2024 PART I

OVERVIEW

PRIMARY SCHOOL GRADUATES' ACADEMIC ACHIEVEMENTS IN MATHEMATICS, READING, AND SCIENCE UNDER CRISIS CONDITIONS

Based on *the Report on the Results of the Third Cycle of National External Monitoring of the Quality of Primary Education*

УДК 373.3.012
З 42

З 42 Briefly about the learning performance of primary school graduates in mathematics, reading and science under crisis conditions: based on the report on the results of the third cycle of the National External Monitoring of the Quality of Primary Education in 2024 / T. Lisova (main author), H. Bychko, V. Tereshchenko, V. Horokh, H. Bondareko, A. Nikytchuk, M. Mazorchuk, T. Vakulenko; scientific editors T. Vakulenko, V. Tereshchenko; edited by H. Bondarenko; Ukrainian Center for Education Quality Assessment. Kyiv, 2025. 53 p.

The booklet summarizes the main data presented in Part I of the Report on the Results of the Third Cycle of the National External Monitoring of the Quality of Primary Education, held in 2024.

The main attention in it is paid to analyzing the level of development of mathematical, reading, and science competencies of primary school graduates as of 2024, as well as comparing these results with data from previous monitoring cycles (for mathematics and reading).

In addition to the learning performance of Grade 4 students, the article examines the relationship between students' success and certain demographic and institutional factors. Special attention is paid to the impact of negative external circumstances, in particular, the full-scale war, on the results of students who completed primary education in 2024.

The presented materials may be useful to education administrators, teachers, researchers, and anyone interested in improving the quality of education and implementing effective monitoring practices.

УДК 373.3.012

I. MATHEMATICAL COMPETENCY OF PRIMARY SCHOOL GRADUATES: STATUS AND DYNAMICS

- The results of the NEMQPE 2024 indicate the presence of serious challenges in the field of primary mathematics education, but at the same time give reason for cautious optimism because the level of mathematical competency of primary school graduates, after a significant drop in 2021, increased slightly in 2024. However, it still has not reached the level of 2018.

- Compared to 2021, the share of students who achieved a high level of mathematical competency in 2024 increased (15.7% compared to 17.7%) and even exceeded the figure that such participants scored in 2018 (17.3%). However, the share of those students who did not pass the basic threshold of mathematical competency is still higher in 2024 (14.6%) than in 2018 (13.4%), although it has significantly decreased compared to 2021 (17.1%).

- As of 2024, there are noticeable **gender differences** in the mathematics performance of primary school graduates. The average score for boys is 204.3, which is significantly higher than the average score for girls at 199.7. Both boys and girls have shown improvement in their performance compared to the 2021 cycle, but the gap between their scores has slightly widened from 4.3 points to 4.6 points in the current cycle.

- In the cycle of 2024, as in the previous two cycles, there is a noticeable difference in the mathematics scores of primary school students based on the **type of settlement** where their school is located. Grade 4 students living in cities have an average score of 203.7, which is significantly higher than the average score of their peers in villages and towns, which is 193.4. In large cities with populations exceeding 7 million, the average score of Grade 4 students is 215.6, surpassing the scores of students in rural areas by 22.2 points. Compared to 2024, the differences in average scores between these groups of students were smaller in the cycles of 2018 and 2021.

- The analysis of primary school graduates' success based on the **type of school** revealed that Grade 4 students in specialized schools achieved the highest scores, averaging 216.9, followed closely by those in schools that offer education exclusively at the primary level, with an average score of 213.4. However, it is important to interpret these findings with caution, as the proportion of participants from these school types was not representative.

- A **content analysis** of primary school students' performance on high- and basic-level tasks, particularly examining the typical incorrect answers given during tests, reveals that many students tended to randomly apply problem-solving methods from a set of established strategies covered in their mathematics courses. Instead of consciously selecting a method to solve the problems, they approached exercises merely as tasks labelled "addition", "multiplication", "subtraction". or "division." This resulted in viewing the problems as opportunities to execute memorized rules, schemes, or algorithms rather than engaging in a thoughtful decision-making process regarding the solution method.

II. READING COMPETENCY OF PRIMARY SCHOOL GRADUATES: STATUS AND DYNAMICS

- The NEMQPE data indicate that there were generally insignificant changes in the reading competency levels of primary school graduates between the 2021 and 2024 cycles. However, the **results** from both these cycles are significantly **lower** than those of students who completed primary education in 2018.

- The **average** reading **score** of Grade 4 students in 2024 is 197.9 points, which is lower than the scores of 198.4 in 2021 and 201.6 in 2018.

- The results from three cycles of the NEMQPE indicate that **girls** typically show higher reading competency than **boys**. In 2018, the gap was 9 points, which decreased to 7 points in 2021 and 2024. However, this reduction reflects a decline in girls' reading performance rather than an improvement in boys' reading skills.

- Consistently, students from **urban schools** have shown better reading results than their peers from **rural areas**. In 2018 and 2021, the difference between these two groups was nearly 13 points, but by 2024, this gap narrowed to 10 points. Notably, the average reading score of students from rural schools in 2024 was 192.1, an improvement from 191.1 in 2021, and it almost reached the 2018 level of 192.6. In contrast, the trend among urban schools has been the opposite: the average reading scores of primary school graduates have declined over the years. In 2018, the average score was 205.5 points, which decreased to 204.1 points in 2021, and dropped to 201.8 points in 2024.

- Across **all types of schools**, the average scores of students in large cities (with a population of over 700,000) are higher than those of their peers in villages and towns. At the same time, Students in gymnasiums and primary schools in cities show average scores that are more similar to those in rural schools than to those in large cities. Meanwhile, among rural schools, some students demonstrated better reading results than their peers from schools in large cities, particularly in comparison to the results of 2021.

- The **consistency** of the results between 2021 and 2024 may indicate the sustainability of reading teaching practices in primary schools. At the same time, there is a specific decrease in performance between cycles when it comes to more complex aspects of reading activity, such as analysis, evaluation, integration and interpretation of information. This indicates the need to improve the work on activating these skills during reading instruction.

III. SCIENCE COMPETENCY OF PRIMARY SCHOOL GRADUATES IN 2024

- The **level of proficiency in basic science** is generally comparable to the level students achieved in other domains of the NEMQPE. 16.6% of students could pass the high threshold of science competency. The basic threshold of science competency was passed by 83.9% of Grade 4 students, i.e. 16.1% of primary school graduates in 2024 were at the pre-basic level of the mentioned competency.

- The results of the cycle of 2024 show that there is **no significant difference** between **boys and girls** in mastering the course "I Explore the World". The average performance of boys (201.3) is only 1.3 points higher than that of girls (200.0). These results probably indicate a relative gender balance in how students' science competency is formed in primary school.

- In contrast to the gender factor, the **type of settlement** in which the young learners' school is located is significantly associated with science performance. Students in large cities (with a population of over 700,000) show the highest average results (211.3 points). In comparison, Grade 4 students from rural areas show significantly lower results (193.6 points), i.e. the gap between these cohorts of students is 17.7 points, one of the most significant indicators across all domains of the NEMQPE.

- Unlike other domains of the NEMQPE, in science, there are no considerable differences in the results of primary school graduates who studied in different **types of schools**. Students of regular primary schools showed slightly better performance than their peers from lyceums or gymnasiums, but these differences are not statistically significant.

IV. THE IMPACT OF FULL-SCALE WAR ON PRIMARY EDUCATION AND STUDENTS' PERFORMANCE

- Students show **greater interest in distance learning** the longer they engage in this form of educational process. However, the vast majority of students (75% in total) still prefer offline (in-person) learning within school buildings.
- Enforced **periods of distance learning did not** significantly **affect children's academic performance**. On average, students who primarily studied in person and only occasionally engaged in remote learning during their last two years of primary school scored higher in all three NEMQPE domains than their peers.
- **Students' performance** was somewhat **affected by problems** related to learning conditions, particularly the **technical** ones. Students who reported difficulties accessing the Internet, technology, or a quiet place to work during the last two years of primary schooling performed slightly worse in all three domains of the NEMQPE compared to Grade 4 students who did not have such difficulties or encountered them less often.
- The **general level of psycho-emotional well-being** of young schoolchildren under the conditions of full-scale war had a **negative impact** on their academic achievement. Students whose school premises were destroyed or damaged, or whose homes were destroyed or damaged, or who lost a loved one as a result of the ongoing war, are approximately 10 points behind their peers in all domains.
- The **teachers** have faced significant challenges in organising the educational process during the full-scale war. The **primary obstacles** included emotional factors, such as the depression experienced by both teachers and students due to shelling and other military events. Additionally, there were organisational and technological challenges, including frequent air raids, power outages, and the need to provide both in-person and remote learning options for students who remained in the country as well as those who went abroad.
- Despite all the challenges that students and teachers have faced since the beginning of the full-scale war, the NEMQPE 2024 data show **no dramatic drop in the young schoolchildren's performance** under these crisis conditions. Unfortunately, there was no such significant improvement in primary school graduates' academic performance, which could have been expected considering the introduction of new approaches that align with the principles of the New Ukrainian School in the primary education system.

OVERALL CHARACTERISCTICS AND SPECIAL FEATURES OF THE THIRD CYCLE OF NEMQPE 2024

OVERALL CHARACTERISTICS AND SPECIFIC FEATURES OF THE THIRD CYCLE OF NEMQPE 2024

The National External Monitoring of the Quality of Primary Education (**NEMQPE**), established by the Ministry of Education and Science in 2016, is a significant study designed to evaluate the reading, mathematical, and scientific competencies of primary school graduates. The first cycle of NEMQPE took place in 2018, documenting the state of primary education before the implementation of the New Ukrainian School, the COVID-19 pandemic, and the onset of full-scale war. Data from the later cycles (2021 and 2024) reflect the changes that have occurred as a result of these profound crises.

The NEMQPE was conceived as a tool for assessing the quality of education in the context of the New Ukrainian School educational reform. However, due to external challenges – quarantines, distance learning, and the war – it is not yet possible to fully assess the effectiveness of the reform. These factors have significantly affected the educational process, slowing the implementation of many of the New Ukrainian School's plans. That is why it is crucial to consider these contexts when analysing the results of the third cycle of the NEMQPE, the main study of which took place in the spring of 2024.

The NEMQPE cycle of 2024 introduced several essential features. It included a science assessment for the first time, allowing the study to cover all three key educational domains: reading, mathematics, and science. This enhancement enabled researchers to track the trends in reading and mathematics results from 2018, 2021, and 2024, while also providing a baseline for future studies on knowledge levels in the field of science.

Moreover, NEMQPE 2024 serves as a vital resource for understanding the effects of prolonged crises, such as pandemics and wars, on students' development and the state of primary education. In extremely difficult conditions, when children have lost a stable educational environment and experienced severe emotional stress, the study makes it possible to assess the impact of these crisis factors on students' learning outcomes and well-being. The data collected will help identify the most vulnerable areas and plan measures to support primary education in wartime.

Based on the results of the NEMQPE 2024, the “Report on the Results of the National External Monitoring of the Quality of Primary Education: Learning under Crisis Conditions: Reading, Mathematical and Science Competencies of Primary School Graduates” was prepared. The Report consists of two parts. Part I of the report provides answers to the following questions:

- **What is the level of reading, mathematical, and science competencies of primary school graduates as of 2024?**
- **How has the primary school graduates’ performance in mathematics and reading changed over six years, across the first, second and third cycles of the NEMQPE (between 2018 and 2024)?**
- **What impact do demographic (student gender) and institutional factors (type of settlement where the school is located, and type of school) have on the performance of Grade 4 students?**
- **How has the learning and teaching process, under the crisis conditions of a full-scale war, affected the reading, mathematical, and science competencies of primary school students? This includes the organisation of the educational process and the level of psycho-emotional well-being.**

This booklet summarises the main provisions of Part I of the Report. You can find the full text of the Report on the UCEQA website.

THE SAMPLE OF THE PARTICIPANTS OF THE MAIN STUDY OF NEMQPE 2024

In the context of NEMQPE 2024, the general population of students considered for the study consisted of all Grade 4 students across the country graduating from primary school in the 2023/2024 academic year. The research focused on 20 regions functioning under wartime conditions, including 19 oblasts (regions) of Ukraine: Vinnytsia, Volyn, Zhytomyr, Dnipropetrovsk, Zakarpattia, Ivano-Frankivsk, Kyiv, Kirovohrad, Lviv, Mykolayiv, Odesa, Poltava, Rivne, Sumy, Ternopil, Khmelnytskyi, Cherkasy, Chernihiv, Chernivtsi, and the city of Kyiv, which is the capital of Ukraine. Due to security concerns, students from the regions of Donetsk, Luhansk, Zaporizhzhia, Kharkiv, and Kherson, as well as from the Autonomous Republic of Crimea and the city of Sevastopol, were not included in the general population studied for NEMQPE 2024. Nonetheless, the methods employed in this study cycle still permit comparative analysis and provide reliable data relevant to the formation of educational policies.

In total, 10,904 students and 636 teachers from 407 schools participated in NEMQPE 2024. Among them, 3,691 students took tests and filled out questionnaires in mathematics, 3,602 in reading, and 3,611 in the 'I Explore the World' course.

The students' sample represented Ukraine's 315,641 primary school graduates of 2024, at the same time reflecting various factors such as the type of settlement where the school is located [1] and the number of Grade 4 students per school.

The school data collection for the third cycle of the NEMQPE main study took place from April 16 to May 17, 2024.

[1] Only two categories were considered during sampling: 'urban area' and 'rural area'. The category of large cities was added to understand the situation in urban areas better. These are the cities with a population of over **700,000** inhabitants. When comparing the results for these categories, it is worth remembering that the sample of large towns is not fully representative. However, the selection method guarantees adequate representation of this category in the sample, since large schools are more common in large cities.

