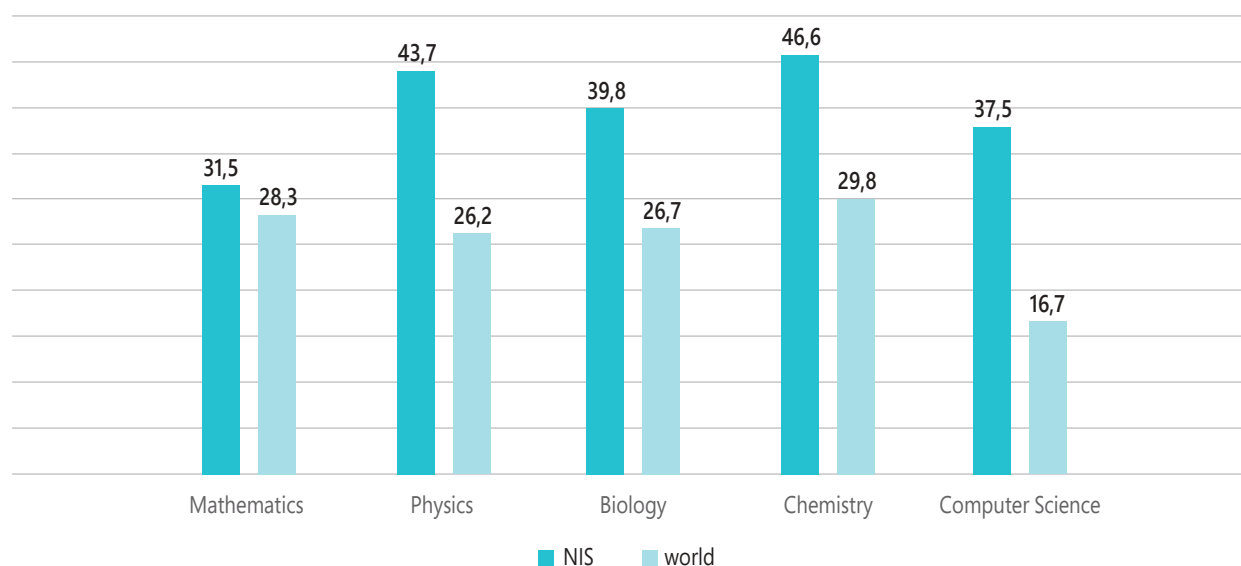
Analysis of the results of grade 12 students' examinations has shown that the amount of A* and A grades above the average was demonstrated in Mathematics, Physics, Chemistry, Biology and Computer Science.

Results of grade 12 students by subject and aggregated letter grades



Annual comparative analyses of the exam results of Grade 12 students in Intellectual Schools and students in other countries taking A-Level examinations have shown that the results of Intellectual School students are higher in all subjects compared.

Results of Grade 12 students in Intellectual Schools and the world who achieved A* and A grades, by subject



The external summative assessment examinations of Grade 12 students were accredited by CAIE, which confirms the high quality of the procedures. All 1 482 graduates received NIS Grade 12 Certificate.

According to the results of the examinations in grades 5, 10-12, 22 278 individual detailed reports, 374 detailed reports by grades, 27 sample answer books of candidates and 3 analytical reports were provided to schools.

5.4. ACCREDITATION OF INTELLECTUAL SCHOOLS

In 2019, the first cycle of international accreditation by the Council of International Schools (CIS) was completed, as a result of which 20 Intellectual Schools were accredited. Since 2021, the schools entered the second cycle to confirm their status. Thus, in 2023, the first

5 Intellectual schools in Astana (PhM, IB), Kokshetau, Semey and Oskemen were visited by CIS teams, consisting of 27 international accreditation experts from different schools of the world (Great Britain, Netherlands, Singapore, France, Czech Republic, Switzerland, etc.).

Schedule of CIS team visits to Intellectual Schools in 2023



As a result of the visits, the experts highly appreciated the NIS AEO strategic plan and its successful implementation. They emphasised that the systematic work of the organisation is clearly seen in the work of Intellectual Schools, especially in the application of modern educational programmes and innovative teaching methods. The experts highly appreciated the attention paid by NIS AEO to national priorities and the successful dissemination of Intellectual Schools' experience to state secondary schools, and emphasised that the work of NIS AEO and the Intellectual Schools actively contribute to the development of the national secondary education system. In addition, they confirmed the effectiveness of Intellectual Schools in continuous improvement of the quality of education, infrastructure and dormitories. They highly appreciated the work of the "Shanyrak" community, the work of curators, tutors, and psychologists, emphasising their successful work in ensuring the safety and well-being of students at school and in the dormitory.

It is especially noteworthy that for the first time at NIS Astana (IB) the CIS team assessment was synchronised with the International Baccalaureate (IB) reauthorisation.

In 2023, 9 Intellectual Schools in Aktobe, Atyrau, Karagandy, Kyzylorda, Pavlodar, Taraz, Oral and Shymkent (PhM, ChB) were subject to a prepara-

tory assessment with the participation of in-house CIS experts and independent accreditation experts from various international schools around the world (UK, Georgia, Germany, Netherlands, Kuwait, Italy). The experts noted that in the reports submitted by the schools and during the visits, the Intellectual Schools demonstrated excellent compliance with the four leading aspects of CIS (aim and direction school, student well-being, high quality learning, development of global citizenship) driving the international accreditation. The schools' learning, wellbeing, delivery of mission, vision and purpose were positively assessed. As a result of the visits, 9 Intellectual Schools were awarded the status of "Candidate for Reaccreditation".

CIS reaccredited:

5 Nazarbayev Intellectual Schools (PhM Astana, Astana IB, PhM Kokshetau, PhM Semey, ChB Oskemen)

9 Nazarbayev Intellectual Schools (PhM Shymkent, PhM Shymkent, PhM Kyzylorda, PhM Taraz, PhM Pavlodar, PhM Aktobe, PhM Karagandy, PhM Atyrau, PhM Oral)

received the status of "Candidate for re-accreditation".





6. RESULTS OF STUDENTS' ACADEMIC ACHIEVEMENTS



6.1. Academic performance and quality of knowledge

6.1. International and national olympiads, competitions, conferences, and research work

6.3. Results of international examinations

6.4. University admissions

6. MONITORING OF STUDENTS' ACADEMIC ACHIEVEMENTS

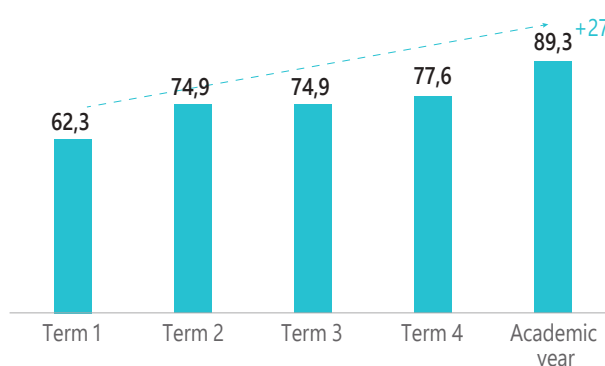
6.1. ACADEMIC PERFORMANCE AND QUALITY OF KNOWLEDGE

At the end of the 2022-2023 academic year, 15 577 students were enrolled in Intellectual Schools, including 9 745 students with the Kazakh language of instruction (62.6%) and 5 832 students with the Russian language of instruction (37.4%).

At the end of the 2022-2023 academic year, the academic achievement of students was 100%. The quality of knowledge was 89.3 per cent. In terms of languages of instruction, the results of students with Kazakh as the language of instruction are 3.6 per cent higher than those of students with Russian as the language of instruction.

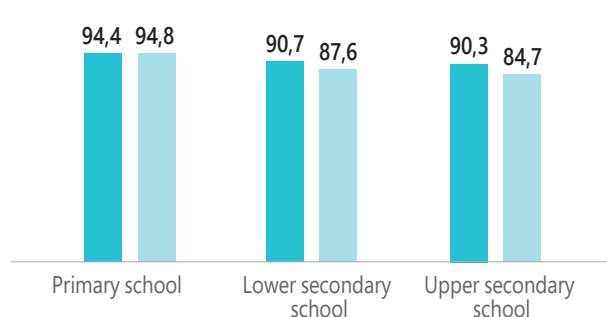
In terms of levels of education, the quality of knowledge of students with Kazakh and Russian languages of instruction meets the established strategic indicators (primary school – 90%, lower secondary school – 70%, upper secondary school – 80%).

Quality of knowledge of students of Intellectual Schools by terms (2022-2023 academic year), %



At the same time, the analysis of data for three years shows the negative dynamics of the quality of knowledge of students of Intellectual Schools. The decline in 2022-2023 academic year compared to 2020-2021 academic year is 8.2 p.p.

Quality of knowledge of students of Intellectual Schools by levels of education (2022-2023 academic year), %

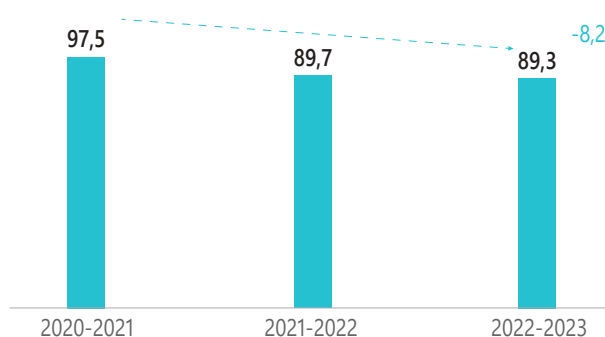


■ With Kazakh language of instruction

■ With Russian language of instruction

The analysis of data for four terms shows a positive trend of growth in the quality of knowledge indicators of students of Intellectual Schools (by 27 p.p. by the end of the academic year).

Quality of knowledge of students of Intellectual Schools for three years, %



In the 2022-2023 school year, 353 out of 373 students (94.6 per cent) in grade 10 confirmed their lower secondary school leaving certificates with honours. The number of candidates for an upper secondary school leaving certificate with honours was 134 students in grade 12, of whom 122 (91%) confirmed their certificates with honours. Of the 117 candidates, 116 (99.1%) confirmed the “Altyn Belgi” award pin.

6.2. INTERNATIONAL AND NATIONAL OLYMPIADS, COMPETITIONS, CONFERENCES, AND RESEARCH WORK

International Olympiads

In 2023, students of Intellectual Schools took part in 17 International Olympiads in general educational subjects:

Nº	Name of the event	Total number of students	Number of winners 1st place	Number of 2 place winners	Number of 3 place winners	Total number of winners	Performance in %
1	The 19th International Zhautyk Olympiad	14	3	3	1	7	50,00%
2	International Mathematical Olympiad "Silk Road"	13	-	-	6	6	46,15%
3	Asia-Pacific Mathematical Olympiad	13	-	1	3	4	30,77%
4	The European Olympiad in mathematics for girls	2	-	1	1	2	100,00%
5	The 57th International Mendeleev Olympiad in chemistry	3	-	-	2	2	66,67%
6	Asian Physics Olympiad	2	1	-	1	2	100,00%
7	International Olympiad Olympiad in Mathematics	1	1	-	-	1	100,00%
8	International "Tuimaada" Olympiad	10	3	3	2	8	80,00%
9	Bulgarian Competition in Mathematics "BIMC"	4	-	1	-	1	25,00%
10	International Olympiad in Physics	2	-	2	-	2	100,00%
11	International Olympiad in chemistry	2	1	1	-	2	100,00%
12	International Olympiad in Linguistics	3	-	-	-	0	0,00%

Nº	Name of the event	Total number of students	Number of winners 1st place	Number of 2 place winners	Number of 3 place winners	Total number of winners	Performance in %
13	International Olympiad in Geography	4	1	-	1	2	50,00%
14	XII International Festival of Young Mathematicians	12	6	5	-	11	91,67%
15	International Olympiad in Economics	4	-	-	-	0	0,00%
16	International Junior Science Olympiad	1	-	-	1	1	100,00%
17	XV Eurasian Olympiad in Computer Science	22	2	6	6	14	63,64%
ИТОГО	17	112	17	23	24	64	57,14%

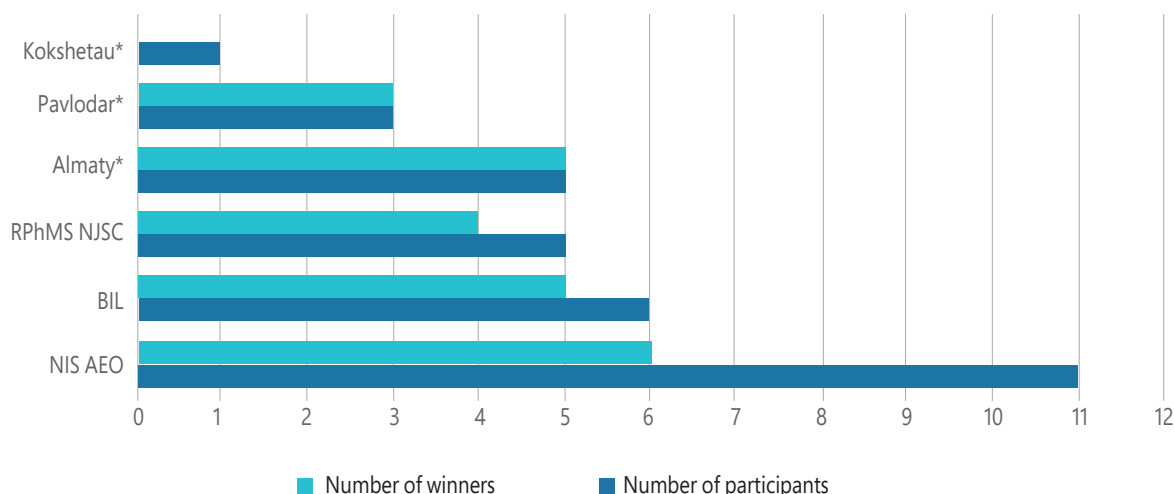
It should be noted that in 2023 at the International Subject Olympiads, 11 NIS students represented the national team of the Republic of Kazakhstan, of which 6 students won prizes. In addition, in accordance with the order of the Acting Minister of Education of the Republic of Kazakhstan from 29 July 2022 No 347, winners and prize-winners of international Olympiads in general educational subjects and teachers who prepared them were awarded a one-time award. This list includes the following Olympiads:

Nº	Name of the Olympiad
1	International Mathematics Olympiad
2	International Physics Olympiad
3	International Olympiad in Computer Science
4	International Biology Olympiad
5	International Chemistry Olympiad
6	International Geography Olympiad
7	International Olympiad in Linguistics

Accordingly, on 27 October 2023 in Astana there was a meeting of prize-winners of the International Subject Olympiads with the Minister of Education of Kazakhstan Beissembayev G. B., where the students were awarded cash certificates in the amount of 6500 MCI, which is 22 425 000 tenge. Teachers who prepared prize-winners were awarded cash certificates in the amount of 2 017 458 tenge.

Histograms 1–3 below show the number of participants of the national team and winners by educational organisations in three periods, starting from 2020-2021 academic year to 2022-2023 academic year. The histograms show that during this period the largest number of students of Intellectual Schools is included in the national team. Then follow the students of BIL, NJSC RPhMS and Pavlodar without taking into account the above-mentioned schools. Also students from the Intellectual schools of Almaty, Astana, Karagandy, Kokshetau and Shymkent entered the national team for this period.

Histogram 1
Participants of the national team of Kazakhstan at international Olympiads by educational organisations
in 2022-23 academic year



* Participants, without reference to a specific educational organization: NIS, BIL and RPhMS

The table below shows data on subjects for the last three academic years. In general, we can see that the highest performance of students of intellectual schools in the national team is shown in Geography and Chemistry, 85.71% and 50.00% respectively. The lowest performance in the national team is in Mathematics, Physics, Biology and Computer Science.

Школа	2021		2022		2023		Итого	
	Partici-pants	Winners	Partici-pants	Winners	Partici-pants	Winners	Partici-pants	Winners
NIS Almaty PhM	4	4	3	3	1	1	8	8
NIS Aktobe PhM	1	1	1	1	2	2	4	4
NIS Astana PhM	2	2	1	1	1	1	4	4
NIS Shymkent ChB	1	1	1	1	2	1	4	3
NIS Pavlodar ChB	1	1	3	1	1	0	5	2
NIS Oskemen ChB	1	1	1	1			2	2
NIS Astana			1	1	2	0	3	1
NIS Semey PhM			1	1	1	0	2	1
NIS Actau ChB					1	1	1	1
NIS Karagandy ChB	1	1					1	1
Total	11	11	12	10	11	6	34	27

Republican Olympiads

In 2023, the students of Intellectual Schools took part in 4 Republican Olympiads in general educational subjects, 2 specialised Olympiads and 2 republican stages of international Olympiads,

according to the table below. As of the end of 2023, 165 students took part in the Republican Olympiads, 121 of them became prize-winners. The overall participation rate was 73.33%.

Nº	Name of the event	Number of students	Number of winners 1st place	Number of winners 2st place	Number of the 3rd place winners	Number of winners	Performance in %
Republican Olympiads in general educational subjects							
1	Republican Olympiad on Science and Mathematics for students of grades 9–11(12)	66	22	21	20	63	95,45%
2	Republican Olympiad in social and humanitarian subjects for students of grades 9–11(12)	36	2	5	10	17	47,22%
3	Republican Olympiad in Science and Mathematics for students of grades 7–8	15	3	6	4	13	86,67%
4	Presidential Olympiad on Science and Mathematics	19	5	5	1	11	57,89%
Specialised Olympiads							
5	Satpayev Republican Olympiad in Chemistry for 9th grade students	3	1	2	-	3	100,00%
6	Bastau Republican Mathematics Olympiad for students of grades 2–4	1	-	-	-	-	0,00%
Republican stages of International Olympiads							
7	Republican stage of International Olympiad in Economics	20	5	5	-	10	50,00%
8	Republican stage of International Olympiad Brain BEE	5	1	2	1	4	80,00%
TOTAL:		8	165	39	46	36	73,33%

In the period from 2020-2021 to 2022-2023 academic years there is a positive dynamics in the performance of the NIS AEO team in Science and Mathematics in the Republican Olympiads. Thus, in 2020-2021 academic year the team of NIS won the 1st place in the nomination “The best Olympiad team in Science and Mathematics subjects”, and in subsequent years won the Grand Prix in the same nomination. The Science and Mathematics subjects are: mathematics, physics, geography, chemistry, biology and computer science.

Below is the report of the Republican Olympiad on general educational subjects in two directions within Science and Mathematics subjects and Arts and Humanitarian subjects for students of grades 9-11(12) in dynamics from 2020-2021 to 2022-2023 academic years.

In Science and Mathematics subjects, NIS AEO national team won the Grand Prix twice in 2020-2021 and 2022-2023 academic years and 1st place in 2021-2023 academic year in the nomination “Best Olympic Team”. This nomination is awarded based on qualitative analysis using a formula according to which a gold medal is valued at 30 points, a silver medal at 20 points, and a bronze medal at 10 points. Then the total number of points is divided by the number of students who participated in the Olympiad. In this way, qualitative analyses allow Olympic teams to improve their approaches and mechanisms to identify, support and develop highly motivated children (Daryn, 2023). This formula will also be used to demonstrate an overall qualitative analysis of the branches of NIS AEO carrying out educational activities.

The figures below show the performance in Science and Mathematics as well as Arts and Humanitarian subjects in all Intellectual Schools. The overall success rate for Science and Mathematics is 81.50% for the last 3 years and 95.45% for the 2022-2023 academic year. The success rate for Science and Mathematics is significantly lower compared to Arts and Humanities which is 59.68% for the last 3 years, and 47.22% for the 2022-2023 academic year which is almost half the rate of Arts and Humanities. Biology and Geography show the highest performance within Science and Mathematics subjects, 93.75% and 85.96%. At the same time, Chemistry and Computer Science have low results (76.47% and 72.22%). It is worth noting that in Chemistry the performance has decreased in 2021-2022 academic years, although the results for other years are above 90%. And in Computer Science the first 2 years were low at about 65%, and only in 2023 the indicator reached 90%.

The following subjects show high results within Arts and Humanitarian subjects: Kazakh language in schools with Russian language of instruction, German language and English language more than 70%. Though, for these three subjects, there is a significant decline of results in dynamics over 3 years from 75% to 25%. The lowest indicators are Kazakh language and literature and French language are 41.67% and 16.67% respectively. The results in Kazakh language and literature for the last 2 years are stable at 50%, and in French language only 6 students have taken part in the republican Olympiad for 3 years, with 1 of them taking a prize-winning place in 2021-2022 academic year.

Statistics on Republican Olympiads (Science)

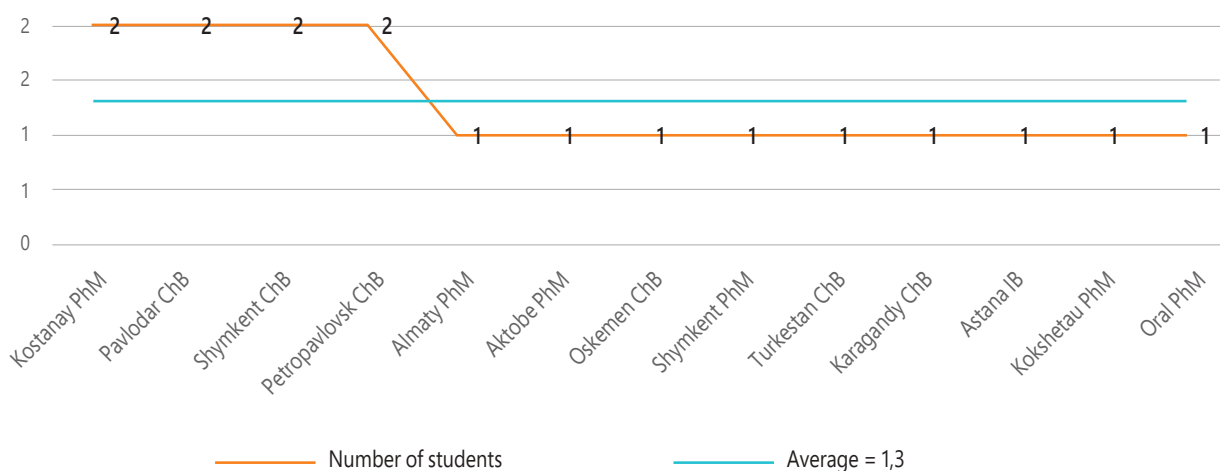
Subject	2022-23 academic year						Total		
	No. of students	Number of winners				%	No. of students	Number of winners	%
		1 st place	2 st place	3 st place	Total				
Biology	8	4	1	3	8	100,00%	32	30	93,75%
Geography	15	8	3	3	14	93,33%	57	49	85,96%
Maths	11		1	9	10	90,91%	37	30	81,08%
Physics	11	3	7	1	11	100,00%	41	33	80,49%
Chemistry	11		6	5	11	100,00%	51	39	76,47%
Computer Science	10	1	4	4	9	90,00%	36	26	71,22%
Total	66	16	22	25	63	95,45%	254	207	81,50%

Statistics on Republican Olympiads (Humanities)

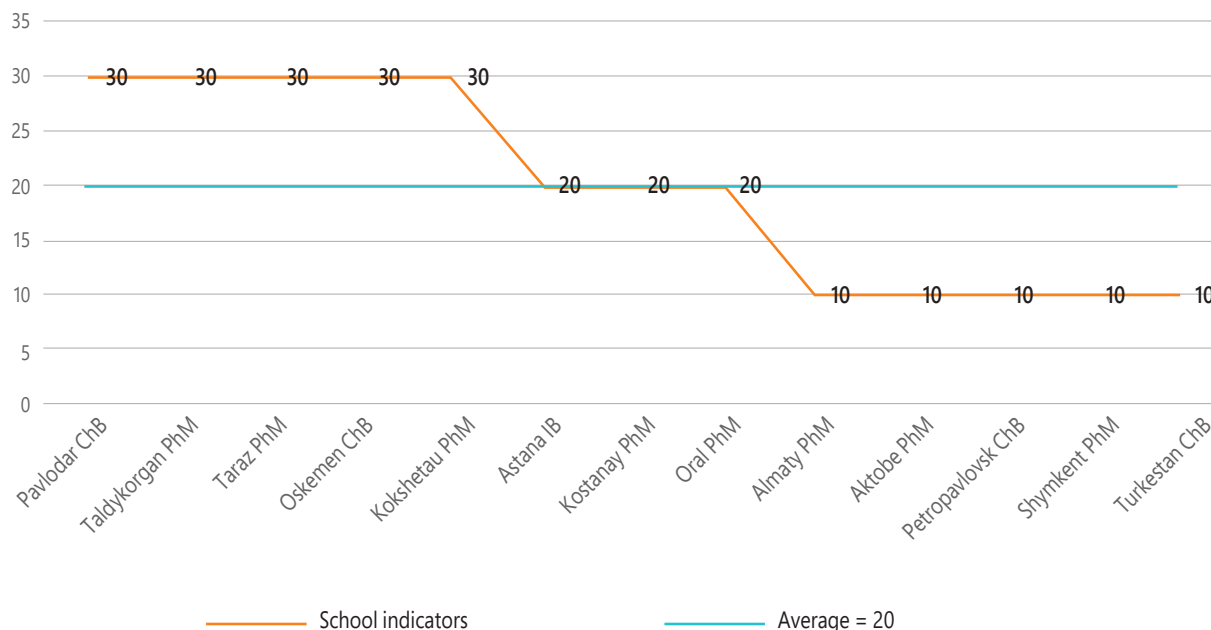
Subject	2022-23 academic year						Total		
	No. of students	Number of winners				%	No. of students	Number of winners	%
		1 st place	2 st place	3 st place	Total				
казахский язык в школах с русским языком обучения	4		1	1	2	50,00%	20	16	80,00%
немецкий язык	3			1	1	33,33%	11	8	72,73%
английский язык	4			1	1	25,00%	14	10	71,43%
история Казахстана	4			2	2	50,00%	14	8	57,14%
основы правоведения	5			2	4	80,00%	14	8	57,14%
русский язык в школах с казахским языком обучения	5			1	3	60,00%	18	10	55,56%
русский язык и литература	4			1	2	50,00%	15	8	53,33%
казахский язык и литература	4			1	2	50,00%	12	5	41,67%
французский язык	3				0	0,00%	6	1	16,67%
Итого:	21	1	3	7	11	52,38%	71	44	61,97%

Graphs 1 and 2 show that NIS Pavlodar demonstrates high results in both Science and Mathematics and Arts and Humanitarian subjects. The top 3 for Science and Mathematics subjects include PhM Almaty, PhM Pavlodar and PhM Astana, and for Arts and Humanitarian subjects – NIS Pavlodar, Taldykorgan and Taraz.

Результаты по участию в Республиканской олимпиаде по предметам естественно-математического направления (по кол-ву учащихся в разрезе школ)* в 2022-23 учебном году



The results of the participation in the Republican Olympiad in humanities subjects
(by the qualitative analysis* across school)** in 2022-23 academic year



* when calculating the indicator, the following formula was used: 1st place = 30 points, 2nd place = 20 points, 3rd place = 10 points

** without Astana PhM, Semey PhM, Almaty PhM, Aktau PhM, Karagandy PhM, Shymkent PhM, Atyrau PhM, Kyzylorda PhM, ISA

Training camps

Educational and training camps is an organisational form of extracurricular activities, conducted in order to develop the potential of students in the study of academic subjects to deepen knowledge of the basics of science and successful performance at Olympiads, tournaments and other intellectual competitions (decision of the NIS Board from 26 February 2015 (Minutes № 7)).

In 2023, students of Intellectual Schools took part in 10 training camps. Of these, 3 were organised by NIS AEO and 7 by the Republican Scientific and Practical Centre “Daryn” (hereinafter – Daryn).

The total number of students who took part in training camps organised by NIS AEO was 547. The purpose of these events is to prepare students for national and international Olympiads, in accordance with the Regulations on the Advanced Training School, approved by the decision of the NIS Board dated 26 February 2015 (Minutes No. 7).

Training camps organised by NIS AEO are held annually in 3 stages in Science and Mathematics subjects:

Stage 1 before the start of the Republican Olympiad, where all students who passed to the final stage of the Republican Olympiad in general educational subjects in the corresponding academic year take part. This year this event was held in Intellectual Schools of Almaty and Shymkent on 13 to 18 March 2023 and involved 71 students.

Stages 2 and 3 of the training camps were held in the summer period and involved more students. For example, a training camp on Science and Mathematics subjects with involvement of graduates – prize-winners of International Subject Olympiads was held in NIS ChB Almaty in the period from 31 July to 10 August 2023 and was attended by 236 students of grades 10-11(12). And Stage 3 of the training camp was held in NIS schools of Astana and Pavlodar and attended by 240 students of grades 8-9.

In 2023, 26 students of Intellectual Schools took part in 7 training camps on Science and Mathematics subjects, such as: mathematics, physics, computer science, biology, chemistry and linguistics, organised

by Daryn in order to select and prepare students for international subject Olympiads.

According to the table below, based on the results of selection and preparatory training camps

organised by Daryn, 11 students out of 26 students of Intellectual Schools were included in the national team of the Republic of Kazakhstan for participation in international subject Olympiads and won 6 medals.

Subject	Number of NIS students included in the Olympic reserve in the 2022-23 academic year	Number of NIS students included in the national team of Kazakhstan for participation in International Subject Olympiads in 2022-23 academic year	Number of NIS students who became prize-winners at the International Subject Olympiads in 2022-23 academic year	Number of NIS students who will be included in the Olympic reserve in the 2023-24 academic year
Mathematics	3	-	-	2
Physics	2	2	2	4
Computer science	1	-	-	1
Biology	3	-	-	2
Chemistry	6	2	2	5
Geography	8	4	2	7
Linguistics	3	3	-	1
TOTAL:	26	11	6	22

In 2023-24 academic year 22 students of Intellectual Schools were included in the Olympic reserve of the Republic of Kazakhstan.

Thus, in 2023, the students of the Intellectual Schools took active part in 10 training camps organised by NIS AEO and Daryn, after which the students of Intellectual Schools entered the national team of the Republic of Kazakhstan and added to the medal collection of NIS AEO and the country.

