IT Fitness Test

2025 V4

Final Report

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Foreword Slovakia

Mário Lelovský
Chairman of the Digital Coalition

Ladies and gentlemen,

On 30 June 2025, we successfully concluded the 14th edition of the nationwide digital skills test for students and teachers, the IT Fitness Test. For the fourth consecutive year, we continued the tradition of international testing across all Visegrad Group countries, and once again offered the test to Ukrainian students in their native language.

First and foremost, I would like to thank our partners in the Czech Republic, Poland and Hungary for their tireless efforts to bring the IT Fitness Test to as many students and teachers as possible. I also extend my sincere thanks to our partners and supporters in Slovakia, especially the Ministry of Education, Research, Development, and Youth, and the Ministry of Investments, Regional Development, and Informatisation, without whose support it would not have been possible to implement this project on such a scale.

The digital world is becoming increasingly complex and fast-paced. Technological progress is advancing more quickly than our ability to adapt our education systems. It is therefore crucial that we show students not only the opportunities offered by the world of IT and new technologies, but also how to use them responsibly. They need to develop essential digital skills that will open doors to education and future employment.

More than 150,000 students from across the V4 countries took part in the international component of this year's testing, including 60,000 students in Slovakia alone. In both tests, students achieved a higher average success rate than in the previous year, which is encouraging, and we hope this positive trend will continue in the years to come.

This year also brought a major innovation, the launch of a new test designed to solve more complex, cognitively demanding tasks, known as the IT Master Test. Although only a fraction of Slovak students participated in this new format, an average success rate of over 60% indicates that Slovakia is home to many talented young people whose abilities and potential deserve to be nurtured and supported.

In conclusion, I would like to thank our partners from the National Agency for Erasmus+ Programme for Education and Training Sectors and the International Visegrad Fund, whose financial support was essential to achieving this year's outstanding results.

Foreword Slovakia

Samuel Migal'
Minister of Investments, Regional Development and Informatisation of the Slovak Republic

Ladies and gentlemen,

It is my honour to address you on the occasion of presenting the results of the IT Fitness Test 2025. This project has now become a natural part of the educational environment and shows that Slovakia has enormous potential in the field of digital skills.

I would like to thank the Digital Coalition for its long-standing work. Thanks to their efforts, digital skills are recognised as basic literacy, as important as reading or mathematics. It is precisely the cooperation between the state, experts and schools that is the key to giving young people the chance to succeed in a world that is changing faster than ever before.

The results of this year's edition speak clearly. Almost 69,000 IT Fitness Tests were completed, which is a fifth more than last year. I am particularly pleased that the interest of primary school pupils has risen by more than half. These are not just numbers; they are proof that children and teachers alike understand the importance of digital education and can move forward in it.

We see progress among pupils of all age groups, but the most significant improvement has been recorded among teachers. This is good news, because if schools are to be modern, they must be built on teachers who can guide pupils towards responsible and creative use of digital tools.

Of course, we still have much work ahead of us. We need to strengthen our work with data, critical and algorithmic thinking, as well as the safe use of artificial intelligence. That is why I welcome the launch of the new advanced-level test, the IT Master Test. It will enable us to identify digital talents better and involve them creatively in shaping Slovakia's future.

The IT Fitness Test is a brand with the potential to go beyond the borders of Slovakia and become a European tool for supporting digital skills. The brand is already established in the V4 region, and its expansion to other countries is a natural next step.

I am convinced that if we continue this cooperation, Slovakia can become a country that not only keeps pace with digital trends but also sets the digital pace.

I wish the organisers great strength and success in fulfilling this ambitious vision.

Foreword Czech Republic

Jaromír Hanzal
Director of the Association
for Applied Research in IT

The IT Fitness Test 2025 marks the fourth year this project has been carried out in the Czech Republic. First and foremost, we are pleased that the IT Fitness Test brand has firmly established itself within the Czech education system. More than 63,000 tested pupils, students and teachers — most of whom successfully completed the test — can be regarded as an undeniable success. All the more so given that this year's testing took place exclusively in the spring term of the 2024/2025 school year, which partially overlapped with the autumn phase of the IT Fitness Test 2024.

In recent years, the topic of digital competencies has resonated strongly in Czech society. We are discussing how to build a higher-value-added economy with a stronger focus on the digital services sector and on creating an efficient public sector. Digital skills-whether among IT specialists or the general public-are an essential prerequisite for realising these ambitions. At the same time, we must prepare our population for a world in which artificial intelligence plays a pivotal role, and the ability to use it safely is one of the basic skills needed to function in society. Looking at AI's meteoric growth over the past three years, we can only speculate about what it might look like, for example, in 2035.

Another major discussion today concerns the impact of digital technologies on the healthy development of children and young people. At times, this debate veers toward extremes, with some voices advocating that computers and digital technologies should not be used in schools at all. While we do not deny the risks that improper use can pose to pupils and students, we must firmly reject such anachronistic views. Mastery of digital technologies will be one of the key conditions for staying competitive globally. If pupils and students are introduced to them early, they will be able to use them effectively in their future lives, not only on the labour market.

As in previous years, we would like to express our immense thanks to the volunteers of the Česko. Digital community, who helped make this project happen. Our thanks also go to the Ministry of Education, Youth and Sports and to the Ministerial Commissioner for Digitalisation and Digital Education, Martin Úlovec, for their indispensable role in reaching out to schools. Last but not least, we would like to thank the Digital Czechia team at the Office of the Government for allowing us to present this year's results, as well as our commercial partners.

Foreword Poland

Michal Kanownik
President of the Digital Poland Association

The digital world does not wait for anyone. Every day new technologies reshape the way we learn, work, and communicate. For our societies to thrive, digital skills can no longer be seen as an addition — they are the foundation of equal opportunity, competitiveness, and resilience.

This is why the IT Fitness Test has become such a vital initiative for the Visegrad countries. It is not merely a survey of knowledge; it is a mirror reflecting how prepared our students, teachers, and citizens are for the challenges of a digital future. The results presented in this report show both our strengths and the areas where we must do more. They remind us that while talent is abundant across our region, it must be nurtured, challenged, and given the right tools to grow.

In Poland, as in our neighbouring countries, we see that young people are eager and curious, yet still face gaps in essential digital competencies. Closing these gaps is not just a matter of education policy — it is a matter of economic development and social cohesion. That is why collaboration across borders is so crucial. Together, we can share insights, inspire innovation in teaching, and raise the level of digital readiness for all.

I invite you to read this report not only as a set of statistics, but as a call to action. The future belongs to those who can use technology wisely and creatively. Let us make sure that the future is built here, in Central Europe.

Foreword Hungary

Krisztina Tajthy
Secretary General of IVSZ — Hungarian Association of Digital Companies

The development of digital skills is no longer merely a technological issue, but has become an economic, social, and educational policy priority. In the 21st century, those countries and communities that can adapt to technological change and actively build their citizens' digital literacy will remain competitive. This is also a strategic necessity for Hungary, as today the pace of digital transformation exceeds earlier expectations. What seemed like a distant possibility five years ago has now become an essential requirement in the job market, education, and everyday life alike.

In this process, we currently stand at a strategic crossroads: while Hungary outperforms the EU average in basic digital skills, the challenges of the artificial intelligence era are opening new dimensions. Artificial intelligence presents us with new challenges in terms of expectations.

The IT Fitness Test 2025 holds special significance in this context. Through the results of primary and secondary school students, as well as higher education students, we have gained a comprehensive picture of where the generations stand that will shape Hungary's digital future in the coming decade. It is clear that we cannot be satisfied with the status quo: we must continuously improve both basic digital skills and the ability to apply advanced technologies, particularly artificial intelligence.

The data of the test clearly indicate that we must reduce regional inequalities, while fact-checking and critical thinking skills need targeted reinforcement. At the same time, the rapid adaptation of both teachers and students offers the opportunity for Hungary to position itself at the forefront of digital education.

IVSZ has always been committed to developing digital skills. The IT Fitness Test 2025 not only provides a snapshot but also establishes a basis for action: it supports the creation of programs that bridge the digital divide, expand teachers' competencies, and foster future-ready skills among the younger generation.

We are building tomorrow's digital society today. This requires a clear strategy, responsible cooperation, and above all, the broad dissemination of digital literacy. The IT Fitness Test 2025 is not only a milestone in this work, but also a vital tool: a mirror reflecting our present state and a compass guiding the path of progress.

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IT Fitness Test

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CHARACTERISTICS AND IMPLEMENTATION OF THE IT FITNESS TEST

The test consisted of two parts:

Part I: **Profile**

In this part, respondents filled in basic **personal details**. Because the test was evaluated after the testing period and the most successful participating schools were rewarded, the data obtained in this part of the IT Fitness Test were used to identify them.