THRESHOLDS AND INTERVALS (LEVELS) OF SUCCESS ON A SCALE OF 100–300

As in previous cycles, the students' results are presented on an interval scale with a mean of 200 and a standard deviation of 30. Only a few individual scores fell outside the range of [100, 300], so we will refer to this as the "100–300 score scale". Additionally, in line with previous cycles, the guidelines for NEMQPE 2024 included three thresholds (points) on the 100–300 scale:

1) basic (corresponds to a value of 170 points),
2) intermediate (200 points),
3) high (230 points).

To interpret the results, the Report focuses on the basic level, with a threshold set at 170 points. Accordingly, in the Report, the term 'students who have passed the basic threshold' refers to those who have scored more than 170 points. It is considered to be the minimum sufficient level to successfully continue learning at the next stage of school education in all domains studied within the framework of the NEMQPE.

According to the threshold scores on a scale of 100–300, four intervals (levels) of primary school graduates' performance were determined:

1) pre-basic (up to 170 points inclusive),
2) basic(from 170 to 200 points inclusive),
3) intermediate (from 200 to 230 points inclusive),
4) high (more than 230 points).

MATHEMATICS PERFORMANCE IN PRIMARY SCHOOLS: STATUS AND DYNAMICS ACROSS THREE CYCLES

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According to the NEMQPE 2023 Program, **mathematical competency** is defined as

a person's ability to recognize mathematics in everyday life, create mathematical models of objects, phenomena, and processes in the surrounding world, and apply mathematical skills when completing educational, cognitive, and practical tasks.

The level of mathematical competency for primary school graduates can be assessed based on their achievement of the **thresholds (levels) of the mathematical competency** defined within the NEMQPE.

At the basic level, students should demonstrate an understanding of mathematical concepts and procedures related to the following content areas: Numbers and Expressions, Geometric Figures and Quantities, Measurements, and Working with Data. They should be able to perform simple calculations with whole numbers and apply their mathematical knowledge to solve straightforward problems related to familiar real-life situations. Students can follow clearly described procedures, can select and apply simple strategies to solve problems. At this level, they can use information from a single source and reason directly based on that information.

At the high level, students are expected to demonstrate proficiency in using mathematical techniques and strategies in such content areas as: Numbers and Expressions, Geometric Figures and Geometric Quantities, Measurement, Working with Data. They should be able to apply their mathematical knowledge to solve problems that extend beyond standard ones, address less familiar situations, and navigate more complex contexts. At this level, students should work purposefully on problems, employing well-developed reasoning and inference skills while utilising information from one or multiple sources.

The results from the study indicate that in 2024, **17.7%** of primary school graduates achieved a high score, **54.5%** met the intermediate-level score, and **85.4%** reached the basic score threshold (see Table 1).

This means that **14.6%** of students, who scored 170 or lower on a scale of 100 to 300 points, are unable to solve even the simplest problems related to familiar real-life situations.

Table 1 . Achieving the thresholds of mathematical competency by primary school graduates

Domain	The percentage of students who reached the thresholds		Low / Medium / High
Mathematics			
	High (230)	Intermediate (200)	Basic (170)
Mathematics	17.7%	54.5%	85.4%

THE RELATIONSHIP BETWEEN PRIMARY SCHOOL GRADUATES' MATHEMATICS PERFORMANCE AND SOME DEMOGRAPHIC AND INSTITUTIONAL FACTORS

The analysis of test results **by gender for the students who participated** in the study (Figure 1) reveals that boys who completed primary education in 2024 demonstrate a higher level of mathematical competency than girls. The average scores show a significant difference, with boys scoring an average of 204.3 and girls scoring 199.7.

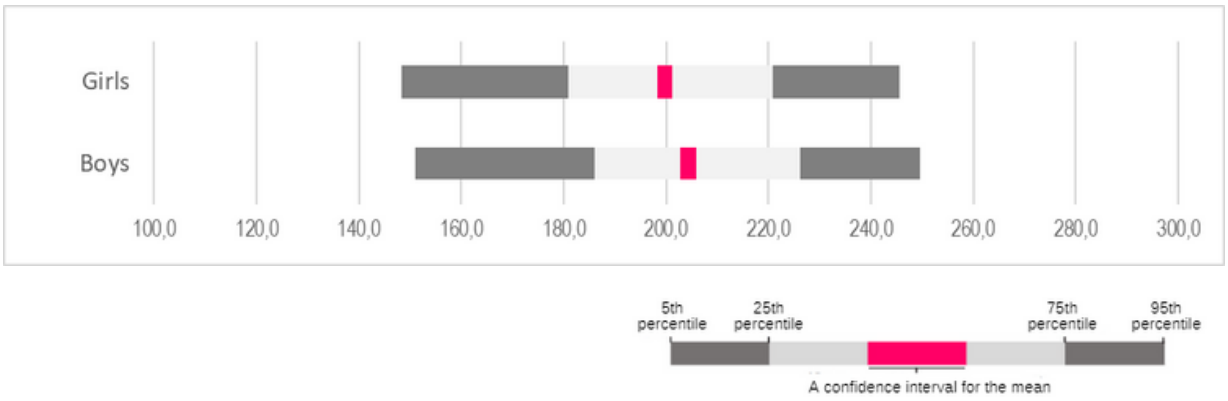


Figure 1 . Statistical indicators for the score distribution by gender (mathematics)

The NEMQPE 2024 data reveals differences in the mathematics assessment results for Grade 4 students based on the type of settlement. Students who completed primary education in cities have an average score of 203.7, which is significantly higher than the average score of their peers in rural areas or towns, who scored 193.4. Furthermore, students in large cities with populations exceeding 700,000 have the highest average score of 215.6. When we categorise the settlements into two groups – urban and rural – the differences in student performance are still significant, albeit reduced. Students in rural schools average 193.4 points, while those in urban schools average 207.5 points (see Figure 2).

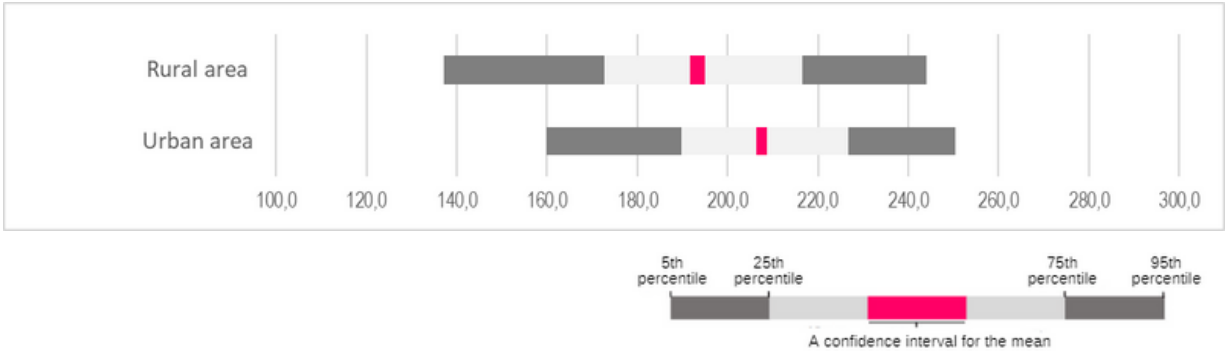


Figure 2. Statistical indicators for the distribution of students' scores by school location settlement type (mathematics)

The data indicate no significant differences in the average mathematics scores of primary school graduates attending lyceums, gymnasiums, educational complexes, or comprehensive schools. However, it is essential to note that the average score of Grade 4 students from specialised and primary schools is significantly higher than that of their peers from other types of schools. It's worth mentioning that the percentage of students receiving primary education in these specialised schools in the 2024 sample is relatively small. Therefore, the **type of school** has **less impact** on the primary school students' performance **compared to the school's location**.

It's important to note that some schools in rural areas successfully ensure a high level of mathematical competency among their students. Conversely, some schools in urban areas, including large cities with populations over 700,000, demonstrate unsatisfactory performance in this regard (see Figure 3).

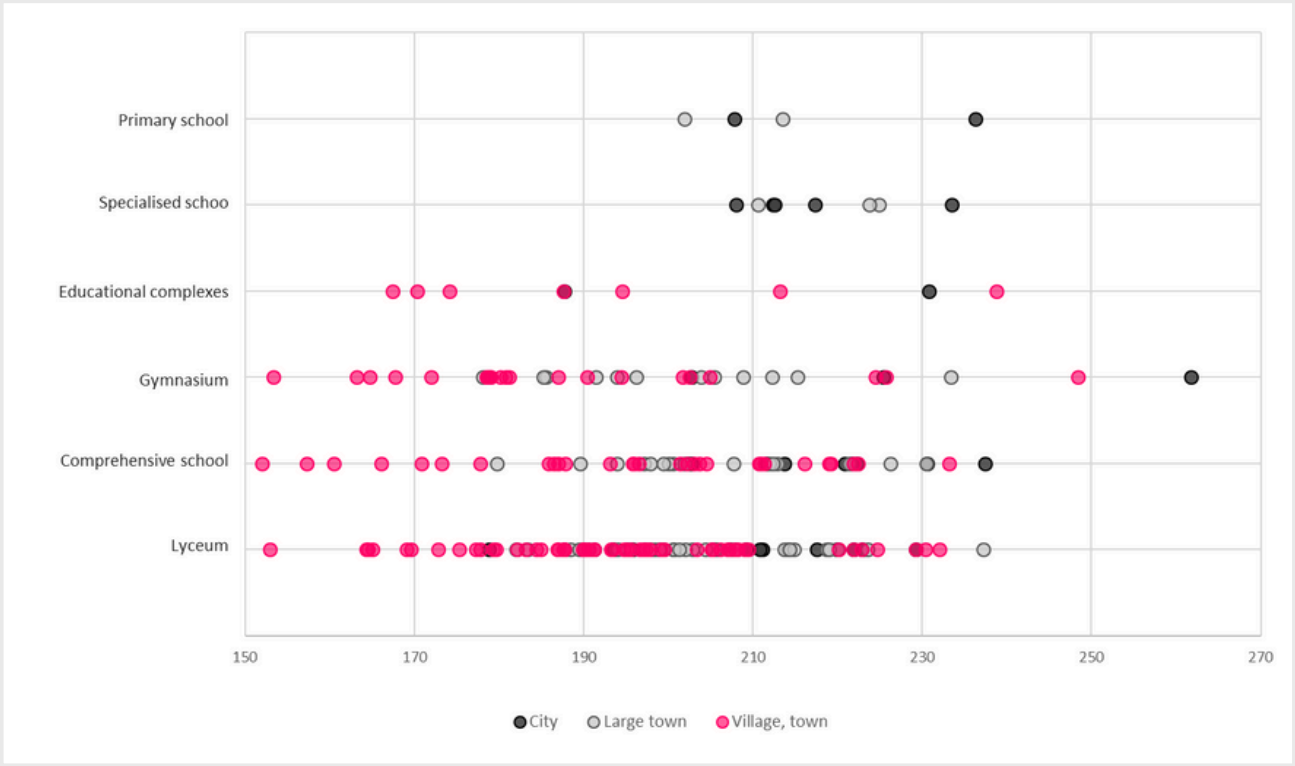


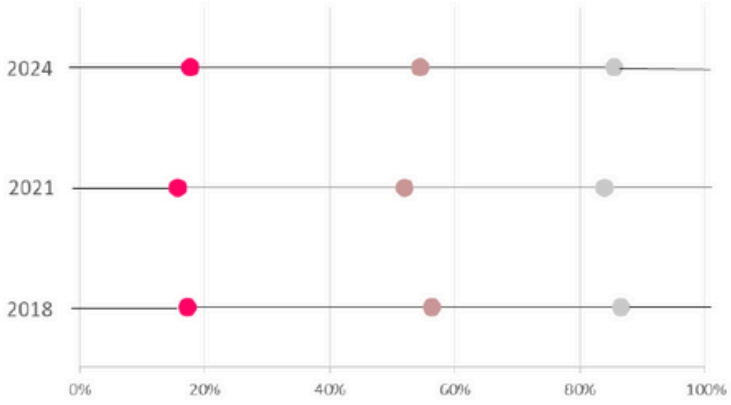
Figure 3. Average performance by school type and school location settlement type (mathematics)

THE DYNAMICS OF MATHEMATICAL COMPETENCY LEVELS AMONG PRIMARY SCHOOL GRADUATES ACROSS THREE CYCLES OF THE NEMQPE (2018, 2021, 2024)

By comparing the average scores of students who participated in mathematics tests in three consecutive cycles of the NEMQPE, we can conclude that the mathematical competency of primary school graduates diminished significantly in 2021 but showed a slight improvement in 2024. However, the scores still have not returned to the level achieved in 2018 (see Table 2).

The average score of Grade 4 students in 2024 (201.8) is slightly higher than the average score of their peers in 2021 (199.9), but lower than the result of 2018 (202.8). At the same time, there is no reason to speak of significant differences in these average results. In 2024, the share of students (17.7%) who achieved a high level of mathematical competency increased compared to 2021 (15.7%) and even exceeded the figure for 2018 (17.3%). However, the share of those who did not pass the basic threshold of mathematical competency is still higher in 2024 (14.6%) than in 2018 (13.4%).