STUDENT ACHIEVEMENT

Winners of International and Republican competitions:

1) Directional information (analysis / text):

In 2023, students of branches of the autonomous educational organisation “Nazarbayev Intellectual Schools” took part in 3 republican competitions of humanitarian and aesthetic direction, 1 research competition and 1 republican competition of scientific projects on general education subjects and 3 international competitions. (Table 1,2)

According to the results of 2023, 112 students took part in national competitions, 84 of them became prize-winners. The overall participation rate was 75%, 52 students took part in international competitions, 43 of them became prize-winners. The overall participation rate was 82.6 per cent. In general, the performance indicator for national and international competitions was 77.4 %

Table 1

Nº	Name of action	Number of students	Number of 1st place winners	Number of 2nd place winners	Number of 3rd place winners	Number of winners	Efficiency in %
Republican							
1	XVIII Republican competition of research works of 2-7 grades «Zerde»	13	6	1	1	8	61,5
2	In the republican competition of young historians «My Small Homeland»	3	-	-	1	1	33,3
3	V Republican oratorical competition «Dilmar»	1	1	-	-	1	100
4	X Republican competition «Akberen»	6	1	1		2	33,3
5	Republican competition of scientific projects in general education subjects	89	17	18	37	72	87,8
TOTAL	5	112	25	20	39	84	75

Table 2

Nº	Name of action	Number of students	Number of 1st place winners	Number of 2nd place winners	Number of 3rd place winners	Number of winners	Efficiency in %
International							
1	Umirbek Zholdasbekov international competition of students' research works in Mechanics and Mathematics	3	1		1	2	66,6
2	International science project competition (ISEF Regeneron)	2		1		1	50
3	International competition of IT-projects «INFOMATRIX ASIA-2023»	47	12	17	11	40	85,1
TOTAL	3	52	13	18	12	43	82,6

2) Rating of Intellectual Schools in 3 major network events by the number of prizes (table):

- Network stage of the Republican contest of scientific projects.

In order to stimulate research and educational and cognitive activities of students, select and support the most talented and gifted young researchers, promote the formation of intellectual potential, the network stage of the Republican competition of scientific projects on general education subjects among students of Nazarbayev Intellectual Schools and the International School of Astana is held.

In the 2023-2024 academic year, 2,399 students with 1,603 topics of project research works of students of Nazarbayev Intellectual Schools were registered in the Republican Scientific and Practical Centre “Daryn”, of which 796 were team works.

A total of 958 students, 636 projects made it to the network stage of Round 1 of the RCSP.

Students of Nazarbayev Intellectual Schools presented projects in the following areas and sections:

Direction 1: Scientific and technological progress as a key to economic growth

Sections: “Physics”, “Engineering”, “Earth and Space Science”.

Direction 2: Mathematical modelling of economic and social processes

Sections: “Mathematics”, “Applied Mathematics”, “Economics”, “Informatics”.

Direction 3: Healthy natural environment is the basis for the implementation of the “Kazakhstan-2030” strategy

Sections: “Biology”, “Chemistry”, “Environmental protection and human health”. **Direction 4:** Historical monuments of Kazakhstan and promising tourist routes

Sections: “History”, “Jurisprudence”, “Regional studies”, “Literature (Kazakh literature and Russian literature)”, “Ethnocultural studies”, “Linguistics (Kazakh language, Russian language and English language)”.

The online competition of scientific projects was held in 2 rounds:

- Round 1 (online) - from October 16 to 20, 2023;
- Round 2 (offline) - from October 30 to November 3, 2023.

380 students, 236 projects passed to the network stage of the 2nd round. The 2nd round was held on the basis of Intellectual Schools of Physics and Mathematics in Astana and Chemistry and Biology in Almaty.

Within the framework of the competition the presentation of famous national experts and scientists of higher educational institutions, research centres, laboratories of the country in the field of scientific discoveries and modern technologies, master classes, defence of scientific projects by students of Intellectual Schools and exhibition of scientific projects were organised.

Project research activity is a mandatory component of the educational activity of Nazarbayev Intellectual Schools, so holding a network competition of scientific projects has become a tradition, and participation in it is a valuable experience for young researchers.

According to the results of the network competition, 116 projects of students won prizes: 1st place-27 projects, 2nd place-33 projects, 3rd place-56 projects.

The largest number of winners in the teams of Intellectual Schools PM in Astana, CB in Kyzylorda, CB in Karaganda.

On XVIII republican competition of research works of 2-7 grades “Zerde” passed 13 students from which 8 became winners in various sections.

Full name/school	Grade	Section	Project topic	Place
Shishkina Polina NIS of CB in Pavlodar	7	mathematics, applied mathematics	Application of mathematical modelling in construction of bridges for adaptation of people with disabilities in Pavlodar city	1
Nurtai Bekzhan NIS of CB in Pavlodar	7	mathematics, applied mathematics	Application of mathematical modelling in construction of bridges for adaptation of people with disabilities in Pavlodar city	1
Tilekkabyl Balnur NIS of PM in Uralsk	7	history, local history	Tolegen Imangaziev, a figure of Alash, educator	1
Temirkul Temirlan NIS of PM in Uralsk	7	history, local history	Tolegen Imangaziev, a figure of Alash, educator	1
Zeken Alikhan NIS of CB in Karaganda	7	chemistry, biology	Enzymatic catalysis as a way to determine the freshness of food products	1
Pak Artyom NIS of PM in Taldykorgan	4	chemistry, biology	The fascinating world of bacteria: harm or benefit?	1
Nauatbek Ademi NIS of PM in Taraz	7	physics, space	Lighting bridges by converting mechanical energy into electrical energy	2
Zhumalieva Aidina NIS of PM in Uralsk	7	Kazakh language and literature	TRAVELGEST (promotion via mobile application)	3

In the republican competition of young historians “My Small Homeland” the student of NIS of PM in Uralsk **Birzhankyzy Tomiris** took the 3rd place, **Mukhambet Mansiya**, NIS of PM in Uralsk and **Leskhan Miras**, NIS of CB in Kyzylorda were awarded with Diplomas.

Zhabagiyeva Ymmigulsim, a student of NIS of PM in Semey became an absolute winner in the V Republican Oratorical Contest “Dilmar”.

From November 24 to 26, 2023 in Aktau was held X Republican competition “Akberen”. Student of NIS of CB in Kyzylorda **Turikben Nurnazar** became the winner, took 1st place, **Bazarbai Syrsunkar** took 2nd place, and student of NIS of CB in Turkistan **Dosybay Shugyla** awarded with a Diploma.

The final stage of the Republican competition of scientific projects in general education subjects was held from April 3 to 7, 2023. The team of Nazarbayev Intellectual Schools was represented by **89 pupils** in natural and humanitarian subjects. Winners and prize-winners of the Republican competition of scientific

projects in general education subjects were **72 students** of Nazarbayev Intellectual Schools, of whom 17 students were awarded gold medals, **18 students** won silver medals, **37 students** were awarded bronze medals, and 10 students were awarded Certificates of Merit.

According to the results of the final stage of the competition in the rating of regions on the quality of participation, the team of Nazarbayev Intellectual Schools AEO is the best in terms of the quality of medals won.

In the international competition of research works of schoolchildren on mechanics and mathematics named after Umirbek Zholdasbekov, which was held from March 1 to 3, 2023 in Almaty, 2 students took prizes:

-1 place, **Mamyrbek Zhanel**, NIS of Astana city, “Applied Mathematics” section

-3 place, **Salimzhanqyzy Zhanaïym**, NIS of CB in Kyzylorda city, “mathematics” section.

A student of NIS of PM in Almaty city **Jumadildayev Sagyn** became a silver medalist in the International Science Project Competition (ISEF Regeneron) in the USA city of Dallas, held from May 14 to 19, 2023.

From 16 to 18 December 2023 in Astana held an international competition of IT-projects “INFOMATRIX ASIA-2023” in which participated 47 students

of Nazarbayev Intellectual Schools, 40 students became prizewinners of this competition from them 12 gold, 17 silver and 11 bronze.

Holders of copyrights, patents, and cash grants for startup projects by school at the end of 2021-2023

Number of students holding copyrights (certificates)

№	school	Number of students			TOTAL
		2021	2022	2023	
1	Pavlodar	24	30	13	67
2	Aktau	3	8	16	27
3	PM in Shymkent	10	12	4	26
4	Karaganda	-	2	23	25
5	Aktobe	16	6	2	24
6	Uralsk	3	1	13	17
7	Taraz	8	6	3	17
8	Ust-Kamenogorsk	-	13	2	15
9	Kokshetau	-	12	2	14
10	Taldykorgan	3	2	7	12
11	Semey	-	4	7	11
12	Kostanay	-	6	5	11
13	PM in Almaty	7	2	-	9
14	Turkistan	-	-	7	7
15	Petropavlovsk	2	3	-	5
16	PM in Astana	-	3	1	4
17	Kyzylorda	-	-	4	4
18	Atyrau	1	-	3	4
19	CB in Shymkent	-	1	2	3
TOTAL		77	111	114	302

Number of students holding patents for utility models and inventions

№	school	Number of students			TOTAL
		2021	2022	2023	
1	Ust-Kamenogorsk	1	3	2	6
2	Pavlodar	1	-	4	5
3	PM in Almaty	4	1	-	5
4	Semey	-	3	-	3
5	Kyzylorda	-	3	-	3
6	Uralsk	-	2	-	2
7	Kokshetau	-	1	-	1
8	PM in Astana	-	1	-	1
9	Aktobe	1	-	-	1
10	Karaganda	-	-	1	1
11	CB in Almaty	-	-	1	1
TOTAL		7	14	8	29

Number of students who have received monetary innovation grants

№	school	Number of students			TOTAL
		2021	2022	2023	
1	NIS of PM in Astana	11	-	19	30
2	NIS of PM in Almaty	-	1	26	27
3	NIS of PM in Uralsk	-	16	9	25
4	NIS of CB in Aktau	-	9	14	23
5	NIS of PM in Semey	-	6	12	18
6	NIS of PM in Aktobe	8	3	3	14
7	NIS of PM in Taraz	14	-	-	14
8	NIS of PM in Taldykorgan	1	3	9	13
9	NIS of CB in Pavlodar	-	9	4	13
10	NIS of CB in Kyzylorda	-	3	10	13
11	NIS in Astana	-	2	11	13
12	NIS of PM in Kokshetau	1	5	6	12
13	NIS of CB in Almaty	-	6	5	11
14	NIS of PM in Shymkent	8	-	-	8
15	NIS of CB in Turkistan	-	-	4	4
16	NIS of CB in Shymkent	-	-	4	4
17	NIS of CB of Atyrau	-	4	-	4
18	NIS of CB in Ust-Kamenogorsk	-	3	0	3
19	NIS of CB in Petropavlovsk	-	-	2	2
TOTAL		43	70	138	251

In the Republican competition of achievements in the field of invention “Shapaghat-2023” in the nomination “Young talent” were awarded diplomas:

- **Ibrayev Mirali, Segizbayeva Zarina**, NIS in Pavlodar,
- **Zinullin Nursultan**, NIS in Uralsk,
- **Kerimkulova Adiya**, NIS in Tatrax,
- **Arynuruly Nurtore**, NIS of PM in Astana

Asanali Karim and Diasali students of 12th grade of Nazarbayev Intellectual School of Physics and Mathematics in Kokshetau became the owners of the money grant for the amount of 500000\$ in the International competition “Rise Global for the World”. <https://www.instagram.com/p/CyA-bmXO-cZs/?igshid=ZDBjMWI0ZjMxOQ==>

Participation in research project competitions provides opportunities for participants to develop skills in project management, communication, public speaking and presentation, enables researchers to

exchange ideas, network and develop collaborations, and promotes professional development, financial support and visibility of research.



Holders of patents and copyrights

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Aipova Dayana, NIS of CB in Karaganda, “Board game in English language”, Copyright Certificate No.39580 dated 01.10.2023, RSE “Institute of Intellectual Property” of the MJ of the RK.

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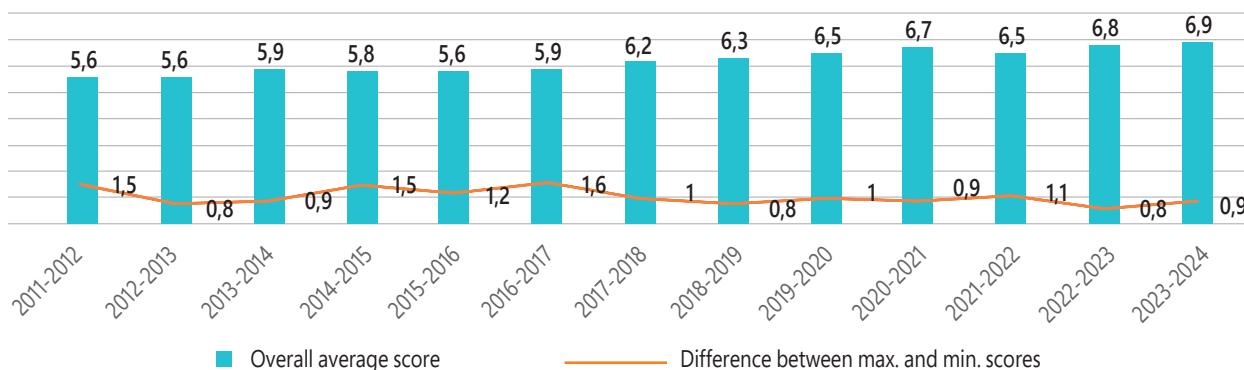
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6.3. RESULTS OF INTERNATIONAL EXAMS

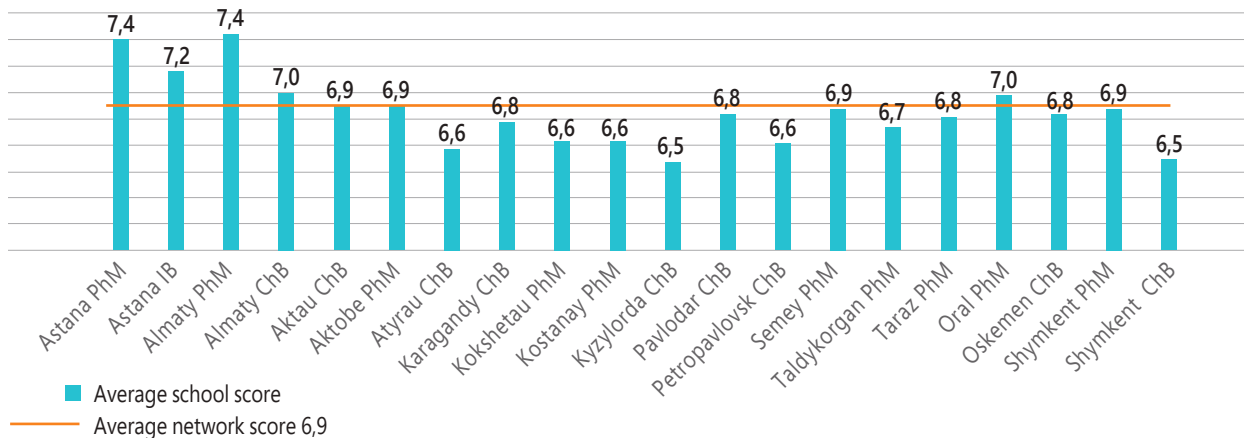
On 12 and 21 October 2023, grade 12 students of the Intellectual Schools took the International English Language Testing System (IELTS), which is an external assessment of learning achievements in the subject “English language”.

Dynamics of IELTS results in different academic years



The results of the exam show that in the current academic year, Intellectual Schools students have once again achieved a record average network score of 6.9, exceeding the previous year's performance by 0.1.

IELTS results by school



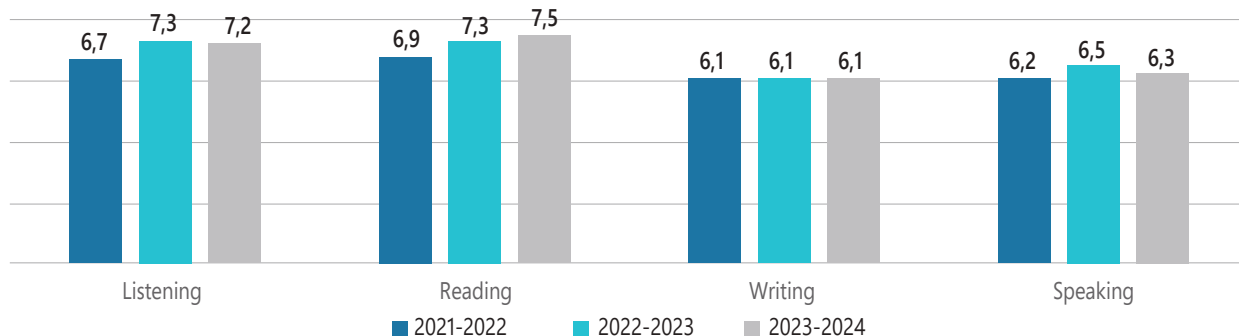
It is worth noting significant progress in IELTS results of 4 Intellectual schools in Astana (PhM, IB), Almaty (PhM, ChB), which showed an average band score of 7.0-7.4, while in the last academic year the result was 6.9-7.1. Across the network, 60 per cent of Intellectual School students scored 7 or higher. The highest band score of 8.5 was obtained by 5 students of intellectual schools in Astana (PhM, IB), Almaty (PhM, ChB) and Semey:

- Bekamanova Samira Yerkinovna, NIS PhM Astana,

- Mazhit Zere Arafatkyzy, NIS PhM Semey,
- Kalymbet Inzhu, NIS Astana (IB),
- Nukushev Asset Kanatuly, NIS PhM Almaty,
- Salkhanova Tomiris Yerkinovna, NIS ChB, Almaty.

Taking into account that many foreign universities accept students with IELTS band score 6.0-7.0, and according to the official world statistics the average IELTS score in 2022 was 6.3, a significant part of students of Intellectual Schools have great chances to enter the leading universities of the world.

Dynamics of IELTS scores by language skills over the last 3 academic years



It should also be noted that IELTS indicators for all academic years demonstrate stable improvement of results of Intellectual schools students. When analysing the dynamics in terms of skills for the last 3 years, we

can see positive trends in listening and reading, where the results have significantly increased. Writing skills remain steady, and the level of speaking skills, despite small fluctuations, remains at a fairly high level.

Scholastic Assessment Test (SAT) International Examination

In 2023, 779 students of grades 12 took SAT and demonstrated an average score of 1 299. Among them, 30 students scored 1 500 or above on SAT (Reading test and Writing test, Math test) and 32 students scored the maximum score (800) in Math test.

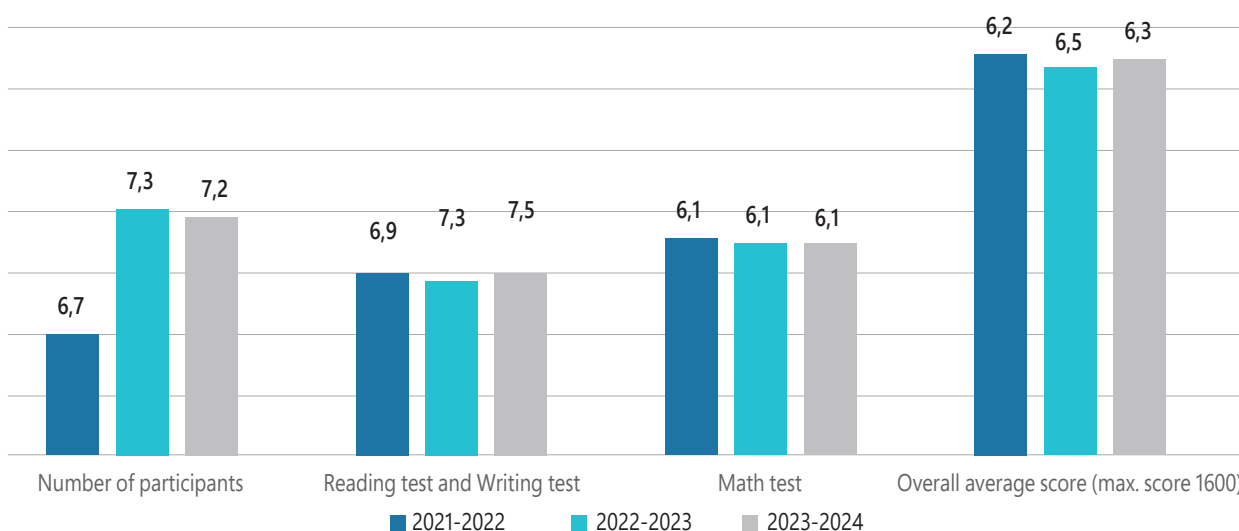
Analysis of the results showed that 661 of the 779 test takers performed above the 75th percentile. This means that these students scored higher than 75 per cent of all exam takers in the US. The 99th percentile is the

highest score, which included 111 Intellectual Schools students. Only 1 in 100 participants score in this range, so these results give students a high advantage for admission to foreign universities.

1 550 out of 1 600 possible and maximum 800 points in Math test were scored by 2 students of Intellectual Schools ChB Almaty and PhM Aktobe:

1. Aigerim Arynkyzy Shakanova, NIS ChB Almaty
2. Daniyar Olegovich Chutenev, NIS PhM Aktobe

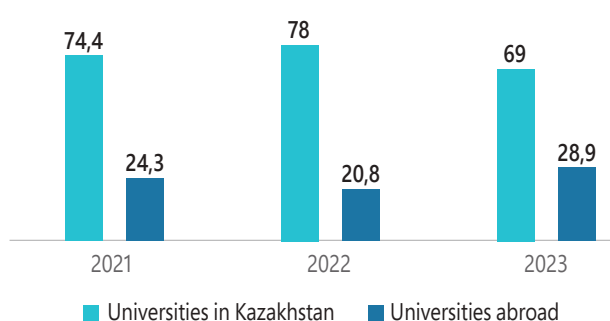
Dynamics of SAT scores by academic year



6.4. ADMISSION TO UNIVERSITIES

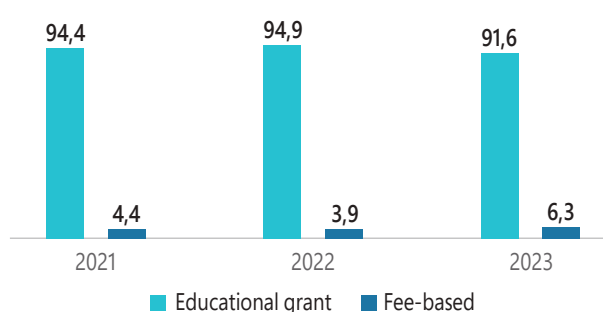
In the 2022-2023 academic year, 1 650 students graduated from 20 Intellectual Schools. The majority of graduates entered higher education institutions in Kazakhstan 68.9% (1 138 graduates), including Nazarbayev University, and 28.9% (477 graduates) entered foreign universities. Of those who entered Nazarbayev University, 80.6% (430 graduates) entered bachelor's degree programmes and 19.4% (103 graduates) entered the Foundation pre-university training programme.

Enrollment of graduates of intellectual schools by place of enrollment, share



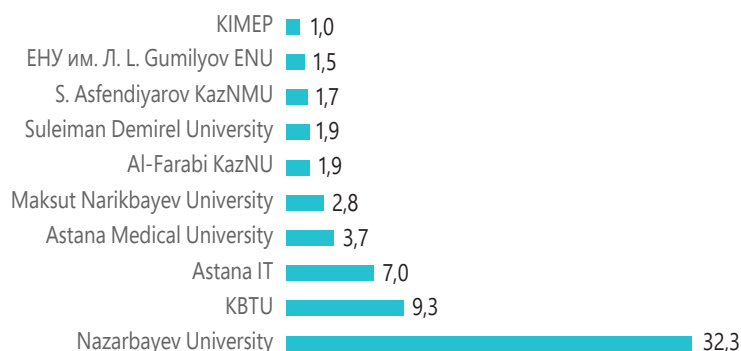
Thus, 97.9% of graduates entered higher education institutions, of which 91.6% became holders of state and university grants in Kazakhstan and abroad. More than 80% of graduates choose technical, medical, pedagogical, agricultural specialities.

Enrollment of Intellectual Schools graduates by type of payment, share



Graduates of Intellectual Schools tend to choose leading higher education institutions in Kazakhstan.

The most popular HEIs of Kazakhstan among the graduates of Intellectual Schools, share



Graduates of Intellectual Schools keep on successfully entering the top universities in the world.

For example, 2 graduates entered the No. 1 university in the world according to QS international rankings – the Massachusetts Institute of Technology in the USA – for a full grant:

- ChB Aktau - Almira Nurlanova;
- PhM Almaty - Yersultan Pitebay.

3 graduates entered Ivy League universities:

1. ChB Pavlodar - Amira Artykbayeva to Brown University.
2. PhM Astana - Aruzhan Aussat to the University of Pennsylvania.
3. Intellectual School of Astana - Diana Serikbayeva to Dartmouth College.

58 graduates entered universities included in the top 100 according to QS rankings: California Institute of Technology, University of California at Berkeley, Johns Hopkins University, University of Michigan, University of Toronto, King's College London, University of British Columbia, Korea Advanced Institute of Science and Technology, Shanghai Jiao Tong University and others.

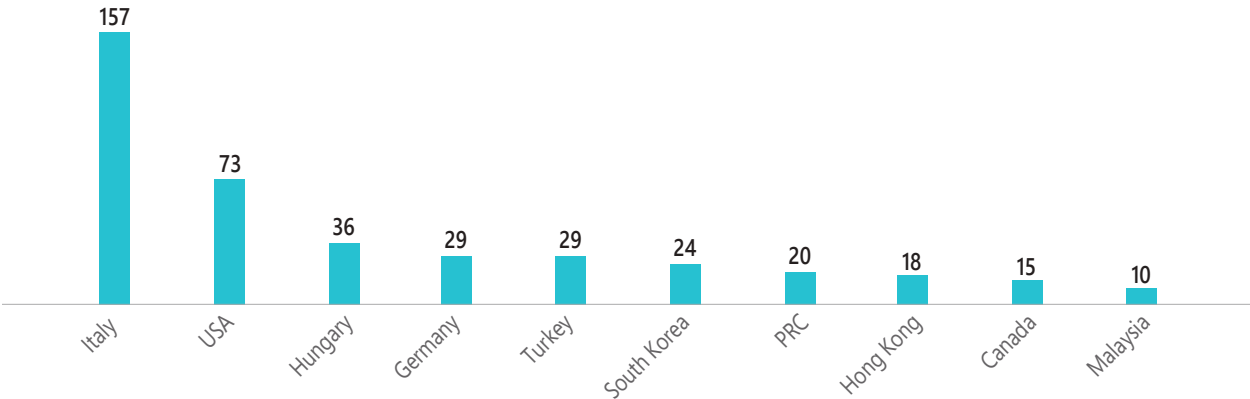
It should be noted that such universities as the University of Toronto, University of British Columbia, Shanghai Jiao Tong University provide special grants

for students of Intellectual Schools through the nomination process.

In total, 27 graduates have enrolled to Ivy League universities and 548 graduates have enrolled to QS-100 universities over the years.

The most popular countries in the world for Intellectual School graduates remain Italy, USA, PRC, South Korea and other foreign countries. Below are the most popular countries for graduates of the 2022-2023 academic year.

The most popular directions for entering universities among graduates of Intellectual Schools, number of graduates



WINNERS OF INTERNATIONAL COMPETITIONS AND OLYMPIADS

“Creation of artificial tissues and organs”

- **1st place** **Aida Oralbekova, Ayazhan Seydin**, NIS ChB Almaty,
- **2nd place** **Dilnaz Massalimova, Ali Serikbayev** NIS ChB Oskemen, Madina Abatova, Rasul Meiram NIS PhM Kokshetau,
- **3rd place** **Anastasiya Tsai, Asiya Makhmudova, Saltanat Alisheva** PhM Astana,

“Creation of «smart» prostheses and their elements”

- **1st place** **Aldiyar Nakyp, Alpamys Issabekov**, NIS ChB Karagandy.
- **2nd place** **Miras Bari**, NIS ChB Pavlodar, Rassul Jolshibekov, NIS ChB Atyrau,
- **3rd place** **Aslan Amangeldi**, NIS PhM Shymkent, Abzal Serikbai, NIS PhM Almaty.

“Creation of personalised medical assistants biointerfaces, simulators for treatment and rehabilitation”

- **1st place** **Shakhnazar Sailaukan, Aida Abkenova**, NIS PhM Pavlodar
- **2nd place** **Victor Kakhno, Maxim Surin, Deni Mirkhayat**, NIS PhM Taldykorgan, Kali Asylkhan, Uisevkhankyzy Nazerke, Yessaly Sabina, Zhakupova Aruzhan, Syzdykova Dinara, Segizbayeva Shadiyar, Samarbekov Daniyar, NIS PhM Kokshetau
- **3rd place** **Karazhan Aidai, Kuramyssova Kamila, Tazhimova Raushan, NIS PhM Aktobe, Assanov Myrzali Assanuly, Ondagan Nurlybek** NIS ChB Aktau, Tursynkhan Tair, Baimukan Kaliakbar, NIS Astana.

“Hardware and software for monitoring the functional state of the human body”

- **1st place** **Mamyrbek Janel**, NIS Astana
- **2nd place** **Baimyshev Zhassulan, Baigozhina Daria**, NIS ChB Pavlodar, Nurgali Ibragim, Nuralinov Kambar, NIS PhM Semey
- **3rd place** **Mustafin Ulan, NIS ChB Karagandy, Munaytbasova Zhuldyzai, NIS ChB Kyzylorda, Pokhabov Ilya, Maktayev Azamat**, NIS PhM Semey.

“Computer technologies for processing and analysis of biosignals and medical images”

- **1st place** Ydyrysbayeva Tomiris, Kamaliyeva Arai, Zhaksylyk Amir, Ausarbekov Adilet, Mamyrbek Zhanel, NIS Astana
- **2nd place** Akhmetova Nargiz NIS PhM Astana, Zhunisbekov Abilmansur, Oralkhanov Daulet, NIS ChB Oskemen.
- **3rd place** Serikbayeva Yasmin, Beisembek Ayan, PhM Astana, Isayeva Altynai, NIS ChB Turkestan, Khusainov Marat, Seidazymov Adil, NIS ChB Oral.

“Development and maintenance of specialised databases with protection of personal information”

- **1st place** Turganbay Raushan, NIS ChB Kyzylorda
- **2nd place** Shokobalinov Danial, NIS PhM Taldykorgan, Mukhalev Danil, Kumatova Kamila, NIS ChB Aktau
- **3rd place** Bekmukhametova Adel, Turash Aruzhan, Shakanova Aigerim, Assanbai Inkar, Assanbai Gauhar, NIS ChB Almaty, Urbetbayeva Yerkezhan, Kakhno Victor, NIS PhM Taldykorgan, Kissamgaliyeva Alima, Makhmutov Shakhnadir, NIS ChB Oskemen.



PART 2

KAZAKHSTAN:

development of intellectual capital
in education



1. CONTENT OF EDUCATION



1. CONTENT OF EDUCATION

Since 2016, NIS AEO has been actively involved in the implementation of the system of criteria-based assessment of students' learning achievements in general educational schools. Since the introduction of criteria-based assessment, a large-scale methodological and resource work has been successfully carried out.