Part II: **Testing**

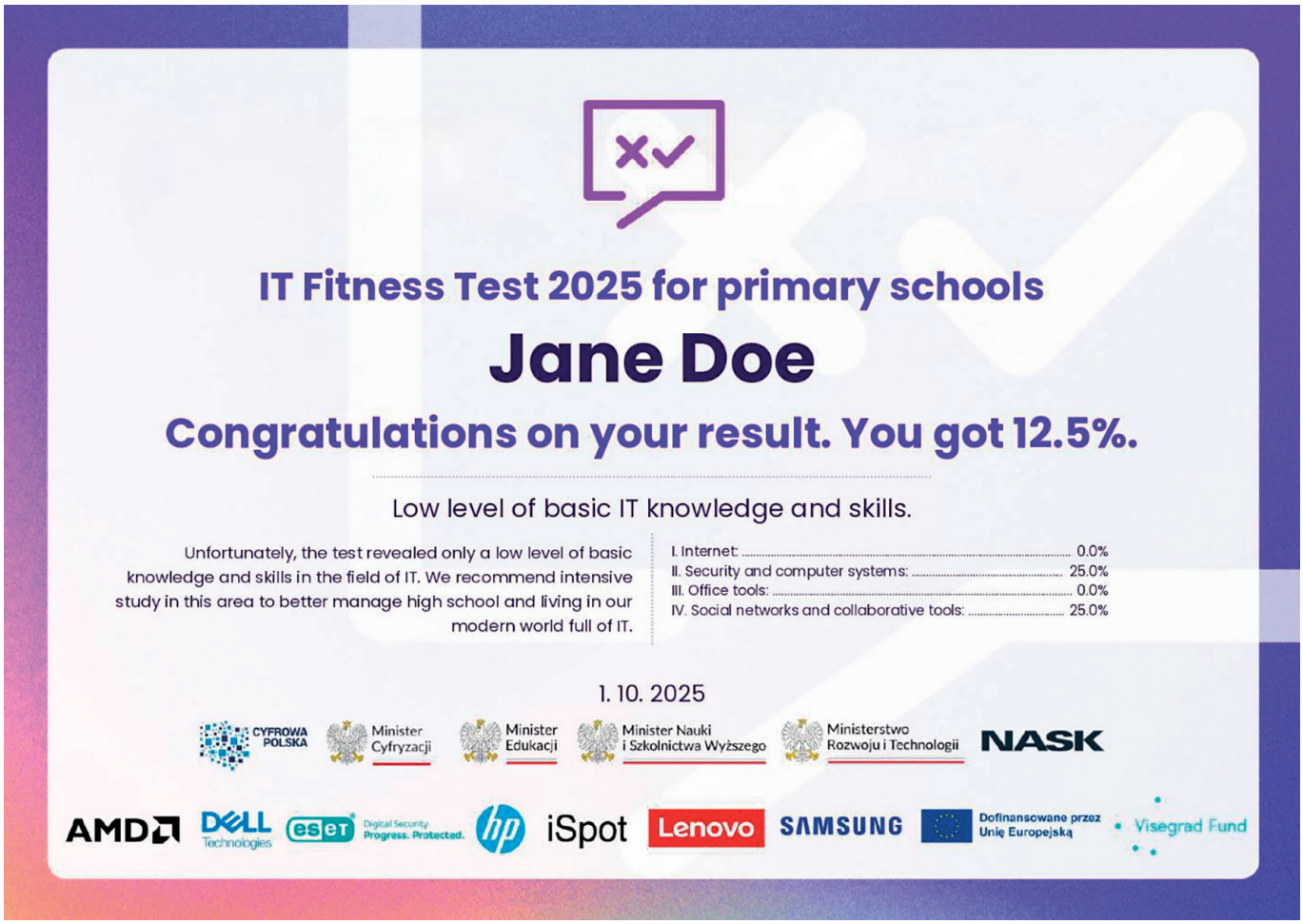
The second, **knowledge — and competence-focused** part of the test targeted practical skills and the respondent's performance across various areas of IT. Two versions of the test were used: one intended to verify the digital skills of graduates of regional schools (aged 15+) for continuing studies at a higher level of education or entering practice, and a second version for primary schools. University students, teachers, and members of the general public from different age groups also took part.

The priority target groups for the testing were:

a. pupils and graduates of primary schools or eight-year grammar schools, aged 14—16
b. students of secondary schools and universities, over 15 years of age.

Alongside their pupils and students, teachers and other interested individuals of any age could also take the IT Fitness Test.

There were two types of questions in the test. The first set consisted of multiple-choice questions with one correct answer out of four options. The second type consisted of questions with several sub-questions (statements) that had to be judged individually, for example, as true/false or correct/incorrect (so-called clusters of dichotomous items). A response was scored as correct only if the entire sequence of sub-answers was correct; that is, the respondent earned a point only when they selected the correct option for every sub-question.



To reduce the risk of advanced disclosure of test items by respondents who had already taken the test, each respondent's test was generated at random from four pre-prepared variants of every question.

During testing, each respondent's score was updated continuously and, at the end, converted into a percentage success rate. Based on this, the respondent was assigned to one of five levels. After finishing, they received their result not only as a percentage, but also as the level achieved, accompanied by a short descriptive comment.

Certification testing in the 14th edition of the IT Fitness Test took place from 26 February in the Czech Republic and Poland, and from 6 March in Hungary and Slovakia. In all countries, the international phase of the certification testing ended on 30 June 2025, while in Poland, the national testing continued until 31 October 2025. During the certification period, respondents also received an electronic certificate and could compete for incentive prizes according to the rules and statutes of the competition in each country. The testing was once again available in Ukrainian to assess the skills of pupils participating in the education systems of the Visegrad Group countries. The test could also be completed in English. After the certification phase ended, correct answers were published, and everyone could repeat the test several times to improve their IT skills.

A. Characteristics of the IT Fitness Test for primary schools

The test was intended for pupils in their final years and graduates of primary schools. It contained tasks that should be manageable within this stage of education (optimally for the age group 14 — 16).

The test was designed to assess skills, subject-specific competencies, and specific key competencies. The aim was to avoid testing isolated knowledge, facts, and encyclopaedic information. Instead, the focus was on assessing the ability to analyse input information. Further emphasis was placed on understanding connections and drawing conclusions, as well as problem-solving and critical thinking.

The test included tasks at various, though generally higher, cognitive levels (understanding, application, analysis, evaluation). Some tasks were more complex and required multiple steps to complete successfully (e.g. opening a spreadsheet in a prepared file, interpreting the information it contains, calculating a result using a simple formula and evaluating it according to given criteria; finding information on a website and extracting the required result based on specific conditions; analysing the properties of a process, estimating its rules, and predicting future behaviour, etc.).

The test was divided into four categories:

I. Internet
II. Security and Computer Systems
III. Office Tools
IV. Social Networks and Collaborative Tools

Each part contained four tasks, giving a total of 16 questions. The optimal time to complete the test was estimated at 30 — 45 minutes (once started, the test was available for a maximum of 8 days).

The test was designed to include tasks of varying difficulty, avoiding those that were extremely easy or extremely difficult. As testing theory suggests, the optimal difficulty of a task lies roughly in the range of 20 — 80 per cent. The aim was to ensure good differentiation among participants, so the test was structured to produce an average success rate of around 50 — 60 per cent (an estimate, since the tasks were not piloted in advance).

The goal was to create tasks that were engaging, more practice-oriented, and less directly tied to the content typically taught at primary schools. We also believe the test could serve as an inspiration for teachers, pointing towards suitable directions in primary education.

Table 01 shows the breakdown of the success rate along with the corresponding descriptive comments for each level.

Success rate	Level	Comment
85 — 100%	Excellent level of basic IT knowledge and skills	Your basic knowledge and skills in the field of IT are at an excellent level, you are familiar with the world of IT, and you can work very well with IT tools. You are probably an IT enthusiast and are one of the most skilled IT users. You are excellently prepared for high school study.
65 — 84.99%	Above-average level of basic IT knowledge and skills	Your basic knowledge and skills in the field of IT are above average, you are familiar with the world of IT, and you can work effectively with IT tools. You only make mistakes occasionally in small details. You are very well prepared for high-school study.
45 — 64.99%	Average to above-average level of basic IT knowledge and skills	Your IT competencies are at an average to above-average level. You are able to find your way around and use IT for work or play. However, there is still room for improvement. You are ready for your high-school studies.
25 — 44.99%	Lower level of basic IT knowledge and skills	Your IT knowledge and skills are below average. You have some skills that you can use in your everyday life and which you will need in your further studies. But you still have a lot of work to do. You are ready to continue your studies in high school.
0 — 24.99%	Low level of basic IT knowledge and skills	Unfortunately, the test revealed only a low level of basic knowledge and skills in the field of IT. We recommend intensive study in this area to better manage high school and living in our modern world full of IT.

Table 01 Characteristics of the individual success rates for the IT Fitness Test for primary schools

B. Characteristics of the IT Fitness Test for high schools and universities

The test is primarily intended for secondary school and university students and their teachers. It enables the assessment of skills focused on advanced practical knowledge, abilities, and competencies in IT literacy. Today, digital literacy has become a fundamental requirement of everyday life. This test provides a school graduate with a clear understanding of their ability to use a computer and the internet at the level commonly required by employers today. A teacher or the school's digital coordinator has the option to supervise the testing of students in their class and thus use the test results directly in the teaching process.

Employed or unemployed individuals can also use the test to identify areas where they need to improve their IT skills. After completing the test, all participants receive a certificate that, in addition to a short, written assessment, also includes a score showing their level of mastery across the four tested areas, as well as recommendations on what they should still work on to improve.

The tasks of the test were divided into four main categories:

I. Internet
II. Security and Computer Systems
III. Office Tools
IV. Social Networks and Collaborative Tools

In each category of the test for high schools and universities, four tasks were included, so the test contained a total of 16 tasks. After completing the test, respondents also received information on their performance in each category.

The test was intended for secondary school and university students and focused on assessing their level of:

- basic and more advanced IT knowledge and skills,
- competencies in creating and presenting information (office software, internet),
- practical skills in searching for and processing information (sources, searching and sorting, communication).

The expected optimal time to complete the test was 45 minutes (once started, the test was time-limited to 8 days).

Table 02 shows the breakdown of the success rate along with the corresponding descriptive comments for each level.

Success rate	Level	Comment
85 — 100%	Excellent level of knowledge and skills in the field of IT	Congratulations on your great results! You must be an IT professional or a very skilled IT user.
65 — 84.99%	Above-average level of knowledge and skills in the field of IT	Very good result. Your knowledge and skills in the field of IT are at a very good level, you are familiar with the world of IT, and you can work effectively with IT tools.
45 — 64.99%	Average to above-average level of basic IT knowledge and skills	Your basic IT skills are at an average to above-average level. In order to be able to use IT effectively, you should pay more attention to this area.
25 — 44.99%	Lower level of basic IT knowledge and skills	Your IT knowledge and skills are below average. You are on the right track, but you still have to work on yourself for better orientation in IT.
0 — 24.99%	Low level of basic IT knowledge and skills	Unfortunately, the test revealed only a low level of basic IT knowledge and skills. For better orientation in the modern digital world, we recommend intensive study in this area.