Table 2 – Reaching the thresholds of mathematical competency in the context of the NEMQPE cycles in 2018, 2021 and 2024

Year of monitoring	The percentage of students who reached the thresholds in mathematics	Low / Medium / High
		

	High (230)	Intermediate (200)	Basic (170)
2024	17.7%	54.5%	85.4%
2021	15.7%	52.0%	83.9%
2018	17.3%	56.3%	86.6%

According to the NEMQPE 2024 data, **boys and girls** improved their mathematics scores by nearly 2 points compared to 2021. However, while boys have slightly surpassed their performance from previous cycles, girls have not yet returned to the level achieved in 2018, following a significant drop in results in 2021. In 2018, girls reached mathematical competency thresholds nearly on par with boys; however, subsequent assessments reveal a different trend: there are fewer girls among students performing at a high level, and more girls who did not meet the basic competency threshold (see Table 3).

Table 3. Primary students' average performance in mathematics in the NEMQPE cycles in 2018, 2021, and 2024 by gender

Gender	Year of monitoring					
	2018		2021		2024	
	Mean	Standard error	Mean	Standard error	Mean	Standard error
Girls	203.4	0.79	197.9	0.72	199.7	0.77
Boys	202.5	0.82	202.2	0.72	204.3	0.77

Throughout the study cycles, changes were observed in the mathematical competency thresholds of primary school graduates, depending on the **type of settlement** in which their school is located. As indicated in Table 4, the average scores of primary school graduates in the mathematics test for 2024 showed a slight increase in such types of settlement as cities, villages and towns, compared to 2021. While students from villages and towns performed somewhat better in 2024 than they did in the Mathematical Competency Test during the first cycle of NEMQPE in 2018, students from cities are only beginning to approach their previous scores. Notably, the level of basic mathematics training in rural areas has remained relatively unchanged over the years, while in cities, this level has nearly returned to its 2018 results.

Table 4. Primary students' average performance in mathematics in the NEMQPE cycles in 2018, 2021, and 2024 by school location settlement type

Type of area	Year of monitoring					
	2018		2021		2024	
	Mean	Standard error	Mean	Standard error	Mean	Standard error
Rural area	191.8	1.00	192.1	0.78	193.4	0.88
Urban area	208.0	0.66	205.6	0.62	207.5	0.65

CHANGES IN PRIMARY SCHOOL GRADUATES' PERFORMANCE IN COMPLETING TASKS OF VARIOUS DIMENSIONS OF MATHEMATICAL COMPETENCY BETWEEN THE CYCLES

According to the data of the NEMQPE-2024, in terms of completing tasks in **all areas of the mathematical content**, there are differences between the study cycles (Figure 4).

The students who graduated from primary school in 2024 coped best with the tasks in the Geometric Figures and Geometric Quantities area. On average, 61% of students managed to solve them, which is the best result for all three cycles (2018 - 57%, 2021 - 59%).

The most challenging tasks for participants in both the current and previous cycles were in the Measurement area. In 2024, the average difficulty of tasks in this category was 52%, which is an improvement over 2021's average of 50%, but significantly worse than the 59% average in 2018. This suggests that the Measurement area of mathematical competency needs special attention in primary education.

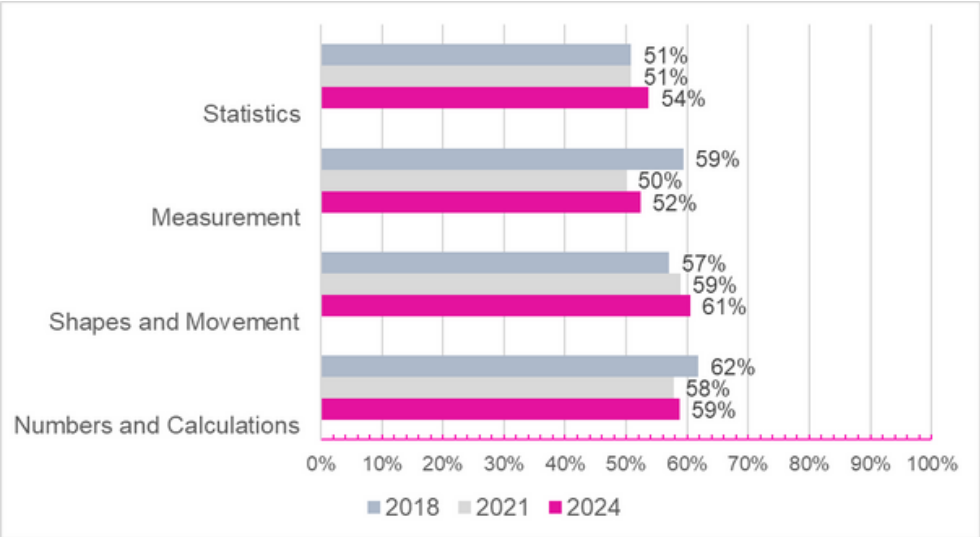


Figure 4. Primary students' average performance in completing tasks of various areas of mathematical competency in the NEMQPE cycles in 2018, 2021, and 2024

Within **the category of cognitive dimensions of mathematical competency**, the easiest tasks for students in all three cycles were the tasks that involved updating specific mathematical knowledge. In 2024, an average of 74% of students could give correct answers to tasks in the Knowledge category. This is a slightly higher result than in 2021 (73%), but still lower than in 2018 (78%) (Figure 5).

The most difficult tasks for students in all cycles of the NEMQPE remain the ones that involve the demonstration of the ability to reason. In all study cycles, less than half of the students could effectively perform tasks in this cognitive category. However, for this category of tasks, positive, yet very slow, dynamics between cycles are observed: 40% in 2018, 41% in 2021, and 43% in 2024.

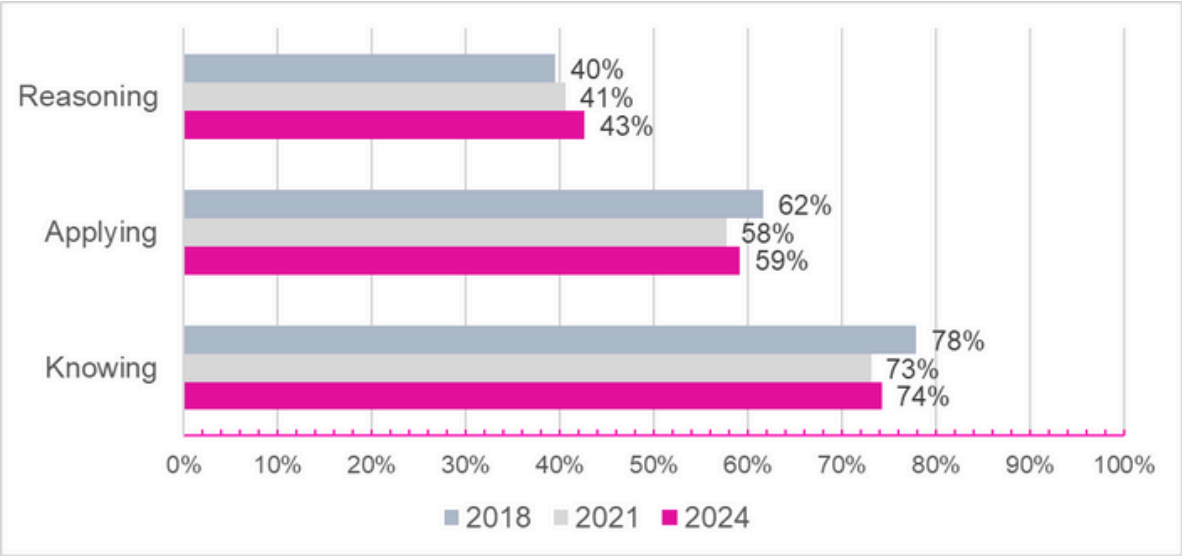


Figure 5. Primary students' average performance in completing tasks of various categories of mathematical competency cognitive dimension in the NEMQPE cycles in 2018, 2021, and 2024

In general, despite the pandemic and full-scale war, the results of NEMQPE 2024 show positive dynamics in the field of mathematics education of primary school students.

READING PERFORMANCE IN PRIMARY SCHOOLS: STATUS AND DYNAMICS ACROSS THREE CYCLES

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According to the NEMQPE 2023 Program, **reading competency** is defined as

a person's ability to broadly understand a text as a part of everyday life and learning activities, to retrieve new information, reproduce and use it, interpret the content and make inferences, comprehend and evaluate the content and form of the text, etc.

The level of reading competency for primary school graduates can be assessed based on their achievement of the **thresholds (levels) of reading competency** defined within the NEMQPE.

At the basic level, when working with a literary text, a primary school graduate demonstrates the ability to retrieve explicitly stated information about the place, time, actions and feelings of the characters, the main events, make simple inferences about the connection between events, the cause and purpose of the characters' actions, generalise information from the text to determine its theme, evaluate actions and behavior of the characters, the plausibility of events, if the topic of the text is familiar and straightforward for the student. When working with an informational text, a primary school graduate can retrieve factual, specific information given in various formats, in particular on maps, in tables, the main essential details in descriptions of objects, in lists, make simple inferences about cause-and-effect relationships, the sequence of actions, determine the main features of the similarities and differences of objects, evaluate the usefulness and reliability of information, if the topic of the text is well known for the student.

At the high level, when reading a literary text, an primary school graduate demonstrates the ability to navigate the entire text, retrieving information about significant actions, deeds, feelings, and traits of the characters, drawing conclusions about cause-and-effect relationships, motives, and goals of the characters' actions and deeds, interpreting the reason for changes in the characters' views and feelings, and the development of the characters' feelings throughout the text, determining the theme and main idea of the text, linking them to the title and fragments of the text, analysing individual specific features of the characters' language, assessing the authenticity of what is depicted, citing evidence from the text, and identifying means of expressing the author's attitude toward the characters. When working with informational text, a primary school graduate can isolate significant information and essential details from both continuous text and other formats (tables, diagrams, drawings, lists), draw conclusions based on the text about the logic of the explanation, justification, cause-and-effect relationships, connect information provided in different formats, evaluate the validity of the findings, the functionality of parts of the text, graphic elements, the appropriateness of specific language tools used by the author, and their effect.

The results of the reading assessment from the main study of the third cycle of the NEMQPE indicate that among the participating students, 13.5% of primary school graduates achieved the high threshold, 49.6% reached the intermediate threshold, and 82.3% met the basic threshold (see Table 5).

This distribution indicates that 17.7% of primary students exhibit limited skills in working with texts. This includes difficulties retrieving information explicitly stated in the text (either literally or with minimal paraphrasing), making simple inferences by connecting two clearly presented pieces of information, and identifying the main idea in short and clearly structured texts, among other challenges.

Table 5. Reaching the reading competency thresholds by primary school graduates

Domain	The percentage of students who reached the thresholds in reading		
	High (230)	Intermediate (200)	Basic (170)
Reading	13.5	49.6	82.3

THE RELATIONSHIP BETWEEN PRIMARY SCHOOL GRADUATES' READING PERFORMANCE AND VARIOUS DEMOGRAPHIC AND INSTITUTIONAL FACTORS

The NEMQPE data related to **the gender of participating students** indicate that girls show a higher level of reading competency than boys. The average scores are significantly different, with boys at 194.6 and girls at 201.6 (Figure 5).

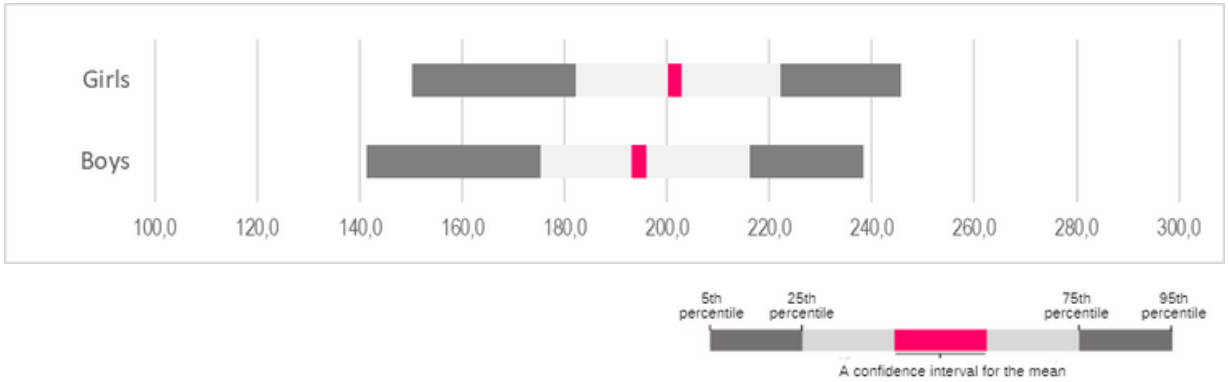


Figure 5. Statistical indicators for the distribution of students' reading scores by gender (reading)

The analysis indicates a statistically significant difference in the performance of students who graduated from primary schools in **villages and towns** compared to those in schools located in **large towns and cities** (with populations exceeding 700,000). Specifically, Grade 4 students from villages and towns achieved an average score that was 14 points lower (192.1 points) than their peers in cities, who scored an average of 206.4 points. This difference is less pronounced when compared to the performance of students from towns, who averaged 199.9 points (see Figure 6). Additionally, nearly twice as many students from rural areas (25.3%) do not meet the basic level of reading competency when compared to students from large cities (10.5%) and those from smaller cities (13.5%).