In accordance with amendments and additions to the model subject programmes for primary, basic secondary and general secondary education levels, specifications for summative assessment for the term by subject are being updated. In order to provide methodological support to teachers of general educational schools as part of the implementation of the assessment system, specifications and samples of summative assessment tasks for the term for students of grades 2, 5, 7 and 11 and for the academic year in grades 4, 9 and 10 by subject and language of instruction have been prepared this year. As part of methodological and advisory support to teachers and school coordinators of general educational schools, moderation of questions on assessment by subject for grades 1-11 was conducted on Educational Resource Portal <http://www.smk.edu.kz>.

Quantitative data on the development of summative assessment specifications for the term

Year	Number of specifications	
	Summative assessment for the term	Summative assessment for the academic year
2021	46	50
2022	87	47
2023	95	81

Final attestation of students of educational organisations

In accordance with the order of the Ministry of Education and Science of the Republic of Kazakhstan dated 18 March 2008 №125 "On approval of the Model Rules for the current control of progress, interim and final attestation of students for secondary, technical and vocational, post-secondary education" examination materials for final attestation of students of grades 11 (12) of secondary schools, grades 9 (10) and 11 (12) of republican schools were developed and submitted to the Ministry of Education and Science of the Republic of Kazakhstan and NTC in the 2022-2023 academic year. Examination materials for final attestation of students of grade 11 (12) of secondary education organisations have also been translated into Uzbek, Uighur, Tajik and English.

As part of the final attestation of students in the 2023-2024 academic year, 87 specifications were updated and submitted for approval to the Ministry of Education of the Republic of Kazakhstan, and examination materials were developed for the final attestation of students of grade 11 (12) of secondary schools and grade 9 (10) and 11 (12) of republican schools. Seminars on the review of examination materials for final attestation in the 2023-2024 academic year have been delivered to teachers of Intellectual Schools.

Quantitative data on the development of assessment tools for final attestation

Academic year	Number of assessment tools
2021-2022	9 614
2022-2023	5 658
2023-2024	4 997

2. EDUCATIONAL RESOURCES



2.1. Textbooks



2.2. Educational platforms



2.3. Experience dissemination portal

2.4. Publications of the Center of Excellence

2. EDUCATIONAL RESOURCES

2.1. TEXTBOOKS

Textbook development according to the State Compulsory Standard of Primary Education

Due to the division of the subject “Arts and Crafts” into “Crafts” and “Visual Arts”, efforts were made to develop electronic methodological guidelines for grade 1 in both Kazakh and Russian languages. Methodological recommendations for teachers have been developed in alignment with the Model Curriculum, as approved by Order No. 399 of the Minister of Education of the Republic of Kazakhstan dated 16 September 2022, and further in accordance with the Model Curriculum for Primary, Lower Secondary, Secondary, and Upper Secondary Education in the Republic of Kazakhstan, as approved by Order No. 412 of the Minister of Education dated 30 September 2022.

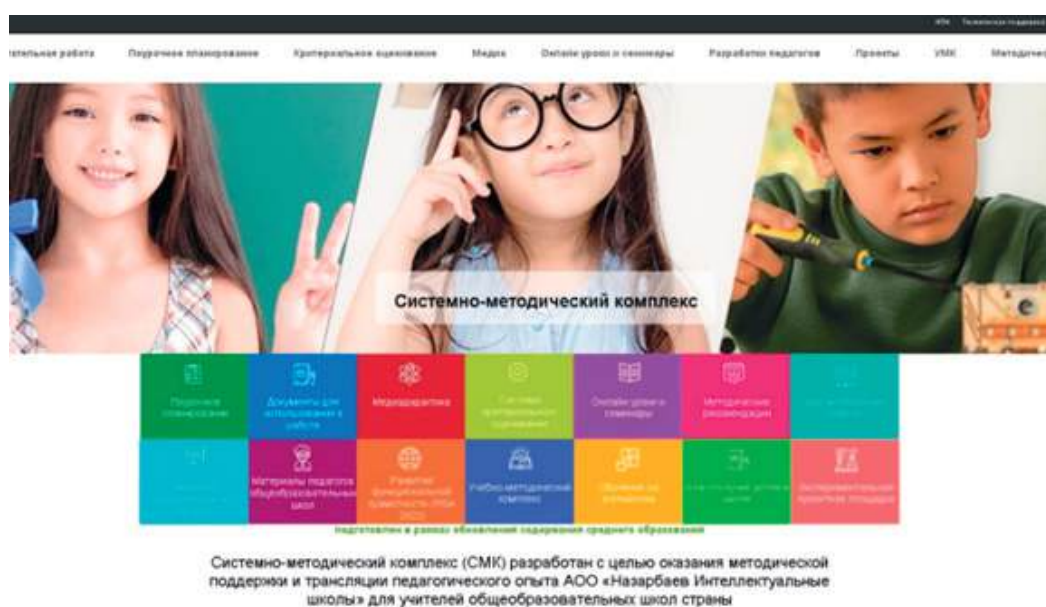
The methodological recommendations describe the aims of the subject, its outcomes, the system of learning objectives, and present the pedagogical approaches and recommendations for teachers on the implementation of learning objectives and the development of cross-curricular skills, as well as a course schedule, lesson plans for each topic of the Model Curriculum and media files.

Electronic methodological guidelines on “Crafts” and “Visual Arts” in the Russian language for grade 1 are included in list of textbooks for secondary educational organisations and preschool organisations, as specified in the order of the Minister of Education of the Republic of Kazakhstan dated 3 August 2023, No. 246.

2.2. EDUCATIONAL PLATFORMS “EDUCATIONAL RESOURCE PORTAL” (ITSC), “ONLINE-MEKTEP” (СЕР), “SHAMSHYRAK” (COE)

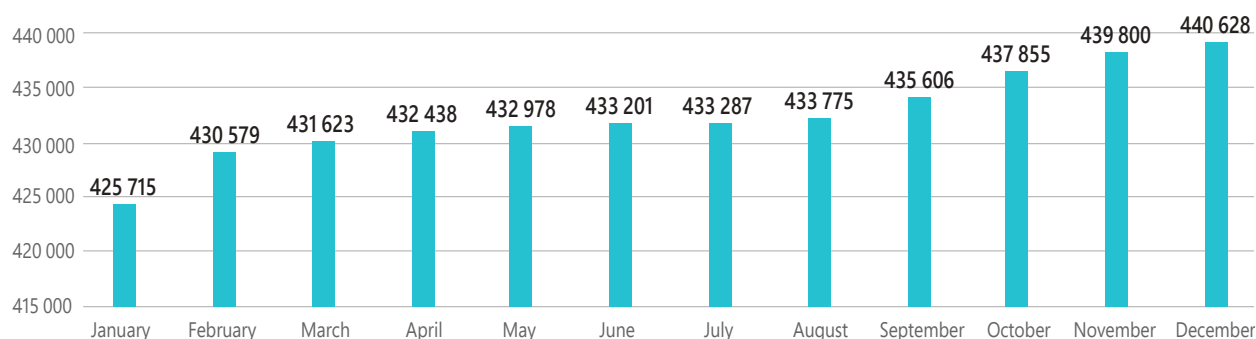
The Educational Resource Portal (hereinafter referred to as ERP) platform, developed with technical support of NIS ITSC, continues to operate and provides

methodological support to teachers in the secondary educational organisations.



According to 2023 statistics, the total number of registered users of the ERP platform was 440 628 users. Since its launch, the platform has recorded 24 069 710 visits, 19 389 294 views and 109 270 422 downloads.

Dynamics of growth in the number of the Portal users during 2023



To be able to monitor the number of registrations on the platform, a counter of registrations with indicators by regions of the state was introduced. Thus, 12 418 user registrations were recorded in the statistical report of the ERP platform for 2023.

Nº	Region	Number of registrations in 2023	Total number of users
1	Abay region	302	484
2	Akmola region	778	25 865
3	Aktobe region	535	23 578
4	Almaty region	1 173	54 573
5	Almaty	1 236	30 568
6	Astana	715	13 999
7	Atyrau region	399	16 517
8	East Kazakhstan region	451	29 619
9	Zhambyl region	694	32 578
10	Zhetysu region	518	769
11	West Kazakhstan region	555	20 303
12	Karagandy region	776	28 555
13	Kostanay region	684	21 801
14	Kyzylorda region	445	23 187
15	Mangystau region	404	16 583
16	Pavlodar region	609	18 601
17	North Kazakhstan region	531	18 207
18	Turkestan region	814	44 609
19	Ulytau region	83	135
20	Shymkent	716	17 602
TOTAL:		12 418	438 133
Users with no region specified:			2 495
TOTAL:			440 628

Technical support and maintenance of the ERP platform was continuously provided, and users were consulted as requests were received. Feedback for the platform users from the technical support specialists was provided via e-mail support.orc.smk@nis.edu.kz and call-centre at (7172) 235-777. At the same time, CITS specialists performed tasks related to the improvement of the existing functionality in accordance with the emerging requirements and needs.

At the moment the ERP platform is successfully functioning, and the highest activity of visits to the platform was observed at the beginning of the academic year, as well as just before the end of a particular academic term. It is worth noting that throughout the calendar year there is an increase in the number of users. Thus, to date, more than 440 000 users from among the country's educators, teachers and NIS AEO staff have registered on the platform.

The online platforms “Mektep Treneri” and “Shamshyrak” were created to provide methodological support to teachers and members of the methodological asset through the social network Facebook. At the moment, 19 800 teachers are registered in the Mektep Treneri community, and 45 423 teachers are registered in the Shamshyrak community.

In 2023, the Mektep Treneri platform hosted 5 live broadcasts for community members. During the broadcasts, discussions took place on the results of observing teachers' practice, the experience of conducting Lesson Study in schools, and the involvement of colleagues in joint research. The participants published over 245 posts and videos, engaging in discussions on various topics including working with adult audiences, school teams, conducting lesson observations, providing feedback, and evaluating student achievements. Key publications included “Quotes of the Day” and the “Review of Professional Literature”.

In 2023, a new section titled “Pedagogika Zhane Ult Ziyalyar” (Pedagogy and National Intellectuals) was launched on the Shamshyrak platform, garnering significant interest among subscribers. The main aim of the section is to disseminate the pedagogical views of national enlighteners and illustrate their

connection with contemporary pedagogical ideas. To engage subscribers, an online quiz titled “Onlinequiz” was conducted, allowing teachers to assess their knowledge in the field of educational history. The experience of live broadcasting lessons was particularly valuable, as it provided teachers with the opportunity to observe their colleagues' teaching methods in action. Over 180 posts, podcasts, and workshops have been published on the platform.

Online MEKTEP

Online Mektep is a new module of the educational portal at www.bilimland.kz, which includes digital educational content in all academic subjects according to the Model Course Plans for primary, lower secondary and upper secondary education.

Project indicators for 2023:

- 3 772 secondary schools are connected to the platform;
- 224 404 teachers use the platform;
- 1 630 056 students use the platform;
- more than 870 000 000 page views.

In accordance with the cooperation and interaction agreement under the Online Mektep project for the 2022–2023 academic year, to update and enhance the platform's content, the following lessons were developed: 14 659 lessons covering all subjects for primary, lower secondary, and upper secondary schools for the terms 2, 3, and 4 of the 2022–2023 academic year (with exceptions for “Music”, grades 1–6, and “Physical Education”, grades 1–11), 146 lessons within the revised subject programmes for “Digital Literacy”, “Visual Arts”, and “Labour”, and 38 lesson scripts in the Kazakh and Russian languages as part of the elective course programme “Global Competencies” for grade 10 students. These materials were developed by CEP and subsequently submitted to National Academy of Education for implementation in general educational schools nationwide (as outlined in the Order of the Ministry of Education dated 16 September 2022, No. 399 “On Approval of the Model Curricula for General Educational Subjects and Elective Subjects of Primary, Lower Secondary and Upper Secondary Education”).

2022-2023
academic yearONLINE
MEKTEP146
lesson
scripts

Revised subject programmes for “Digital Literacy”, “Visual Arts” and “Crafts” have been implemented

38
lesson
scripts

An elective course programme for “Global Competences” was introduced for Grade 10 students of general educational schools nationwide

14659
lesson
scripts

14 659 lessons have been developed for Terms 2, 3 and 4 in all subjects of primary, lower secondary and upper secondary schools

2.3. EXPERIENCE DISSEMINATION PORTAL WWW.TT.NIS.EDU.KZ

In order to consolidate and coordinate the the experience dissemination, including the experience of Intellectual Schools, Centre of Excellence, Centre for Pedagogical Measurements and Centre for Educational Programmes, the Experience Dissemination Portal of Nazarbayev Intellectual Schools– www.tt.nis.edu.kz (Fig.X) has been developed, which has been functioning since September 2022.

The Experience Dissemination Portal is designed to inform the pedagogical community of the country and all interested parties about the projects and events implemented by Nazarbayev Intellectual Schools.

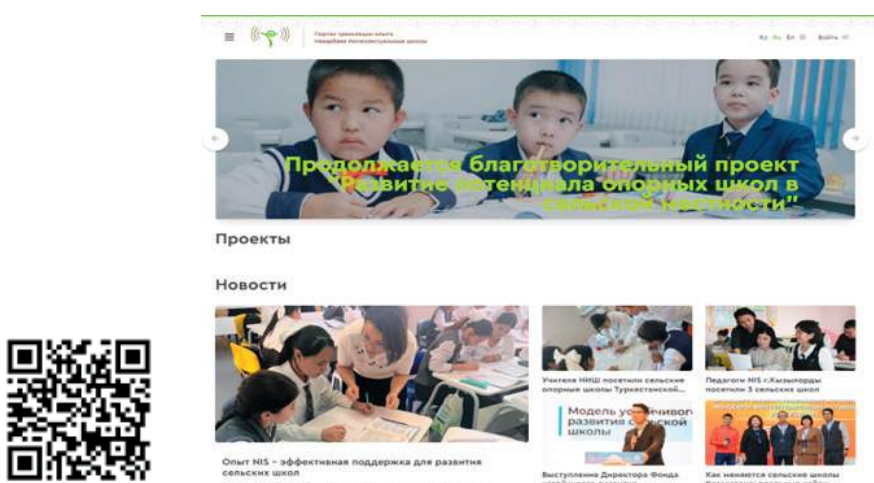
The Experience Dissemination Portal includes the following functions and opportunities: methodological support for teaching staff, creation and exchange of educational resources, monitoring and evaluation of

results, partnership and cooperation, research, and implementation of innovations.

The portal creates a community of schools in Kazakhstan that are committed to continuous improvement of the educational process. Equal opportunities have been created for all teachers in the country to scale up best practices and participate in ongoing projects.

All methodological activities conducted under the Charity Project “Building the Capacity of Rural Reference Schools” are regularly posted on the experience disseminating portal. The portal has created a Methodological Resource Bank to support teachers, which is updated with the most effective materials that have been tested in practice at the reference schools. Each reference school has its own account to provide quantitative and qualitative data to analyse the current situation in the school.

The main page of the NIS Experience Dissemination Portal – www.tt.nis.edu.kz



2.4. PUBLICATIONS OF CENTRE OF EXCELLENCE

From 2012 to 2023, Centre of Excellence developed 749 methodological materials. Including 70 methodological manuals and 4 issues of the information and methodological journal “Pedagogical Dialogue” (hereinafter – the Journal) prepared for publication in 2023.

Publishing activities are aimed at popularising the results of research projects, methodological and resource support for professional development courses, seminars and webinars, and post-course activities.

Methodological manuals are published in the Kazakh, Russian and English languages and are in demand among teachers of all levels of education: from preschool to higher and postgraduate. The manuals are published under the headings “In aid of the teacher”, “From the teacher’s practice”, “In aid of the school leader”, “In aid of the university/ college teacher”, “International experience”, “Research”. They cover scientific and methodological aspects of the new school practice, the results of research to improve teaching and learning, the best domestic and foreign experience of teachers.

Publication of the information and methodological journal “Pedagogical Dialogue”

In cooperation with experts from the Faculty of Education of the University of Cambridge, CoE publishes the information and methodological journal “Pedagogical Dialogue” in the Kazakh, Russian and English languages. The Journal is registered with the Ministry of Culture and Information of the Republic of Kazakhstan (Certificate No. 12804-І) and the International Centre for the Registration of Serial Publications ISSN (UNESCO, Paris, France) (ISSN 2308-7668).

The Journal aims to highlight the best practices of “Nazarbayev Intellectual Schools”, the best Kazakhstani and world educational practices, the results of research activities of researchers and teachers.

In 2023, 4 issues of the Journal were published: “Teacher makes the world a better place”, “Creativity to every school”, “STEAM & skills of the future”, “Prosperity of rural schools – the key to the well-being of society”, dedicated to the International Research-to-Practice Conference of Nazarbayev Intellectual Schools.



The first issue of 2023 was dedicated to the teacher. The issues addressed included the teacher’s mission in the modern world, the components of a communicative image, responsible behaviour in the Internet space, and the basic rules of professional ethics. The Journal published articles by both Kazakh and foreign scholars, experienced teachers and young educators.



The second issue of the Journal explored the issue of creativity in education as the most important skill of a competitive specialist. Scholars, experts from the USA, Great Britain, Hungary, Russia and Malaysia shared their opinions. Special attention was paid to the questions about pedagogical practices supporting creative teaching, peculiarities of creative thinking development, etc.



The content of the Journal reflects the key ideas of STEAM-education aimed at building student-friendly links between academic disciplines.

The issues raised include the factors influencing successful teaching practice, STEAM opportunities, learning through art and design, and conditions for the development of STEAM-competence of teachers.



This issue presents materials, speeches of speakers of the International Research-to-Practice Conference of Nazarbayev Intellectual Schools “Prosperity of rural schools – the key to the well-being of society”.

The model of sustainable development of rural school is described, advantages and disadvantages of school teaching, development of emotional intelligence and formation of comfortable learning environment in the conditions of inclusive education are considered.

In 2023, articles of 74 authors have been published in the Journal, including: 30 foreign scholars-practitioners, international experts and consultants, 14 teachers of NIS, 15 employees of CoE, 1 director of general educational school, 4 employees of NIS AOE, 1 employee of CPM, 1 employee of CEP, 3 representatives of the National Academy of Education named after Y. Altynsarin, 1 director of PF “Fund for Sustainable Development of Education”, 2 representatives of Quantum STEM School, 1 Chair of the Board of the Academy of Pedagogical Sciences, 2 experienced teachers, honorary educators and holders of Y. Altynsarin award pin.

Scholars and education experts from the following countries have published their papers: Great Britain, Norway, Lithuania, the Netherlands, Finland, Sweden, Canada, Australia, the USA, Malaysia, Hungary, Slovakia, Azerbaijan, the United Arab Emirates, Scotland, Vietnam, and Russia (Table 1).

Disseminating the experience in the development of pre-school and school education systems through the Journal allows to see a holistic picture of interaction of educational levels, continuity of content and methods of teaching and learning, positive experience of changes in pedagogical practice. It also contributes to highlighting contemporary problems and their possible solutions.

Publication of methodological manuals

In accordance with the “Development Strategy of “Nazarbayev Intellectual Schools till 2030” CoE publishes 70 methodological manuals annually. In the period from 2012 to the present 703 methodological literature has been published.

In 2023, 70 methodological manuals were developed and published. Presented methodical literature is authored by employees of branches, also some works are developed in co-authorship with teachers

of Nazarbayev Intellectual Schools and general educational schools.

Publishing methodological manuals is an important means of professional support of pedagogical staff. They present systematised practical material on teaching and learning methods. The contents of the manuals represent a sequence of actions and rules developed on the basis of the authors’ own positive experience and the results of research into pedagogical practice.

Development of methodological guidelines and resources

In 2023, CEP continued to develop methodological guidelines covering a wide range of subjects. The educational resources are designed to educate general educational school students through subject-specific content.

As part of this initiative, the guidelines covering Chemistry, Mathematics, Computer Science, Physics, Biology, Geography, Kazakh Language, Russian Language, and primary school subjects (9 in total) have been developed. The materials provide recommendations and suggestions for integrating pastoral work into the learning process. Particular attention is paid to emphasising the

educational component of lessons, including the cultivation of values through learning objectives and tasks, as well as the pivotal role of the teacher in facilitating this process. Hence, these guidelines equip teachers with valuable tools for effectively integrating educational elements into the learning process.

This initiative reflects the commitment of NIS AEO to fostering a harmonious educational environment, wherein the learning process serves not only the acquisition of knowledge but also the development of personal qualities and values among primary and secondary school students.



3. EXTENDED EDUCATION

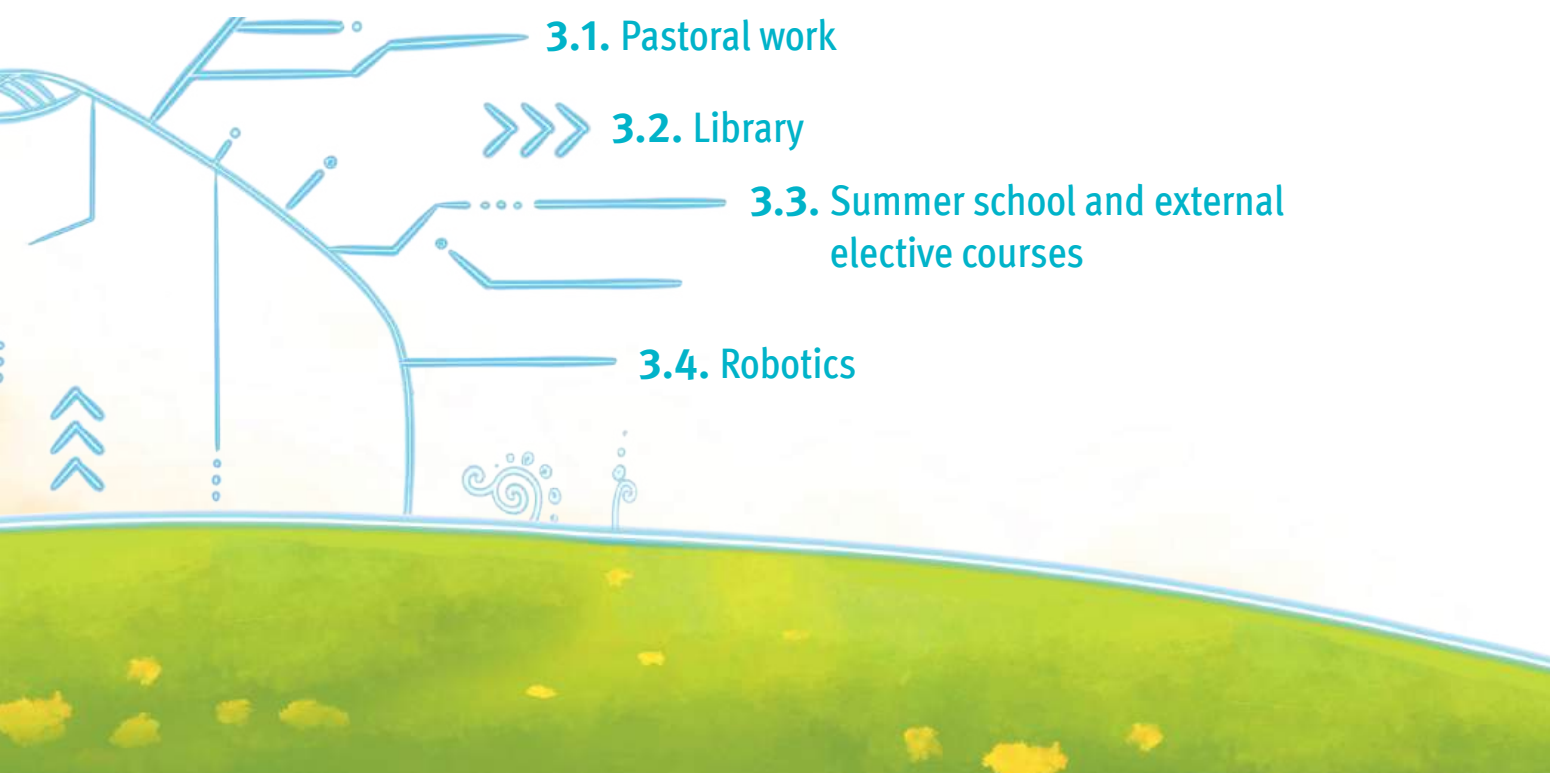


3.1. Pastoral work

3.2. Library

**3.3. Summer school and external
elective courses**

3.4. Robotics



3. EXTENDED EDUCATION

3.1. PASTORAL WORK

Experience dissemination is an important aspect of pastoral work in NIS AEO. An analysis of the work done has shown that all schools in the NIS network took part in experience dissemination by implementing various educational projects. A total of 189 sem-

inars and master classes were held. The number of general educational schools involved in disseminating the experience of Intellectual Schools in pastoral work was 1 232, the number of participants was 6 464.

	Number of seminars in urban schools	Number of seminars in regional schools	Number of webinars online	Audience coverage (number)
TOTAL	37	130	22	6 464

As noted by the deputy directors of Intellectual Schools, teachers, curators, psychologists, librarians of general educational schools are most active in the organisation of the curatorial service, social projects and practices developed by Intellectual Schools. It should be noted that the system of experience dissemination this year includes various forms of work: seminars, webinars, round tables, forums, consultations. The main objectives of them are the promotion of moral values, improvement of the system of pastoral work of the school aimed at creating conditions for the development of a competitive moral and creative personality.

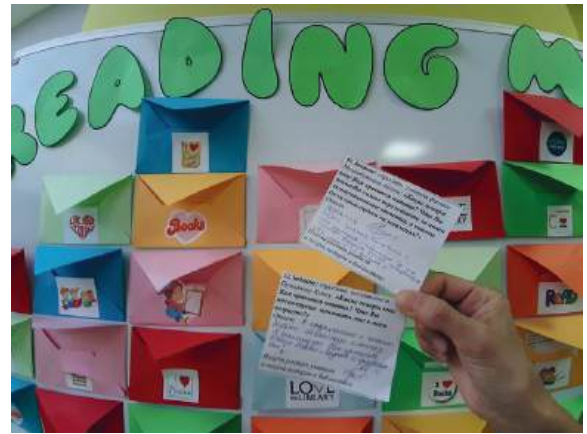
All Intellectual Schools hosted the Forum of Young Teachers of the regions, where team building, academic and creative master classes, and training sessions were held.

As part of the project “Developing the potential of reference schools in rural areas”, teacher-organisers-mentors, dormitory teachers shared forms and methods of pastoral work system of NIS AEO.

During the seminar, class teachers learnt about the approaches and methods of work and got ac-

quainted with the wonderful practical experience of implementing the pastoral system through the main projects: School community “Shanyrak”, “Service to Society”, “Continuity of generations”, “Poets of the great steppe”, “Years of contemporaries”, “100 Kazakh songs and 100 kuys”, Leadership, “Proverbs used in my life”, Wikipedia, TEDx, 100 books, Summer Practices, TET, extracurricular education, etc. They also received the necessary methods of teaching students design and planning skills.

Analysing the results of the events within the framework of experience dissemination, we can say that their implementation allows to promote innovative processes in the education system, to provide platforms for open professional dialogue. In the next academic year we should also pay attention to the publication of articles based on the results of Lesson Study, Action research and the creation of methodological developments to generalise experience.



3.2. LIBRARIES

The main areas for disseminating teacher-librarians' work experience include the promotion of reading, the development of information and functional literacy, academic integrity, and methodological support for librarians of general educational schools.



From January to December 2023, teacher-librarians conducted 156 workshops for 2 494 schools and trained more than 3 026 school staff offline and online for urban, regional, district and rural reference schools. The main topics of the experience dissemination were: “The library as a resource platform of the school for students and teachers”, “Development of information and reading literacy of students”, “Formation of reading literacy of students through active methods of reading promotion”, “The role and place of the school library in the modern educational process”.

The participants of the online seminar learnt the methods and techniques of forming information literacy of students through critical thinking methods, such as The Six Thinking Hats, Fishbone, etc., practically applied mind maps in creating additional material about the writers of Kazakhstan, made lists of used literature with the help of various online services.



At the offline workshop on organising the work of school libraries, participants learnt to develop skills of analytical text analysis on the basis of fable tests with resource support, got acquainted with the methods of working with illustrated books as a tool for recognising students' emotions, They

also created a dictionary of values and terms using Chat GPT artificial intelligence, worked with active learning methods to develop reading literacy “Read

and write”, and practiced methods to develop news literacy “5W+1H”.

Title	Number of seminars held	Number of schools covered	Number of participants
Reference schools	78	80	690
Urban schools	51	1 491	1 499
Regional schools	20	472	478
At the request of schools	7	326	359

In addition, as part of disseminating the Intellectual Schools experience, a creative group of teachers and teacher-librarians visited reference schools to conduct trainings. From January to December 2023, teacher-librarians conducted 78 offline and online seminars for 80 schools and trained more than 690 school staff of reference support schools in rural areas.

Thus, School-Gymnasium named after B. Sokpakbayev in Raiymbek district of Almaty region and Secondary school named after Turar Ryskulov with boarding school in Uzynagash village of Zhambyl district, Almaty region are actively implementing such projects as “Bookcrossing”, “Book conquers the world”, they promote reading using such methods as “Reading in a circle”, “Reading man”. Secondary school named after Y. Sikimov with boarding school in Zhansugurov village, Aksu district, Zhetisu region, Abay school-gymnasium in Sarkand district of Zhetisu region hold meetings within the project “READx”, also use such activities as “Book picture”, “Book Bingo”, “Darkened poetry” to promote reading and develop reading literacy.

Secondary school named after T. Zharmagambetov in Baiganinsky district of Aktope region actively uses in its work game methods to promote reading among secondary and primary school students “Bring along your favourite book”, “Book Puzzle”, project “Reading man”, “My first favourite page”, “Lego poetry”. Secondary school named after Kozhageldy Batyr in Aksuat district, Abay region successfully introduces initiatives and methods of work to promote reading, such as “Book conquers the world”, Reading in a circle, Throw away the map, Reading illustrated books.

The libraries of reference schools actively implement various projects in their work (Bookcrossing,

100 books, Drop everything and read, Book start, Book conquers the world), interesting methods (Literary jam, Poem analysis, Human Bingo, Triple method analysis, WAKA (Japanese method), pastoral methods, reading illustrated books “Home”, “Strange home”, “Fox”, “Every flower’s hope”, etc.), as well as other interesting methods.

From September to December 2023, the internship of reference schools in rural areas was successfully conducted in accordance with the approved schedule. Teacher-librarians of Nazarbayev Intellectual Schools actively participated in this process, providing necessary support and training to teaching staff. The main objective of the internship is to provide the reference schools in rural areas with additional methodological support aimed at improving the quality of education.