Table 02 Characteristics of the individual success rates for the IT Fitness Test for high schools and universities

C. Characteristics of the IT Master Test

This year, a new test was introduced within the testing framework — the IT Master Test, focused on solving more complex and cognitively demanding tasks. It was an extension of one of the IT Fitness Test categories, which in previous years had been part of the test for both primary schools and high schools and universities, but was omitted from these tests in the current year.

The test was open to all age groups of respondents, provided they had completed one version of the IT Fitness Test beforehand.

The test contained 12 tasks aimed at applying higher cognitive levels of thinking. The objective was to verify how well respondents could combine multiple skills when solving tasks, including reading comprehension and critical thinking. The tasks required multiple steps and more complex problem-solving compared to simple tasks.

The test tasks were divided into four main areas with varying numbers of questions:

I. Encoding information
II. Complex security tasks
III. Complex search tasks
IV. Algorithmic thinking

The expected optimal time to complete the test was 45 minutes (once started, the test was time-limited to 8 days).

Table 03 shows the breakdown of the success rate along with the corresponding descriptive comments for each level.

Success rate	Level
85 — 100%	Very high level of complex skills in areas of IT and problem-solving
70 — 84.99%	High level of complex skills in areas of IT and problem-solving
50 — 69.99%	Above-average level of complex skills in areas of IT and problem-solving
25 — 49.99%	Average level of complex skills in areas of IT and problem-solving
0 — 24.99%	Low level of complex skills in areas of IT and problem-solving

Table 03 Characteristics of the individual success rates for the IT Master Test

I. EVALUATION OF THE TEST FOR PRIMARY SCHOOLS

Ia. Basic overview

	CZ	HU	PL	SK	UA
Total number of respondents	33,513	3,843	13,900	25,657	120
Respondents who completed the test for primary schools aged 7—16	23,068	2,648	9,550	18,616	75
Average success rate (age 7—16)	55.72%	54.54%	55.21%	55.09%	44.17%
Average success rate (age 7—13)	52.24%	50.87%	52.59%	50.73%	—
Average success rate (age 14—16)	56.96%	55.28%	58.56%	58.01%	—
Test sensitivity	53.34%	56.68%	56.03%	55.93%	52.50%
Average success rate of teachers	69.62%	63.43%	66.43%	68.57%	—
Test reliability (Cronbach's alpha)	0.69	0.72	0.72	0.72	0.66

Table 01 Basic psychometric parameters of the IT Fitness Test 2025 for primary schools

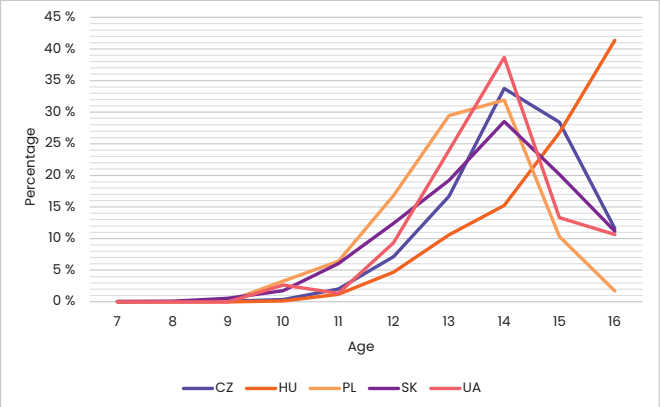
Note: Please note that comparing the average success rate of the test across different years cannot reliably assess the development of IT skills in the population, as both the test and its participants change each year. Comparisons with previous years should therefore be regarded only as indicative. In addition, the structure of the test was modified this year — the category of *Complex Tasks*, which in the past formed part of the test, was expanded into a separate IT Master Test.

Ib. General information about respondents

The test was published on a publicly accessible portal, and anyone who provided the required information could participate. The total number of respondents to the test for primary schools was **76,913**. In the evaluation, we used data from **53,882 tests**, which correspond to the age category of **7—16 years**.

The primary sample did not include: respondents outside the <7—16> age range; respondents who did not complete the test; teachers (who are evaluated separately); respondents who were employees; respondents who registered under the category "Curious (other)".

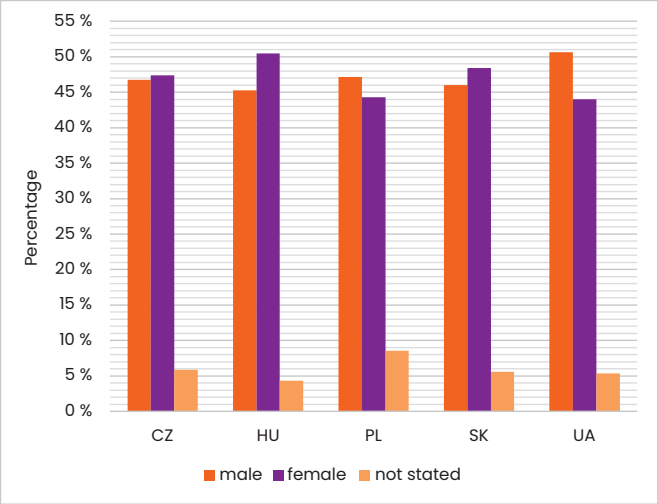
A. Distribution of respondents by age group



Graph 1 Distribution of respondents by age group

In Hungary, the largest age group was 16-year-old pupils. In Poland, the largest groups were 13- and 14-year-old pupils. In the Czech Republic, the most numerous groups were 14- and 15-year-old pupils. In Slovakia, the largest group was 14-year-old pupils. Ukrainian pupils had a low representation in the testing.

B. Gender distribution of respondents



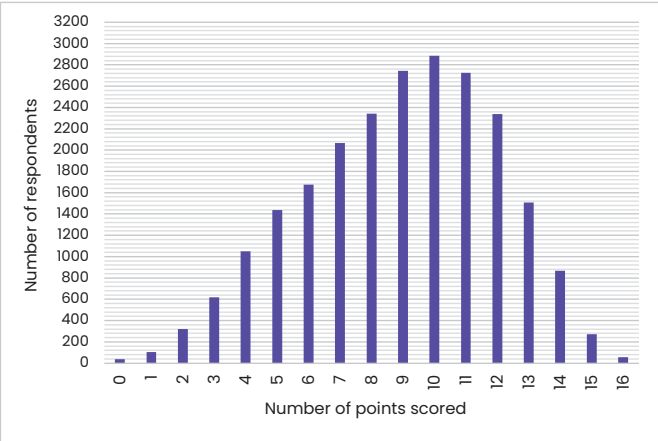
Graph 2 Gender distribution of respondents

Among Polish and Ukrainian pupils, male respondents were in the majority. In the Czech Republic, females slightly outnumbered males. In Hungary and Slovakia, the majority of respondents were female. The overall balance between male and female respondents may be affected by data hidden under the "not stated" category.

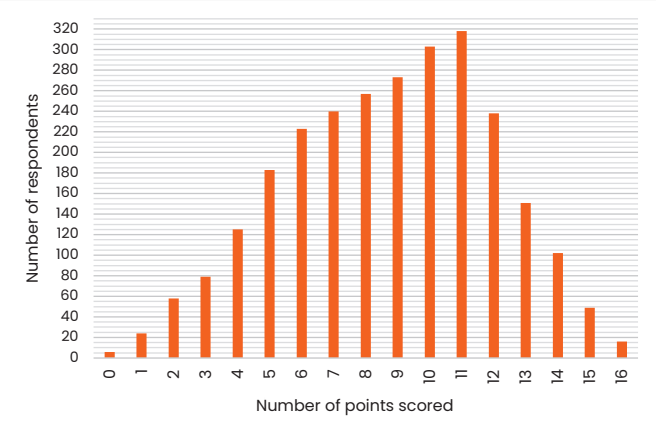
Ic. Evaluation of the testing section of the test for primary schools

A. Raw score

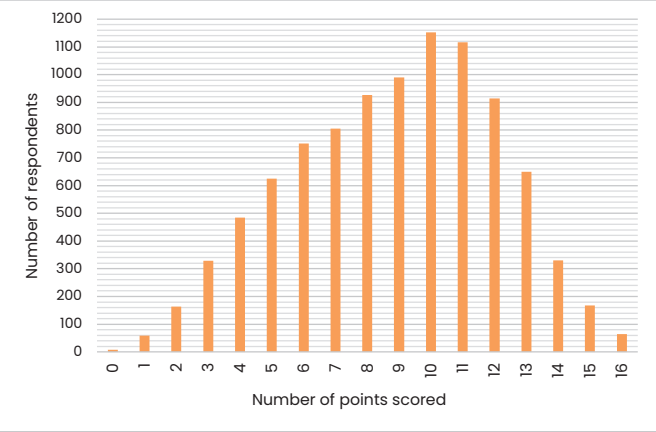
The raw score reflects the test results by the number of respondents and the number of points achieved.