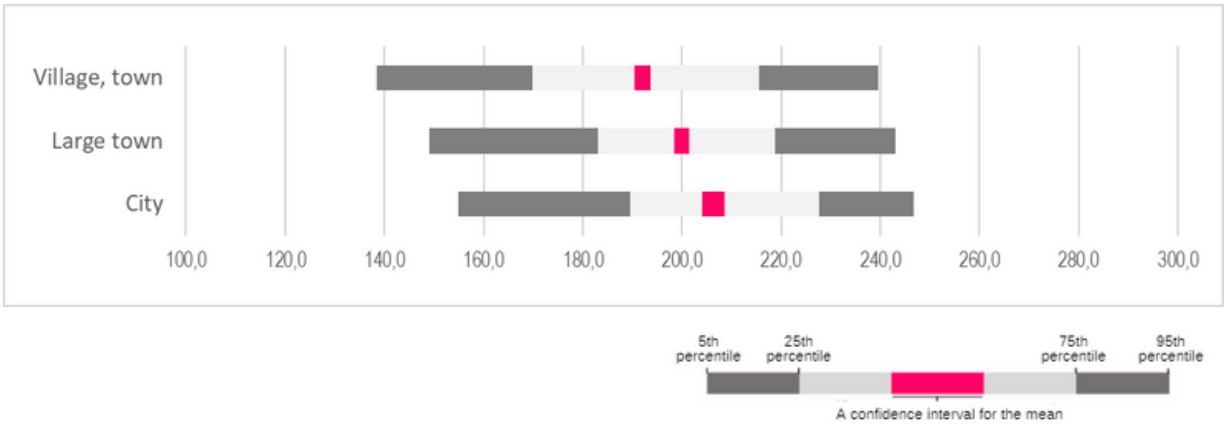


Figure 6. Statistical indicators for the distribution of students' scores by school location settlement type (reading)

The reading test results for students attending **different types of schools** do not differ significantly. The average performance of primary school graduates who studied in lyceums (196.4), gymnasiums (195.2) and regular schools (198.0) are lower than the corresponding indicators of Grade 4 students who attended other types of schools. Students from specialised schools showed the highest average performance score (209.4). Still, it does not differ significantly from the scores of students in primary schools (as a specific type of educational institution) and educational complexes (Figure 7).

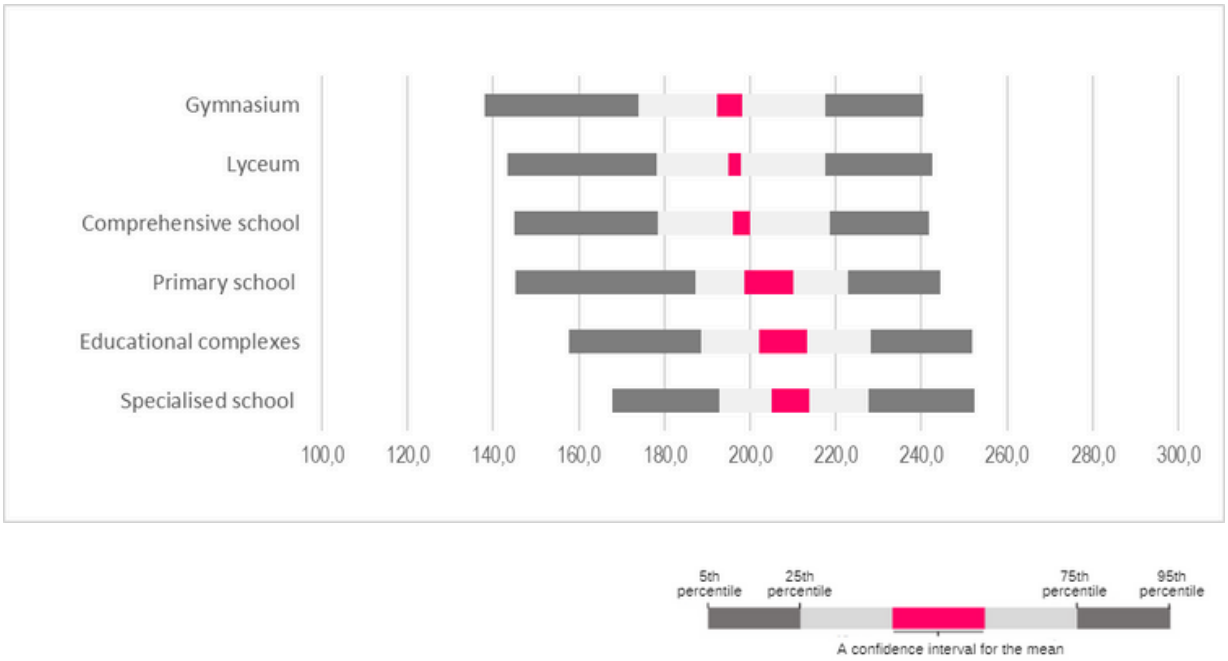


Figure 7. Statistical indicators for the distribution of students' scores by school type (reading)

Generally, for all types of schools, the average performance score for Grade 4 students in cities is higher than that of their peers in corresponding schools in villages and towns (Figure 8). However, in large towns, gymnasiums and primary schools (as a specific type of educational institution) are closer in average results to rural institutions than to schools in cities.

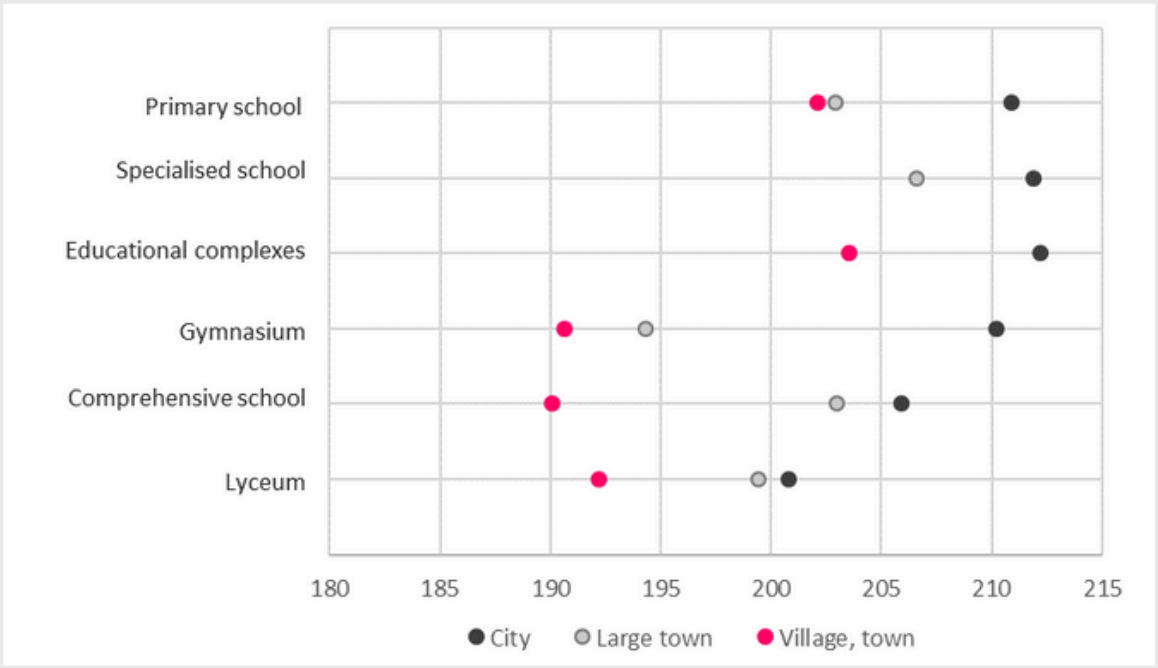


Figure 8. Overall average performance of primary school graduates by school type and school location settlement type (reading)

THE DYNAMICS OF READING COMPETENCY LEVELS OF PRIMARY SCHOOL GRADUATES BETWEEN THE NEMQPE THREE CYCLES (2018, 2021, 2024)

Comparing the reading test average scores of students completing primary education in different years of the previous cycles of the NEMQPE, we can conclude that children's reading ability level has generally decreased (Table 6). The average score obtained by Grade 4 students in 2024 (197.9) is slightly lower than the same indicator in 2021 (198.4) and, at the same time, significantly lower than the average score of primary school students participating in the study in 2018 (201.6). In addition, the share of Grade 4 students demonstrating a high level of reading competency decreases with each cycle: 15.8% in 2018, 14.7% in 2021, and 13.5% in 2024. Conversely, the share of primary school graduates who did not pass the basic threshold of reading competency has been increasing from cycle to cycle: 13.6% in 2018, 17.5% in 2021, and 17.7% in 2024.

Table 6. Statistical indicators for the score distribution in reading in 2018, 2021 and 2024

Year of monitoring	Percentile					Standard error for mean
	05	25	Mean	75	95	
2024	144.4	179.0	197.9	219.0	243.0	0.52
2021	144.0	179.2	198.4	219.7	244.9	0.47
2018	150.1	184.3	201.6	221.4	244.4	0.58

The data from 2024 reveal that girls and boys achieved nearly identical average reading scores as they did in 2021 (see Table 7). However, their results were lower than those in 2018, with girls declining by approximately 5 points and boys declining by 2 points.

Table 7. Average students' performance in reading in by gender

Gender	Year of monitoring					
	2018		2021		2024	
	Mean	Standard error	Mean	Standard error	Mean	Standard error
Girls	206.4	0.80	202.0	0.64	201.6	0.72
Boys	196.9	0.82	194.8	0.68	194.6	0.75

Data from NEMQPE 2024 show that in **rural areas,** average reading scores **increased** slightly compared to 2021 and approached the level of 2018. However, the results for **urban areas decrease** with each cycle (Table 8). In 2024, the gap in the share of students with a high level of reading competency between cities and villages decreased from 10 to 4 percentage points: in cities, the number of such students decreased, and in villages, it increased. At the same time, rural areas still have a higher share of students who do not reach the basic level: in 2024, this difference with cities was almost 13 percentage points.

Table 8. Average performance of students in reading in 2018, 2021 and 2024 by school location settlement type

Type of area	Year of monitoring					
	2018		2021		2024	
	Mean	Standard error	Mean	Standard error	Mean	Standard error
Rural area	192.6	1.10	191.1	0.69	192.1	0.84
Urban area	205.5	0.66	204.1	0.61	201.8	0.65

CHANGES IN THE PRIMARY SCHOOL GRADUATES' PERFORMANCE IN COMPLETING READING TASKS BETWEEN THE CYCLES

Tracking the changes between the three cycles in primary school graduates' performance on test items corresponding to basic and advanced levels of reading competency shows minor fluctuations. As illustrated in Figure 9, the proportion of students who can complete advanced tasks has decreased compared to 2021, and it is significantly lower than the proportion of students in 2018. Conversely, basic tasks have become more manageable for primary school graduates in 2024 compared to those who completed their primary education in 2018 and 2021.

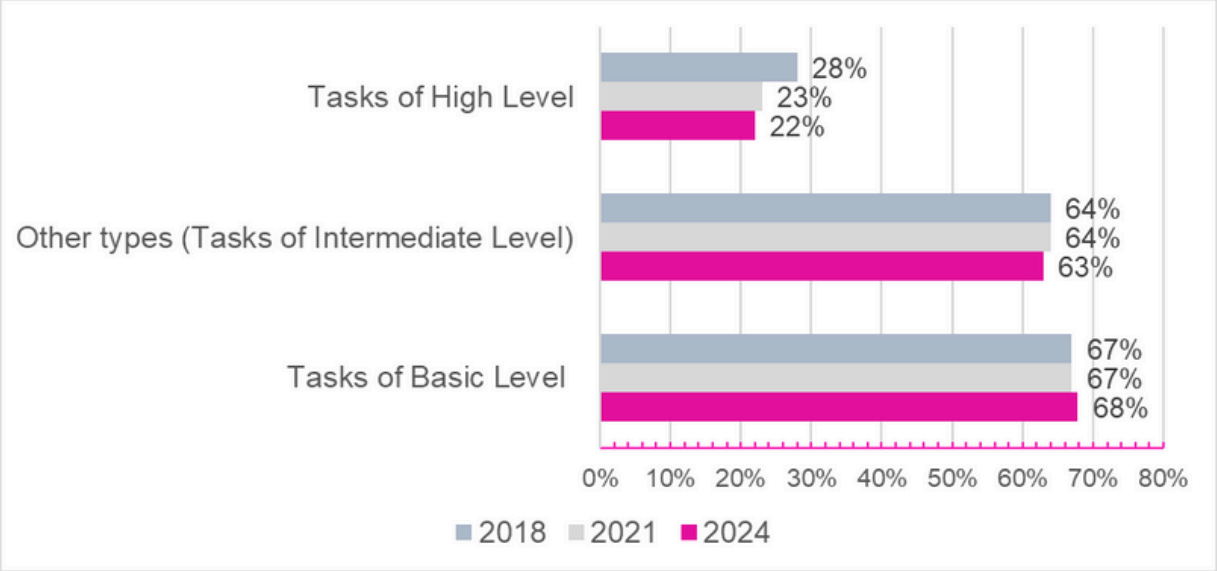


Figure 9. Average difficulty of basic and advanced reading test items: trends across the cycles (2018, 2021, 2024)

Although the difference in average performance rates of primary school graduates when completing tasks related to texts with different reading purposes in 2024 is relatively small, it reveals a vital pattern observed in previous cycles of the NEMQPE. On average, students perform **worse** with **non-fiction texts**, which aim to provide information or facilitate specific actions, than **fiction texts** (see Figure 10).

To some extent, these results indicate that the traditional approach (more focus on literary texts) to teaching reading in primary school remains strong in the New Ukrainian School, while reading informational or advertising media texts remains a relatively peripheral activity.