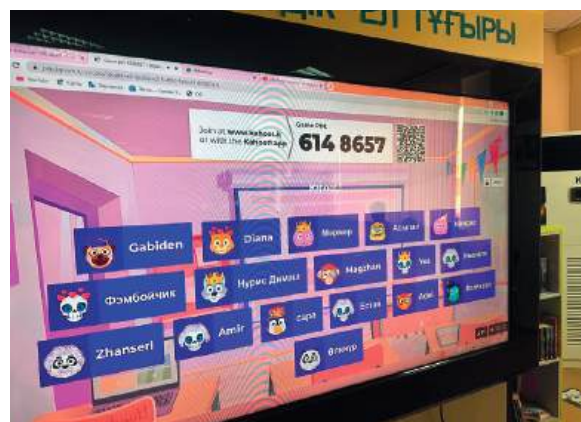
As part of this initiative, a variety of activities, including master classes, trainings and exchange of experience, were conducted. These activities allowed for deeper interaction between educational institutions and created favourable conditions for sharing best practices. As part of the internship, librarians and teachers from 23 reference schools were trained in libraries of Intellectual Schools of Taraz, Kyzylorda, Pavlodar, Shymkent, Aktau, Kostanay. Teacher-librarians of Intellectual schools of Taraz, Oskemen, Pavlodar, Oral, Shymkent, Karagandy held events in reference schools on such topics as: «Development of information and reading literacy of students», «Cultivation of teenager’s personality through reading», «Library – school information centre for students and teachers», «Role of library in innovative school».

To promote reading and increase interest in books, libraries of Nazarbayev Intellectual Schools

organise Bookcrossing campaign. This social initiative of donating read books to the libraries of general educational schools. In 2023, a large number of fiction, popular science and reference books were collected and donated for permanent use to general educational schools in the regions. A total of 4 349 items of books were collected and donated by Intellectual Schools to reference schools in 2023.

The libraries of Intellectual Schools, constantly improve their own practices and optimise process-

es and methods of work. They are not only methodological and training centres of experience exchange for libraries of general educational schools in the region, but also administrators of professional library communities in social networks. These communities are online platforms for experience sharing, training and professional development of school librarians, where all school libraries have the opportunity to publish news, events and discuss professional issues.



3.3. SUMMER SCHOOL AND EXTERNAL ELECTIVE COURSES

Summer School

Summer School is held annually in 22 Intellectual Schools during the summer holidays to develop abilities to conduct project-research activities, deepen knowledge of subjects and prepare for admission to the leading universities of Kazakhstan and abroad. Students of Intellectual Schools, as well as students of general educational schools can participate on a paid and unpaid basis.

Summer School is organised annually by Intellectual Schools to create conditions for combining recreation

and interest-based learning for students in academic, sports and creative areas and is a successful platform designed to develop research and critical thinking skills of students, deepen academic knowledge. The content of the courses is shaped by the demands of the students and the staff potential of each Intellectual School and consists of course programmes that complement, extend and deepen educational programme NIS-Programme. In 2023, almost 9 000 students took part in the Summer School.

External elective courses

NIS AEO supports students' aspirations to deepen and broaden academic knowledge, develop creative and imaginative thinking skills, as well as research, communication, and language competences. In this respect, students are organised to participate in external elective courses online using educational platforms of the world's leading universities.

The Johns Hopkins Center for Talented Youth (CTY), a world leader in gifted education since 1979, is a non-profit organisation dedicated to identifying and developing the talents of academically advanced students around the world.

CTY Online offers learners many benefits, such as the flexibility of a personalised course or the structure of a session-based course and provides opportunities to develop cognitive and non-cognitive skills. CTY Online courses cover a wide range of subject areas including Mathematics, Science, Computer Science, Writing, Grammar, Critical Reading, History, World Languages and English language development. In 2023, 63 students of grades 9-11 at Intellectual Schools had the opportunity to participate in CTY online courses powered by the MS Office and Zoom platforms.

- Arduino Prototyping
- Behavioral economics
- Disease Modeling
- Engineering design
- Game Design
- Game of Life

- The Mathematics of volatile markets
- The psychology of memory
- Unquiet Minds

The **University of Hong Kong** was founded in 1911 and is the oldest university in the country. The university is ranked 4th in the rankings of the best universities in Asia and 21st among the world's universities according to QS rankings in 2023.

Most of the teaching staff of the university are specialists invited from other countries – professors from the UK, USA, Canada. The university has 10 faculties. The most popular with both local and international students are the faculties of Law, Business and Economics, and Engineering.

The Academy is committed to helping students explore and develop their interests in a wide range of academic disciplines, emphasising personal growth and development of the whole person. In 2023, 63 students completed courses at the Academy.

Arizona State University (ASU), founded in 1885 in Tempe, Arizona, USA, has been ranked number one in innovation by US News and World Report for the sixth consecutive year. ASU offers a wide range of academic choices with more than 800 undergraduate and graduate programmes from the university's 16 colleges and schools, as well as access to the best ASU Online programmes. 20 Intellectual Schools students participating in the Adaptive-Active Learning Prototypes project took advanced courses in Chemistry, Physics, and Biology.

3.4. ROBOTICS

Organisation of the regional and national robotics Olympiad WRO-2023

From 27 May to 3 June 2023, qualifying regional stages of the Olympiad were held at Intellectual Schools in all regions of the country. The Olympiad participants were 918 students (650 – students of general educational schools, 268 – students of Nazarbayev Intellectual Schools), who competed in four WRO categories: RoboMission, Future Innovators, RoboSports and Future Engineers.

According to the results of the Competition, 266 students (140 of them – students of general educational schools, 126 – students of Intellectual Schools) became winners in different categories and were admitted to participate in the Republican stage of the Robotics Olympiad WRO-2023 (hereinafter – the Olympiad), which was held on 24-25 August 2023 at NIS ChB in Almaty.

WRO is one of the most challenging and prestigious robotics competitions in the world among middle-aged and older children. This year's event brought together participants from 81 countries.

The global agenda of the World Robot Olympiad is dedicated to making human-robot co-operation successful and safe. The main themes of WRO are traditionally linked to the UN Sustainable Development Goals. The 2023 theme is symbolic for all countries - Connecting the World, teams worked with robots building the infrastructure and logistics of the digital industry. Teams will learn about the logistics of delivery and the infrastructure for our digital technologies. They will explore how robots can help the delivery and infrastructure of digital technology become safer, more sustainable and more efficient.

According to the results of the Republican Olympiad, the national team of Kazakhstan on robotics was formed (13 teams, including 6 teams of Intellectual Schools, 7 teams of students of general educational schools), which will represent our country at the World Robot Olympiad on 7-9 November this year in Panama city, Panama (see Part 3.).

4. PROFESSIONAL DEVELOPMENT OF THE TEACHING STAFF OF THE REPUBLIC OF KAZAKHSTAN



4.1. Educational programmes for Advanced Teacher Training in Kazakhstan

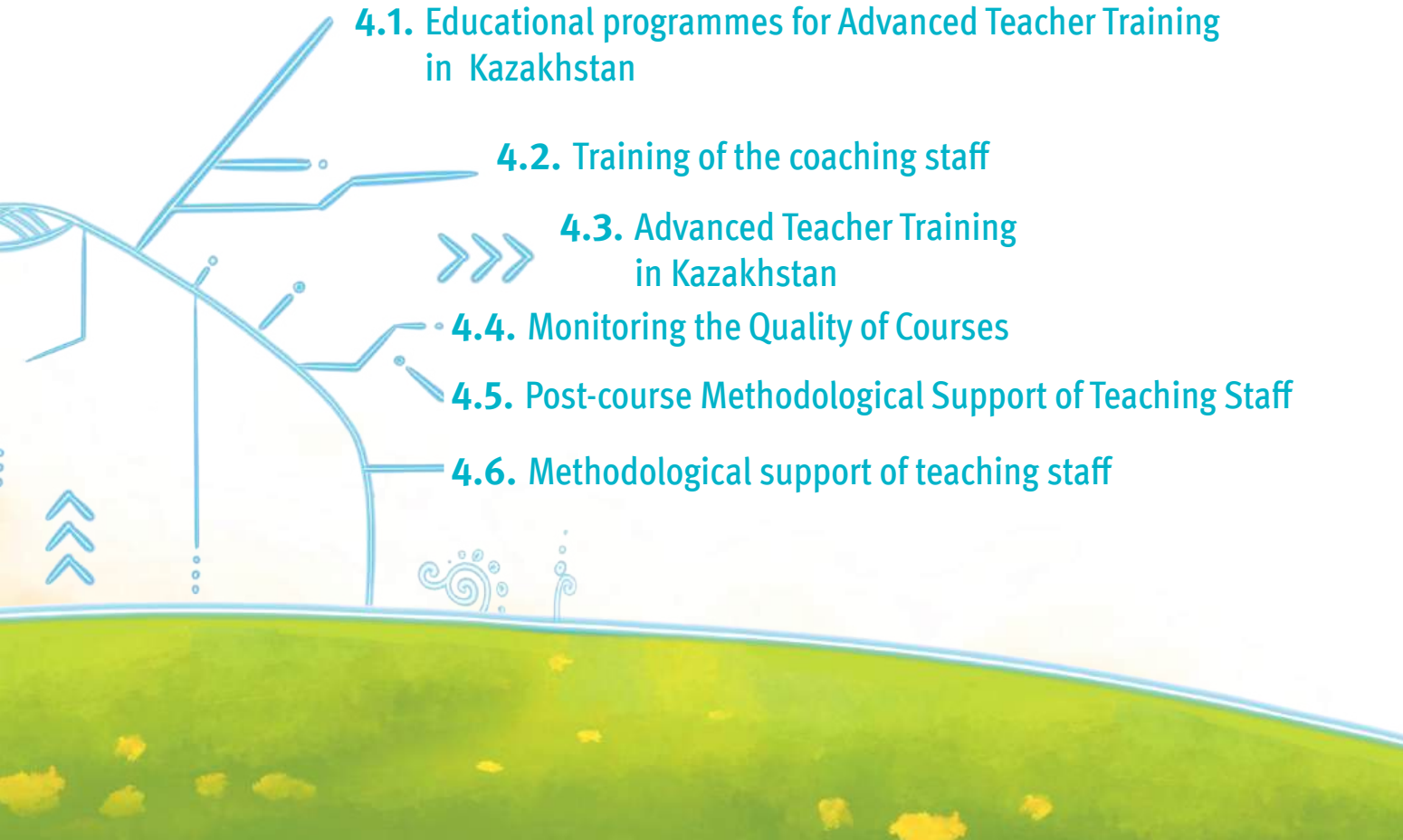
4.2. Training of the coaching staff

4.3. Advanced Teacher Training in Kazakhstan

4.4. Monitoring the Quality of Courses

4.5. Post-course Methodological Support of Teaching Staff

4.6. Methodological support of teaching staff



4. PROFESSIONAL DEVELOPMENT OF THE TEACHING STAFF OF THE REPUBLIC OF KAZAKHSTAN

4.1. TRAINING PROGRAMMES FOR PROFESSIONAL DEVELOPMENT OF TEACHING STAFF IN KAZAKHSTAN

During 2023, CoE successfully developed and updated 38 training programmes for teachers in Kazakhstan. These programmes were divided into different areas to support the professional development of teachers in different areas and to ensure quality education for children. In particular, CoE developed 8 training programmes aimed at developing teachers' metacognitive competencies. These programmes included such topics as STEAM learning in primary schools, assessment for creating successful educational environments, reading literacy and teacher research. To support the development of teachers' professional competencies in the field of inclusive education, CoE developed 2 training programmes on the practice of inclusive education in primary and lower secondary schools.

As part of the professional development of technical and vocational education teachers, CoE developed 15 programmes. These programmes included both general educational subjects and specialised topics such as psychological and pedagogical support for college students and effective teaching and learning in college. One of the areas of CoE's work was to improve the professional competences of specialists of regional, city and district methodological rooms.

For this purpose a special programme "The Modern Methodologist: Competent Expert and Effective Mentor" was developed. Also 1 training programme was developed for professional development of teachers of Nazarbayev Intellectual Schools. This programme focused on digital education and included content and tools for effective teaching. In addition, CoE developed 6 training programmes that helped teachers to improve their skills in the field of leadership and management in education. These programmes covered topics such as the school leadership talent pool, the effective leader in preschool management, and leadership in the modern college. It is worth noting that CoE also updated the content of 5 training programmes, including Management in Education, Effective Learning and Teaching, Teacher Leadership in School and Teaching Community, and Physical Education Lesson in School.

The development and updating of training programmes was carried out by CoE in accordance with the state educational order and requests from external organisations. The analysis showed that all set tasks and plans were successfully fulfilled by 100%, which confirms the success of the work of CoE in 2023.

4.2. TRAINING OF TRAINERS

One of the main priorities of CoE is training of qualified trainers to ensure a high level of organisation and content of the educational process at advanced training courses. At present, 104 certified trainers are actively working in CoE. In order to ensure the quality of training at professional development courses, CoE also attracts experienced teacher-leaders from state schools, preschool organisations and research institutions, which allows enriching the content of the

programme with real cases and events from teachers' practice, bringing theoretical training closer to the realities of pedagogical work. Teacher trainers gain valuable experience of working with adult audiences and use these skills to improve their own professional practice in their work with the teams of their educational institutions.

In 2023, 203 trainers were trained according to the following training programmes.

Number of trainers trained by training programmes

Nº	Programme	Total	Including CoE trainers
1	Assessment approaches for creating a successful educational environment	60	60
2	Reading literacy: reading, cognition, and creativity	60	60
3	School management based on data analysis	40	40
4	Analytical competences of school teachers to improve teaching practices	20	20
5	Professional development programme for heads of educational organisations in Kazakhstan	23	23
Total		203	203

Over the last three years, 1 524 trainers have been trained under various training programmes of professional development.

Number of trainers trained for the last three years

	By year		
	2021	2022	2023
A total of 1 624 trainers have been trained	567 trainers	754 trainers	203 trainers
The share of involved trainers	362 чел. (64%)	545 чел. (72%)	0

The procedure of certification of trainers is carried out to assess and confirm the professional level of trainers. In 2023, this procedure was carried out by the CoE Expert Council under NIS AEO. Out of the school teachers engaged to conduct courses under the contract on reimbursable services, 23 trainers (41%) successfully passed the certification procedure

and received a certificate confirming their status of a trainer.

Thus, CoE continues to train trainers on the relevant teacher training programmes. Both CoE trainers and already certified trainers are involved in training activities, which ensures high quality of courses.

4.3. ADVANCED TRAINING OF TEACHING STAFF OF THE REPUBLIC OF KAZAKHSTAN

Professional development courses at CoE and its branches were organised and conducted in accordance with the Rules approved by the Director of CoE, Order No. 482 dated 07.11.2022, as well as taking into account the Rules for organising and conducting professional development courses for teachers and post-course support, approved by the Minister of Education and Science of the Republic of Kazakhstan, Order No. 95 dated 28 January 2016. The CoE programmes were funded at the expense of NIS AEO. As of the end of 2023, the CoE plan for professional development of teachers was fully implemented.

In terms of gender, the majority of trainees were women – 90.3 per cent and men – 9.7 per cent. Of the total number of trainees, most were teachers from rural schools – 57.6 per cent (or 11 978 teachers). By language: 70.4 per cent of teachers were trained in Kazakh, 21.4 per cent in Russian, and 8.2 per cent in English.

The number of trainees by levels of education:

2. 1 975 teachers of preschool educational organisations on programmes “Early Child Development

Guidelines” and “Management Practices in Preschool Organisations: Child Development Guidelines”.

3. 18 525 secondary education teachers on training programmes for subject leaders and teachers, including various aspects of lesson improvement, innovative management, school team building and development of professional competencies.

4. 300 college teachers on programmes “Methods and Technologies of Teaching and Learning” and “Methodology of Applied Research”.

One of the aspects of ensuring quality educational process at the courses is systematic monitoring. Course participants report that continuous feedback from the trainers during the sessions is timely, constructive, effective and useful.

Thus, the CoE plan for professional development of teachers in 2023 has been fully implemented. Teachers were awarded certificates based on the results of external evaluation. The trainees received teaching and methodological resources to further apply in their practice. To ensure effective implementation of the acquired knowledge, trainers will provide post-course support during the year.

Kazakh Language immersion

On 6 June 2023, the Republican Research-to-Practice Online Conference titled “The Project of Language Immersion in the Kazakh Language: Experience and Opportunities” was held. The conference aimed to foster the language environment in educational institutions

nationwide. During the conference, CEP specialists presented reports on the topics “Basic Principles and Possibilities of the Kazakh Language Learning Project” and “Pedagogical and Psychological Aspects of Language Learning Methodology”.



Svetlana Belova, director of the Mustamäe Humanitarian Gymnasium in Tallinn (Estonia), was one of the honoured guests of the conference. She shared her experience with the language training programme in Estonia, highlighting the effectiveness of this approach in the field of education. Svetlana also expressed her confidence in the successful implementation of the project, drawing from her impressions gathered during visits to kindergartens in Astana and Kokshetau, where the practice of full language immersion is already underway. A total of 79 teachers attended the conference, comprising 58 kindergarten teachers and 21 primary school teachers.

From 30 October to 3 November 2023, CEP specialists conducted a training session on the methodology of teaching the Kazakh language at the International School of Astana. The training session focused on the topic of “Creating a developing environment: an emotional environment, and talking walls”, and also included a master class titled “Teaching the Kazakh language in a comfortable and effective language learning environment”.

Additionally, CEP specialists organised a monitoring seminar on the project “Teaching the Kazakh language” in the period of 6 to 11 December at the International School of Astana. The seminar was attended by 65 primary school and kindergarten teachers.

Training seminar on the topic «Bala Tabigatynyn Kalauly - Oyin» («Play is a child’s natural inclination»)

From 27 to 30 July 2023, teachers from the «Altyn urpak Astana» kindergarten attended a 36-hour training seminar titled «Bala Tabigatynyn Kalauly - Oyin» («Play is a child’s natural inclination»). The seminar was attended by a total of 99 educators.

During the seminar, teachers delved into and discussed effective methods for speech development in preschool children. The seminar topics encompassed a wide range of subjects, including comprehensive content and language training in kindergarten, micro-education, organizing design

activities, project work, and promoting active involvement in drama as a natural means of developing children’s speech.

All the methods are based on the desire to develop speech through diverse and interactive activities, creating favorable conditions for the formation of vocabulary, cognitive abilities and creative thinking in children. Overall, the seminar participants gained insights into new pedagogical tools aimed at stimulating creativity in teaching and cultivating communication skills in children.

Topic	Basic techniques
<ul style="list-style-type: none"> • Comprehensive content and language training • Microeducation • Organizing design activities • Project work • Active involvement in drama 	<ul style="list-style-type: none"> • Integrating content and language training in kindergarten • Individual approach, personalised techniques • Using construction set to develop creative thinking • Stimulating research approach and communicative skills • Using drama to develop natural speech and express feelings

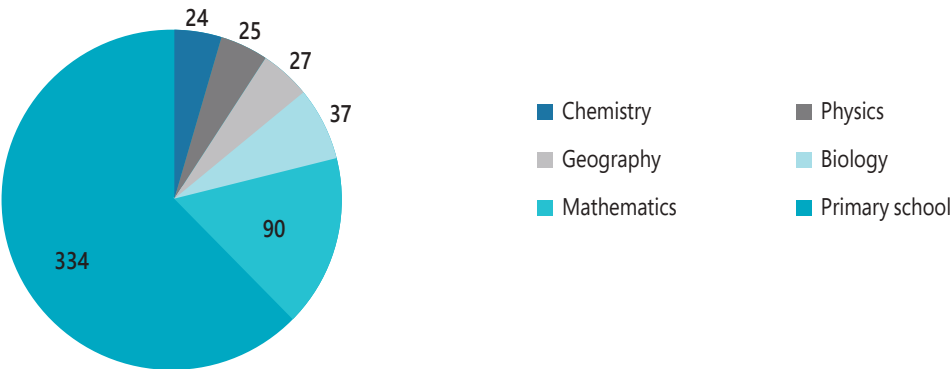
Training workshops for BINOM EDUCATION teachers

The CEP subject specialists conducted training workshops for grades 7-8 teachers of the BINOM school network in Astana and Atyrau.

Theme	Workshop on the development of students' functional literacy for primary school teachers	Workshop on the development of professional teaching competencies for the development of reading literacy among primary school students	Workshop on the development of professional teaching competencies for the development of reading literacy among primary school students
Date	7–12 August 2023	14–25 August 2023	1–3 November 2023
Venue	BINOM Astana	BINOM Astana	BINOM Atyrau
Subject	– Mathematics – Chemistry – Physics – Biology	– Kazakh language – Russian language	– Kazakh language – Russian language

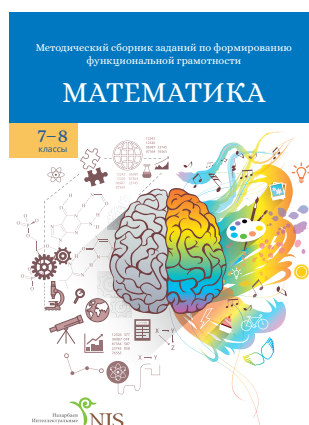
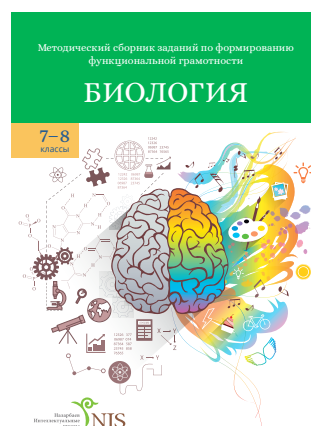
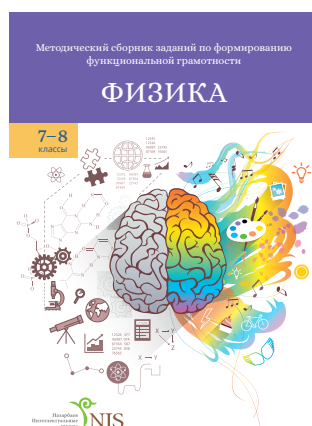
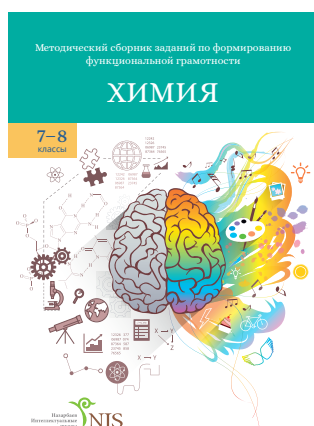
Within the workshop for BINOM EDUCATION teachers, a total of 537 teachers were trained during the reporting period.

Number of Binom teachers trained by subjects



Within the workshop on the development of functional and reading literacy of students, teachers used a practice-oriented approach to analyse and assimilate the concepts of these types of literacy. The teachers were presented examples of international research tasks such as TIMSS, PISA, and PIRLS, as well as contextual tasks aimed at stimulating students' cognitive activity. Special attention was given to the importance of participating in international comparative studies on the quality of education, as well as the use of research tasks to interpret data and formulate conclusions.

Moreover, during the reporting period, the CEP developed elective course programmes in Mathematics, Chemistry, Physics, Biology, and Geography in both Russian and Kazakh, and delivered them to the BINOM school network. These programmes are designed to enhance students' abilities to apply knowledge and skills in the field of science in real-life situations. In particular, the courses encompass discussions on socially significant issues related to the practical applications of advancements in science.



Evaluation within teacher training courses

CPM conducts independent evaluation procedures within 7 teacher training courses to determine the level of acquiring the content of programmes and certification. Teachers deliver portfolios and presentations that reflect on how they are able to plan and apply acquired knowledge and skills in practice.

In 2023, 21 223 teaching materials were evaluated and 19 616 (92%) were recommended for certification.

Number of teachers in the context of course programmes

Programme	Evaluated	Recommended
Effective teaching	125	64 (51%)
Teacher leadership at school*	125	93 (74%)
Teacher leadership in the teaching community*	125	90 (72%)
Courses for heads of comprehensive schools	756	641 (85%)
Training courses "Lessons at school: focuses and strategies for improvement"*	13 950	13 000 (93%)
Training courses "Teaching at college: focuses and strategies for improvement"	4 517	4185 (93%)
Courses for teachers of preschool organisations "Guidelines for early child development"	1496	1423 (95%)
Total	21 223	19 616 (92%)

1 116 teachers not recommended for certification were evaluated repeatedly.

Number of teachers reevaluated

Programme	Evaluated	Recommended
Teacher leadership at school*	1	-
Teacher leadership in the teaching community*	7	7 (100%)
Courses for heads of comprehensive schools	64	38 (59%)
Training course "Lessons at school: focuses and strategies for improvement"*	753	664 (88%)
Training courses "Teaching at college: focuses and strategies for improvement"	213	191 (90%)
Courses for teachers of preschool organisations "Guidelines for early child development"	78	65 (83%)
Total	1 116	965 (86%)

According to the evaluation results, on average 4% of the materials were rated «good», 90% – «satisfactory», and 6% – «unsatisfactory».

Оценка материалов педагогов

Programme	Total	Evaluation					
		good		sat.		unsat.	
Effective teaching	125	2	1%	62	50%	61	49%
Teacher Leadership at school*	125	12	10%	81	65%	32	25%
Teacher Leadership in the teaching community*	125	11	9%	80	64%	34	27%
Courses for heads of comprehensive schools of KZ	756	6	1%	635	84%	113	15%
Training courses «Lessons at school: focuses and strategies for improvement»*	14 832	1795	12%	11 989	80%	1048	8%
Training courses «Teaching at college: focuses and strategies for improvement»	4730	519	12%	3857	88%	354	7%
Courses for teachers of preschool organisations*	1574	17	1%	1471	94%	86	5%
Total	22 267	2 362	11%	18 175	82%	1 728	7%

To ensure reliability of evaluation procedures and to support the principles of academic integrity, portfolios are checked for plagiarism using online services at the formative and summative assessment stages.

At the stage of formative assessment, feedback is provided, which makes it possible to improve the quality of evidence.

The results of checking the teachers' portfolios

Programme	Number of portfolio reports	Plagiarism	
		FA stage	SA stage
Effective teaching	125	12	36
Teacher leadership at school*	125	20	19
Teacher leadership in the teaching community*	125	37	19
Courses for heads of comprehensive schools of KZ	4 204	209	107
Courses for teachers of preschool organisations	1 574	95	26
Total	6 153	373	169

Amendments have been introduced to documents regulating assessment procedures within such programmes as «Lessons at school: focuses and strategies for improvement», «Teaching at college: focuses and strategies for implementation», and training courses for teachers and assessment experts.

In 2023, reflective reports of 75 trainers involved in short-term courses were assessed. 31 (41,3%) of them were recommended for certification.

The recommendations below were provided following the results of assessment of reflective reports to develop practice:

- take into account the needs of teachers (reasonably choose teaching methods, resources, activities and lesson structure) when planning a lesson;
- choose assessment methods and tools to support teachers’ learning in achieving learning goals;
- evaluate the lessons according to how all teachers achieved their learning goals.

NIS held 4 webinars to provide methodological support to the course trainers, to support the principles of academic integrity, explain the significance of citation, more than 30 individual and group consultations, and provided more than 75 features on portfolio assessment with the recommendations on the development of trainers’ practices.

4.4. MONITORING THE QUALITY OF COURSEWORK TRAINING

In 2023, NIS proceeded monitoring studies to ensure the quality and control of processes related to the development and implementation of professional development programmes for teachers of Kazakhstani educational institutions. They were completed

in accordance with the Regulations approved by the director’s order.

Monitoring studies were conducted systematically at all stages of the implementation of educational programmes ensuring their integrity.

Main tasks of monitoring studies

Pre-course research	To develop the concept, thematic content, goals, objectives and expected outcomes of the programme
Course research	To timely adjust teaching and learning materials and to provide methodology for the learning process in the courses
Post-course research	To manage the quality of post-course activities of certified teachers

In 2023, CoE conducted 10 studies using scientific methods such as questionnaires, pedagogical observation, interviews, focus groups and document review. The studies involved not only managers and teachers but also specialists from

departments of education, students and their parents. The total number of respondents in these studies was 16 593. It is noted that 3 pre-course studies, 5 course and 2 post-course studies were conducted among them.

4.5. POST-COURSE SUPPORT FOR TEACHING STAFF

According to the Post-course Support Regulations approved by the order of CoE director No.480 dated 07.11.2022, teachers who successfully completed training courses receive post-course support.

It aims to identify professional challenges in teaching and to provide methodological assistance. Communication between trainers and trainees is built up through the Communication Matrix filled in on the platform esus.kz

As part of the post-course support for comprehensive school teachers trained by CoE, the main focus is on the lesson observation and a constructive feedback. This approach allows trainers to individually

solve teachers’ issues and to implement the ideas of a high-quality training.

This year, CoE trainers held 7 000 events including 2490 lesson observations (see Appendix 1). The analysis of observation sheets showed that most teachers successfully write lesson plans, build its structure, organise students’ active learning and use different opportunities to visualise the material and evaluate academic achievements. However, most teachers still have some difficulties in certain aspects such as formulating SMART lesson objectives taking into account the levels of thinking skill development, building a dialogue in the classroom through open questions,

involving all students in active learning and using online platforms.

To solve typical difficulties of school practices identified as a result of lesson observations, trainers conduct seminars, webinars, and consultations.

Post-course support for heads of general educational organisations who completed the CoE training includes an analysis of school development plans and attendance of pedagogical and methodological

councils' meetings. According to the results of the visit, it was revealed that the directors have difficulties in writing a school development plan, priorities do not always correspond to the main goal of school, the results of intra-school teams are not observed and the effectiveness of the measures taken to develop the professional competence of the team is not monitored. Therefore, CoE conducted seminars and webinars to develop managerial skills.

4.6. METHODOLOGICAL SUPPORT FOR TEACHING STAFF

One of the areas of methodological support for teachers is to strengthen the professional potential of the network of leading schools. These schools work with partner schools through interschool communities of teachers aiming to systematically develop skills and experience of every teacher in the country. Cooperation between teachers of leading and partner schools allows to acquire new skills and experience that make changes in school practice.

In 2023, the number of leading schools was 2000 which is about 30% of the total number of schools in the country. The operating principle includes the training of leading school teachers so that leading schools would be able to train partner schools teachers. Leading schools follow the instruction letter on the organisation of work of leading schools issued by the Ministry of Education and Science of Kazakhstan №11-4/874 dated 11 October 2018.

CoE provides methodological support for teachers of general educational institutions by annually holding subject sections within the Republican August meeting organised by the Ministry of Education

of the Republic of Kazakhstan. The main purpose of these activities is to provide methodological support for teachers in organizing effective teaching in the classroom. The subject sections were held in 13 areas and brought more than 9000 teachers from all regions of the country. Teachers represented analyses of research practices, delivered practical classes on the development of students' competencies and the best teachers of the country held master classes.