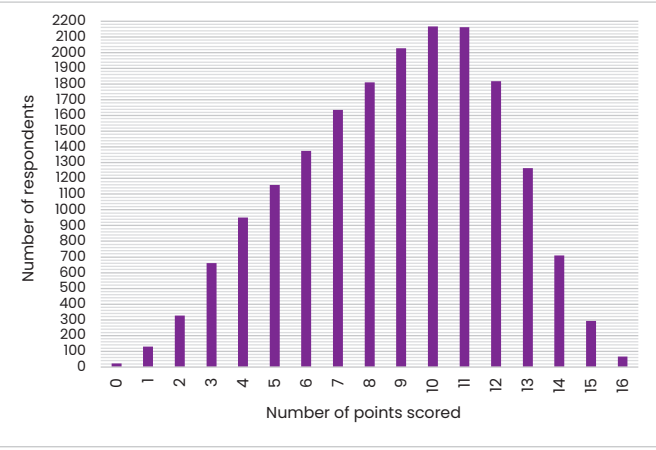
Graph 3 CZ — Raw score distribution



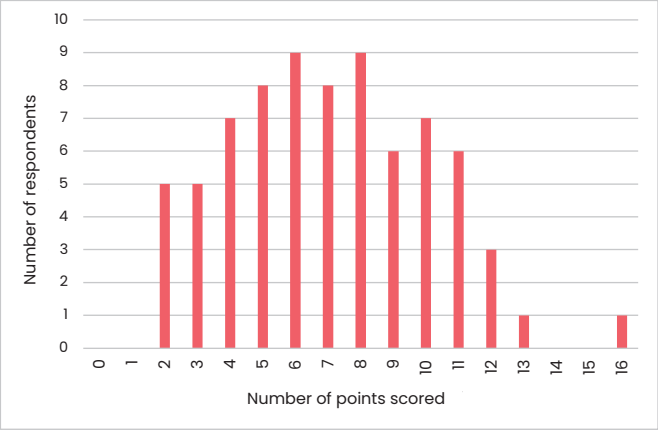
Graph 4 HU — Raw score distribution



Graph 5 PL — Raw score distribution



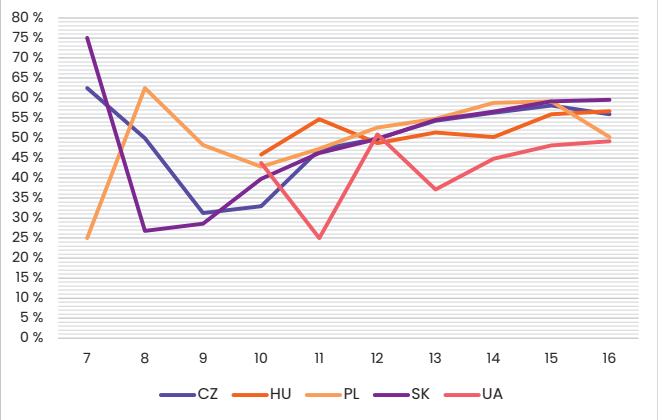
Graph 6 SK — Raw score distribution



Graph 7 UA — Raw score distribution

A comparison of raw score distributions shows similarities across countries. In all countries (except Ukraine), the peak of the distribution curve is at a score of 10 or 11, slightly shifted to the right. The sample of Ukrainian students was too small for statistical evaluation.

B. Success rate of respondents by age group



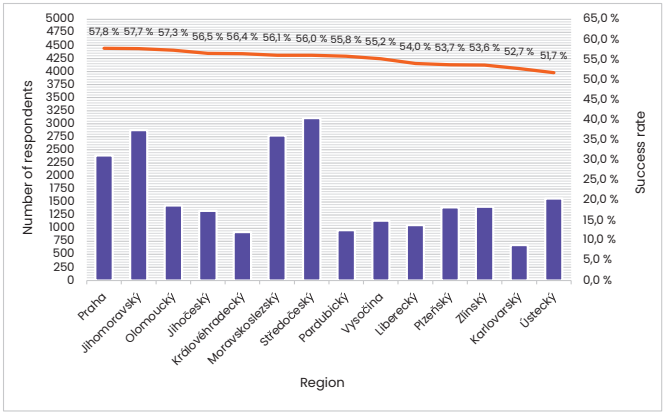
Graph 8 Success rate of respondents by age group

In the graphs, only data from the age of 10 upwards can be considered relevant. At younger ages, the number of respondents is often very low, and the accuracy of self-reported ages cannot be guaranteed. This is particularly significant in small samples, where inaccurate age reporting may considerably distort the results.

The data show that in Poland, the Czech Republic, and Slovakia, the curves follow a similar trend for respondents over the age of 10. This means that test performance tends to rise slightly with age. This trend is disrupted by 16-year-old respondents in Poland, most likely due to the small sample size, which is also visible in the age distribution graph.

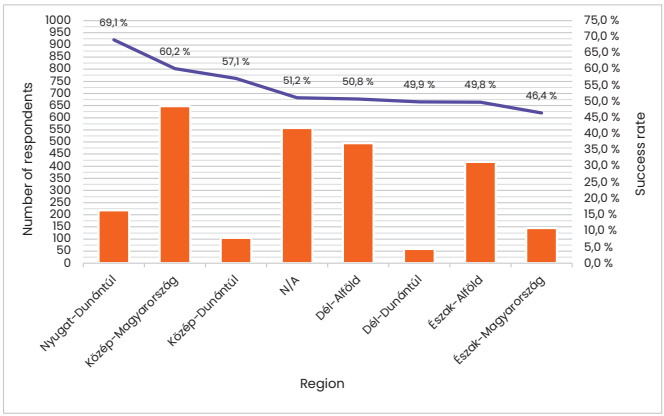
Among Ukrainian pupils, we observe larger fluctuations, again likely caused by the small sample size.

C. Success rate of respondents by region



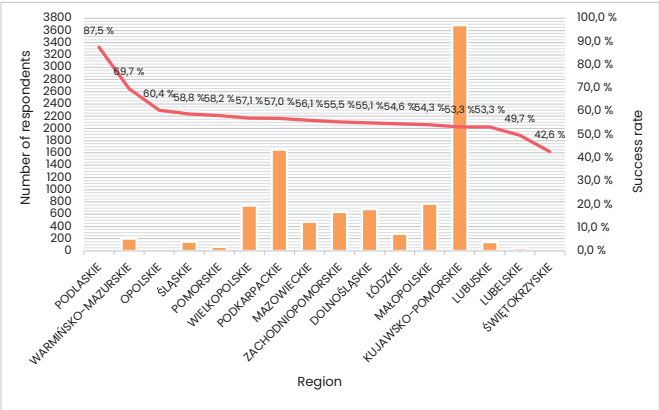
Graph 9 CZ — Success rate of respondents by region

The highest success rate was achieved by pupils from Prague, followed by those from the South Moravian Region. The lowest success rate, as in the previous year, was in the Ústí Region. The difference between the highest- and lowest-performing regions is around 6 percentage points. The graph also shows that regional success rates are not dependent on the number of respondents.

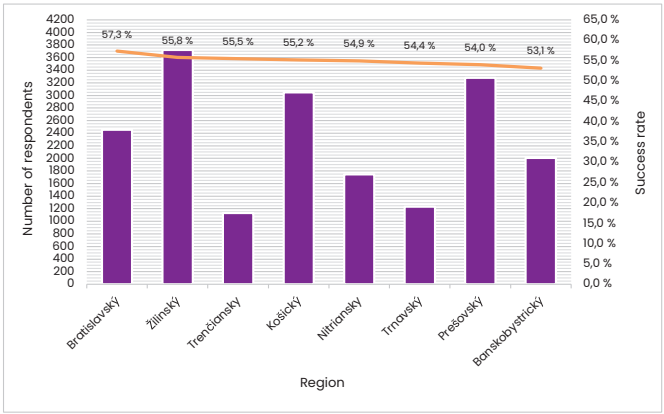


Graph 10 HU — Success rate of respondents by region

In Hungary, the highest success rate (as in the previous year) was recorded in the Nyugat-Dunántúl (Western Transdanubia) region. The lowest was in Észak-Magyarország (Northern Hungary). The gap between the top and bottom regions was substantial, greater than last year, at about 23 percentage points. The data also show that success rates were not tied to the number of respondents, though it should be noted that participation levels in most regions were very low. A large number of respondents did not indicate the region they live in (represented by the N/A column).



Graph 11 PL — Success rate of respondents by region



Graph 12 SK — Success rate of respondents by region

In Poland, participation levels varied significantly between voivodeships. For example, in Podlaskie Voivodeship, there was only one respondent, making it impossible to draw meaningful conclusions or comparisons. The highest participation was in Kuyavian-Pomeranian Voivodeship, which accounted for 38.6% of all respondents. At the other end, the five voivodeships with the lowest participation each represented less than 2% of the total, and therefore their results cannot be considered relevant. Among voivodeships with a sufficient sample size, pupils from Greater Poland (Wielkopolskie) were the most successful. The performance gap between voivodeships with relevant participation levels was about 4 percentage points, which can be regarded as balanced results.

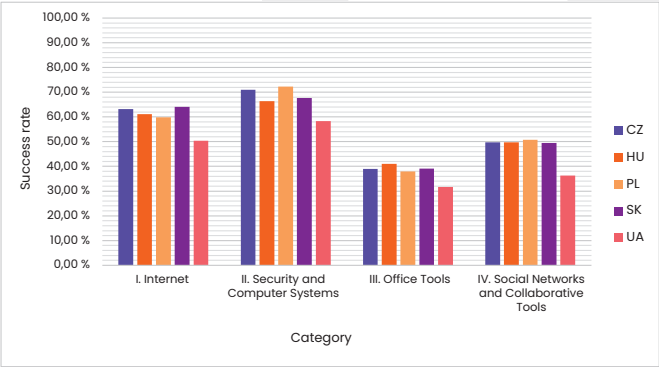
The highest success rate (as in the previous year) was achieved by pupils from the Bratislava Region, followed by those from the Žilina Region. The results across regions were broadly balanced, with differences within an interval of 4 percentage points. The lowest success rate was recorded in the Banská Bystrica Region (again, as in the previous year). The data show that regional success rates were not dependent on the number of respondents. The Žilina Region had the highest participation rate.