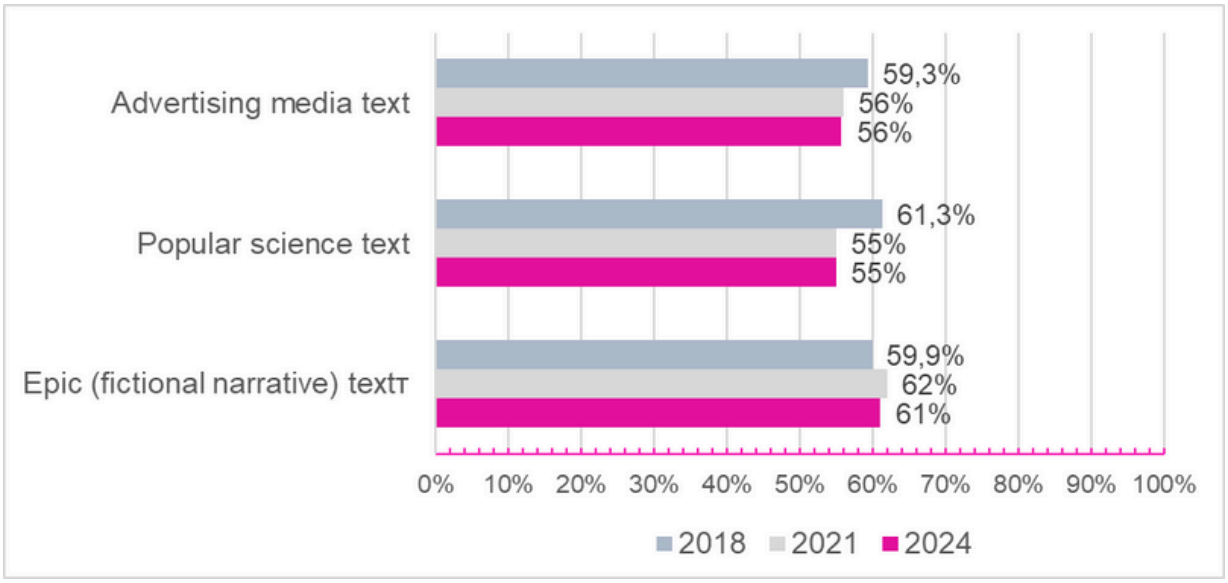


Figure 10. Average difficulty of reading test items by text type: trends across the cycles (2018, 2021, 2024)

The results from the last two cycles of the study indicate that students **perform better** when working with **texts** that follow **a sequence of events** compared to those **without a clear plot.** This finding aligns with the age and psychological characteristics of the target group involved in the study. Moreover, it highlights the fact that teaching practices in primary schools tend to focus more on literary texts, which are typically plot-driven (see Figure 11).

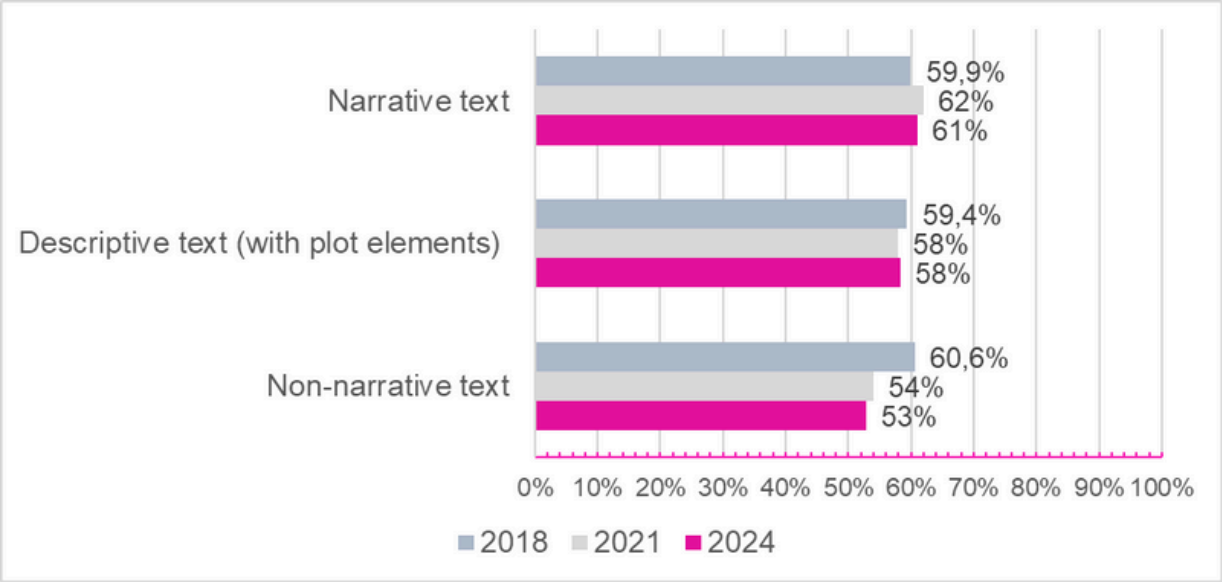


Figure 11. Average difficulty of reading test items by text narrative (plot): trends across the cycles (2018, 2021, 2024)

Students' ability to complete tasks on **all dimensions of cognitive reading activity has decreased** somewhat in the last two cycles of the study (Figure 12).

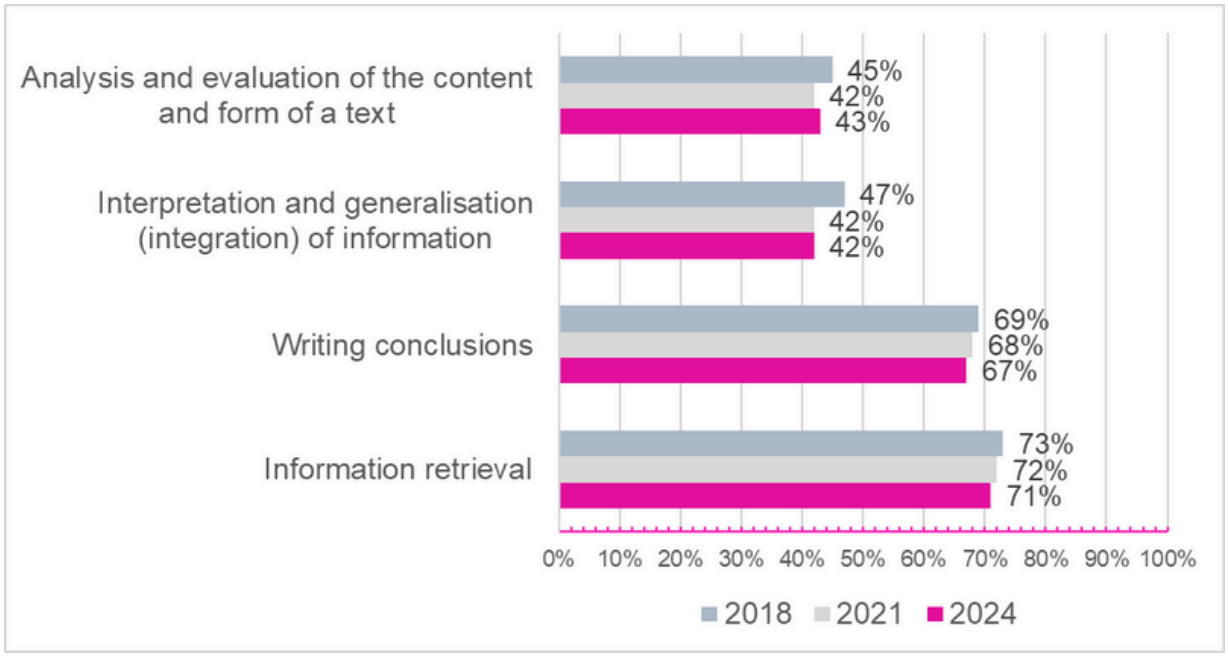


Figure 12. Average difficulty of reading test items by the cognitive dimension category of reading competency: trends across the cycles (2018, 2021, 2024)

Compared to the students who completed their primary education in 2018, the primary school graduates of 2021 and 2024 were **less confident** in working with all tasks, **regardless of which part of the text they had to search for answers**. In addition, the students who participated in NEMQPE 2024 showed less ability to work with information contained at the beginning of the text (even compared to the 2021 cycle) (Figure 13).

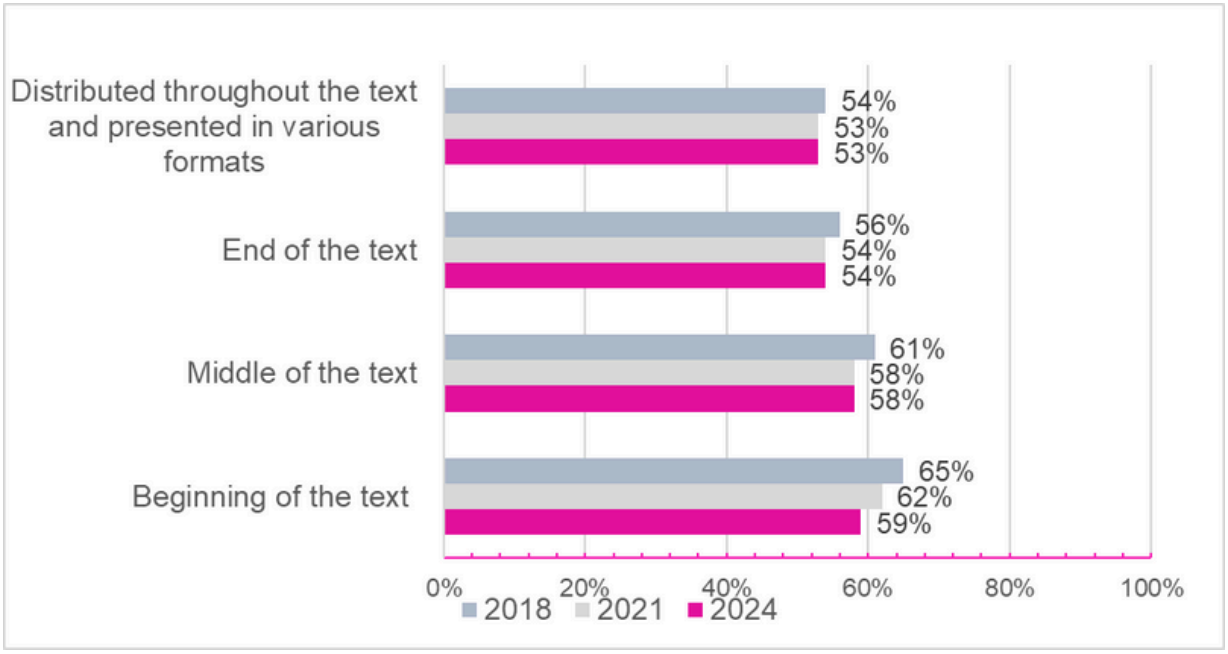
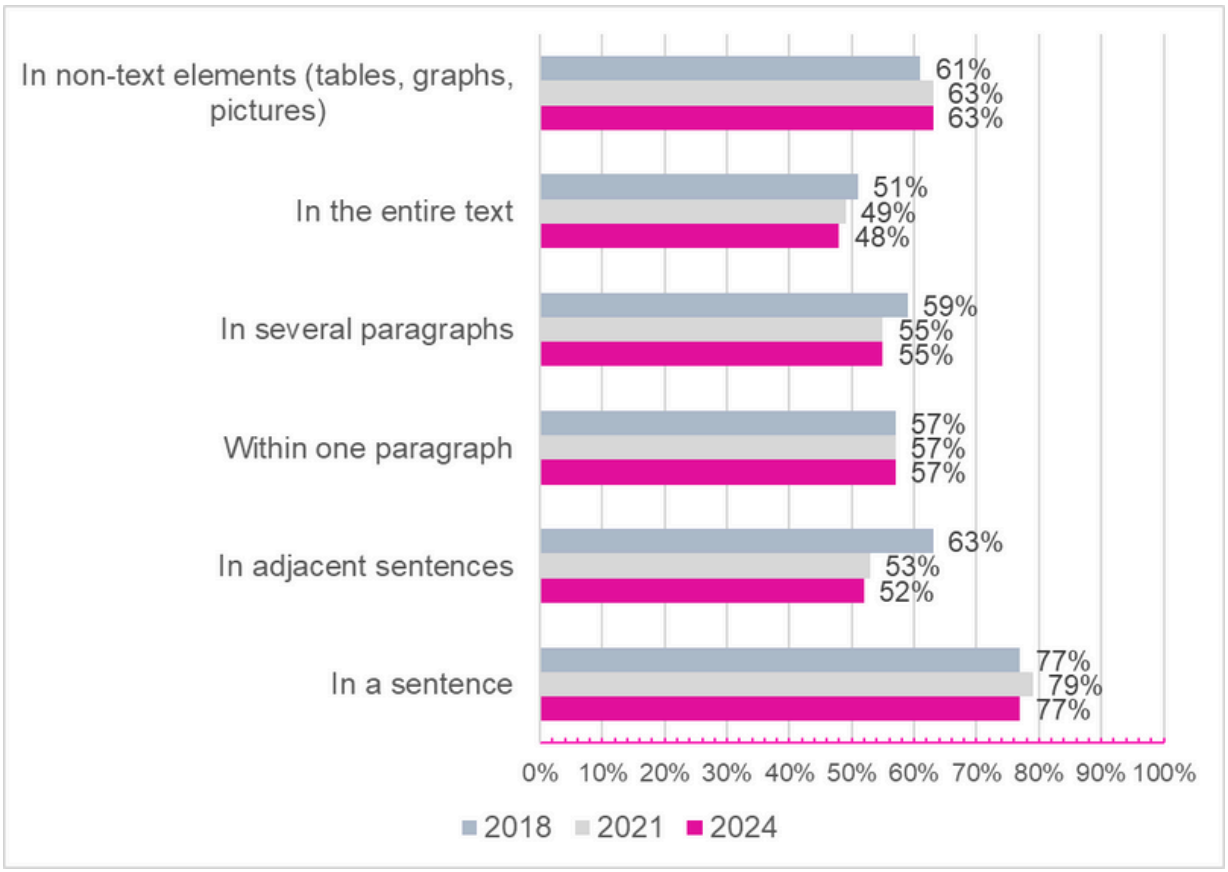


Figure 13. Average difficulty of reading test items by location of answers in the text: trends across the cycles (2018, 2021, 2024)

In all three cycles, the most manageable tasks for students were those **with an answer that could be found in one sentence**. In 2024 and 2018, 77% of students answered these correctly, while in 2021, the percentage was slightly higher at 79%. Tasks that required searching for information in neighbouring sentences were also relatively simple, but the results for 2024 were lower than in previous cycles. The performance on tasks requiring answers from a paragraph or the entire text remained consistent or showed only slight changes (see Figure 14).