CoE proceeds to systematically train and professionally improve the methodological assets of schools. These assets include school trainers on teaching methods and techniques, designing assessment tasks and learning about one's own practices and developing analytical competencies of teachers. School trainers represent an intra-school methodological group that follows the principle of mutual respect and equal status. In the period from 2016 to 2023, a pool of 62 888 school trainers for comprehensive schools was built which is about every 16th teacher in the country.

Number of school trainers

Total school trainers	Of them			
	teaching methods and techniques	studying one's own practice	assessment	analysis
62 888	17 517	8 876	34 283	2 212

In 2023, CoE held II Republican Forum «Young teacher: a way to success» to provide young teachers with a methodological support on behalf of the Ministry

of Education of Kazakhstan. The forum was attended by young teachers working in rural areas. They took participation in master classes, thematic platforms,

and pedagogical quest where they got acquainted with the best practices of using digital technologies and the features of inclusive education. One of the main forum's part was the speeches of motivational speakers including Azamat Orazbek, Olzhas Suleimеноv, Maulen Bekturganov and Mukhit Amantayev who spoke about their personal and professional achievements after overcoming difficulties. The culminating point of the forum was a conversation with Gani Beisembayev, the Ministry of Education of Kazakhstan. Later in November 2023, CoE branches took over the regional forums. In total, they held 15 forums attended by around 2000 young teachers.

Regional clubs were created for young teachers to provide methodological support through the social network Instagram. A series of webinars were delivered including lesson planning, using strategies for students' active learning and evaluating learning outcomes based on certain criteria. A total of 12 we-

binars were conducted. Young teachers actively exchanged life hacks from their teaching practice on the Instagram page.

Thus, CoE systematically provides methodological support and post-course assistance for teachers based on the analysis of their problems. It follows such principles as accessibility, usefulness, practicality, and involvement of each teacher who completed advanced training courses.

The implementation of joint educational projects including educational research and the use of modern social networks and media platforms are considered to be important tools for achieving the main goal of modernizing education - improving the quality of education in the country. These projects and research allow CoE to create optimal conditions for developing the pedagogical community, exchanging the best practices, and adjusting new approaches and innovations in the educational process.

5. COOPERATION ON NIS EXPERIENCE DISSEMINATION



5.1. Experience dissemination at the national level



5.2. Charity project “Development of the potential of reference schools in rural areas”



5. COOPERATION ON NIS EXPERIENCE DISSEMINATION

5.1. EXPERIENCE DISSEMINATION AT THE NATIONAL LEVEL

August Conference

On 17 August 2023, 33 subject experts delivered 22 online webinars for NIS teachers within the NIS August Conference on «Development of the professional training community: quality and efficiency». Each section consisted of 4 sessions attended by 1 225 people. Subject experts told in details about the features and peculiarities of the educational programme NIS-Programme. They also gave specific

examples of tasks and methodological recommendations to teachers aimed at developing effectively students' skills, types of literacy and values. In addition, they introduced the priority areas of work in the 2023-2024 academic year and types of measures to fill the gaps identified as a result of the monitoring study. At the end of the webinars, 695 teachers took an online survey.

International research-to-practice conference of Nazarbayev Intellectual Schools AEO

«Rural school prosperity is a key to community wellbeing»

On 2-3 November 2023, Nazarbayev Intellectual Schools AEO jointly with the Qazaqstan Halqyna Fund (to the People of Kazakhstan) and the Fund for Sustainable Development of Education held an

international research-to-practice conference «Rural school prosperity is a key to community wellbeing» in Astana as part of the project «Development of reference schools in rural areas».

The Conference official banner



The conference aims to jointly discuss, and address issues related to improving the quality of education in rural schools and ensuring the well-being of every student.

A delegation of teachers from reference schools of Kostanay oblast and their colleagues from NIS ChB in Petropavl



More than 330 teachers from rural schools of the country took part in the large-scale event. International and national education experts such as Colin McLaughlin, Professor of the Faculty of Education at Cambridge University in the UK, Kristina Salmivalli, Professor at the University of Turku and an author of the international anti-bullying programme KiVa in Finland, Graham Ranger, an expert of the Council of International Schools (CIS) in the Netherlands, Kate Evans, Founding CEO of the Anglian Learning Multi Academy Trust in the UK, Darius Radkevicius, Lithuanian psychiatrist, certified transactional analysis therapist and crisis management expert and Oistein Kristiansen, Nick Jr Asia cartoonist and a designer in Norway reported their research findings.

Colleagues from rural schools participating the Conference had an educational tour by visiting the capital's schools and higher educational institutions. They visited 2 universities such as AITU and Nazarbayev University, 2 Intellectual Schools - NIS in Astana and NIS of PhM in Astana, and 3 comprehensive schools - Alikhan Bokeikhan lyceum school №76, gymnasium school №91 and lyceum school №59 which made up a 2-hour programme to immerse their guests in the educational process of their institutions. They had a campus tour, watched the general pre-

sentation about the institution's activities, and the unique experience and innovations used in schools.

The guests had an opportunity to learn about school culture, values and features of the management system, and teaching methods and techniques. They also visited Robotics and STEM classes.

In addition to the academic part of the Conference, rural school teachers were involved in the cultural programme. The participants went to the State Opera and Ballet Theatre «Astana Opera», the largest theatre in Central Asia, and listened to the Kyz Zhibek Opera, inspiring and exciting with its music and plot.

One of the highlights of this event was the participation of Jane Larsson, Executive Director of the Council of International Schools (CIS), the Netherlands, as well as Ji Han, Deputy Director of School Support and Assessment at CIS, Switzerland. During their visit, they gave a presentation to the directors of Intellectual Schools on innovations in international accreditation, in particular the features of a new approach in the CIS accreditation protocol: Pathway 2. Work on this option will be aimed at deeper assessment and development of the school through the choice of one direction at the beginning of the accreditation cycle as the main one. The proposed directions represent certain goals such as

ensuring effective student learning, improving students' well-being or developing global citizenship. In addition, the guests shared the news that the CIS is actively developing and testing the assessment protocol for international schools providing online services. School directors actively participated in the discussion and asked questions expressing their interest in new directions within an international accreditation. This event highlighted the significance of introducing innovations and constant striving for high-quality development of the educational process



and that cooperation with international organisations such as the CIS gives schools the opportunity to get acquainted with trends in education, follow relevant pedagogical approaches and to be a leader in the development of education.

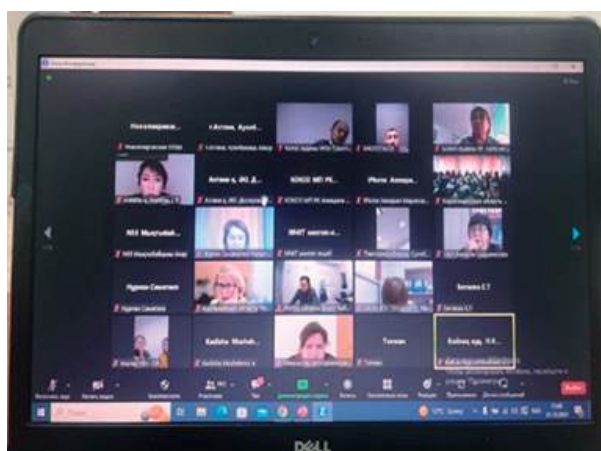
Graham Ranger, a CIS consultant on the creation of an accreditation agency and one of the authors of the CIS updated accreditation protocol, the Netherlands, together with the directors of Intellectual Schools held a session where they discussed the differences between school accreditation and inspection.



The «100 schools» Project

The training webinar «Criteria-based assessment» initiated by the Committee for Quality Assurance in Education of the Ministry of Education of Kazakhstan was delivered to provide methodological support for schools based on the results of monitoring students' academic performance.

667 employees attended it including heads of regional and city methodological centers, methodologist-mentors, school directors and teachers. They discussed criteria-based assessment, organised formative assessment in the classroom and analysed the assessment results.



The «100 Smart Quotes» Project

Throughout the year, CoE posted the quotes of outstanding educators who have left a valuable pedagogical legacy and ideas in tune with the principles of student assessment on their social networks (Insta-

gram, Facebook) 60 quotes of Al-Farabi, Khoja Ahmed Yasawi, A. Kunanbay, A. Baitursyn, M. Dulat, M. Zhumabay, L. V. Vygotsky, B. Momysuly, Zh. Aimaurov and M. Auezov were published throughout the year.



Competitive selection of teachers for regions facing shortages of teachers (Special programme)

In 2023, within the framework of the Rules for recruiting the best teachers with an appropriate package of support measures for regions facing shortages of teachers (Special programme) the CPM run the first stage of the competitive selection (hereinafter referred to as the selection) - a subject test and essay.

The first stage of the selection procedure was held in August 2023 across 11 Intellectual Schools. A total of 33 applicants took part in the selection and 11 (33%) of them passed the threshold level.

Quantitative data by schools

Nº	Venue of the competition's first stage	Number of applicants	Achieved a threshold score
1	NIS PhM in Aktobe	2	1
2	NIS PhM in Almaty	5	1
3	NIS ChB in Almaty	10	4
4	NIS ChB in Atyrau	2	-
5	NIS PhM in Oral	4	2
6	NIS ChB in Oskemen	2	1
7	NIS ChB in Pavlodar	1	1
8	NIS PhM in Taldykorgan	1	-
9	NIS ChB in Turkistan	3	-
10	NIS ChB in Shymkent	2	1
11	NIS PhM Shymkent	1	-
Total		33	11 (33%)

According to the data, most of teachers participated in Almaty. In other regions, the number of applicants is no more than 3 people.

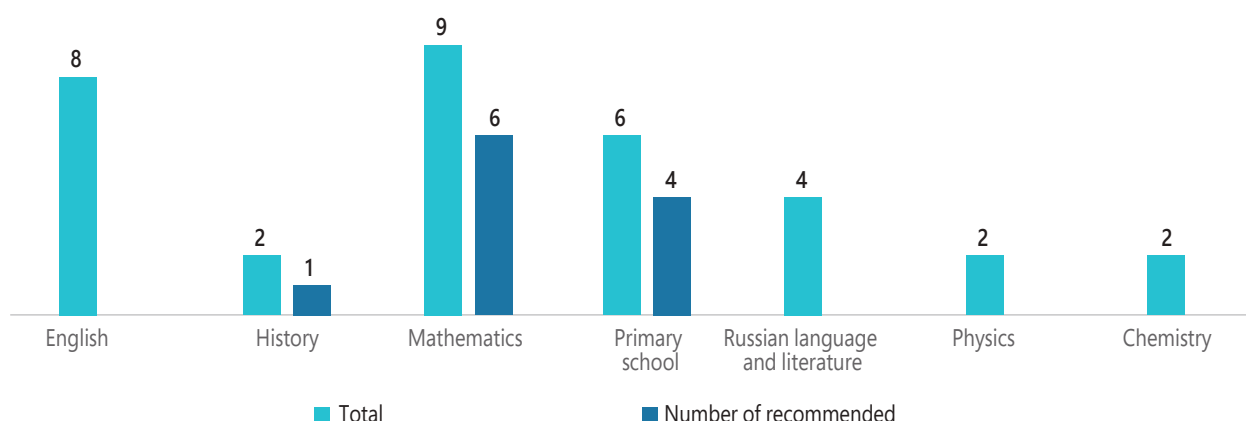
24% of the total number of participants are applicants aged from 20 to 23 years and from 33 to 38 years.

Age composition of applicants

Age	Total	Share of the total number, %	Number of recommended	Share of recommended of the total number, %
21-23	8	24%	1	3%
25-30	6	18%	1	3%
33-38	8	24%	5	15%
41-48	6	18%	2	6%
51-58	5	15%	2	6%
Total	33		11	33%

67% of applicants were able to pass a threshold score in Mathematics and Primary school, 50% - in History, and no one could overcome a threshold score in English, Russian language and literature, Physics and Chemistry.

Information about the number of applicants by subjects



An analysis of the essay assessment results showed that many applicants had difficulty in understanding and explaining the importance of providing feedback to students while they complete an assignment in the classroom and to colleagues while observing the lesson. Most applicants found

it difficult to explain the effectiveness of teaching methods for developing students' research skills.

According to the results of the selection's first stage, the applicants were provided with 33 individual feedback sheets including recommendations on the development of subject knowledge and reflection skills.

5.2. CHARITY PROJECT «DEVELOPMENT OF THE POTENTIAL OF REFERENCE SCHOOLS IN RURAL AREAS»

Since July 2022, Nazarbayev Intellectual Schools AEO, the Qazaqstan Halqyna Fund and the Foundation for Sustainable Development of Education have been implementing a large-scale country project «Development of reference schools' potential in rural areas». Social partnership between government, educational and business structures creates positive precedents in solving problems of rural education, allows saving resources, promoting innovations, and raising educational standards appropriate to the labor market. Joint efforts brought innovations and a technological progress to a village and strengthened public confidence in stake-

holders. A partnership enables to create a sustainable community, support social and economic initiatives aimed at improving the quality of life in a rural area.

It is important to note that the success of a partnership depends on great many factors including transparency, mutual trust, adequate management and the development of common goals and strategies. Final results may vary depending on specific conditions and the context. The partnership of three organisations in this project is almost completely consistent with the above-mentioned principles.

Next, briefly about each partner organisation.

«Qazaqstan Halqyna» Public Fund

In January 2022, the President of the Republic of Kazakhstan initiated to establish for the first time in the history and practice of domestic charity «Qazaqstan Halqyna» Public Fund with large-scale goals and ambitious objectives. It has built its line of work relying on the accumulated experience of many public organisations and foundations.

The Fund has launched 17 charity programmes and projects. At the heart of each programme is a difficult life story which was the source for the origin of the projects and targeted assistance.

The Fund applies a systematic approach to solving accumulated problems in education. Today despite the government's efforts to create an accessible environment for students, there has been no significant narrowing of the gap in the quality of education between urban and rural schools. The Fund believes that wherever children are, they have the right to receive a quality education. Paying attention to rural education is one of the frequent requests from members of the public addressed to the fund during on-site and offline meetings.

«Qazaqstan Halqyna» Fund finances the renovation of facilities and resources in reference schools.

The Foundation for Sustainable Development of Education

Since 2019, Sustainable Rural Development Fund has been implementing the project «Rural School Powered by NIS» in collaboration with Nazarbayev Intellectual Schools AEO to develop education in rural areas. The project was successful in 4 schools of East Kazakhstan oblast and gymnasium-school of Makinsk, Akmola oblast.

In 2022, educational projects were transferred to a separate fund and in April 2022, the Foundation for Sustainable Development of Education was registered. The Foundation implements educational projects which help to ensure equal access to high-quality education regardless of a person's status, age and territorial affiliation. It is funded by private sponsor-

ship and implements non-profit projects to reduce a gap in the quality of education between the city and countryside by professionally developing teachers and renovating the facilities and resources of rural schools.

Professional development of rural education helps slow down the outflow of human capital from rural areas and provides the basis for sustainable development of the whole country.

The Foundation provides full assistance in the implementation of methodological activities of NIS AEO as well as the selection of partner schools and coordination of interaction with schools participating in the project, improving school infrastructure and engaging business communities to participate in the Charity Project.

«Nazarbayev Intellectual Schools» AEO

Dissemination of NIS experience is strategically important as it allows to apply adjusted programmes, methods and approaches that demonstrate effectiveness in rural schools of the country. NIS implements a comprehensive programme for methodological support across all regions to develop the potential of reference schools in rural areas by training teachers, school management staff, students and their parents and the whole school community.

NIS AEO conducts such methodological activities as:

- professional development courses for teachers who have not completed basic trainings courses during the implementation of the programme;
- delivering seminars on teaching and learning methods based on the results of research on professional needs of teachers in schools;
- internships and teacher training in NIS AEO;
- monitoring of academic achievements of Grade 4 and 8 students;
- courses on criteria-based assessment by subjects;

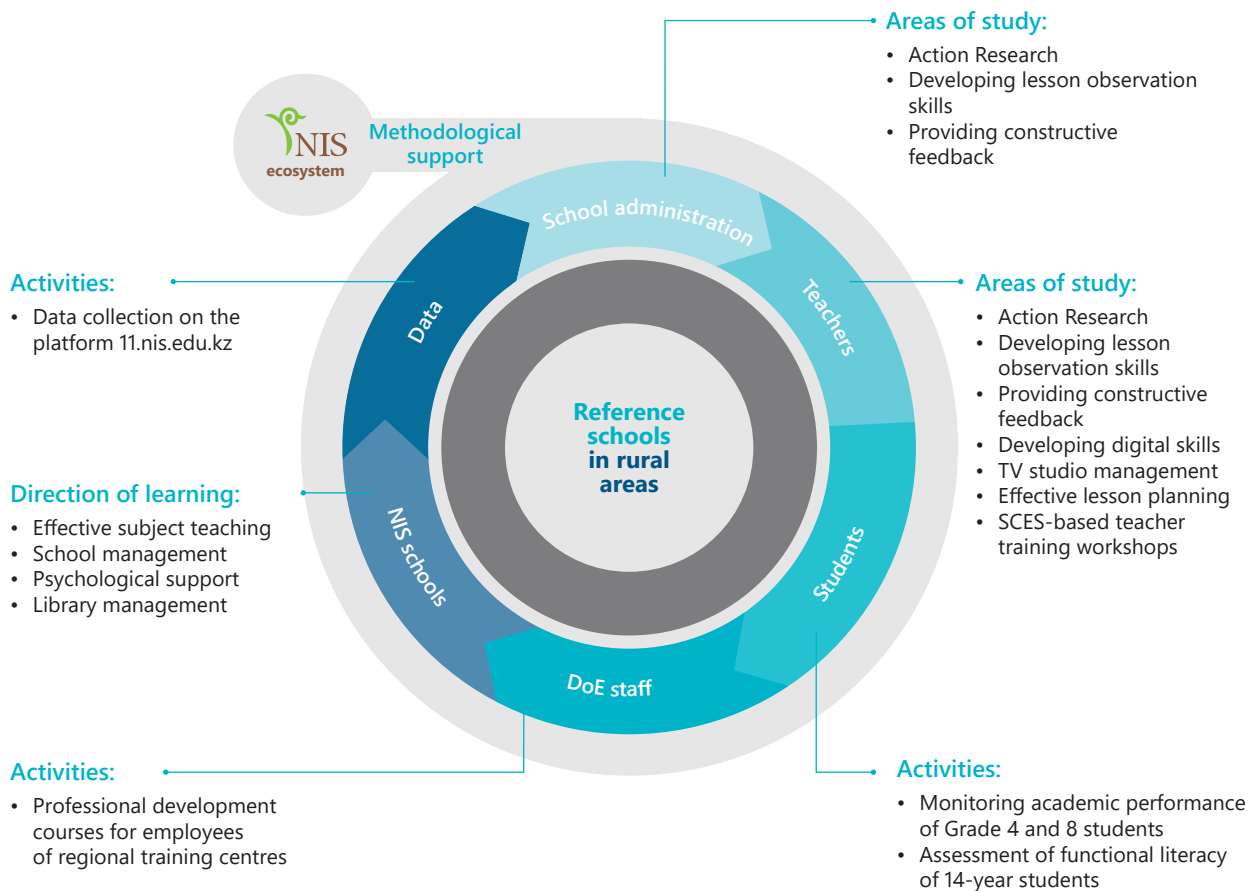
- online seminars on the development of subject programmes;
- workshops and internships on methodological support.

On 14 July 2022, a trilateral memorandum was signed to implement the project that involved 17 comprehensive schools from all regions of Kazakhstan. A list of chosen schools was coordinated with the regional Board of Education and the district Department of Education.

The project «Development of the potential of reference schools in rural areas» aims to provide rural students with equal opportunities to get quality education, and rural teachers – to improve the level of their professional competence.

On 26 June 2023, «Qazaqstan Halqyna» Fund, Nazarbayev Intellectual Schools AEO and the Foundation for Sustainable Development of Education signed a new Memorandum on Cooperation in the framework of implementation and scaling of the charity project. 62 rural schools were additionally included in the project.

Methodological support for reference schools



The main focus was on the areas that require development in terms of management, training and professional growth. Rural schools aim not only to achieve expected outcomes but to ensure their sustainability on a long-term basis. It includes a careful coordination of all elements of the project from diagnosing and meeting professional needs of teachers to monitoring academic achievement of students and strengthening their psychological well-being.

To coordinate a charity project:

- reference schools are distributed between 21 Intellectual Schools in regions and assigned to them according to Appendix 1 to Order №242 OD dated 20 July 2023;
- deputy directors of Intellectual Schools (21 people) were appointed as project coordinators responsible for the dissemination of the NIS experience;

- Advisory groups were created from among the heads of Intellectual Schools for directors of rural reference schools to consult on how to organise and manage the educational process (65 people); from among teachers of Intellectual Schools to provide methodological support in writing lesson plans and assessing teachers of rural reference schools (250 people);

- a detailed action plan was developed to provide teachers of rural reference schools with methodological support and increase their capacity. The plan was designed for 2023–2025;

- every Intellectual school developed a plan of internships, visits to reference schools and activities for NIS international teachers with their colleagues from rural schools.

Methodological support for teachers begins with introductory seminars and webinars on the aims and objectives of the project, statistical data on schools

is collected. Diagnostics of professional needs and analysis of schools allow to provide assistance more accurately and focused on real needs of rural teachers.

The CEP and CoE deliver training courses on the development of functional literacy in core subjects, research competencies, school management, teaching methods, digital skills and etc.

The CPM twice a year (November and April) monitors academic achievements of Grade 4 and 8 students in basic subjects (Table X). The monitoring aims to identify the current level of students' knowledge and skills in rural schools of Kazakhstan and to provide targeted pedagogical support in teaching.

Monitoring items

Grade	Subject
4	Mathematics
	Kazakh language (L1)
	Russian language (L1)
	Science and World Understanding
8	Mathematics
	Kazakh language (L1)
	Russian language (L1)
	Kazakh language and literature (L2)
	Russian language and literature (L2)
	English language
	Chemistry
	Biology
	Physics

Training teachers from rural reference schools

In 2023, CoE proceeded to implement the project «Development of the potential of reference schools in rural areas» in accordance with a comprehensive programme which consists of the following stages:

- analyzing school leaders and teachers to identify their needs in professional development;
- delivering advanced training courses for teachers (school trainers) and school leaders;
- providing methodological support for teachers' activities through seminars/webinars.

In the first half of 2023, CoE worked with 17 rural schools in two directions:

- training teachers within advanced training courses;
- methodological support for teachers' activities.

141 teachers completed advanced training courses in the following programmes:

- «Development of functional literacy in students» for teachers of Mathematics and Science – 82 teachers;
- «Development of digital skills in teachers» (for school trainers) – 32 teachers;
- «Development of social skills in students: family, school and career» (for teachers of boarding schools) – 27 teachers.

Methodological support for teachers of 17 rural schools was provided in accordance with the problem areas in the development of professional competencies identified in 2022.

In 2023, seminars/webinars were held on lesson planning, task development based on learning objectives, learning management in the classroom where teachers practiced their ability to formulate goals based on Bloom's taxonomy, select tasks in accordance with the level of thinking skills, against criteria and descriptors for formative assessment.

They also delivered seminars/webinars on the lesson research at school where teachers discussed how to organise research groups, develop the skills of collaborative lesson planning and lesson observation and to discuss the results.

Thus, in 2023, CoE held 503 methodological events for teachers from 17 schools participating in the project including 174 lesson observations with a constructive feedback and 329 seminars and webinars (for 6017 teachers).

Professional problems and needs of teachers from 62 reference schools were studied between 23 and 30 September 2023. 5860 teachers responded to the survey. Key areas: school context (development management, culture, learning environment) and professional development of teachers. Data is collected using such methods as survey and lesson observation.

Assessment parameters for «School context»: willingness to work as a leader and personal professional development; real contribution to the professional development of teachers; traditions of cooperation; personal participation of a school director in the evaluation of the teaching quality; use of the lesson observation data to improve and adjust teaching practice; school culture and intra-school control.

Assessment parameters for «Professional development of teachers»: content of education; professional difficulties and professional development; methodological resources; interaction and cooperation; assessment system; monitoring of homework; research of one's practice.

Analysis of research results showed the following:

- a share of rural teachers who indicated that their best experience is related to advanced training courses is about 63% which is compared to a similar share of teachers from urban schools.

- As a whole, research results confirm a stable relationship between the intensity and regularity of professional development and teachers' knowledge, values, and success of their pedagogical practice.

- When developing a content, forms and format of professional development, a sequence based causal model is applied: learning – modelling – practice – feedback – adaptation of newly acquired skills to natural teaching conditions.

- In selecting forms of professional development of rural schools, it is important to meet the following criteria: consistency between the current Standards, forms of professional development, goals of professionally developing a certain teacher and an educational institution as a whole; predisposition for collective participation and cooperation between teachers of one school and continuity of accumulated experience at school and outside it; focus on certain teaching methods and mechanisms for their integra-

tion into daily classroom practice; priority of improving subject competencies.

In 2023, 155 teachers from 62 rural schools completed training within the following courses:

- «Research activities of a teacher: Action Research and Lesson Study» – 13 teachers;
- «Analytical competencies of school teachers to improve teaching practices» – 16 teachers;
- «Development of teachers' digital skills» (for school trainers) – 126 teachers.

The inner potential of schools is built through seminars/webinars for heads of methodological associations, teachers training on how to observe lessons and provide constructive feedback and develop skills in researching their practice.

Training teachers at seminars/webinars on the stated topics allows to create the foundations of a self-learning educational organisation which will be able to solve emerging problems of school practices through the implementation of the lesson study approach.

Thus, 41 lesson observations and 118 seminars/webinars (covering 2 440 teachers) were delivered for teachers from 62 rural schools.

In 2023, the Centre of Excellence held 662 methodological activities for 79 schools within the project «Development of the potential of reference schools in rural areas» of which 447 are seminars/webinars and 215 – lesson observations.

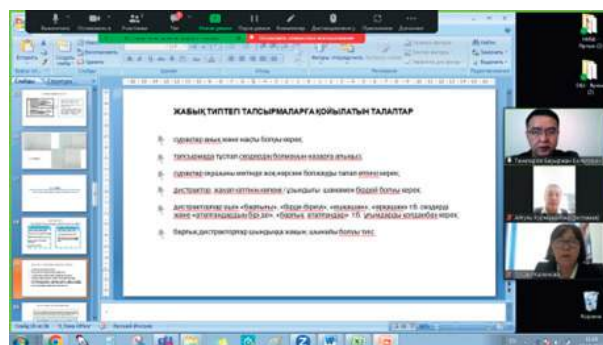
Summary of the number of activities for 79 schools in 2023

Region	Number of schools	Number of seminars/ webinars	Number of lesson observations	Total events
Abay region	3	49	0	49
Atyrau region	3	13	0	13
Akmola region	5	24	21	45
Aktobe region	12	31	33	64
Almaty region	4	21	8	29
Zhetysu region	4	29	0	29
Zhambyl region	3	25	8	33
East Kazakhstan region	4	44	0	44
West Kazakhstan region	4	29	0	29
Karagandy region	8	32	25	57
Kostanay region	5	12	0	12
Kyzylorda region	3	23	30	53
Mangystau region	3	27	58	85
Pavlodar region	4	18	15	33
North Kazakhstan region	5	31	4	35
Turkestan region	7	19	5	24
Ulytau region	2	26	8	34
Total:	79	447	215	662

In 2023, the Centre for Pedagogical Measurements conducted online training seminars in Kazakh and Russian for teachers of reference schools.

In January, it delivered a seminar on «The use of formative assessment in the classroom: planning, analysis of results and feedback» for teachers from a

secondary school in Katarkol village, Akmola oblast. Teachers improved their skills in the application of formative assessment in the classroom and discussed the possibilities of using the assessment results in lesson planning.



At the beginning of the academic year, they had an online seminar «Development and expert review of assessment tasks» in 15 subjects in Kazakh and Russian for more than 500 teachers of rural schools. The seminar aimed to develop teachers' competencies and skills in developing and using assessment tools in the context of each subject. Teachers studied the relationship between subject programmes and criteria-based assessment and developed assessment tools for formative and summative assessment. Participation in the online seminar allowed teachers

to improve the quality of tasks for further use in the educational process.

In order to support and develop teachers' practice in planning formative assessment of students' academic achievements, teachers from 17 schools attended a seminar «Formative assessment: planning, application, analysis of results and providing feedback». During the seminar, they learnt approaches to applying strategies and techniques of formative assessment in the classroom and providing feedback based on assessment criteria.

Monitoring of academic achievements of Grade 4 and 8 students from 17 reference schools

In 2023, within the Memorandum of cooperation in the implementation and scaling of the charity project «Development of the potential of reference schools in rural areas» dated 26 June 2023, NIS monitored academic achievements of Grade 4 and 8 students of rural schools and tested the level of functional literacy of 14-year old students from rural schools.

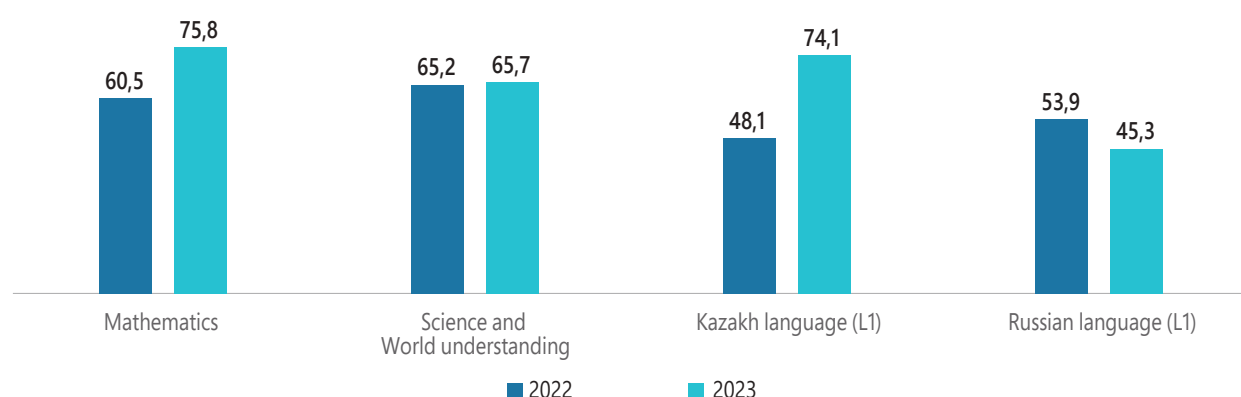
In April 2023, the monitoring of educational achievements was conducted for 2 267 students of 17 rural schools, including 1 193 students of Grade 4 with Kazakh language of instruction - 957, with Russian language of instruction - 236 and 1 074 students of Grade 8 with Kazakh language of instruction - 868, with Russian language of instruction - 156.