D. Success rate across the test categories

The test was divided into four thematic categories. Each category contained four test tasks, for a total of 16 tasks. The following table shows the average success rate in each category:

	Success rate				
Category	**CZ**	**HU**	**PL**	**SK**	**UA**
I. Internet	63.15%	61.14%	59.83%	64.13%	50.33%
II. Security and Computer Systems	70.96%	66.33%	72.30%	67.68%	58.33%
III. Office Tools	39.00%	40.97%	37.94%	39.07%	31.67%
IV. Social Networks and Collaborative Tools	49.75%	49.74%	50.75%	49.46%	36.33%

Table 2 Success rate across the test categories

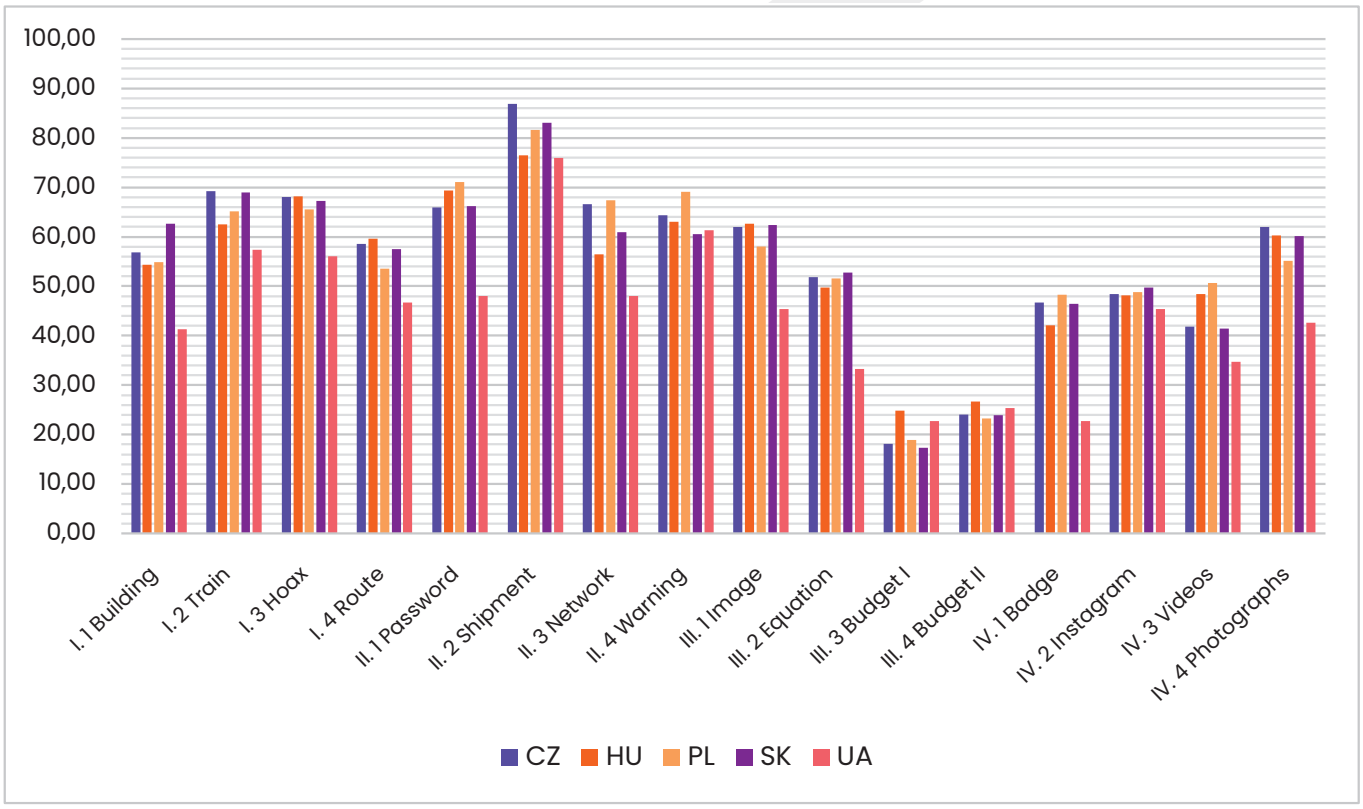


Graph 13 Success rate across the test categories

The results indicate that in every tested category, pupils from Ukraine had the lowest success rate. This may be due to several factors, but it is also essential to take into account the small sample size of Ukrainian respondents. The maximum difference (between the highest and lowest country averages) in success rates across categories —excluding Ukraine — was nearly 6 percentage points. The smallest differences (excluding Ukraine) between countries were in the category *Social Networks and Collaborative Tools*. The most significant differences were observed in *Security and Computer Systems*. The highest success rates overall were achieved in *Security and Computer Systems*, while the lowest were in *Office Tools*, which continues a long-term trend. Lower success rates were also recorded in *Social Networks and Collaborative Tools.*

E. Success rate across the test tasks

The following graph shows the success rates of pupils aged 7—16 in the test for primary schools.



Graph 14 Success rate across the test tasks (in %)

In the following table, we present the combined average success rate of all four task variants in the test:

	Success rate				
Task	**CZ**	**HU**	**PL**	**SK**	**UA**
I. 1 Building	56.80%	54.32%	54.91%	62.70%	41.33%
I. 2 Train	69.18%	62.50%	65.20%	69.01%	57.33%
I. 3 Hoax	68.03%	68.12%	65.57%	67.32%	56.00%
I. 4 Route	58.55%	59.58%	53.59%	57.45%	46.67%
II. 1 Password	65.93%	69.40%	71.05%	66.17%	48.00%
II. 2 Shipment	86.93%	76.47%	81.62%	83.13%	76.00%
II. 3 Network	66.57%	56.52%	67.38%	60.89%	48.00%
II. 4 Warning	64.42%	63.02%	69.06%	60.50%	61.33%
III. 1 Image	61.93%	62.67%	58.09%	62.32%	45.33%
III. 2 Equation	51.84%	49.77%	51.56%	52.77%	33.33%
III. 3 Budget I	18.17%	24.86%	18.86%	17.30%	22.67%
III. 4 Budget II	24.06%	26.68%	23.20%	23.90%	25.33%
IV. 1 Badge	46.68%	42.15%	48.28%	46.48%	22.67%
IV. 2 Instagram	48.46%	48.11%	48.76%	49.76%	45.33%
IV. 3 Videos	41.80%	48.40%	50.68%	41.42%	34.67%
IV. 4 Photographs	62.03%	60.26%	55.15%	60.10%	42.67%

Table 3 Success rate across the test tasks

The lowest success rates were in the tasks *Budget I* and *Budget II* (both from the *Office Tools* category). The task with the highest success rate was *Shipment* from the *Security and Computer Systems* category. Pupils from Ukraine had lower success rates overall and, task by task, underperformed in 12 tasks compared with the V4 countries. The most significant differences among V4 countries were in the tasks *Shipment* and *Network*. The smallest difference was in the task *Instagram*.

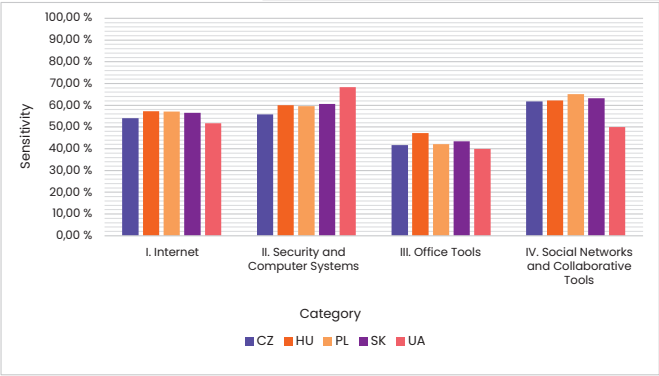
F. Sensitivity across the test categories

The sensitivity of a task refers to its ability to distinguish between stronger and weaker pupils. It is defined as the difference in the average success rate between the top 20% and the bottom 20% of respondents.

Any task with a sensitivity above 30 percentage points is considered to have good sensitivity, meaning it reliably differentiates the tested group.

	Sensitivity				
Category	**CZ**	**HU**	**PL**	**SK**	**UA**
I. Internet	54.12%	57.30%	57.13%	56.47%	51.67%
II. Security and Computer Systems	55.78%	60.01%	59.65%	60.64%	68.33%
III. Office Tools	41.66%	47.26%	42.17%	43.41%	40.00%
IV. Social Networks and Collaborative Tools	61.79%	62.15%	65.18%	63.19%	50.00%

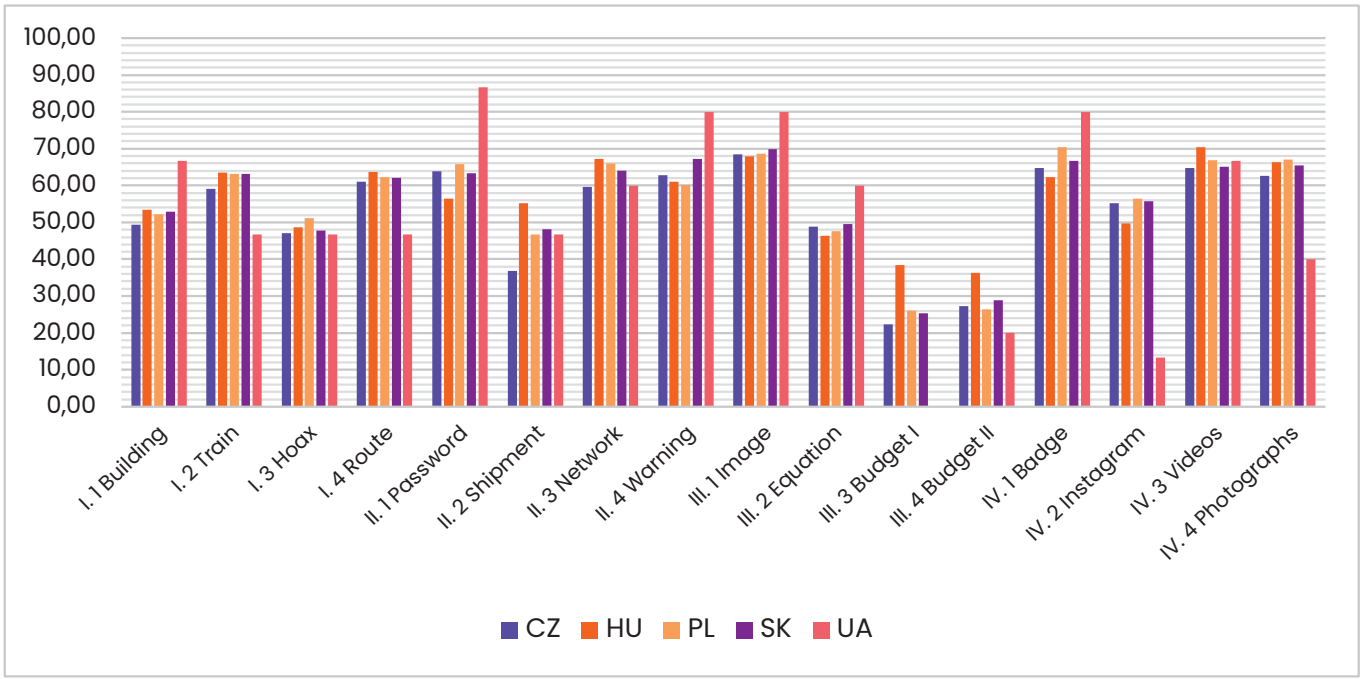
Table 4 Sensitivity across the test categories