Fgure 14. Average difficulty of reading test items by the information processing required for answers: trends across the cycles (2018, 2021, 2024)

Students performed worse on short-answer tasks in 2021 than in 2018, and this trend persisted into the 2024 cycle (Figure 15).

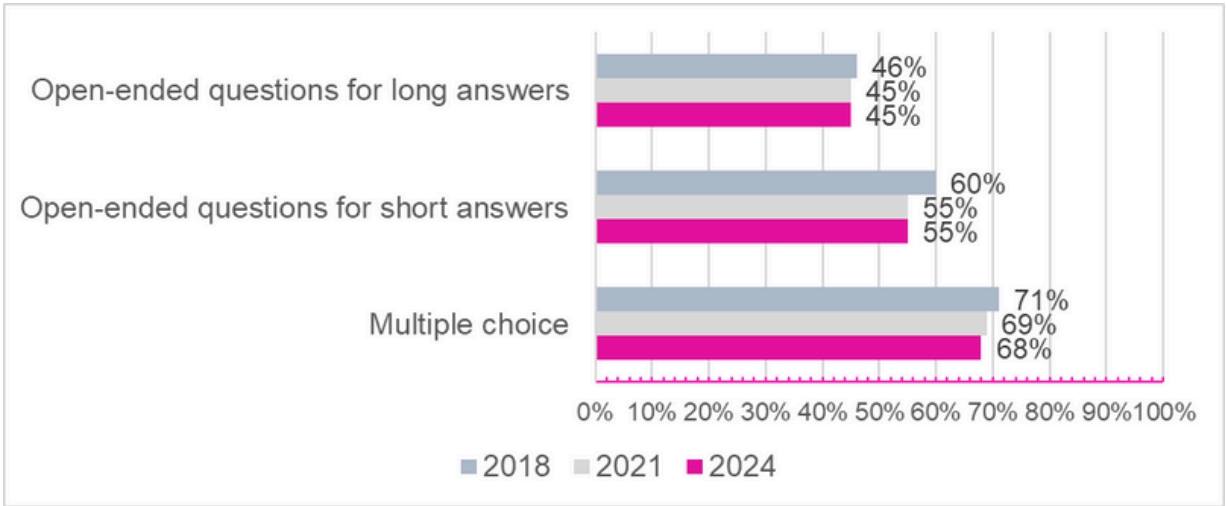


Figure 15. Average difficulty of reading test items by their complexity with added conditions: trends across the cycles (2018, 2021, 2024)

Data from the 2021 and 2024 cycles of the NEMQPE indicate that primary school students' reading competency hardly changed during this period. Still, it significantly decreased compared to students' reading performance in 2018.

SCIENCE PERFORMANCE IN PRIMARY SCHOOL: NEMQPE 2024 DATA AS A STARTING POINT FOR TRACKING PRIMARY SCHOOL GRADUATES' ACADEMIC ACHIEVEMENTS IN FUTURE CYCLES

SCIENCE PERFORMANCE IN PRIMARY SCHOOL: NEMQPE 2024 DATA AS A STARTING POINT FOR TRACKING PRIMARY SCHOOL GRADUATES' ACADEMIC ACHIEVEMENTS IN FUTURE CYCLES

Within the cycle of 2024, for the first time in NEMQPE, a kind of integrated **science competency** became the object of the study. According to the NEMQPE 2023 Program, science competency is defined as

a person's ability to apply in practice a scientific understanding of nature (phenomena, processes, patterns, laws), methods and tools of natural sciences, engineering and technology (to observe, collect and systematize data, formulate hypotheses, conduct research/experiments, analyze and evaluate results), to consciously relate to the preservation of nature and the improvement of the quality of life of a person, community and humanity in general, and the balanced development of society.

Primary school graduates' science competency level can be determined by considering their achievement of the **thresholds (levels) of science competency** defined within the framework of the NEMQPE.

At the basic level of science competency, students can answer simple scientific questions and complete one-step tasks presented in a familiar way. Specifically, they can determine if scientific equipment is used correctly, demonstrate a general understanding of technological processes, and recognise information displayed through photos, drawings, or pictograms. Additionally, they can distinguish between different organisms, objects, and natural phenomena or processes. Students also possess basic knowledge about their own body and can describe the changes that occur within them, as well as understand the importance of preserving nature.

At the intermediate level of science competency, students demonstrate an understanding of the main concepts from their learning materials. They can apply their knowledge in practical situations, provide their own examples, and successfully complete two-step tasks, such as determining the optimal conditions for organising and conducting research. Students are able to interpret information presented in various formats, including drawings, pictures, pictograms, photographs, maps, text, and diagrams. They work with educational models that visualise objects, natural phenomena, and processes. Additionally, students can identify organisms, objects, natural phenomena, or processes based on specified characteristics. They know the properties of materials and understand how they can be processed and utilised. Students establish relationships between animate and inanimate objects, human activities and environment. They can explain changes in their own bodies based on their physical health, types of activities, and lifestyle choices. Furthermore, they recognise the impact of natural and material resources on human life and possess a general understanding of global geography and natural patterns.

At the high level of science competency, students have deep, systematic and flexible knowledge within the curriculum for their age. They can apply this knowledge in various contexts, supported by well-reasoned arguments. These students can solve multi-step problems, integrate theoretical information with practical skills, and use analytical and creative approaches to explore the world. They draw well-founded conclusions by comparing scientific concepts to their observations, predict possible research results, and evaluate scientific inventions based on their relevance to everyday life. Moreover, they process information from multiple sources, such as photos, drawings, pictograms, maps, schemes, graphs, and diagrams, and can transform it into different forms of representation. Students demonstrate spatial thinking, meaning they can navigate in space and work with various representations of the Earth and abstract models. They critically analyse text information, highlight key points, and draw conclusions while working with educational models and applying their acquired knowledge to real objects and situations. They understand the content of both concrete and abstract scientific concepts, classify organisms within specific species, and identify their characteristic features and behavioral traits. Additionally, they can explain cause-and-effect relationships between natural phenomena and processes, generalise information, and identify natural laws. They also rationally use natural resources in their daily lives, evaluate information related to health and safety, and make informed decisions. Furthermore, they demonstrate an understanding of the Ukrainian context within natural science disciplines and integrate knowledge from different fields of expertise to address natural science problems.

The assessment results for primary school graduates' science competency from the main study of the third cycle of the NEMQPE indicate that **16.6%** of students achieved the **high** threshold, **51.3%** met the **intermediate** threshold, and **83.9%** passed the **basic** threshold (see Table 9).

This means, in 2024, Grade 4 students who did not meet the basic proficiency threshold, specifically those at the pre-basic level of science competency (16.1%), show significant gaps in their understanding of the material covered in the 'I Explore the World' course. As a result, they struggle with applying this knowledge in practical situations.

Table 9. Achieving the thresholds of science competency by primary school graduates

Domain	The percentage of students who reached the thresholds in 'I Explore the World'		Low / Medium / High
I Explore the World	0% 20% 40% 60% 80% 100%		
	High (230)	**Intermediate (200)**	**Basic (170)**
I Explore the World	16.6	51.3	83.9

THE PRIMARY SCHOOL GRADUATES' PERFORMANCE IN COMPLETING TASKS OF DIFFERENT AREAS OF CONTENT, COGNITIVE AND RESEARCH DIMENSIONS OF SCIENCE COMPETENCY

In the NEMQPE, students were given tasks from **three content areas** for assessment: Nature Studies, Life Sciences, and Earth and Space Sciences. Grade 4 students who completed primary education in 2024 demonstrated a better understanding of topics related to Nature Studies and Life Sciences. The average complexity of the test tasks in these areas was 43%. In contrast, tasks from the Earth and Space Sciences area proved to be more challenging, with only an average of 37% of students able to complete them (see Figure 16).

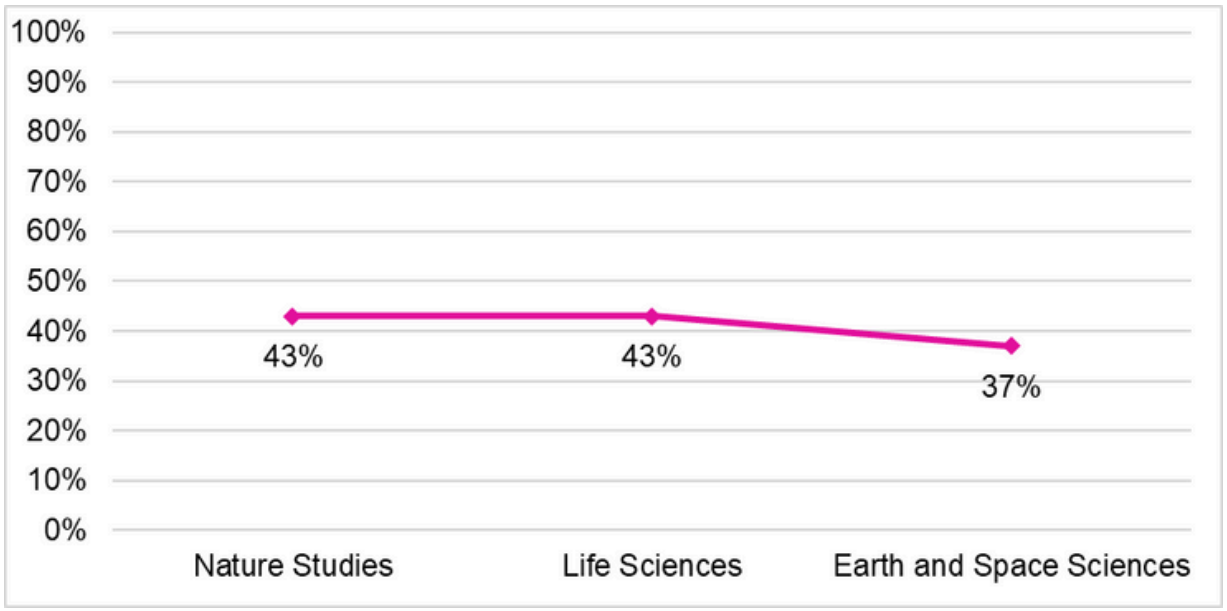


Figure 16. Average difficulty of science test items by science competency content area

Participants of the NEMQPE engaged in tasks from **various cognitive categories**. These tasks included tasks on knowledge (the ability to recall, recognise, describe, give examples), application (the ability to compare, distinguish, classify objects and phenomena, interpret and explain information) and reasoning (the ability to formulate questions, put forward hypotheses, predict, analyze, generalise and draw conclusions, evaluate information and data).

As expected, the most manageable test tasks for primary school graduates in 2024 were those in the Knowledge category. More than half of the test participants (51%) successfully completed tasks in this cognitive area.

The average difficulty of tasks in the Application category was 43%. This means students performed worse on these tasks compared to knowledge tasks, but better than reasoning tasks (29%) (Figure 17).

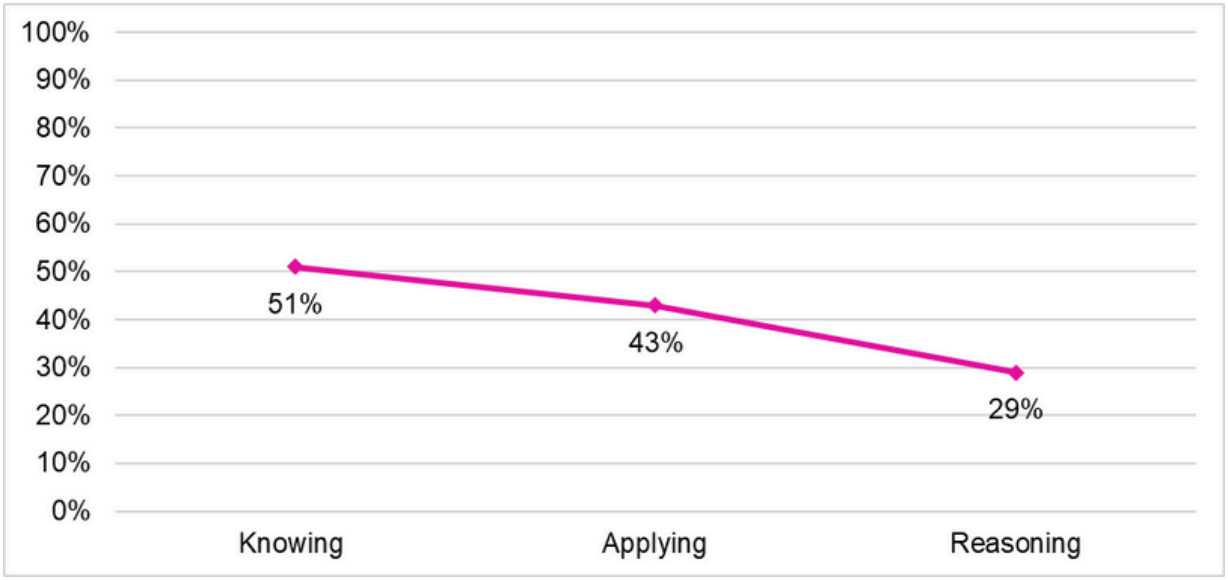


Figure 17. Average difficulty of science test items by science competency cognitive category

An Example of a Task from the Application Category

The task involved analysing a stimulus, specifically the text information (The stork and the animals it eats: earthworms, insects, fish, frogs, lizards, snakes, mice). The objective was to work with this specific information. In 2024, approximately 59% of primary school graduates were able to complete this task correctly, meaning they successfully drew all the arrows in the appropriate directions.