220 tests in 4 subjects were designed for Grade 4 students and in 9 subjects for Grade 8 students.

A comparative analysis of the results of monitoring conducted in 2022 demonstrates the increase of indicators of Grade 4 students in all subjects, except for the subject «Russian language (L1)».

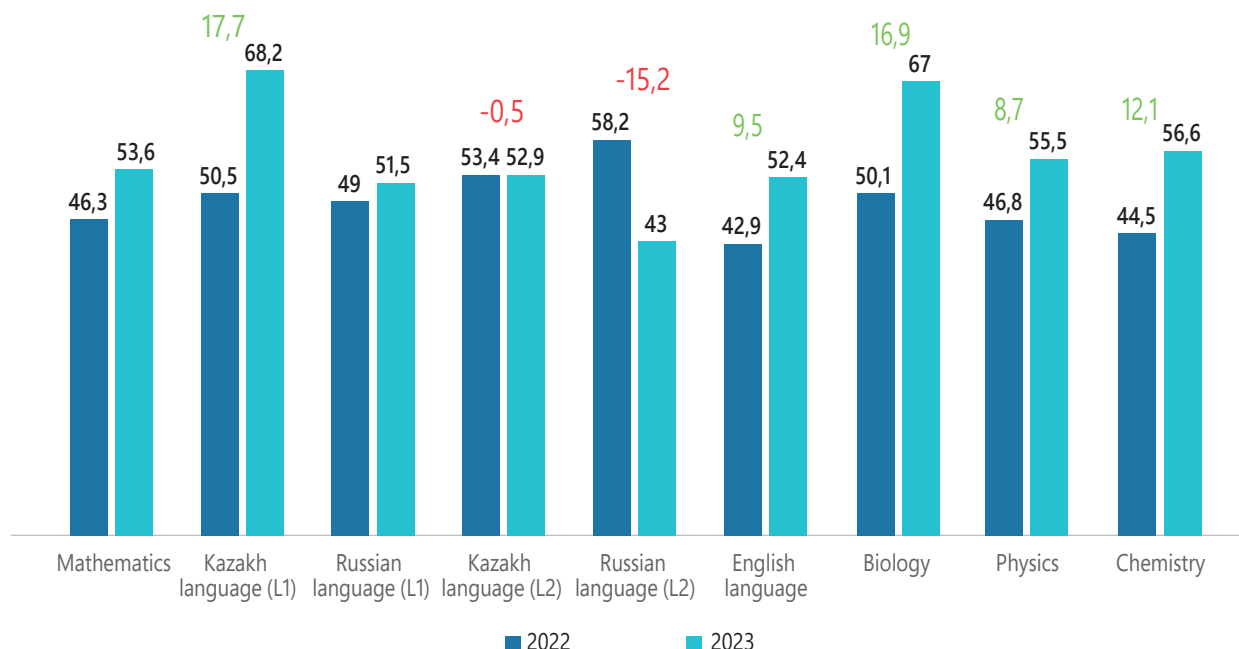


Comparative analysis of the monitoring results of Grade 4 students in 2022 and 2023



A comparative analysis of the results of monitoring conducted in 2022 demonstrates the increase of indicators of Grade 4 students in all subjects, except for the subject «Russian language (L1)».

Comparative analysis of the monitoring results of Grade 8 students in 2022 and 2023



When comparing the results of students following the outcomes of monitoring conducted in 2022, there is an increase in indicators of Grade 8 students in all subjects except for «Kazakh language (L2)» and «Russian language (L2)».

To organise further work with students, Intellectual Schools have been provided with:

- 11 903 individual detailed reports;

- 227 detailed school-level reports;
- 17 general reports for each school;
- 17 report presentations with data analysis for each school.

In order to provide support on data interpretation, in January 2023, 359 teachers of 17 rural schools (school administration, subject teachers) attended a webinar «Using monitoring reports».

Test to assess the level of functional literacy of 14-year-old students in 17 rural schools

In February 2023, 1 189 students of 17 rural schools took a test to check the level of their functional literacy.

60 tasks were designed in three subject areas: mathematical, reading and science literacy in the languages of instruction.

The average percentage of test completion in the context of the languages of instruction

	Mathematical literacy	Reading literacy	Science literacy
	26,6%	37,8%	39,1
With the Kazakh language of instruction, %	25	36,5	38,2
With the Russian language of instruction, %	30,9	46,1	45,2

The analysis of test results showed that students demonstrated the highest results in science literacy while in mathematical literacy, the results are significantly lower.

To organise further work with students, schools have been provided with:

- 3 368 individual detailed reports;
- 117 detailed school-level reports;
- 17 general reports for each school;
- 17 report presentations with data analysis for each school.

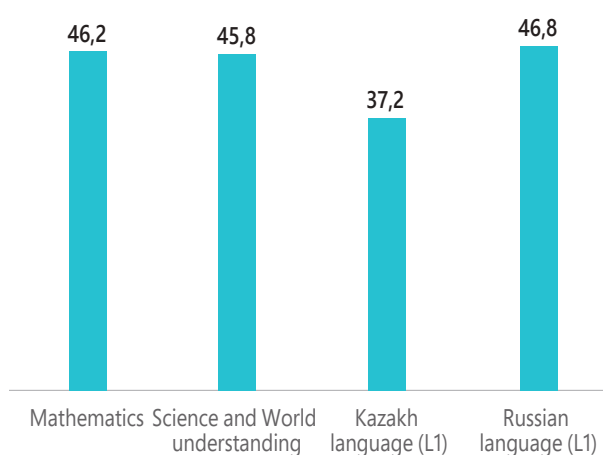
Monitoring of academic achievements of Grade 4 and 8 students from 62 reference schools

In October 2023, monitoring of academic achievements was conducted for 8 426 students of 62 rural schools of which 4 332 students are from Grade 4 (3 521 students with the Kazakh language of instruction and 811 with the Russian language of instruction), and 4 094 students are from Grade 8 (3 299 with the Kazakh language of instruction and 795 with the Russian language of instruction).



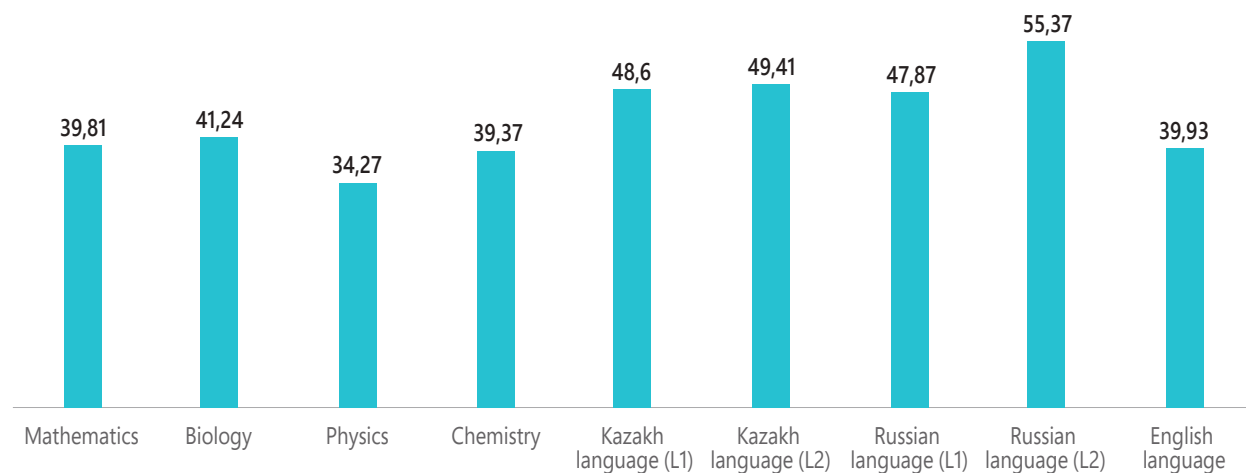
220 tests in 4 subjects were designed for Grade 4 students and in 9 subjects for Grade 8 students.

Analysis of monitoring of Grade 4 students' academic achievements



The analysis of the monitoring results showed that Grade 4 students demonstrated higher results in the subjects “Mathematics”, “Science and World understanding” and “Russian language (L1)”.

Analysis of monitoring of Grade 8 students' academic achievements



Grade 8 students demonstrated higher results in the subjects «Russian language (L2)» while in other subjects the percentage of task completion is below 50%.

To organise further work with students, schools have been provided with:

- 39 621 individual detailed reports;
- 791 detailed school-level reports.

In December 2023, a webinar on data interpretation and analysis of results for their further use in the educational process «Using monitoring reports» was delivered for school directors and deputy directors of the curriculum department from 62 rural schools.

In 2023, the CEP proceeded to provide methodological support to rural schools within the project «Development of the potential of reference schools in rural areas».

CEP specialists within the reporting period delivered a series of training seminars on methods and techniques for implementing learning objectives aimed at developing subject skills, developing functional literacy and emotional intelligence of students, research skills through practical and laboratory work, and organised monitoring visits and methodological support for students of 79 reference schools.

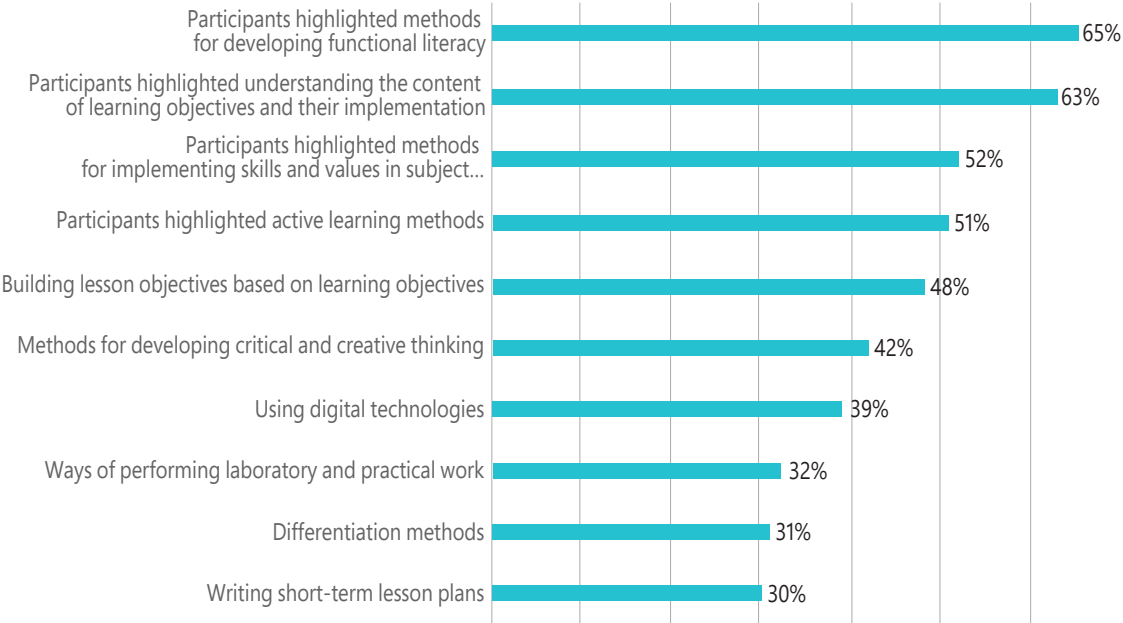
More information about the seminars is given in the table below.



SEMINAR	DESCRIPTION
17 reference schools Theme: 1. Development of students' emotional intelligence 2. Development of research skills through practical and laboratory work Date: 17 March - 1 April 2023 Venue: NIS ChB in Almaty, Karagandy, Shymkent, Atyrau; NIS PhM in Kokshetau, Semey, Turkistan and Karagandy Format: offline	<ul style="list-style-type: none"> · Organising laboratory and practical work in biology classes · Developing research skills through laboratory and practical work in Physics · Developing research skills through laboratory and practical work in Chemistry · Developing students' emotional intelligence through different types of art in music, arts and crafts, visual arts, and labour
62 reference schools Theme: 1. The development of students' functional literacy Date: 23 September - 15 October 2023 Venue: NIS ChB in Atyrau and Aktobe, NIS PhM in Semey, Almaty, Kokshetau, Turkestan and Karagandy Format: offline	<ol style="list-style-type: none"> 1. Formation of functional literacy of primary school students 2. Formation of students' reading literacy (Kazakh language, Kazakh language and literature, Kazakh literature) 3. Formation of students' reading literacy (Russian language, Russian language and literature, Russian literature) 4. CLIL and Communication Skills Development (English language) 5. Formation of students' mathematical literacy 6. Formation of students' mathematical literacy (Mathematics) 7. Formation of students' digital literacy (Computer science) 8. Formation of students' science literacy (Physics, Chemistry, Biology, Geography) 9. Developing students' research skills (History, Arts and Crafts) 10. Features of teaching Physical education
62 reference schools Theme: 1. Methods and techniques for achieving learning objectives focused on developing subject-specific skills Date: 13 November – 5 December 2023 Format: offline	<ol style="list-style-type: none"> 1. Formation of reading literacy of primary school students 2. Implementation of learning objectives focused on developing language skills (Kazakh language, Kazakh language and literature, Kazakh literature, Russian language, Russian language and literature, Russian literature) 3. Implementation of learning objectives focused on developing subject skills (Physics, Geography, Computer Science, Mathematics, Chemistry, Biology)

After the workshops, the participants were offered to take an online survey to provide their feedback. The survey results indicated a high level of effectiveness of the workshops.

Feedback results
Question “What did you learn in the workshop?”



Monitoring visits

Visits were conducted to schools in the villages of Bestamak (Aktobe region) and Shaulder (Turkestan region) from 25 to 26 September 2023, to monitor the implementation of educational programmes. Throughout the monitoring, a total of 119 lessons were observed, and recommendations were provided for subjects such as Kazakh language, Kazakh literature, Physics, Geography, History, Mathematics, Biology, Chemistry, and primary school subjects.



As a result of the monitoring, the following recommendations were developed:

Systematic methodological support	<ul style="list-style-type: none"> • Organisation of consultations and training seminars for teachers on a subject programme
Peer lesson observation	<ul style="list-style-type: none"> • Peer lesson observation to exchange experience and integrate best practices
Alternative ways of update	<ul style="list-style-type: none"> • Development of alternative methods for updating and revising decreasing the dependence on classroom questioning
Diversity of learning methods	<ul style="list-style-type: none"> • Encouraging teachers to use different methods besides classroom questioning to enrich learning
Formative assessment	<ul style="list-style-type: none"> • Training teachers to use formative assessment in classroom
Clear descriptors	<ul style="list-style-type: none"> • Development of clear descriptors in line with learning objectives to ensure consistency in student assessment
Active interaction in classroom	<ul style="list-style-type: none"> • Contributing to active interaction in classroom and creative use of learning materials and tasks
Application of the CEP platform	<ul style="list-style-type: none"> • Using the tab “Methodological support for rural school teachers” to share materials and interact with teachers

Methodological support

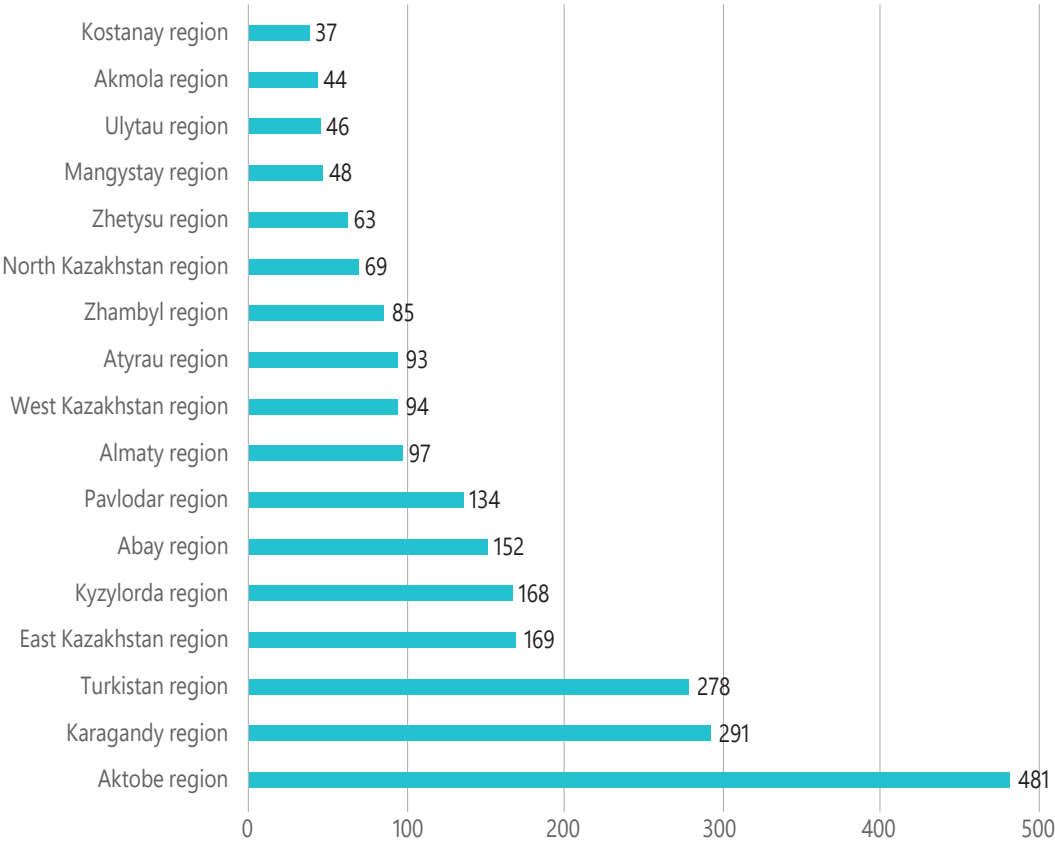
To provide methodological support for rural school teachers, the new tab «Methodological Support for Rural School Teachers» was created on the

platform of the Centre for Educational Programmes (<https://forum.cep.nis.edu.kz/>). Rural school teachers have an access to 134 subject-specific materials.



During the reporting period, a total of 2 349 teachers from 79 rural schools were trained under the project.

Number of teachers trained within the “Rural Schools” project in 2023 by regions



An important part of the project is the development of teachers’ social capital and the organisation of internships, which contributes to the creation of deeper professional ties and the exchange of experience.

Internships in Intellectual Schools

Nazarbayev Intellectual Schools conduct onsite and remote internships during the academic year in coordination with rural schools.

In the context of the Project, an internship refers to the immersion of a teacher in a professional activity that improves professional competencies and allows to get a specific pedagogical result.

Internships involve events of different formats to provide methodological support to reference schools such as lesson observation, seminars, webinars, master classes, trainings, workshops and etc.

At the beginning of the academic year, a specialist coordinating the dissemination of NIS experience and his team goes to a rural school for an introductory meeting to establish communication, identify professional needs of teachers, discuss directions for future work and to plan joint activities for the upcoming academic year. Then Intellectual Schools develop individual plans and internship programmes for the systemic organisation of methodological support.

Usually internships at Intellectual Schools are held 2 times a year - in the first and second half of the year in 2 main directions in Kazakh and Russian – for management personnel on the organisation of the educational process and pastoral work and for subject teachers on teaching and learning methods using modern digital technologies.

The topics of methodological events within the internship touch upon the issues related to professional development of teachers:

- effective lesson planning;
- research in teacher's practice;
- criteria-based assessment in the classroom;
- modern approaches in teaching and learning;
- development of functional, reading, and mathematical literacy of students;
- organisation of intra-school control;
- use of digital technologies in the organisation of the educational process and school management;
- school development planning;
- psychological support for students at school;
- working with equipment;
- organisation of the library as a school resource centre.

Administrators, teachers and other staff (librarian, psychologist, and teacher of continuing education) of reference schools come to the Intellectual School for 1 day and immerse themselves in the internship process: attend open lessons, discuss and analyse the teaching methods of their colleagues, evaluate the effectiveness of strategies and exercises used in the classroom, participate in master classes, seminars, workshops, trainings, reflect on how to apply gained experience in their own practice, exchange ideas, reflect and draw conclusions.

From September to December 2023, 21 Intellectual Schools hosted teachers and management staff from 79 rural reference schools. The total number of interns was 1912 people: 1610 teachers, 151 members of administration and 151 other employees (psychologist, continuing education teacher and librarian).

They had 1061 methodological events:

- 494 demo lessons;
- 88 seminars;
- 116 training seminars;
- 44 seminar-workshops;
- 53 trainings;
- 78 workshops;
- 112 master classes;
- 54 round tables;
- 22 other events (professional talks, exhibition, fair, poster session and game).

In addition, all Intellectual Schools organised NIS teachers' visits to reference schools to provide methodological support including lesson observation and constructive feedback, master classes, seminars, trainings, workshops, round tables according to the professional needs of rural teachers, discussions of topical teaching and learning issues, criteria-based assessment and modern school management system.

During the visit, NIS teachers delivered training seminars on how to work with a new equipment in the classrooms of Physics, Chemistry, Biology, Computer Science and STEAM, gave explanations on their use in lessons, and provided individual consultations on the TV studio and methodological recommendations on the further operation of the educational equipment.

In total, 2 556 teachers were provided with methodological support: 2 199 teachers, 231 management staff and 126 other employees. 808 events were held:

- 41 demo lessons;
- 61 seminars;
- 78 training seminars;
- 12 seminar-workshops;
- 108 trainings;
- 153 workshops;
- 146 master classes;
- 13 round tables;
- 173 lesson observations;
- 13 comprehensive lesson analyses;
- 10 other events (professional talks, laboratory work).

Along with offline events, Intellectual Schools hold online events, i.e. webinars at the request of reference

school teachers. In total, in the first half of the year, 49 training webinars were delivered for 721 participants: 624 teachers, 28 members of administration and 69 other employees (psychologist, continuing education teacher, and librarian).

The webinars touched upon the key pedagogical issues and correspond to the professional needs of reference school teachers:

- Development of subject competencies;
- Teaching and learning methods;
- Development of functional literacy;
- Student motivation;
- Organisation of assessment procedures in the classroom and providing a feedback;
- ICT and DER in teaching, learning and assessment.

Methodological support for psychologists and social teachers of rural schools on students' well-being

NIS AEO provides methodological support to psychologists and social teachers of rural schools in ensuring students' well-being and preventing and responding to child abuse.

Methodological support is provided in two main areas:

- professional learning and development: delivering training seminars;
- counseling and supervisory activities: assistance in solving individual cases and conducting supervisory sessions.

· In 2023, teacher-psychologists and social teachers from 62 rural schools had a training seminar on «Prevention and crisis intervention in child abuse situations». 107 specialists took part in the training seminar.

· The training-seminar programme included the issues related to the evaluation of professional boundaries and interaction between psychologists and social teachers, involvement of all school employees, parents, communities, and organisations authorised in the field of protection of children's rights, life, and health to social and psychological activities.

· Participants gained basic knowledge and skills in case management (managing a difficult case) as a whole system of psychological work at school which is

grounded on a biopsychological approach to considering and solving child abuse issues such as neglect of needs, physical, psychological, and sexual violence against children and teenagers.

· The programme was implemented through the case study method which allowed specialists to immerse in each topic, see the situation through the eyes of the case participants, understand their anxiety and behavioural reactions. The case study method made it possible to work with situations from school practice, see strengths and weaknesses of school processes, predict future behaviour, and propose effective measures to provide support to teenagers and their families.

· The training helped participants realise that when solving any difficult life situation and violence against children, they have to adhere to the case management stages: evaluation, planning, assistance and support in accordance with students' needs.

· Participants were introduced to assessment tools such as the HEADSS psychosocial interview questionnaire as well as a protocol for assessing risk and protective factors for child development. They practiced their planning skills using the SMART child care and support plan template. Special attention was paid to the development of professional communicative competencies of school psychologists and social teachers - the skills

of using different types of questions, paraphrasing, reflection, and affirmation.

- As a result, school psychologists and social teachers practiced the basic approach of case management in groups, learned new methods and tools for identifying, promptly responding to, and helping students, saw their strengths and areas of development, and discussed the interaction within the school and with the local community to provide timely and effective assistance to children and their families.

- Each participant received a workbook as well as an access to resources (assessment forms, questionnaires, protocols, seminar papers for students and parents) that can be downloaded and used in their school practice.

- Counseling and supervision were provided in an online format. Participants of training seminars are supervised on case management. They also consider specific cases, analyse intervention strategies, develop approaches to student support and discuss emotional and ethical aspects of work.

- These activities enable to create pilot social and psychological services in 79 rural reference schools that would implement the programmes for abuse prevention and crisis assistance to students and their families, reduce violence against children and increase the overall level of well-being at schools.

The world «Hour of Code» campaign in reference schools

In December 2023, NIS teachers conducted an «Hour of Code» campaign across 21 reference schools within the project «Development of the potential of reference schools in rural areas» as a part of the international Computer Science Week. About 1 400 students of rural schools were involved in the world campaign.

The «Hour of Code» is a global movement involving several million students and school children from over 180 countries. The campaign aims to familiarise students with programming in a simple and entertaining way and to make them interested in exact sciences. It is intended to popularise the study of Computer Science and Programming as

well as to increase the prestige of IT professions which are already among the most demanded ones today.

The «Hour of Code» format involves special Computer Science lessons where teachers tell students about what programmers do and write together the first lines of a real code.

During the campaign, resources provided on <https://www.hourofcode.kz/ru.html> were used as educational and informational materials. These materials contributed to students' deeper understanding of the topic in rural schools and practical application of knowledge in the field of programming and information technology.

Virtual school of Nazarbayev Intellectual Schools AEO

From 9 October to 18 December 2023, 2 370 Grade 6 students from 79 reference schools completed the virtual school of Nazarbayev Intellectual Schools AEO.

The virtual school was established for Grade 5-6 students of secondary educational organisations of Kazakhstan. Tuition at the virtual school is provided free of charge.

The virtual school aims to prepare students of secondary educational organisations of Kazakhstan for competitive selection in the educational organisation «Nazarbayev Intellectual Schools» AEO.

Upon completion of the virtual school, all students of rural reference schools passed tests to consolidate the learning material and final online testing.



Part 3

WORLD:

GLOBAL EDUCATION BRAND



1. AEO RESULTS IN THE INTERNATIONAL EDUCATIONAL ARENA



1.1. PISA-2022



1.2. Recognition of NIS-PROGRAMME and NIS certificate



1. AEO RESULTS IN THE INTERNATIONAL EDUCATIONAL ARENA

1.1. PISA-2022 RESULTS

In 2022, students of 20 Intellectual Schools in Almaty, Aktobe, Aktau, Atyrau, Karagandy, Kokshetau, Astana, Semey, Pavlodar, Petropavl, Taldykorgan, Oral, Oskemen, Kyzylorda, Kostanay, Taraz and Shymkent took part in the international study on the assessment of students’ educational achievements in PISA (Programme for International Student Assessment).

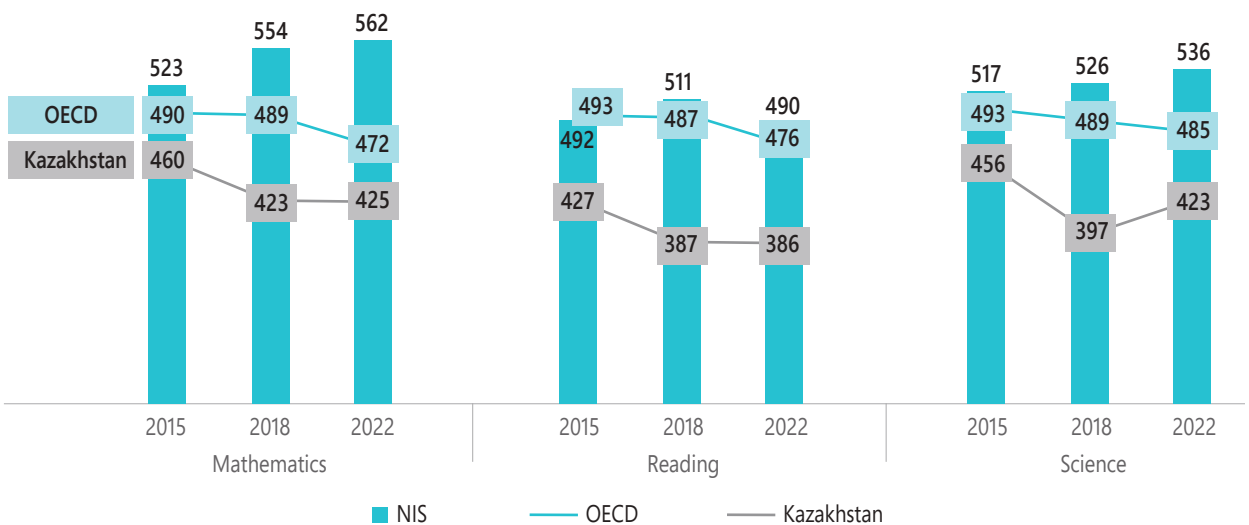
Intellectual Schools have been participating in the PISA study for the 3rd cycle (previously in PISA-2015 and PISA-2018).

The 2022 study in Intellectual Schools was conducted in April 7-8. PISA 2022 was attended by students born in 2006. The total number of test participants was 2 662 students from Grades 8 to 11. 1 685 students study in Kazakh and 977 students study in Russian,

It should be noted that NIS students participated in the PISA-2022 as NIS School sample within the agreement between NIS AEO and the National Center for Education Research and Evaluation Tal dau named after Akhmet Baitursynuly (formerly Information and Analytical Centre JSC of the Ministry of Education and Science of Kazakhstan). Thus, the results of NIS students were not taken into account when calculating the scores of 15-year-old students of Kazakhstan and not included in the OECD international report following the PISA-2022 results.

In 2022, the study was computer based. The main focus of this cycle was Mathematical literacy. Another distinctive feature of PISA-2022 was an adaptive approach.

On 5 December 2023, OECD presented the PISA-2022 results.



The average score of NIS in PISA-2022 was 562 points in Mathematics, 490 - in Reading and 536 - in Science.

Mathematics: Improved by 39 points since 2015 and by 8 points from the previous cycle.

Reading: Decreased by 3 points since 2015 and by 21 points from the previous cycle.

Science: Improved by 19 points since 2015 and by 10 points from the previous cycle.

Compared to Kazakhstan's results, NIS demonstrated significant superiority in each type of literacy

in the context of all 3 cycles. According to PISA-2022 results, the difference in average scores between NIS and Kazakhstan is 137 points in Mathematics, 104 points in Reading and 113 points in Science.

A comparison with the results of OECD countries shows that in 2018 and 2022 the average score of NIS students is higher than in all three literacies. In 2015, the average score of OECD in reading literacy was 1 point higher than the one of NIS students.

The general trend shows an improvement in Mathematics and Science scores but a decrease in Reading.