Graph 15 Sensitivity across the test categories

Each category as a whole demonstrated good discriminatory power. The *Internet* category had roughly the same level of sensitivity across countries. The *Office Tools* category had the lowest sensitivity everywhere, likely due to the lower success rates in this area. In the V4 countries, the highest sensitivity was found in the *Social Networks and Collaborative Tools* category, while among Ukrainian pupils, the highest sensitivity was in the *Security and Computer Systems* category.

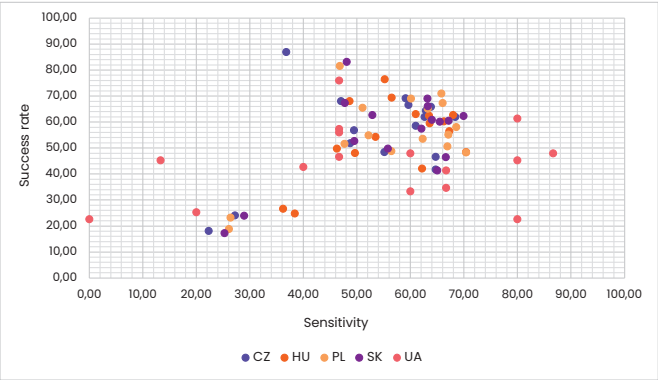
G. Sensitivity across the test tasks



Graph 16 Sensitivity across the test tasks (in %)

At the level of individual tasks, differences in sensitivity were more pronounced (compared with the broader categories). The lowest sensitivity was observed in *Budget I* or *Budget II* (this varied by country). The highest sensitivity differed across countries: in the Czech Republic and Slovakia, it was the *Image* task; in Hungary, the *Videos* task; in Poland, the *Badge* task; and among Ukrainian pupils, the *Password* task.

Generally, tasks with lower success rates in a given country also showed lower sensitivity.



Graph 17 Success rate and sensitivity of the test tasks (in %)

In the Czech Republic, Poland, Slovakia, and Ukraine, *Budget I* and *Budget II* had low sensitivity, reflecting weak performance in these tasks. Among Ukrainian pupils, the *Instagram* task also showed low sensitivity, although it had high sensitivity in the other countries. It should be noted, however, that the Ukrainian sample was small. All other tasks had good sensitivity and therefore provided a reliable differentiation among the tested pupils.

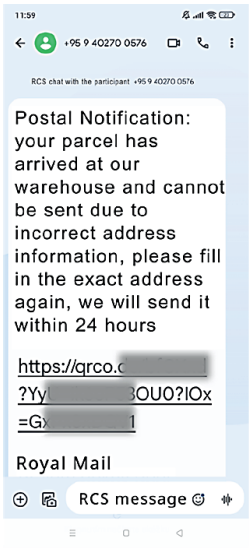
H. Examples of selected tasks in the test for primary schools

Task with the highest success rate — II. Security and Computer Systems — Shipment

Success rate:
CZ: 86.93%; HU: 76.47%; PL: 81.62%; SK: 83.13%; UA: 76.00%

Sensitivity:
CZ: 36.82%; HU: 55.22%; PL: 46.76%; SK: 48.08%; UA: 46.67%

Task assignment:
Marek received a message on his mobile phone, which can be seen in the image.



From the following statements, select the one that is true:

a) *Marek received a normal message asking him to clarify some details, and he should click on the link and provide the required information.*
b) *A message from a foreign phone number can be trustworthy if the package is for Royal Mail and was sent from abroad.*
c) *Marek should ignore the message, as it's clear from the phone number that the message isn't from Royal Mail.*
d) *Marek can safely click on the link in the message as long as he doesn't provide any information — just clicking the link is certainly safe.*

Task with the highest sensitivity — III. Office Tools — Image

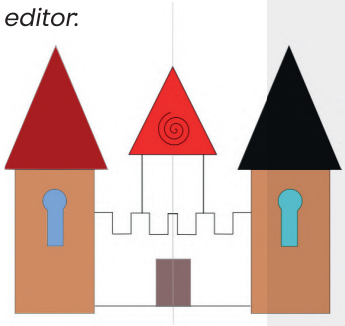
Success rate:
CZ: 61.93%; HU: 62.67%; PL: 58.09%; SK: 62.32%; UA: 45.33%

Sensitivity:
CZ: 68.93%; HU: 67.95%; PL: 68.56%; SK: 69.92%; UA: 80.00%

The task with the highest sensitivity varied across countries. In this sample, we present the task *Image*, which reached the highest sensitivity in two countries, the Czech Republic and Slovakia.

Task assignment:

We want to draw the following castle in a graphic editor.



Select the correct sequence of operations that represents the process of drawing the castle.

1. *Draw the outlines of the left half of the castle.*
2. *Select the left half of the castle.*
3. *Place the flipped section close to the left side of the image.*
4. *Flip the copied part horizontally*  .
5. *Make a copy of the selected section.*
6. *Colour the castle and draw a spiral to the middle roof.*

a) 1. 2. 3. 5. 4. 6.
b) 1. 4. 5. 3. 2. 6.
c) 1. 5. 3. 4. 2. 6.
d) 1. 2. 5. 4. 3. 6.

Id. School performance in the test for primary schools in Poland

The test was designed for pupils in their final years of primary school or recent graduates. It contained tasks that students at this level of education (optimally those aged 14—16) should be able to solve.

In the following evaluation, we present results for the primary target group (students aged 14—16). Pupils in this age group may attend primary schools, eight-year grammar schools, or even the first year of secondary school. Clearly, if a student is already in the first year of secondary school, their result cannot be interpreted as a direct reflection of their performance in that secondary school. However, in cases where first-year secondary school students achieved strong results, it may be acknowledged that the school selected good primary school graduates and motivated them to take part in the test.

A total of 262 schools with pupils aged 14—16 years took part in the primary school test in Poland. Of these, 114 schools had at least 10 respondents in this age group. From these schools, the following table presents the ranking of the most successful schools, including the school percentage (above 70%), the school's average success rate, the average age of tested pupils, and the number of pupils who completed the test.

Rank	Schools	Percentile	Average success rate	Average age	Number of students
1.	SZKOŁA PODSTAWOWA NR 4 Z ODDZIAŁAMI INTEGRACYJNYMI IM. JANUSZA KORCZAKA, ul. Stanisława Staszica 25, Sochaczew	100.00%	83.75%	14.4	15
2.	SZKOŁA PODSTAWOWA NR 10 IM. STEFANA ŻEROMSKIEGO W KOSZALINIE, ul. Fryderyka Chopina 42, Koszalin	99.10%	77.08%	14.2	15
3.	SZKOŁA PODSTAWOWA NR 14 IM. GEN. WŁADYSŁAWA SIKORSKIEGO W BYDGOSZCZY, ul. Żmudzka 12, Bydgoszcz	98.20%	76.39%	14.2	18
4.	SPOŁECZNA SZKOŁA PODSTAWOWA NR 1 IM. ŚW. URSZULI LEDÓCHOWSKIEJ, ul. Grunwaldzka 154, Poznań-Grunwald	97.30%	76.17%	14.3	16
5.	POZNAŃSKA OGÓLNOKSZTAŁCĄCA SZKOŁA MUZYCZNA I STOPNIA NR 1 IM. HENRYKA WIENIAWSKIEGO, Solna 12, Poznań	96.40%	73.58%	14.3	22