To evaluate the achievements of primary school graduates in applying their science knowledge to practical activities, the NEMQPE tests focused on three aspects of science competency: planning a study, conducting the research, and processing the data obtained from the results. The differences in the average performance of Grade 4 students across various categories of the research aspects were relatively small. However, this reveals an important observation: students find it more challenging to handle preparatory and analytical tasks than to conduct the research itself.

On average, only 41% of primary school graduates successfully completed research planning tasks, which involved developing skills to analyse information from various sources and using it correctly. Students performed best in 'conducting research', with an average success rate of 47%. However, they struggled the most with 'processing research results', achieving only an average of 35%. Only one in three Grade 4 students could effectively analyse, interpret, and evaluate research data (see Figure 18).

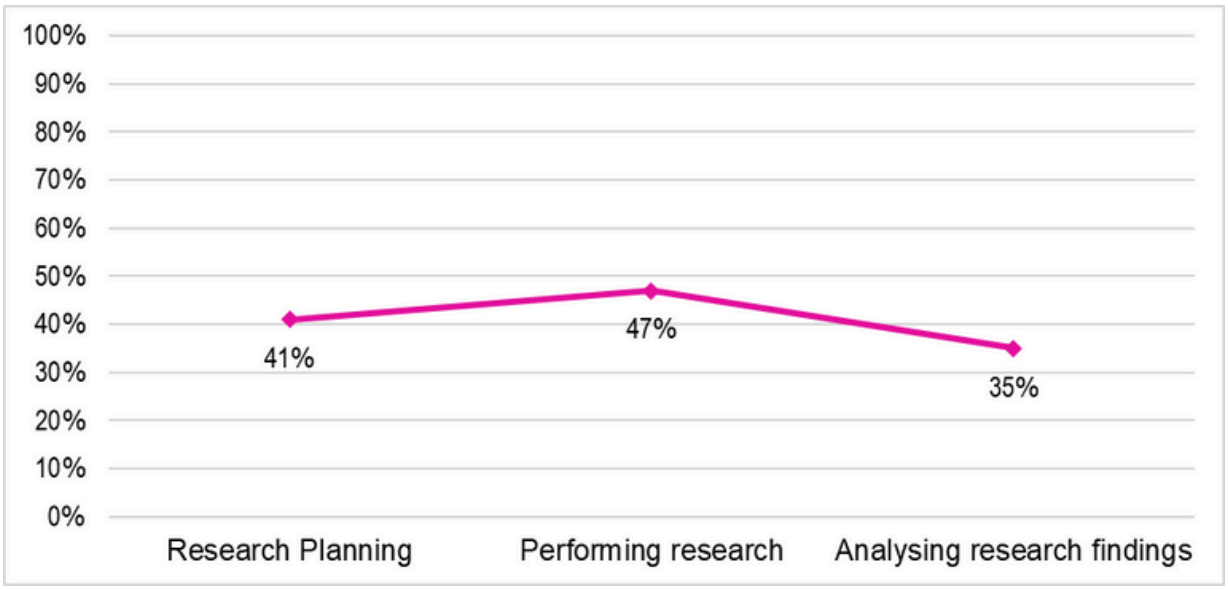


Figure 18. Average difficulty of science test items by category

Only about a quarter of primary school graduates (25%) can successfully complete multiple-choice test tasks requiring them to provide at least a short, clear, and logical written explanation (see Figure 19). As expected, Grade 4 students found the multiple-choice test tasks the easiest. 48% of primary school students managed to complete these tasks successfully.

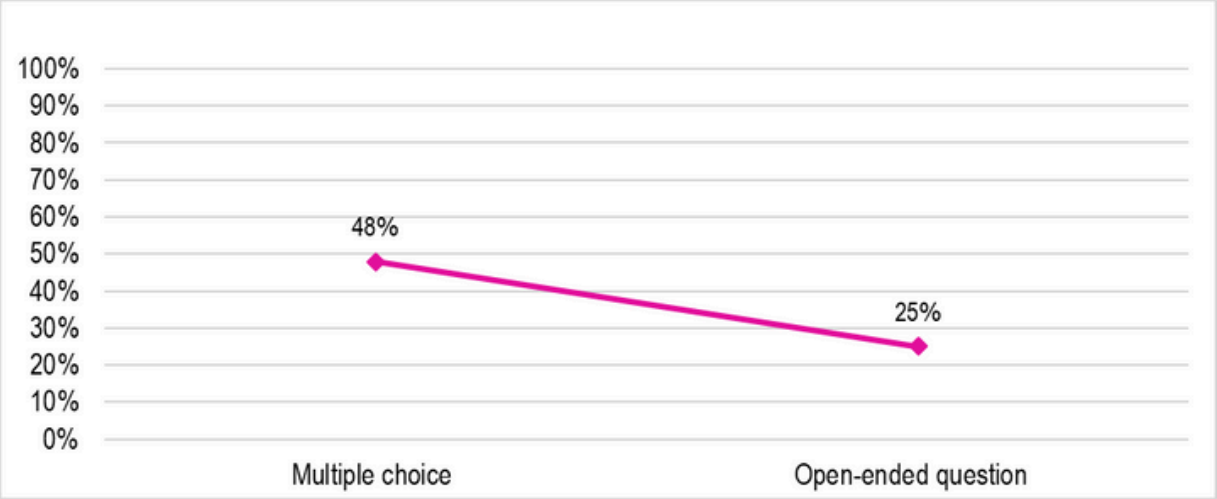


Figure 19. Average difficulty of science test items by test question types

Since science competency is important for individuals and society, the assessment of this competency in primary schoolchildren within the NEMQPE was conducted using stimuli that allowed for the exploration of specific situations related to the life of an individual, community, or humanity as a whole (i. e. to specific contexts: **personal, local/national, global**).

The contexts that primary school students find most understandable are those related to their personal experiences. Tasks concerning their health, lifestyle, educational activities, and the scientific aspects of their hobbies are particularly relatable. On average, students achieved a success rate of 43% on these tasks. In contrast, a smaller percentage of primary school graduates were able to solve test questions related to local and national contexts. These questions require at least a basic understanding of social and natural processes that extend beyond students' personal experiences. The average complexity rates for tasks in these categories were 39% and 38%, respectively.

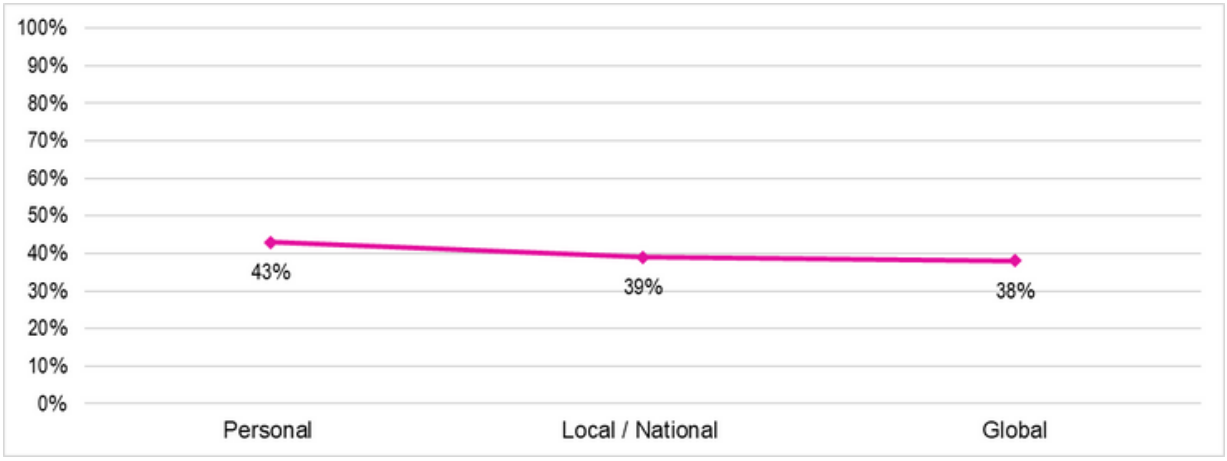


Figure 20. Average difficulty of science test items by life context relation

THE RELATIONSHIP BETWEEN PRIMARY SCHOOL GRADUATES' PERFORMANCE IN THE 'I EXPLORE THE WORLD' COURSE AND SOME DEMOGRAPHIC AND INSTITUTIONAL FACTORS

The data from NEMQPE 2024 show no significant differences in the performance of **boys and girls** in the 'I Explore the World' course. The average score for boys is 201.3, which is just 1.3 points higher than the average score for girls, which is 200.0 (see Figure 21).

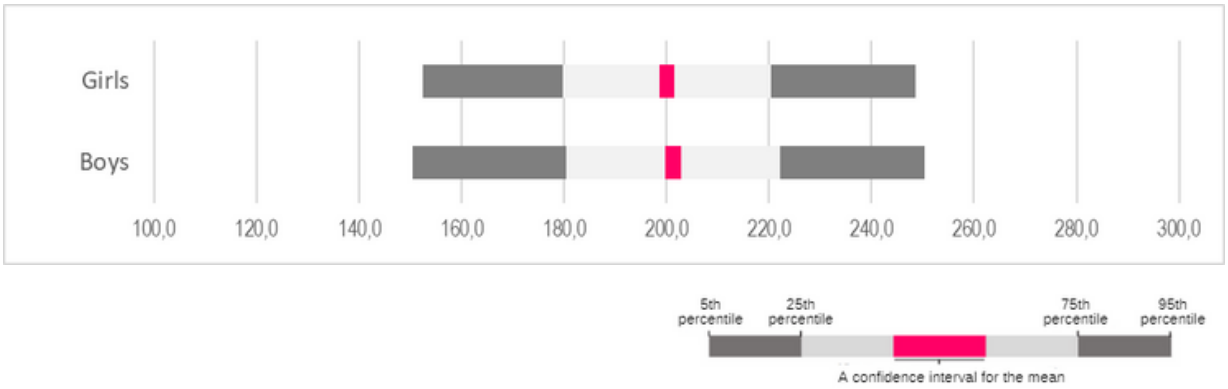


Figure 21. Statistical indicators for the distribution of students' scores by gender ('I Explore the World')

The study data indicate that primary school students' performance in science competency assessments is influenced by the **type of settlement** in which they study. Students from cities with populations over 700,000 achieved the highest average score of 211.3. In contrast, students from towns had a slightly lower average score of 202.0, while children from rural areas scored the lowest at 193.6. Overall, there is a significant difference between urban students, who averaged 205.0, and rural students, who averaged 193.6 (see Fig. 22).

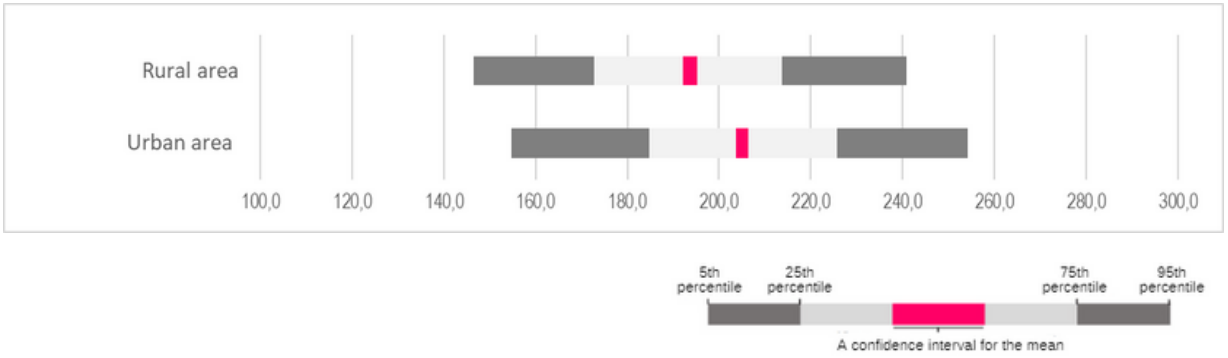


Figure 22. Statistical indicators for the distribution of students' scores by school location setllement type ('I Explore the World')

While students in cities and large towns generally demonstrate higher levels of science competency compared to those in rural areas, it's important to highlight that some rural schools provide science education of equal quality to their urban counterparts (see Figure 23).