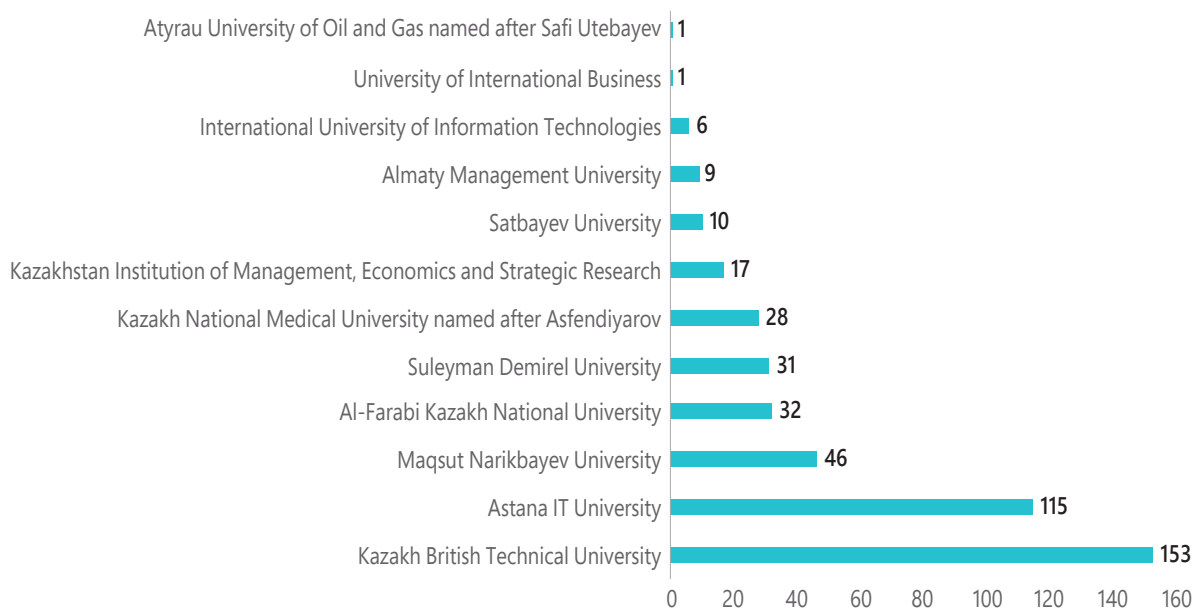
1.2. RECOGNITION OF NIS-PROGRAMME EDUCATIONAL PROGRAMME AND THE NIS CERTIFICATE

In the reporting year, the work with universities of the Republic of Kazakhstan on the recognition of the NIS-Programme and NIS Grade 12 Certificate was continued.

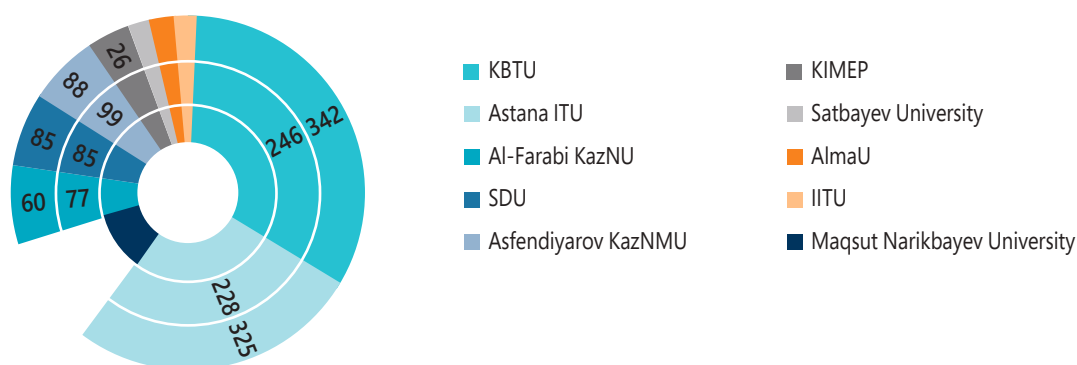
In 2023, Maqsut Narikbayev University recognised learning outcomes of Nazarbayev Intellectual Schools students, thereby being one of the universities which

recognised them in Kazakhstan. In total, 19 universities in the country today accept NIS graduates for reduced bachelor's degree programmes or transfer academic credits. Most graduates who continue their studies in the country prefer higher educational institutions that recognise learning outcomes in Intellectual Schools (Figures 1 and 2).

The number of graduates enrolled in the 2022-2023 academic year in universities of Kazakhstan which admit to shortened bachelor's degree programmes and transfer academic credits



Graduates enrolled in national universities to shortened Bachelor's programme and transfer academic credits, number (data for three years 2021–2023)



At the same time, NIS proceeds to cooperate with international higher educational institutions and organisations to further expand the recognition of NIS Grade 12 Certificate and the NIS-Programme educational programme. NIS AEO employees actively participated in international conferences including the conference held by Association for International Credential Evaluation Professionals (TAICEP) and the National Association for College Admission Counseling (NACAC). These efforts contributed to

the establishment of productive relationship with leading universities that regularly participate in these events.

As a result, 17 more prestigious universities in the UK, Canada, Italy, the Netherlands, Russia and other countries have recognised the NIS Grade 12 Certificate. It provides a unique opportunity for NIS graduates to enroll in the 1st year of Bachelor's degree programmes bypassing the pre-university Foundation programme.

International universities that recognised the NIS Grade 12 Certificate in 2023



Great Britain >>>

- Nottingham University
- Arden University
- University of Glasgow
- Northumbria University
- Association of Chartered Certified Accountants
- University of Galway (Ireland)
- University of London



Canada >>>

- University of Toronto
- University of Alberta
- University of Block
- Wilfrid Laurier University



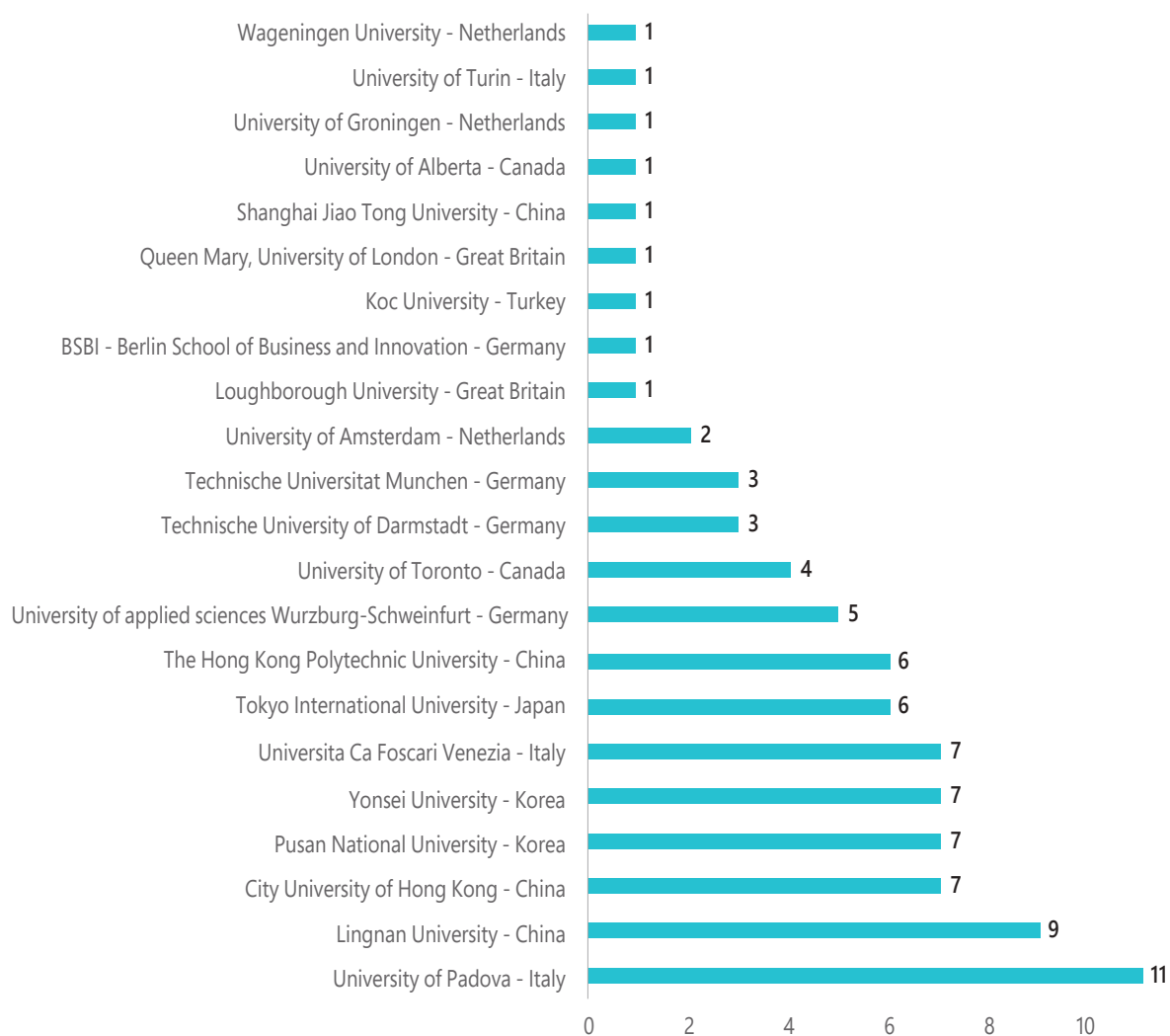
Other countries >>>

- Turkey
 - Koc University
- Italy
 - Universita di Torino
- Denmark
 - VIA University College
- Netherlands
 - Windesheim Honours College
- Australia
 - The University of Western Australia
- Russia
 - National Research University of Higher School of Economics

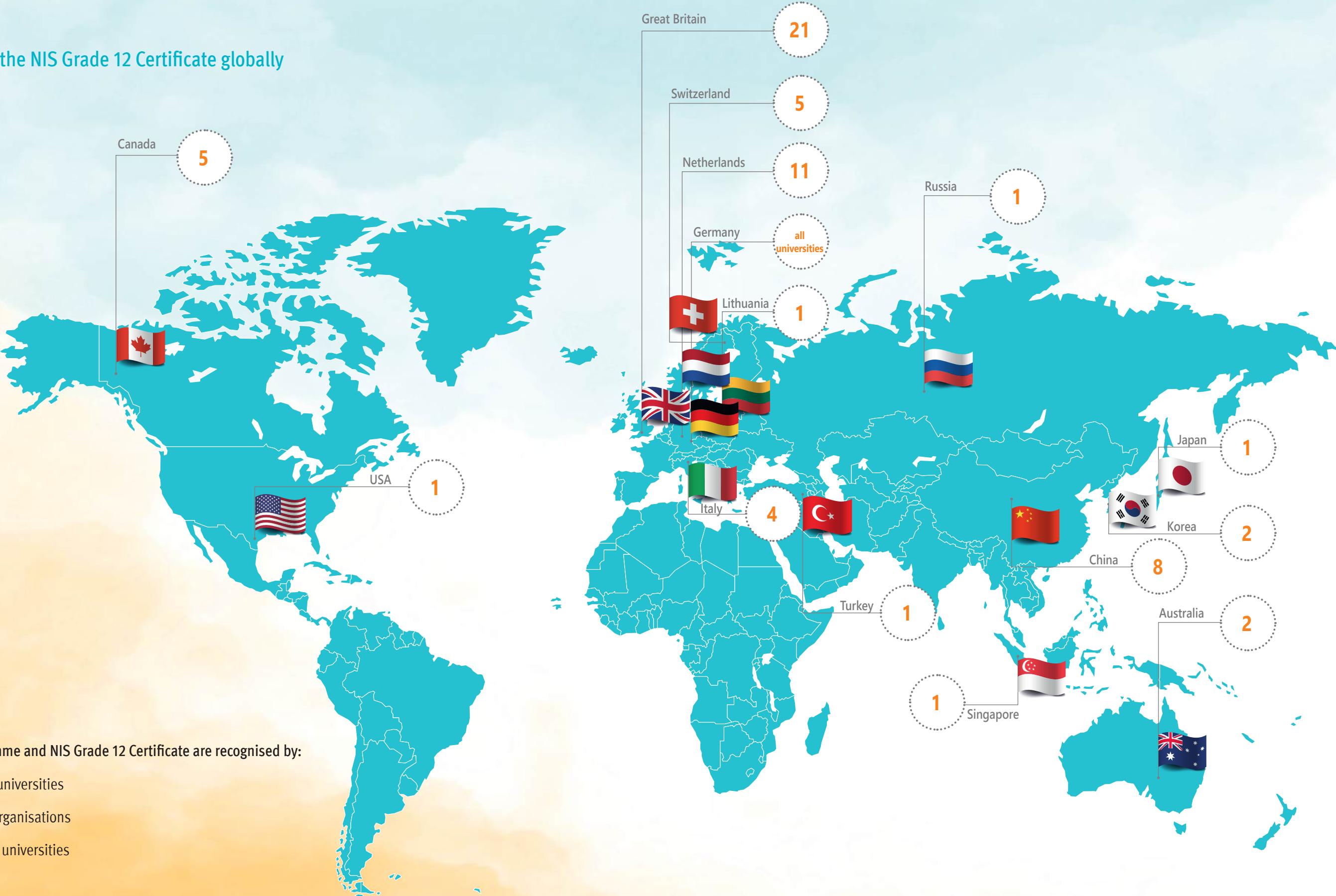
In addition, the NIS Grade 12 Certificate was included in the Victorian Tertiary Admissions Centre along with other 47 universities. Graduates from all over the world will be able to apply for admission to Australian universities through this service.

Out of total 477 graduates enrolled in foreign universities in 2023, 86 were admitted to recognised universities: 23 – China, 19 – Italy, 14 – Korea, 12 – Germany, 6 – Japan, 5 – Canada, 4 – the Netherlands, and 1 – Turkey.

Выпускники, поступившие в зарубежные вузы, признающие сертификат NIS



Recognition of the NIS Grade 12 Certificate globally



The NIS- Programme and NIS Grade 12 Certificate are recognised by:

- 19 Kazakhstani universities
- 8 international organisations
- 60 international universities



2. INTERNATIONAL COOPERATION



2.1. Strategic partnership



2.2. Cooperation with international educational organizations



2. INTERNATIONAL COOPERATION

2.1. STRATEGIC PARTNERSHIP

A new stage of partnership with the University of Cambridge

Since 2023, NIS AEO has moved to the next stage in cooperation with the University of Cambridge (UK) and its departments. This new stage includes the accreditation of educational programmes and assessment system for their compliance with high international standards.

NIS-Programme and assessment system including the NIS Grade 12 Certificate have been successfully implemented since the beginning of collaboration with the University of Cambridge in 2010.

Joint activities with the University of Cambridge allowed NIS to train qualified specialists whose experience is actively being integrated in the educational system of Kazakhstan and beyond it. CEP and CPM develop educational programmes and assessment

tools that are internationally recognised. Cambridge remains an external organisation that accredits NIS projects for their compliance with international quality standards and their comparability with A-level qualification.

On 21–22 November 2023, the Annual Review of the first year of collaboration under the Accreditation Agreement between NIS and Cambridge was held. Within two days the parties discussed key issues in the field of education, summarised the results of collaborative work for 2023 and laid a foundation for further cooperation. As part of the Annual Review, Cambridge provided a letter of recognition for the NIS Grade 12 Certificate.

Cambridge University Press and Assessment Certificate of Recognition



10 years of cooperation between NIS and Cito

In 2023, there was an event dedicated to the 10th anniversary of cooperation between NIS and Cito as part of the competitive selection of students for Intellectual Schools. Over the years of cooperation, the selection system has confirmed its reliability, validity, efficiency, and transparency by the results of validation studies, as well as the international accreditation by the Research Center for Expertise and Certification (RCEC).

Within 10 years, 184 221 Grade 6 students of Kazakhstan participated in the competitive selection of which 25 704 became the holders of the educational grant «Orken». More than 90 NIS employees have gained invaluable experience, knowledge, and skills in the field of pedagogical measurements as part of this cooperation.



KiVa Anti-bullying Programme

The Student Welfare Department initiated an agreement with the University of Turku (Finland) to disseminate the KiVa anti-bullying programme in Kazakhstan. It was proposed to implement 3 blocks for primary, lower secondary and upper secondary schools in Russian and Kazakh across Intellectual schools with further adaptation of the programme in

comprehensive schools of the country. In the period from October 2023 to August 2024, the programme provides for training of trainers, adaptation of learning materials, and their translation into Kazakh. From August 2024 to May 2025, it is planned to pilot the programme in Intellectual Schools, 80 rural schools and 5 schools in Astana with external monitoring.



A project to create an Independent Agency for Assessment and Accreditation of Educational Organisations

In Kazakhstan, accreditation is an important link in ensuring the quality of education, contributing to its improvement, and strengthening competitiveness in the global community. The aim of the project is to create an Independent Agency for Assessment and Accreditation of educational organisations which will conduct an independent assessment of educational organisations (schools) in accordance with established standards. Accreditation encourages continuous improvement of schools based on feedback.

An accreditation system methodology has been developed based on the existing experience in accreditation and inspection of schools and a review of international approaches to accreditation in countries with high educational quality indicators (Canada, USA, England, South Korea, and the Netherlands). The accreditation process is a multi-stage and cyclical process that includes preparing an organisation for accreditation, an assessment procedure (accreditation) and a post-accreditation period. The principles of accreditation are defined - transparency, equity, competence, and independence, ensuring the objec-

tivity and fairness of school assessment. Accreditation standards have been developed covering various aspects of education, which makes the assessment comprehensively informative.

NIS AEO signed a Memorandum of cooperation with the Council of International Schools (CIS, the Netherlands) within the framework of the international research-to-practice conference «Rural school prosperity is a key to community wellbeing». CIS is a global educational organisation that accredits educational organisations around the world. The CIS community includes 1502 educational institutions from 121 countries around the world. The partnership with CIS is aimed at providing mutual support, exchanging knowledge and information, and giving additional opportunities for further development of the project and the organisation. The Centre for Pedagogical Measurements affiliated with Nazarbayev Intellectual Schools AEO became a CIS member in the context of cooperation (<https://www.cois.org/for-consultants-and-supporting-organizations/supporting-members>).



WALS-2024 in Kazakhstan

In 2023, CoE proceeded its membership in the World Association of Lesson Studies. The WALS-2023 international conference was held in Zwolle (the Netherlands) which was attended by 16 CoE trainers who demonstrated the best practices of Lesson Study implemented in national education. Participants discussed how to develop students' creativity, school leadership, school culture and positive relationships between a teacher and a student within the framework of thematic symposiums, training sessions and master classes.

At the author's symposium with the participation of experts in the field of education, Peter Dudley

and Stephen Klivaz, CoE trainers presented ways of teaching English as a second language through lesson research. The CoE trainer worked in partnership with Dr. Hasna Abdullah from Malaysia and Siti Nur Fikrah who confirmed the significance of conducting cross-country Lesson Study - among the highly demanded trends in global education. The WALS Expert Council consisting of representatives of 25 countries noted the professionalism of trainers, highly appreciated the effective system of promoting Lesson Study in Kazakhstan and signed an agreement on holding WALS – 2024 in Kazakhstan.



2.2. COOPERATION WITH INTERNATIONAL EDUCATIONAL ORGANISATIONS

Partner Schools

In order to share experience in the development and implementation of innovative research projects, joint students' research, online research-to-practice conferences, projects, seminars and competitions, work with gifted children, in the period from January to December of the current year, a number of important meetings and events were successfully held within the framework of cooperation of libraries of Nazarbayev Intellectual Schools with international educational institutions.



In 2023, the following meetings were held with partner schools:

- Online meetings with the partner school Szkoła Podstawowa nr 43 im. Simony Kossak w Białymstoku, Poland, within the framework of the Global Readers Club (NIS PhM in Kokshetau);
- Online meeting with the partner school Happy Home School, HHS Schooling System, Pakistan (NIS PhM in Kokshetau);
- Online meeting between the library of the Nazarbayev Intellectual School in Karaganda and the library of the Global Indian International School (Abu Dhabi, United Arab Emirates) within the framework of the International Month of School Libraries (NIS ChB in Karagandy);

- Online meeting of NIS and VAS (Vietnam-Australia) students took place in the NIS Petropavl library. The students outlined plans for further cooperation (NIS ChB in Petropavl);

- Online meeting of Grade 8D students and the Bal Bharti Public School students on the topic “The World of Jobs”) (NIS PhM in Taldykorgan);

- Online meeting of Grade 7-8 students and student-librarians of Sekolah Cikal school in Indonesia (NIS PhM in Taldykorgan);

- Online meeting with the author of the book «ShkolaTa or How to Enjoy Education» by Akikat Ras (NIS PhM in Oral);

- «READx» together with the Indian Lucky International school (Jodhpur, India) (NIS ChB in Shymkent);

- Meeting with teachers and students of the Global Youth Center in Ansan (South Korea) (NIS ChB in Oskemen).

In the period of globalization and digitalization of all spheres, the international exchange of experience is becoming more and more widespread. Building friendship among the school library community helps our libraries grow. This format of cooperation allows our libraries to take into account global development trends, evaluate one's activities, achievements, and problems in comparison with the activities of other libraries. Library staff get the opportunity to widen their horizons. International cooperation allows NIS libraries to show themselves to the world, and to learn something new. In addition, the exchange of experience on an international scale makes the masterpieces of the world cultural heritage accessible to people from different countries.



Today the school library leads the role of an information center, where conditions are created for the development of a creative and intellectual personality. The libraries of Nazarbayev Intellectual Schools are actively introducing new technologies and approaches in their activities.

Teachers-librarians of Nazarbayev Intellectual Schools regularly participate in online webinars and trainings with the participation of foreign specialists. So, in the period from October to December 2023, three online meetings were held with foreign colleagues from Malaysia, Singapore, and the Netherlands on topics such as: Storytelling Session, Hidden Treasures: Revealing School Libraries' Vital Role, How the Public Library Reading Consultant (RC) Adds Value to the 'Library in School' in the Netherlands.

In 2023, NIS AEO employees visited the IFLA World Library and Information Congress 2023, the 88th IFLA General Conference and Assembly on the theme «Let's work together», as well as the 51st annual IASL Conference. Cooperation with school libraries of foreign countries, participation in international conferences IFLA and IASL, introduction of modern methods, techniques, and projects into their work, conducting research on various topics gives teachers-librarians of Nazarbayev Intellectual Schools the opportunity to share their accumulated experience with their colleagues. The aim of disseminating the experience is to increase the level of information and functional literacy of the participants, develop professional skills of school librarians, and exchange experience between the participants of the event.

Implementation of training programmes for teachers from the Republic of Azerbaijan

Within the framework of cooperation between CoE and the Ministry of Science and Education of the Republic of Azerbaijan, training was conducted for 30 teachers on the advanced training course «Modern teacher: from teaching to research». The programme is aimed at improving the professional competence of teachers through the development of lesson planning

skills, the organisation of an active cognitive learning and assessment process, reflective teaching, and research of their own practice. It was designed taking into account the concept of general education of the Republic of Azerbaijan and internationally recognised CoE programmes «Effective learning» and «Research in teacher practice».



Implementation of training programmes for teachers of the Kyrgyz Republic

Within the framework of cooperation between CoE and the International Educational Institution «Sapat», a professional development course «Teacher's Research Activity: Lesson Study and Action Research» was delivered for Kyrgyz teachers. In addition, in order

to build further partnerships with educators of the Kyrgyz Republic, the CoE management staff visited Salumbekov University and the Sapat network of schools: Bishkek Lyceum «Aichurok», United World International School and Seytek STEM School.



Holistic Assessment Special Interest Group

Holistic Assessment Special Interest Group, HASIG was created on the platform of the Association for Educational Assessment – Europe, AEA-Europe at the initiative of the CPM. The Management Committee of the Special Interest Group is chaired by CPM expert Gulbakhyt Sultanova. The committee members are scientists Tim Oates, Irenka Suto, Stuart Shaw and Caroline Hutchinson (Great Britain) and Asel Rakhimbekova (Kazakhstan).

The Management Committee held six meetings, an annual reporting meeting, and a webinar on «Holistic assessment: Theory and Practice». The annual conference of the Association for Educational Assessment (AEA-Europe) made an official presentation of the Special Group. Working in this group allows to discuss topical issues in the field of assessment with international experts and to increase the scientific potential of Intellectual schools.

Education Centre at the Embassy of the Republic of Korea

In 2023, NIS and the Education Centre signed a Memorandum of understanding at the Embassy of the Republic of Korea. It is planned to cooperate

with Korean universities on the issues of recognition within the Memorandum of cooperation.



3. DIGITAL EDUCATIONAL ENVIRONMENT



3.1. BeyimTech



3.2. Adaptive active learning system

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3.3. Digital learning environment



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3. DIGITAL EDUCATIONAL ENVIRONMENT

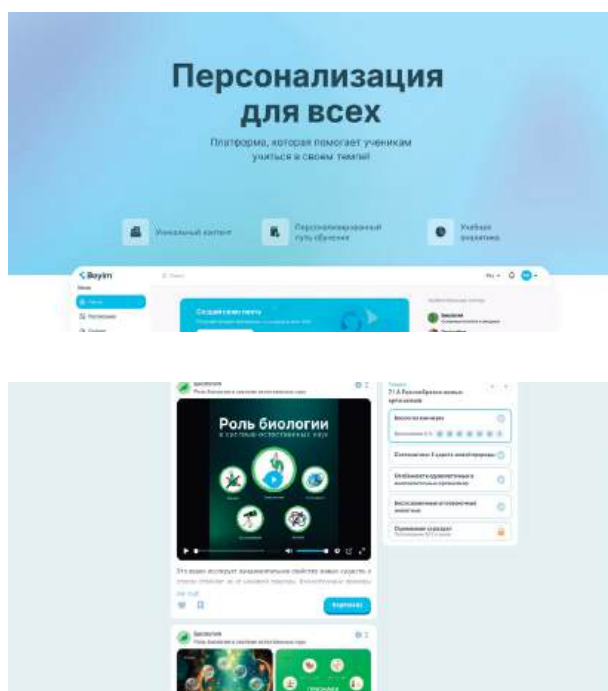
3.1. BEYIMTECH

On 20 October 2023, the Board of Nazarbayev Intellectual Schools approved the establishment of a subsidiary of the private institution «NIS Center for Information Technologies and Services» under the name of BeyimTech LLP.

In 2023, it started to develop two EdTech products:

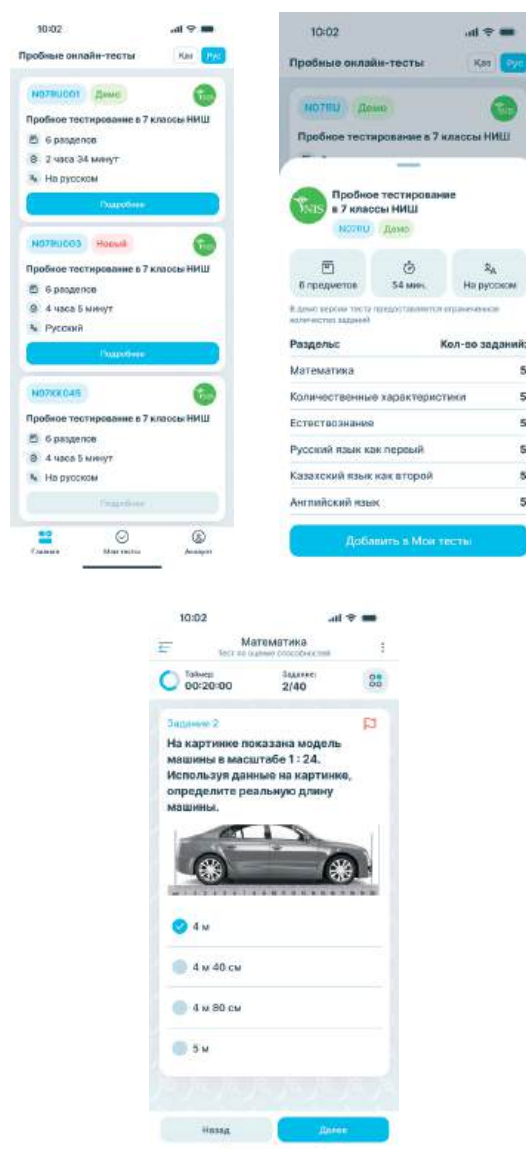
1. Beyim.ai (since April 2023)

Beyim.ai is a microlearning social network built on a unique methodology developed with NIS strategic partner Arizona State University based on three years of research and utilizing artificial intelligence. The features of this platform are microlearning based on a ribbon presentation of information. Currently, Beyim.ai's educational content is developed in accordance with the NIS-Programme in science and math and is designed for Grade 7 students. Learning on the platform Beyim.ai will be available in three languages, and subsequently in other languages around the world. <https://beyim.ai/>



2. Beyim Synaq (since July 2023)

BBeyim Synaq is an online official trial testing platform to prepare for admission to Nazarbayev Intellectual Schools. The product is designed for students to take the test at a time and place convenient for them. The features of this application are easy and convenient test-taking, fast payment, and instant test results. <https://synaq.beyim.ai/>.



Most Investable Battle

As part of the promotion of digital products, Beyim.ai and Beyim Synaq platforms were presented at the Most Investable Battle conference, which was held on 9-10 November 2023 in Almaty at MOST Hub co-working space.

Most Investable Battle is a technology startup competition where 20 selected projects with artificial intelligence-based solutions shared their innovations with the public and investors. During the conference, 20 teams, including Beyim Synaq and Beyim.ai, participated in the semifinals and successfully entered the top 20 AI startups in Kazakhstan and made it to the MOST Business Incubator semifinals.



Profit Education Day

Profit Education Day is a conference on information technology in education aimed at managers and IT directors of educational institutions. The conference held on 20 October 2023 in Almaty at the InterContinental Almaty attracted about 100 representatives of educational projects and more than 1 000 online listeners. The 'Beyim' ecosystem acted

as a speaker presenting the topic «Digitalization in education». The participation provided an opportunity to study international experience, get acquainted with trends in the IT industry and new educational programmes, as well as share experience and discuss innovative modernization in the field of education with colleagues.



3.2. ADAPTIVE ACTIVE LEARNING SYSTEM

Since the beginning of the 2023-2024 academic year, an educational platform for adaptive learning in Canvas has been launched in the network of Nazarbayev Intellectual Schools. Students of 20 Intellectual schools (Aktau ChB, Aktobe PhM, Almaty PhM, Almaty ChB, Astana PhM, Atyrau ChB, Karagandy ChB, Kokshetau PhM, Kostanay PhM, Kyzylorda ChB, Pavlodar ChB, Petropavl ChB, Semey PhM, Taldykorgan PhM, Taraz PhM, Turkistan ChB, Oral PhM, Oskemen ChB, Shymkent ChB, Shymkent PhM) became participants in this project on the use of Canvas in Grade 11 with in-depth study of Chemistry, Biology, and Physics.