Rank	Schools	Percentile	Average success rate	Average age	Number of students
6.	ZESPÓŁ SZKOLNO-PRZEDSZKOLNY NR 12 W RZESZOWIE, ul. Pogwizdowska 139, Rzeszów	95.50%	73.30%	14.1	11
7.	SZKOŁA PODSTAWOWA NR 26, ul. Jarosława Dąbrowskiego 66a, Rzeszów	94.60%	73.01%	14.4	22
8.	DWUJĘZYCZNA SZKOŁA PODSTAWOWA „PRIMARY STEPS”, ul. Lotnicza 15, Bielsko-Biała	93.70%	72.32%	14.1	14
9.	SZKOŁA PODSTAWOWA NR 133 IM. ORŁA BIAŁEGO W KRAKOWIE, ul. Mieczysława Wrony 115, Kraków-Podgórze	92.80%	71.69%	14.1	17
10.	ZESPÓŁ SZKÓŁ MUZYCZNYCH IM. CZESŁAWA NIEMENA, ul. Wiejska 29, Włocławek	91.90%	71.48%	14.3	16
11.	SZKOŁA PODSTAWOWA NR 23 IM. EDWARDA SZYMAŃSKIEGO, ul. Mikołaja Reja 1, Warszawa	91.00%	71.25%	14.0	10
12.	SZKOŁA PODSTAWOWA NR 28 IM. PŁK. ŁUKASZA CIEPLIŃSKIEGO, ul. Ignacego Solarza 12, Rzeszów	90.10%	69.57%	14.2	69
13.	SZKOŁA PODSTAWOWA NR 9, ul. Miła 58, Rzeszów	89.20%	69.49%	14.1	17
14.	NIEPUBLICZNA SZKOŁA PODSTAWOWA Z ODDZIAŁAMI DWUJĘZYCZNYMI OPEN FUTURE INTERNATIONAL SCHOOL, ul. Kwiecista 25, Kraków-Podgórze	88.30%	69.23%	14.5	13
15.	SZKOŁA PODSTAWOWA NR 34 IM. WOJSKA POLSKIEGO, os. Bolesława Śmiałego 107, Poznań-Stare Miasto	87.50%	68.75%	14.1	24
16.	SZKOŁA PODSTAWOWA NR 7 IM. ERAZMA Z ROTTERDAMU, ul. Galileusza 14, Poznań-Grunwald	86.60%	68.11%	14.2	39
17.	SZKOŁA PODSTAWOWA NR 1 IM. ADAMA MICKIEWICZA W RZESZOWIE, ul. Bernardyńska 4, Rzeszów	85.70%	67.90%	14.1	22
18.	SZKOŁA PODSTAWOWA NR 18 W RZESZOWIE, ul. bł. Karoliny 21, Rzeszów	84.80%	67.89%	14.3	51
19.	SZKOŁA PODSTAWOWA NR 37 IM. KPT. Ż. W. ANTONIEGO LEDÓCHOWSKIEGO, ul. Lucjana Rydla 6, Szczecin	83.90%	67.58%	14.4	48
20.	SZKOŁA PODSTAWOWA NR 56, ul. Tarnowska 27, Poznań-Nowe Miasto	83.00%	67.34%	14.2	31

Rank	Schools	Percentile	Average success rate	Average age	Number of students
21.	SZKOŁA PODSTAWOWA NR 41 IM. ROMUALDA TRAUGUTTA Z ODDZIAŁAMI SPORTOWYMI W BYDGOSZCZY, ul. Romualda Traugutta 12, Bydgoszcz	82.10%	67.31%	14.1	13
22.	SZKOŁA PODSTAWOWA NR 190 IM. JAROSŁAWA IWASZKIEWICZA, ul. Jacka Malczewskiego 37/47, Łódź-Górna	81.20%	67.28%	14.6	17
23.	SZKOŁA PODSTAWOWA NR 5 Z ODDZIAŁAMI INTEGRACYJNYMI IM. I PUŁKU LOTNICTWA MYŚLIWSKIEGO „WARSZAWA" W JAROCINIE, ul. Ludwika Waryńskiego 11, Jarocin	80.30%	67.01%	14.3	36
24.	SZKOŁA PODSTAWOWA NR 4 IM. ARMII POZNAŃ W POZNANIU, ul. Rawicka 12, Poznań-Grunwald	79.40%	66.78%	14.3	19
25.	ZESPÓŁ EDUKACYJNY NR 9 W ZIELONEJ GÓRZE, ul. Spawaczy 3d, Zielona Góra	78.50%	66.67%	14.5	21
26.	SZKOŁA PODSTAWOWA NR 9, ul. Marynarska 31, Legnica	77.60%	65.52%	14.2	132
27.	SZKOŁA PODSTAWOWA NR 16 IM. KORNELA MAKUSZYŃSKIEGO, ul. Tatrzańska 9, Legnica	76.70%	65.28%	14.3	81
28.	SZKOŁA PODSTAWOWA NR 12 IM. FRANCISZKA ŻWIRKI I STANISŁAWA WIGURY Z ODDZIAŁAMI INTEGRACYJNYMI W BYDGOSZCZY, ul. Kcyńska 49, Bydgoszcz	75.80%	65.06%	14.4	22
29.	ZESPÓŁ SZKÓŁ W ZACZERNIU IM. ARMII KRAJOWEJ, 249a, Zaczernie	75.00%	64.38%	14.5	40
30.	SZKOŁA PODSTAWOWA NR 4 IM. BOHATERÓW I ARMII WOJSKA POLSKIEGO, ul. Kupiecka 1, Kołobrzeg	74.10%	64.14%	14.2	19
31.	SZKOŁA PODSTAWOWA NR 4 Z ODDZIAŁAMI INTEGRACYJNYMI IM. KPT. Ż. W. MAMERTA STANKIEWICZA W ŚWINOUJŚCIU, ul. Szkolna 1, Świnoujście	73.20%	64.09%	14.3	67
32.	ZESPÓŁ SZKÓŁ W PODLESZANACH, 127, Podleszany	72.30%	64.06%	14.3	12
33.	ZESPÓŁ SZKOLNO — PRZEDSZKOLNY NR 1, ul. Gałczyńskiego 9, Włocławek	71.40%	63.58%	14.3	52
34	SZKOŁA PODSTAWOWA NR 8 IM. 4. KUJAWSKIEGO PUŁKU ARTYLERII LEKKIEJ, ul. Władysława Łokietka 3, Inowrocław	70.50%	63.27%	14.3	57

Table 5 Most successful schools in the test for primary schools (pupils aged 14—16 years)

Ie. Interpretation of results and recommendations for the test for primary schools

The test authors aim to design a test each year that can reliably distinguish respondents with strong knowledge and skills from those with weaker ones. A test that effectively differentiates respondents should ideally have a success rate of around 50—60%. Since the test tasks are not piloted in advance, estimating their parameters is particularly challenging.

The success rate of the test for the primary age group (14—16 years) was 56.96% in the Czech Republic, 55.28% in Hungary, 58.56% in Poland, and 58.01% in Slovakia, all of which fall within the desired range. In this year's testing cycle, the overall structure of the test underwent significant revision: the former category, *Complex Tasks*, was developed into a separate IT Master Test. For this reason, it is not advisable to compare the overall test results directly with those of previous years. Ukrainian students achieved a success rate of 44.17% in the 7—16 age range, although the number of test participants was low. Nevertheless, some comparisons can still be made based on specific tasks or observed trends in the individual test categories.

In terms of technical comparisons, the results in the Czech Republic, Hungary, and Poland were slightly better, while those in Slovakia were slightly worse. However, as noted above, these comparisons cannot provide definitive conclusions given the changes in test structure.

The test was highly effective in differentiating respondents' results. The overall sensitivity (discriminatory power of the test) ranged from 52.50% to 56.68% across participating countries, which is considered excellent sensitivity, despite a slight decrease compared to previous years. The structural change was likely responsible for this decline, as the *Complex Tasks* category has traditionally shown high sensitivity to changes. A well-balanced selection of tasks with appropriate difficulty levels also improved sensitivity. Results indicate that the test included only one easy task (in the Czech Republic, Poland, and Slovakia) and one difficult task (again in the Czech Republic, Poland, and Slovakia). In contrast, all other tasks were within the recommended difficulty range-an impressive outcome considering the absence of pre-testing.

In past years, the *Internet* category tended to yield the best results, but this year the top-performing category was *Security and Computer Systems*. The *Internet* category ranked second.

Within the ***Internet*** category, Slovak students achieved the highest results, with Czech students performing very similarly, while Polish students scored two percentage points lower. Overall, there were no significant differences among the countries in this category. Ukrainian students, however, achieved a lower result of 50.33%.

Students in the Czech Republic, Slovakia, and Ukraine performed best in the *Internet* task, where they had to identify a property of a train connection. Hungarian and Polish students achieved their best results in the task requiring them to locate a video and determine its specific content.

Conversely, the weakest results in the *Internet* category were observed among students in the Czech Republic, Hungary, and Ukraine in a task that required them to find specific information on Wikipedia, locate it within a structured format (a table), and compare it with other data.

Students from Poland and Slovakia performed the worst in the task requiring them to find the shortest route on a map of a given location and identify a point along the way.

Overall, students demonstrated solid information retrieval skills. They are more successful at locating simple information than structured information, which requires comparison and evaluation.

The ***Security and Computer Systems*** category was the best-performing category across all countries. Students achieved average results ranging from approximately 58% to 72%.

Polish students achieved the highest results, while Ukrainian students performed the weakest.

The top-performing task in this category across all countries was *Shipment*, where students had to identify phishing from a visual cue and decide on an appropriate response. The weakest (though not poor) results within this category came from the tasks *Network* (Hungary, Poland, Ukraine) or *Warning* (the Czech Republic, Slovakia). In the *Network* task, students were required to assess the risks associated with connecting to an unknown Wi-Fi network. In the *Warning* task, they had to identify and evaluate the causes of a security alert displayed to a user, with access to an explanatory information source.

The most consistent cross-country results came from the *Password* task, where students had to evaluate the consequences of a leaked password based on a described scenario. Students performed strongly in this task, despite it being phrased as a negatively formulated question.

Students generally understand the consequences of password disclosure and the necessary follow-up actions, and they can recognise phishing and determine an appropriate response. Compared to previous years, these abilities have shown slight improvement.

However, students still face difficulties in less common situations, particularly when they need to verify a source, interpret supplementary texts or infographics, or incorporate new information into their reasoning. In the past, students demonstrated a strong theoretical knowledge but struggled to apply it to practical scenarios. This year's results indicate improvement in responding to real-world situations, although their ability to apply new knowledge using the provided sources remains weaker.

The ***Office Tools*** category has long been among the weakest areas, and this year was no exception.

In the *Equation* task, where students had to select appropriate tools for writing a chemical equation in a text editor, the results were lower than expected. This suggests that students are not entirely familiar with the basic, standard tools of text editors and do not fully understand the implications of tool selection for optimal formatting and structure preservation. This may reflect a tendency in teaching to focus more on achieving the result than on the appropriateness and efficiency of the method used. Notably, this task showed the smallest differences in success rate across the V4 countries.

The best results in this category were achieved by all countries in the *Image* task, where students had to identify the correct sequence of steps to create an image with defined properties.