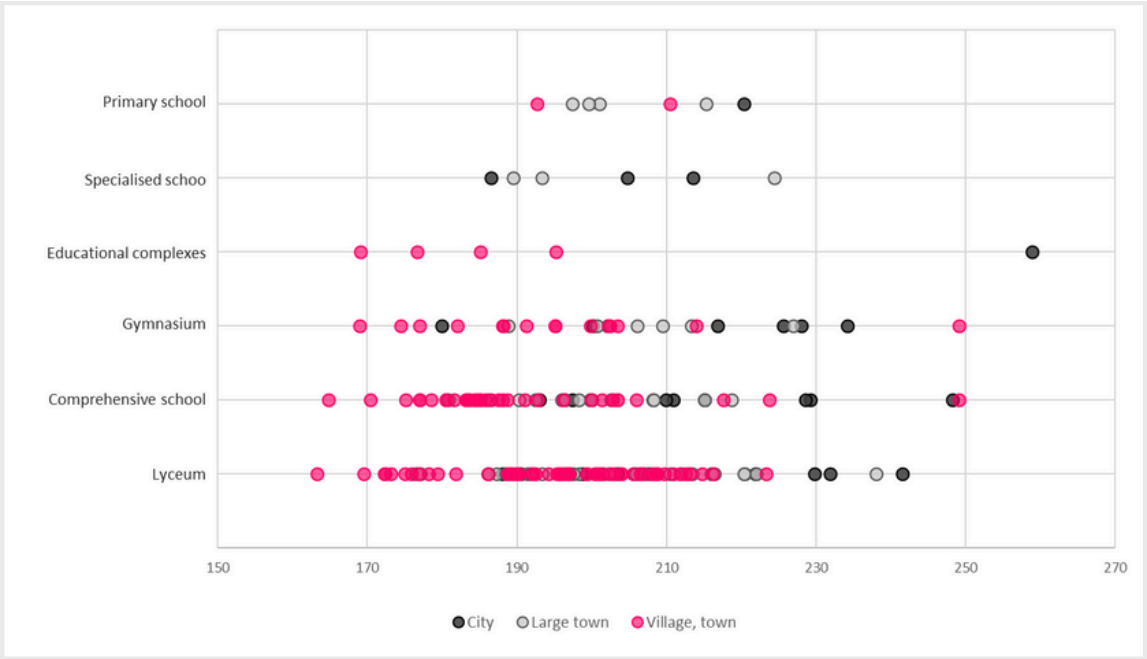


Figure 23. Average performance of Grade 4 students by school type and school location settlement type ('I Explore the World')

As mentioned above, the assessment of science competency within the NEMQPE was conducted for the first time during the 2024 cycle. The performance indicators reflecting various levels of science competency, established on this cycle's results, will serve as a reference for tracking the progress of primary school students in future NEMQPE cycles.

PRIMARY EDUCATION UNDER WAR CONDITIONS AND STUDENS' PERFORMANCE

PRIMARY EDUCATION UNDER WAR CONDITIONS AND STUDENS' PERFORMANCE

To investigate how the full-scale war affected primary school students' learning processes and psychological well-being, a series of questions from the so-called 'crisis block' was included in the questionnaires for graduates and teachers who participated in the main study of NEMQPE 2024. The participants were asked about their educational and extracurricular experiences during the last two academic years (2022/2023 and 2023/2024), specifically following the onset of the full-scale invasion.

STUDENTS REPORT

Over half of the Grade 4 students surveyed reported that they primarily studied in person but occasionally engaged in remote (online) learning. Nearly one-third of the respondents indicated that they studied exclusively in person on school premises. The data reveal that students who primarily studied in person, with some remote learning, achieved higher average scores across all three domains of the NEMQPE compared to their peers. This difference was particularly notable when compared to those who studied exclusively in person, with an average score gap of approximately 10 points.

Students demonstrated an increasing interest in distance learning the longer they participated in this method of organising their education. However, a significant majority of students–75% in total–still prefer in-person learning within a school setting. Additionally, the format of learning that students prefer is only minimally related to their success in all three domains of the NEMQPE.

Source.: Which schools in Lviv were hit by rockets and when children will be able to return to their deskshttps://city-adm.lviv.ua/news/society/education/303206-yaki-shkoly-lvova-postrazhdaly-vid-raket-ta-koly-dity-zmozhut-povernutys-za-party

Source.: A schoolgirl from Hlukhiv performed the song against the backdrop of her destroyed school. https: hlukhiv.info/shkolyarka-z-gluhivshhyny-vykonala-pisnyu-na-foni-svoyeyi-zrujnovanoyi-shkoly/

Based on responses from approximately 40% of students, learning support from teachers primarily involved the use of video communication programs to conduct classes. Teachers frequently sent learning materials and assignments, or uploaded them to the school website or educational platform. One in three fourth-grade students reported that teachers often provided access to recorded lessons or various Internet resources. Additionally, about 30% of students noted that teachers frequently encouraged them to work through materials and complete tasks independently, without offering explanations. According to the NEMQPE 2024 report, the frequency of online classes or just sharing materials with students had little to no impact on their academic results. Furthermore, students who mainly received recorded lessons or Internet materials performed worse across all domains assessed by the NEMQPE.

About two-thirds of students (about 70%) reported that their teachers often or very often asked how they were doing and whether they were doing well, and gave helpful advice on how to study independently, that is, they supported their students to take care of their emotional health. At the same time, boys more often than girls reported teachers' efforts to support their studies. At the same time, girls, compared to boys, were more likely to indicate that they received emotional support from teachers. Students in cities more often than students in villages or towns indicated in their responses to the questionnaire ways of interacting with teachers aimed at supporting their studies, but they reported emotional support less often than their peers from rural areas. As the data analysis shows, although both types of support did not strongly impact students' results, the significant impact of emotional support on students' feelings of safety and security is still worth noting.

Despite the challenges posed by wartime, a significant percentage of students–over 50%–reported that they did not face major difficulties accessing learning resources, such as computers, tablets, or smartphones, as well as a quiet place to study. The most significant issue, affecting nearly 55% of students, was a lack of stable internet access. The data indicate that, across all subjects, students who frequently experienced difficulties accessing a computer, the internet, or a quiet study environment scored, on average, more than 10 points lower than their peers who rarely faced such challenges.

Most Grade 4 students (74%) reported feeling calm and secure during their studies. However, more than two-thirds of these students regularly experienced emotional difficulties and reported feelings of depression related to worries about family and friends (70%). Additionally, over a third of students reported poor sleep due to air raid alarms. According to the survey, students who felt calm and secure were likely to achieve average test scores from 3 to 5 points higher across all subjects. Interestingly, even students who frequently worried about their family and friends performed slightly better academically than those who rarely experienced such concerns. This suggests that feelings of empathy, even when paired with anxiety, do not always hinder academic performance.

Girls were more likely than boys to report experiencing psycho-emotional problems during the last two years of their studies under war conditions. In contrast, boys tended to focus more on encountering technical difficulties in their studies. Students from villages and towns were more likely to face material and technical challenges, while students in cities reported a higher incidence of issues related to their psycho-emotional well-being.

Source.: Keeping families warmer in Pavlohrad this winter.
https://www.unicef.org/ukraine/en/stories/keeping-families-warmer-in-pavlohrad

The majority of students experienced the severe consequences of a full-scale war. Nearly one in five students reported having to relocate to another settlement (23%) or even leave the country for some time (21%) due to the war's onset. About one in ten students (9%) indicated that their homes were destroyed or damaged due to the war, and 8% reported that their schools suffered damage or destruction. Overall, 20% of students mentioned that one of their parents or guardians went to defend their homeland by joining the army, while 14% experienced the loss of a loved one due to the war. Additionally, around one-third of students (34%) lost contact with some of their friends. The data indicates that in cities, the proportion of surveyed students who had to move to another settlement or leave the country temporarily is nearly double that of those in villages and towns. Consequently, more students in cities have lost touch with their friends. However, in urban areas, there are five percentage points fewer students whose parents or guardians went to war compared to those in other types of settlements.

The challenges posed by wartime conditions have significantly negatively affected students' performance across all domains of the NEMQPE. Students whose schools were destroyed or damaged, whose homes were impacted, or who lost a loved one due to the war are approximately 10 points behind their peers in all subjects. Additionally, students whose parents or guardians joined the military to defend the country show an average score that is over 4 points lower across all subjects. There is also a slight decline in the performance of students who had to relocate to another country for a period of time. However, a more substantial and noteworthy decrease in performance is observed among Grade 4 students who chose not to answer this question.

Source.: During the two years of full-scale war, children in frontline regions spent more than 7 months in shelters - UNICEF. https://nus.org.ua/2024/02/24/za-dva-roky-povnomasshtabnoyi-vijny-dity-u-pryfrontovyh-regionah-provely-ponad-7-misyatsiv-v-ukryttyah-yunisef/

Source.: Who will return from Europe? https://glavcom.ua/country/society/minekonomiki-rozpovilo-jak-planuje-povertati-bizhentsiv--959892.html

TEACHERS REPORT

The most significant challenges in arranging an effective learning process for teachers stemmed from organisational and technological issues. These included frequent interruptions due to air raid alarms (96%), power outages (66%), and the necessity to combine face-to-face and distance learning, especially when some students were abroad or displaced within the country (49%). Emotional factors were also a concern, though to a lesser extent. Teachers reported issues such as depression among students (56%) and colleagues (64%), along with feelings of fatigue, apathy, and other psychological challenges (64%) associated with the ongoing shelling and military events. In cities with populations over 700,000, these emotional factors were more likely to impede the educational process compared to other settlement types. Conversely, in smaller settlements, teachers faced more organisational and technological hurdles due to the war. Even though over half of the teachers involved in the NEMQPE reported difficulties in organising the learning process after the start of the full-scale war, this did not adversely impact students' performance in any subjects assessed in NEMQPE 2024.

Students' emotional states have significantly impacted the learning process due to military events. According to teachers, a large majority of the children–78%–reported feeling depressed during this time. Additionally, 60% of primary school graduates were taught by teachers who acknowledged that at least one student in their class required professional psychological assistance. Teachers in villages and towns observed signs of depression among students more frequently, with 19% more students affected than in urban areas. However, fewer teachers in rural areas–by 13 percentage points–believed their students needed professional psychological help. Teachers indicated that students who experienced occupation (77%) or lost a loved one as a result of the war (71%) are the most in need of additional psychological support (see Figure 24).

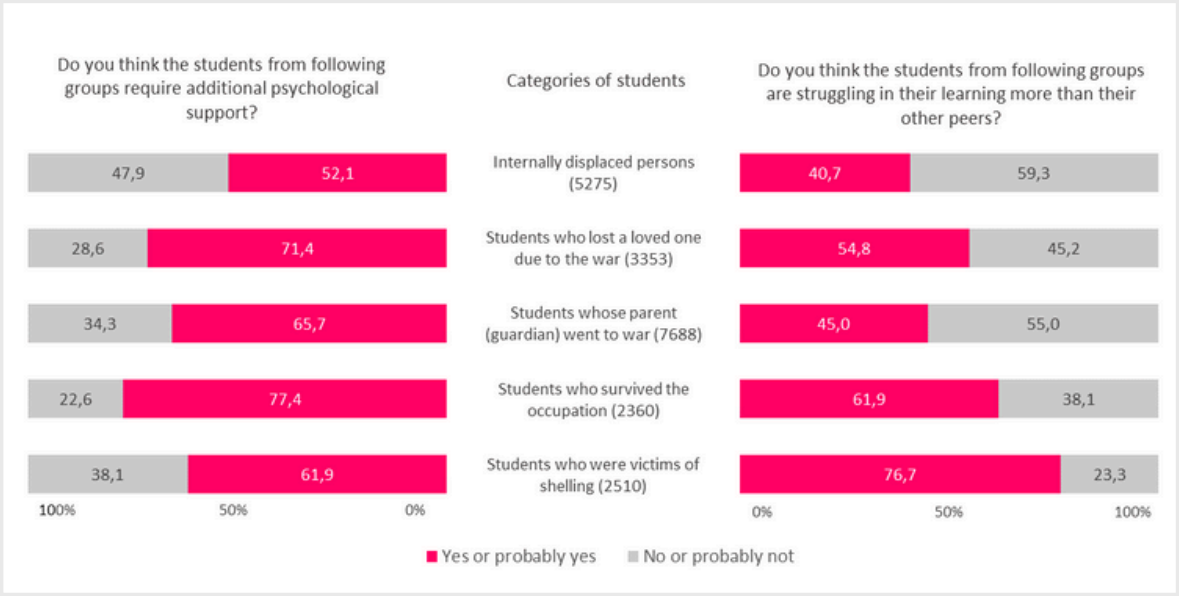


Figure 24. Percentage of students who participated in the study, whose teachers reported on the psycho-emotional and educational difficulties faced by students from specific vulnerable groups

Over two-thirds of teachers (67%) believe that students' academic performance has declined since the beginning of the full-scale war, and 54% report decreased students' motivation to learn. Additionally, more than three-quarters of teachers (77%) believe that students who have experienced shelling and 62% who have survived occupation face particular challenges in their learning. Conversely, only 41% of teachers think that students displaced within the country face greater learning difficulties than their peers.

Despite the challenges, most teachers (81%) believe that children prefer face-to-face learning over distance learning (7%). This preference is influenced by the children's age, psychological characteristics, and prior learning experiences during the pandemic. Additionally, a substantial 90% of students involved in the NEMQPE attended classes where their teachers partially or fully agreed that, following the return to face-to-face learning after the onset of the full-scale war, their students became more united.

The NEMQPE 2024 findings present objective data confirming the significant impact of the war on students' learning processes, emotional health, and academic performance. Despite facing extraordinary challenges such as forced displacement, inconsistent access to educational resources, and psychological pressure, most children continued to pursue their studies, with teachers providing continuous support. As a result, there was no critical drop in performance that could have been expected. This is notable compared to the data from 2021, when primary schooling faced a crisis due to the COVID-19 pandemic.

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ

УКРАЇНСЬКИЙ ЦЕНТР ОЦІНЮВАННЯ ЯКОСТІ ОСВІТИ

2024

ЧАСТИНА І

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Я ДОСЛІДЖУЮ СВІТ

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Київ 2025

Briefly about the learning performance of primary school graduates in mathematics, reading and science under crisis conditions /

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