Canvas has 3 065 registered users and 226 courses. During the entire reporting period, 314 applications from platform users were processed.

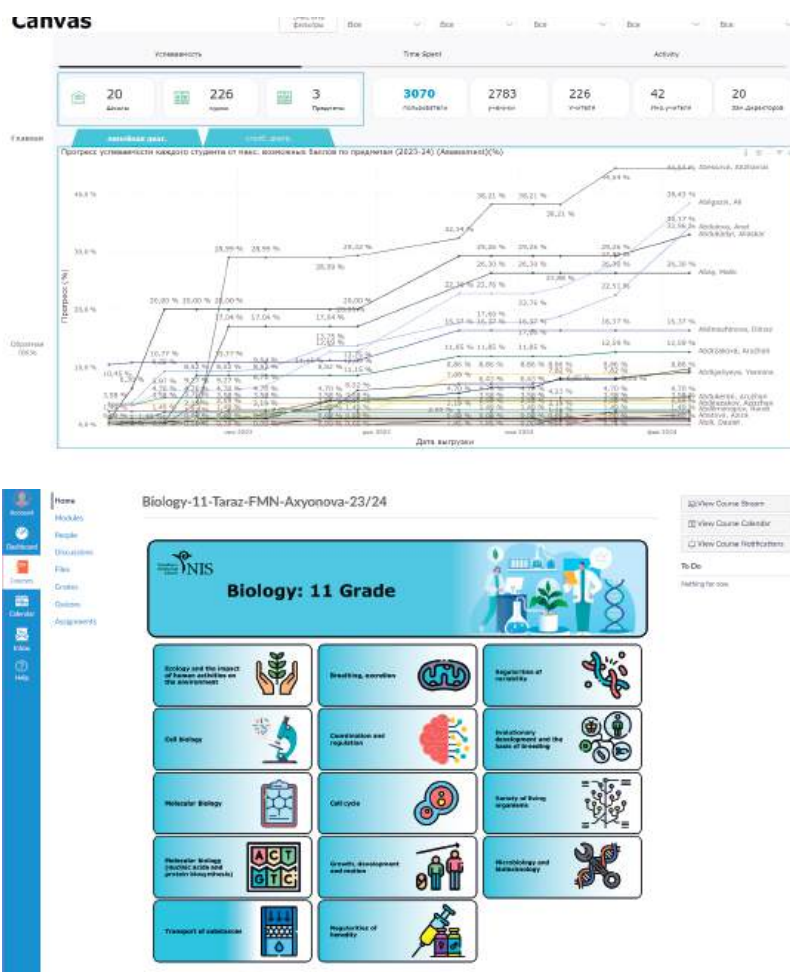
Students made 1 048 068 visits to pages including educational resources and successfully completed tasks 212 866 times. The most visited pages were on

the subject of Physics (504 828 views, 105 954 tasks completed). The most active 5 schools are: Almaty PhM, Shymkent PhM, Almaty ChB, Astana PhM, and Shymkent ChB.

All student progress and activity are recorded and displayed using the Microsoft Power BI visualization service (Figure 1, 2).

As part of the personalised learning system, the Canvas platform was used to develop and review 160 learning resources and 817 assessment tools for Grade 11 students in English for the subjects of Physics, Chemistry and Biology.

To implement and introduce the adaptive learning system within the BEYIM ecosystem, 280 learning resources and 2 258 assessment tools were developed and reviewed for Grade 7 students in Kazakh and Russian for the subjects of Physics, Chemistry and Biology.



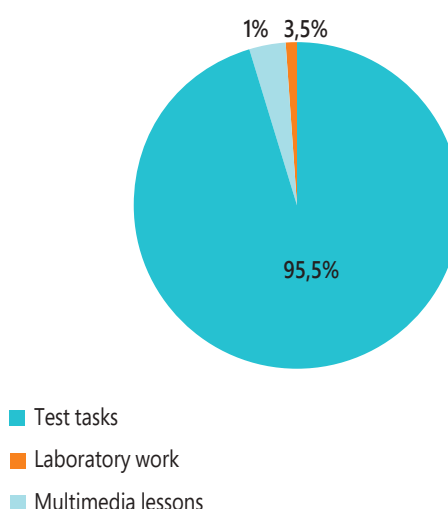
3.3. DIGITAL LEARNING ENVIRONMENT (DLE)

Based on the decisions of the AEO Board (Minutes No. 7 dated 18.02.2021 and Minutes No. 18 dated 05.05.2021), the CEP was assigned to develop lessons for the digital learning environment in «Physics», «Chemistry», «Biology», «Computer Science», «History of Kazakhstan», and «Geography» to integrate these lessons into the NIS Online educational platform, and the NIS Lab digital laboratories.

In 2023, 3,060 lessons were developed for the digital learning environment, covering grades 11 and 12. The lessons are divided into test tasks, multimedia lessons and laboratory work. According to the Table and Diagram below, laboratory work constitutes 1% (26 lessons), multimedia lessons - 3.5% (101 lessons) and test tasks - 95.5% (2 933 lessons).

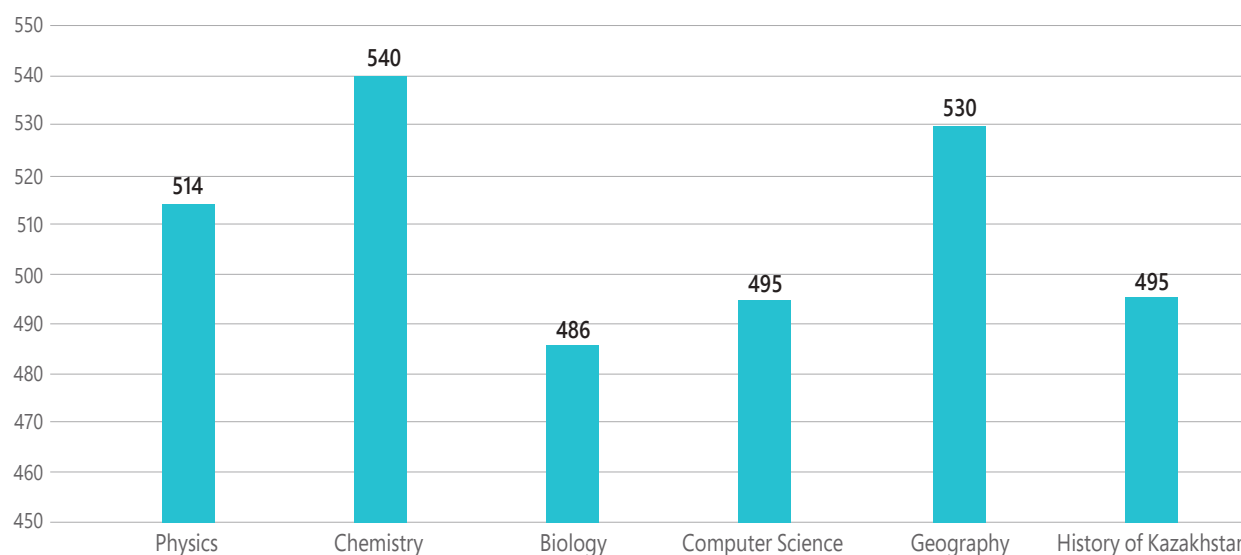
Type of the DLE lesson	Number
Test tasks	2 933
Multimedia lessons	101
Laboratory work	26

The ratio of DLE lessons by type of lesson



According to Table, the majority of lessons were developed for the subjects of «Chemistry,» «Geography,» and «Physics».

Number of lessons for digital learning environment in Grades 11-12 by subjects



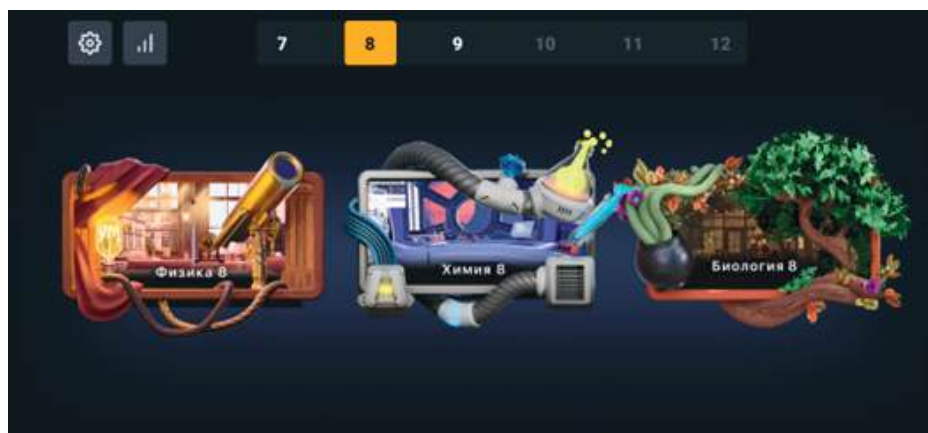
Test tasks make up 95.5% of all lessons, which allows for a formative assessment of knowledge in the learning process.

Multimedia lessons include video lectures, interactive tasks, and simulations, fostering the develop-

ment of analysis, assessment, and planning skills. 101 multimedia lessons consist of 185 components from a multimedia video lecture and interactive multimedia tasks, as well as 17 simulations.

In 2023, this year saw the development of 24 laboratory works on the subjects of Physics, Chem-

istry, Biology (with a total of 48 lessons, comprising 24 in Kazakh and 24 in Russian).



After receiving approval in the 2022-2023 academic year, additional 90 lessons were developed for Grade 7 students as part of the Digital Learning Environment project. These lessons include 90 multimedia lessons and were created based on recommendations from both practice teachers and students.

To develop, edit, and localise lessons, the DLE enlisted qualified subject teachers from Nazarbayev

Intellectual Schools, who had previously participated in the CEP projects.

Moreover, this year saw the development of 'NIS Online' and 'NIS Lab' mobile apps. Mobile apps will provide students with quick access to the materials uploaded to the platform. Free access to educational resources allows students to study at any convenient time.



Mobile NIS Online



[NIS Online на iOS](#)



[NIS Online на Android](#)



Mobile NIS Lab



[NIS Lab на iOS](#)



[NIS Lab на Android](#)

4. INTERNATIONAL COMPETITIONS, CONFERENCES



4.1. International competitions and olympiads for students



4.2. International competitions and conferences for teachers and educational organizations



4. INTERNATIONAL COMPETITIONS, CONFERENCES

4.1. INTERNATIONAL COMPETITIONS AND OLYMPIADS FOR STUDENTS

«Caspian Startup»

Every year NIS ChB in Aktau holds the final stage of the startup project competition «Caspian Startup». In 2023, the Caspian Startup competition turned 5 years old. Approximately 800 applications were received over the course of the competition. In 2023, the number of applications increased to 215 projects, of which 17 projects reached the final of the competition.

The participants of the competition are high school students of comprehensive schools in Kazakhstan, Azerbaijan, Uzbekistan and Turkmenistan and students of the 1st and 2nd courses of colleges in Kazakhstan and Turkmenistan.

The main sponsor of the competition in 2023 was KazFruit Company LLP. The competition was also supported by the Corporate Fund «International Technopark of IT Startups «Astana Hub», the Chamber of Entrepreneurs of Mangystau region «Atameken», online academies QAZAQEDU.COM, Mediana Service Limited LLP, and Renaissance Hotel.

Higher educational institutions - Kazakh-British Technical University (Almaty), Atyrau University of Oil and Gas named after Safi Utebayev, Caspian University of Technology and Engineering named after Sh. Yessenov regularly allocate three grants each to the authors of the best projects.

In 2023, according to the competition results, the «Skincare AI» project of the NIS IB students Darmena Ausarbekova, Tomiris Ydyrysbaeva, Arai Kamaliyeva, Adeliya Aitpayeva, Amira Zhaksylyk and Ayan Armanuly was recognised as the best. The novelty of the project idea is to enable early detection of malignant moles.

The team from the NIS PhM in Oral consisting of Oraz Kairzhan, Nursultan Zinullin, Nurdaulet Bazargali and Makhambet Otepkali developed a project of a multifunctional agricultural drone «DEO-1» and took the honorable second place.

The bronze medalists of the competition were students of the NIS ChB in Turkistan Alpamys Sartay, Dias Asylbek, Ali Paizkhan and Zharkynbek Zhailybek who developed a mobile application «TauFind» which helps quickly determine the location of a missing person in a mountainous area as well as a student of the NIS PhM in Taldykorgan Viktor Kakhno who presented the concept «SeeTheFuture» – a helmet for the visually impaired and blind people.

Atyrau Oil and Gas University named after Safi Utebayev invited the students for free training: Viktor Kakhno from NIS PhM in Taldykorgan, Alexander Tsyupay and Sergey Trefilov from the Physics and Mathematics Lyceum of the Education Department of Kostanay, Adil Shayakhmetov, Abilmansur Alimbayev, Mansur Sayran, Almubdi Mutaykhan and Sultanbi Isatay from NIS ChB in Karagandy.

The scholarship of Kazakh-British Technical University was granted to Viktor Kakhno from NIS PhM in Taldykorgan, Mutaikhan Almubdi from NIS ChB in Karagandy, and Amina Asadova from school №36 named after the Novruz brothers, Baku, Azerbaijan.

Nursultan Zinullin from NIS PhM in Oral, Raushan Turganbay from NIS ChB in Kyzylorda, and Mutaikhan Almubdi from NIS ChB in Karagandy were invited to study at the Caspian State University of Technology and Engineering named after Sh.E. Yessenov.

Maral Kadyr, a doctor-epidemiologist of Mangystau Regional Hospital, awarded a special cash prize to the projects «ExoGlove» and «DolphEYE» of the students from NIS ChB in Aktau, as well as to the project «Fingerprint Recognition» of the students from NIS ChB in Kyzylorda.

The «Caspian Startup» competition helps students find creative ideas, supports the young generation in developing their useful and effective projects, and contributes to the education of a young and innovative community.

International Robotics Olympiad ‘World Robot Olympiad-2023

Since 2014, NIS AEO is the national organiser of the Robotics Olympiads according to the rules of the World Robot Olympiad (hereinafter referred to as the Olympiad) in Kazakhstan which is responsible for the formation of the national team. The national team of Kazakhstan was formed following the results of the republican stage of the current year which was held in NIS ChB in Almaty.

In accordance with the order of the Chair of the NIS Board dated 22 September 2023 №327/OD, dated 12 October 2023 №346/OD, and dated 27

October 2023 №373/OD, the national robotics team took part in the International Robotics Olympiad WRO-2023 in the period between 7 and 9 November 2023.

This year, according to the results of the republican stage of WRO, the honor of the national team was presented by 13 teams out of 27 participants, including 12 students of NIS and 15 students of comprehensive schools. Three out of 13 Kazakhstani teams won prizes with excellent results and 2 teams entered the ranking of the best results.

Team results by category

№	Name	School	Category, result
1)	Maxim Usoltsev	"Nazarbayev Intellectual school of Chemistry and Biology in Kyzylorda", NIS AEO	Robomission Senior III place out of 88 teams
2)	Dinmukhammed Abdiyev		
3)	Amir Karabayev	private robotics school "Robotek" in Astana	Future Engineers II place out of 40 teams
4)	Ansar Saurbayev		
5)	Vagiz Disembayev	private robotics school "Robotek" in Astana	Robomission Junior III place out of 91 teams
6)	Zhanarys Kaparov		
7)	Batyrrkhan Baiterekov	private robotics school "Robotek" in Astana	Robomission Senior 24th place out of 88 teams
8)	Marat Kazkenov		
9)	Diana Khassimova	"Nazarbayev Intellectual school of Physics and Mathematics in Taldykorgan", NIS AEO	Future Innovators Senior 15th place 32 teams
10)	Ilya Stasyukov		
11)	Adilet Ausarbekov	"Nazarbayev Intellectual school of Astana", NIS AEO	Future Innovators Senior 6th place out of 80 teams
12)	Aliamir Kurmangazy		
13)	Sergey Gaponov	"Nazarbayev Intellectual school of Physics and Mathematics in Almaty", NIS AEO	Robosports 26th place out of 45 teams
14)	Amina Buribayeva		
15)	Ilyas Makhatov	"Nazarbayev Intellectual school of Physics and Mathematics in Semey", NIS AEO	Robosports 36th place out of 45 teams
16)	Mansur Asylbekov		
17)	Yernur Sadu	"Nazarbayev Intellectual school of Chemistry and Biology in Kyzylorda", NIS AEO	Robomission Senior 5th place out of 40 teams
18)	Nurdaulet Adilbek		
19)	Aizere Yessenalina	School №75 in Aktobe	Future Innovators Elementary 26th place 30 teams
20)	Aisha Talgatkyzy		
21)	Rustam Anas	private Robolab school, Astana	Robomission Elementary 25th place out of 80 teams
22)	Mansur Bidanov		
23)	Imran Kuziyev	private New Generation School in Almaty	Robomission Elementary 72th place out of 80 teams
24)	Yestay Zhumakanov		
25)	Adilzhan Oralseit	private Milestone school, Astana	Robomission Junior 41th place out of 91 teams
26)	Niyazbek Zhumabek		
27)	Omar Zapir		

Olympiad results:

3rd place in the main senior category:

Senior							
Team		Day 1		Day 2		Σ	
1.	Robolution	165 (63)	70 (57)	215 (62)	205 (120)	275 (117)	490 (179)
2.	Robotic Boys	23 (6)	190 (78)	215 (82)	180 (120)	275 (115)	490 (197)
3.	QYZYLORDA Rage	198 (120)	215 (110)	215 (103)	255 (83)	275 (119)	490 (222)

2nd place in the main middle category:

Junior							
Team		Day 1		Day 2		Σ	
1.	KWANGHUA FALCON 01	160 (69)	160 (70)	160 (64)	200 (75)	220 (79)	380 (143)
2.	Up Up C.H.M	160 (82)	160 (76)	147 (71)	180 (106)	220 (110)	380 (186)
3.	ROBOTEX Cynex	71 (49)	160 (106)	160 (75)	0 (28)	190 (116)	350 (191)

3rd place in the Future Engineers category:

Future Engineers							
Team		Qualifying Matches		Final Matches	Documentation	Σ	
1.	Liga Robotov Tajikistan	30.0 (27)	30.0 (25)	26.0 (31)	35.0 (32)	24.0	109 (57)
2.	ROBOTEX Prime	30.0 (23)	3.0 (5)	25.0 (40)	12.5 (58)	23.0	108 (63)
3.	BLACK FINGERS - KSA	30.0 (88)	30.0 (37)	25.0 (17)	53.0 (66)	21.0	106 (111)

Top 5 in the Future Engineers category:

Future Engineers							
Team		Qualifying Matches		Final Matches	Documentation	Σ	
1.	Liga Robotov Tajikistan	30.0 (27)	30.0 (25)	26.0 (31)	35.0 (32)	24.0	109 (57)
2.	ROBOTEX Prime	30.0 (23)	3.0 (5)	25.0 (40)	12.5 (58)	23.0	108 (63)
3.	BLACK FINGERS - KSA	30.0 (88)	30.0 (37)	25.0 (17)	53.0 (66)	21.0	106 (111)
4.	SPARK	1.5 (180)	30.0 (30)	30.0 (100)	24.0 (180)	21.0	104 (132)
5.	Qyzylorda	30.0 (37)	15.0 (64)	25.0 (32)	4.0 (17)	19.0	104 (139)

Top 6 in the creative senior category:

Team		Points
1.	Support Submarine (SuppSub)	177.75
2.	Oceanic Pioneers	172.06
3.	Minders	171.19
4.	HSBP Tech Keepers	170.31
5.	Robonium Bangladesh	162.63
6.	ACRS	154.72

The Olympiad results are available at the link [Scoring for an agegroup - WRO Scoring System \(wro-association.org\)](https://wro-association.org).



FIRST Global Challenge

FIRST Global Challenge – International competitions geared toward high school, college and university students between the ages of 12 and 18. Every year teams participate in a new game where they design, build, test and program robots that can move both autonomously and under the control of operators.

This year students of NIS PhM in Almaty confirmed their champion status and became two-time gold medalists winning among 191 countries at the international stage of the FIRST Global Challenge held in Singapore.

4.2. INTERNATIONAL COMPETITIONS AND CONFERENCES FOR TEACHERS AND EDUCATIONAL ORGANISATIONS

CoE in Top 10 in the Community Award for Citizenship nomination

CoE participated in the prestigious international GESS Education Awards, Dubai 2023 and took a place in Top 10 in the Community Award for Citizenship nomination with the Leading Schools Network project. More than 900 projects from 60 countries were presented

in the competition this year which indicates a high competition in this nomination. The inclusion of the CoE project in the Top 10 is a well-deserved recognition of the relevance of the CoE projects and their effectiveness in the field of education.



I International Management Intensive Training «Guidelines for Leadership Education»

In December 2023, for the first time in the country, a dialogue platform for the leaders of education in Kazakhstan was organised – the I International Management Intensive Training «Guidelines for Leadership Education» which was attended by more than 500 school directors. The main goal of the training was to create a professional community of leaders focused on improving the quality of school education. The intensive participants got acquainted with cases and success stories from national and foreign education.

They also discussed the issues of talent management at school, the role of a leader, beliefs and values, as well as creative and effective tools for a successful manager. The training participants got acquainted with cases of success stories in both national and foreign education: A. Kozhakhmetov, President of AlmaU; Sara Seleznev, a member of the Council of the British Educational Research Association; Madis Somelar, Head of the Tallinn School of Science; Saras Menon, Associate Consultant of the Arbinger Institute in Singapore.



Digital Bridge & Astana Hub Battle

From 12 to 13 October 2023, Astana hosted the most important international Digital Bridge conference which brought together more than 30 thousand participants from 30 countries. This large-scale IT forum attracted more than 300 companies, 450 speakers and more than 100 investors becoming a platform for meetings, exchange of experience and search for innovative ideas. The Beyim startup got the opportunity

to introduce itself at Startup Alley which increased the website (beyim.ai) traffic to 85 views and attracted 43 new visitors. Our Instagram page, [@beyim.ai](https://www.instagram.com/beyim.ai), got 169 views. In addition, Beyim actively participated in the Astana Hub Startup Battle taking the 18th place out of 100 startups. The startup's success was confirmed by the audience award, where they took the 6th place with 58 votes in 15 minutes.



EdTech Korea

From 21 to 23 September 2023, an important annual EdTech Korea event dedicated to educational technologies was held in COEX, Seoul, South Korea. This forum organised by KEFA has been a platform for promoting digital education in Korea since its founding in 2006. The exhibition attracted a huge number of visitors, about 300 000 people and presented more than 300 stands from around the world. The Beyim team

actively conducted research on educational technologies focusing on the use of artificial intelligence (AI). It learned valuable experience and best practices from a variety of international EdTech projects which provided a unique insight into this dynamic and important field. This event was an opportunity to not only exhibit, but to actively contribute to the development of innovation in education through technology.



Bakotech (Cybersecurity & Digital Transformation Conference)

On 1 November 2023 in Tashkent, Uzbekistan, the Hilton Tashkent City Hotel became the venue for the BAKOTECH international conference organised by a leading IT distributor. This event focused on cybersecurity in digital transformation. More than 150 participants representing C-level IT/IS managers, technical professionals, business representatives and heads of public and private companies participated both offline and online. At the conference, the Beyim team presented a number of innovative solutions in the field of cybersecurity focusing on their application in educational projects. Our experience in developing products given business requirements and the realities of the information security sector was presented in details. This event became a platform for sharing experience, obtaining valuable information, demonstrating practical solutions and updating knowledge in the field of cybersecurity, emphasizing the impor-

tance of continuous learning and adapting to the rapidly changing requirements in this area.



EdCrunch X

From 15 to 16 November 2023, the EdCrunch X global conference was held in Almaty where more than 3 000 participants from 25 countries were able to exchange their experience and ideas. EdTech Cases, a platform within the EdCrunch EXPO, gave companies the opportunity to share their experience which the exhibition guests could put into practice.

The Beyim team presented the Beyim ecosystem demonstrating innovative technologies successfully applied in our projects. They established contacts with other IT companies for future cooperation, recorded

interviews with teachers on innovation in education and held a meeting with Dale Johnson, Director of Innovation at Arizona State University. As a result of the team's efforts, more than 100 people have added their contacts to the waitlist to gain access to the Beyim platform, and the CEO of Skillbox became interested in our projects and shared his contacts. The recommendations and consultations received will improve and promote the Beyim platform, and the team also received an invitation to participate and speak at an educational forum in Semey.



CIS Universities and Schools Summit

On 16-17 April, 2023, the Council of International Schools Summit of Schools and Higher Education Institutions was held in Cambridge (Great Britain). This event annually brings together the leaders of the international educational community, schools and higher educational institutions starting in 2019 under the theme «Bringing Schools and Universities Together». The Summit aims to identify significant opportunities for positive change in the international educational community. In particular, the Summit sessions touched upon such topics as making a smooth transition for schoolchildren to higher education, fostering a sense of belonging to successfully integrate students and schoolchildren into new communities, and improving the accessibility of quality education

in schools and universities to increase opportunities for a successful future for their students and schoolchildren.

In 2023, the Deputy Director of the Department of Education Quality Assessment and International Accreditation Abildenova D. M. and Director of Nazarbayev Intellectual School of Chemistry and Biology in Aktau Zhumabayev R. N. were invited to participate in the Summit. It should be noted that being an important partner of CIS in Central Asia, including 21 accredited schools and more than 20 certified accreditation experts, as well as relying on nine years of joint experience with CIS, NIS is an annual and important participant, and actively supports the common goals and ideas of the Summit.



CIS Global Forum

From 15 to 18 November 2023, career counselors of Intellectual Schools of PhM in Shymkent (Yesnazarov M.A.) and the Intellectual School of ChB in Oskemen (Berikbolov T.M.) visited the annual CIS Global Forum on International Admission and Guidance which was held in Dublin (Ireland).

The Forum gave an opportunity to learn about the latest changes and effective practices in supporting students in admission to universities, explore global trends in the international student recruitment, master skills required in daily work of counselors, and meet face-to-face with colleagues and establish contacts.

The event was attended by over 300 universities of the world (Cambridge University, University of Cambridge, University of British Columbia, University of Toronto, New York University, City University of Hong Kong, etc.) and representatives of various international educational organisations (Cambridge Assessment International Education, College Board, Duolingo English Test, International School Counselor Association, NACAC, etc.) who performed at educational sessions and fairs.



NACAC International Conference

From September 21 to 23, 2023, the annual international conference of the National Association for College Admission Counseling (National Association for College Admission Counseling) on the topic «Our power (The power of us)» was held in Baltimore (USA). About 7 000 consultants and student admission specialists from 26 countries of the world took part in this conference.

During the conference, more than 500 universities and organisations from Americas, Asia, Europe and Oceania represented themselves at the education fair.



More than 100 educational sessions were also held on topics including Admission Counseling, Counselor Personal and Professional Development, Admission Office Operations, Policy and Advocacy, Research, Strategic Enrollment Management, and etc.

The event was attended by employees of the Department of Education Quality Assessment and International Accreditation of the NIS AEO in order to obtain information on admission to universities, current admission policies, as well as to establish co-operation in recognizing the NIS Grade 12 Certificate.



TAICEP International Conference

In order to continue establishing cooperation with foreign universities and organisations in recognizing the NIS-Programme qualification and NIS Grade 12 certificate as well as to increase the recognition of Nazarbayev Intellectual Schools among universities abroad, an employee of the Department of Education Quality Assessment and International Accreditation of NIS AEO participated in the annual international conference on recognition of TAICEP (The Association for International Credential Evaluation Professionals) educational documents.



This year's conference was held from 1-5 October 2023 on the theme «TAICEP at 10 Years: Our Impact Continues. What Next?» in Redondo Beach (USA). The event brought together more than 180 participants from various countries such as the USA, Canada, Great Britain, Italy, Norway, Finland, as well as representatives of other European countries, Asia and Africa. It was a unique opportunity to share experience and knowledge with representatives of various educational systems.

Seminars and various sessions were held during the conference. The topics ranged from the automation

of the document recognition process to presentations on the education systems of various countries such as India, Bangladesh, Argentina, and South Africa.

Exhibitions representing leading educational organisations were also organised within the framework of the conference. For example: ECE from the USA, Cambridge Assessment International Education from the UK and Truecopy Credentials Pvt Ltd from India. Participation in exhibitions allowed to broaden the outlook on modern trends in education and to introduce innovative technologies in the process of document recognition.

Annual European Association for Educational Assessment

NIS has been a member of the European Association for Educational Assessment since 2014. This year, EAEA held its 24th Annual Conference on «Assessment reform journeys: intentions, enactment and evaluation» from November 1 to 4, 2023 in Valletta, Republic of Malta.

The conference discussed topical issues of assessing student achievement, such as inclusivity in assessment (in particular, students with speech defects), decolonization of assessment (shifting the focus of assessment from the amount of knowledge to the quality of their application), assessment of critical thinking, peer assessment, the use of artificial intelligence, and e-assessment, etc.

At this conference, the director of NIS PhM in Shymkent (Ismailova I. K.) made a report on «Exploring the assessment of IELTS writing task response among the high school students». She presented the results of studying low student scores on the IELTS writing exam and measures to improve the scores.

In addition, teachers of NIS ChB in Aktau participated in the conference and spoke at breakout

sessions (Utesheva Z. A., Orazbayeva N. T.) on «Feedback Culture at School: What Remains Neglected?» and «The impact of using peer evaluation in writing essays».

The study of the teacher Utesheva Z.A. was that students did not see themselves in the role of giving feedback, but were very effective in accepting and working with the feedback. At the same time, teachers willingly and effectively provide feedback to students, but accept it from students with less enthusiasm and without a clear understanding of its importance. This presentation received a lot of feedback from the conference participants, who expressed solidarity with the results of this study and shared their experience regarding the focus of the study.

In her presentation, teacher Orazbayeva N. T. shared the results of her study conducted among Grade 10 students, namely peer assessment in writing an academic essay and its impact on the development of writing skills. The presentation was positively received by the audience, and questions were asked about the continuation of the study.



ABBREVIATIONS

NIS AEO stands for “Nazarbayev Intellectual Schools” Autonomous Educational Organisation

NIS / Intellectual Schools – Nazarbayev Intellectual Schools

PhM – Physics and Mathematics

ChB – Chemistry and Biology

ISA – International School of Astana

IB – International Baccalaureate

CEP – Centre for Educational Programmes

CPM – Centre for Pedagogical Measurements

CoE – Centre of Excellence

NIS ITSC – NIS Information Technology and Service Centre