The weakest results were observed in *Budget I.* Here, students had to work with a source table, understand its structure, and interpret the behaviour of different types of data within it. The findings suggest that students tend to focus more on achieving the final result than on understanding the relationships and reasoning behind the data. This may indicate a need to change teaching approaches, showing that despite the availability of artificial intelligence, a solid foundation of basic knowledge and relationships remains essential for solving problems effectively.

Students also performed poorly in *Budget II*, where they were asked what happens when a formula calculating a sum is copied into another cell. Although they had access to the source file containing the table, the results confirmed once again that students often lack understanding of principles and relationships, focusing only on obtaining the result without considering the appropriateness or efficiency of the method.

Results in the *Office Tools* category were highly consistent across the V4 countries, with only minimal differences in success rates (excluding Ukrainian students, who had greater variation but also represented a much smaller sample).

In the ***Social Networks and Collaborative Tools*** category, all countries recorded the second-lowest success rates compared with other categories. Within-country comparisons show that Ukrainian students performed weakest in this category, while students from the Czech Republic, Poland, and Slovakia achieved almost identical results.

The best results in this category for the Czech Republic, Hungary, Poland, and Slovakia were achieved in the *Photographs* task, where students had to navigate a shared folder with a complex structure to locate the

correct photo. This tested their ability to use collaboration tools. Ukrainian students performed significantly worse in this task compared to the other countries.

The weakest results in this category were recorded in *Badge* (Hungary, Poland, Ukraine), where students had to understand the use and assignment rules of a badge on a social network. Students could use different sources and, if unfamiliar with the feature, look up the information. The task assessed whether students could handle an unfamiliar situation and search for or deduce the necessary information. The results here were weaker than expected.

In the Czech Republic and Slovakia, the weakest results in this category were in the *Videos* task. Students had to find a specified YouTube channel, navigate its structure, and use standard tools to filter/sort playlists to select a video that matched the given criteria. Again, this required working with a structure and applying specific tools. In previous years, students performed slightly better in similar tasks. In this case, there were also more noticeable cross-country differences, with Polish students achieving the best results.

II. EVALUATION OF THE TEST FOR HIGH SCHOOLS AND UNIVERSITIES AMONG RESPONDENTS AGED OVER 15 YEARS

IIa. Basic overview

	CZ	HU	PL	SK	UA
Total number of respondents	29,557	1,450	13,703	40,977	92
Average success rate (all respondents)	55.85%	50.19%	54.53%	59.66%	43.75% *
Average success rate of students	54.95%	49.34%	54.13%	58.69%	43.58% *
Average success rate of teachers	68.50%	68.14% *	63.30%	67.98%	—
Test sensitivity	54.69%	52.51%	54.50%	56.81%	50.42% *
Test reliability (Cronbach's alpha)	0.697	0.648	0.702	0.73	0.673 *

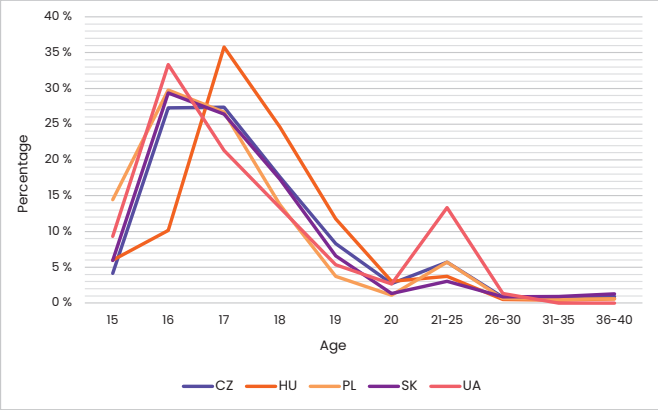
Table 6 Basic psychometric parameters of the IT Fitness Test for high schools and universities
* the figure is calculated from a small sample of respondents

IIb. General information about respondents

Since the test was published on a publicly accessible portal, anyone who filled in the required details could participate. The total number of test respondents was **85,687**. The evaluation excludes respondents younger than 15 years of age and also does not include respondents whose test expired (they started it but did not submit it within the set time). In the following sections, we present an evaluation based on data from **76,752 respondents**, assessed according to various criteria.

A. Distribution of respondents by age group

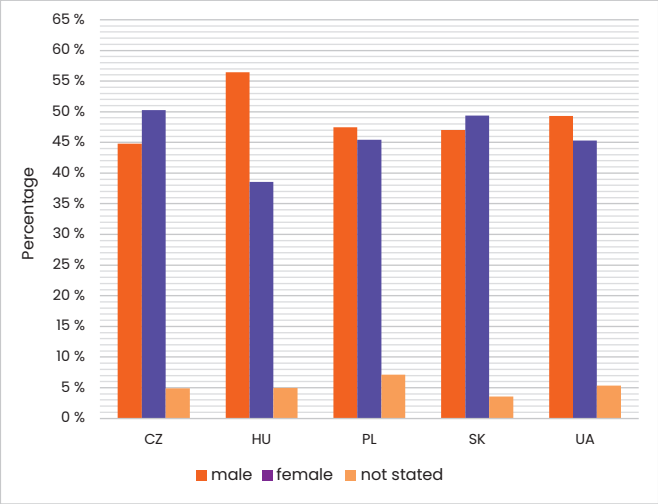
Although the test was primarily intended for secondary school and university students, respondents from younger and older age groups were also included. Their representation is shown in the following graph.



Graph 18 Distribution of respondents by age group

As the graph shows, the strongest age category consisted of respondents aged 15 — 18, corresponding to secondary school students. In Hungary, 17-year-old students had the largest representation, and participation declined with age. In Poland, Slovakia, and Ukraine, 16-year-old students had the highest representation. In the Czech Republic, 16- and 17-year-old students had roughly the same representation and formed the core age group.

B. Gender distribution of respondents



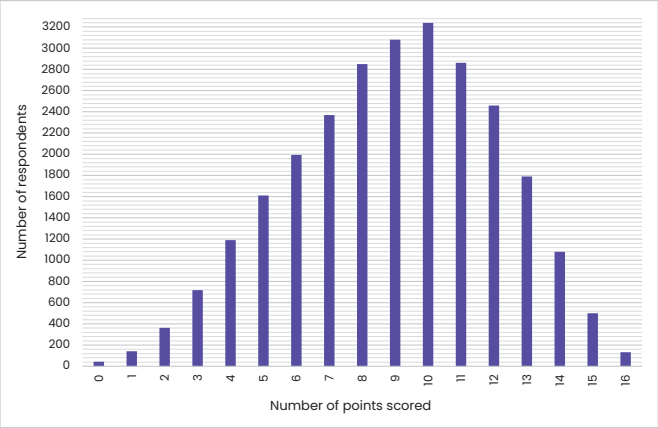
Graph 19 Gender distribution of respondents

In Hungary, the share of men is markedly higher, by almost 18 percentage points. In Poland and among students from Ukraine, men are slightly predominant. In the Czech Republic and Slovakia, women are somewhat predominant.

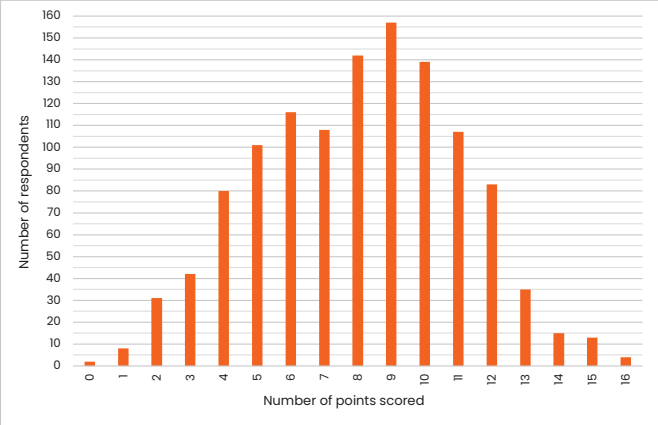
IIc. Evaluation of the testing section of the test for high schools and universities among respondents aged over 15 years

A. Raw score

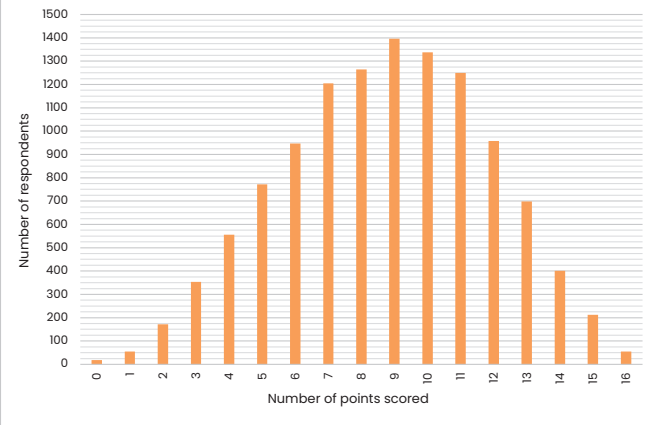
The raw score indicates the number of respondents who achieved each overall point total.



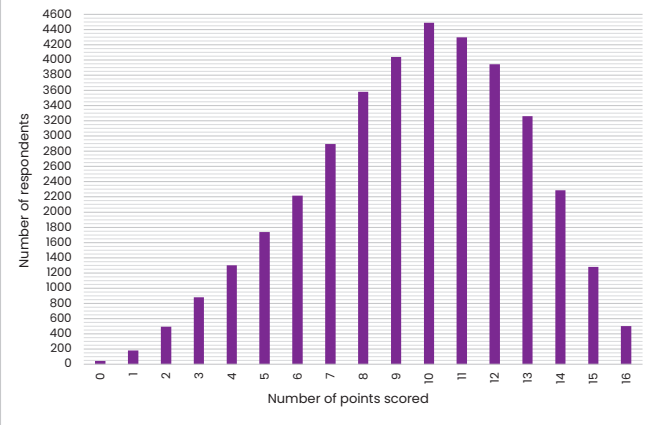
Graph 20 CZ — Raw score distribution



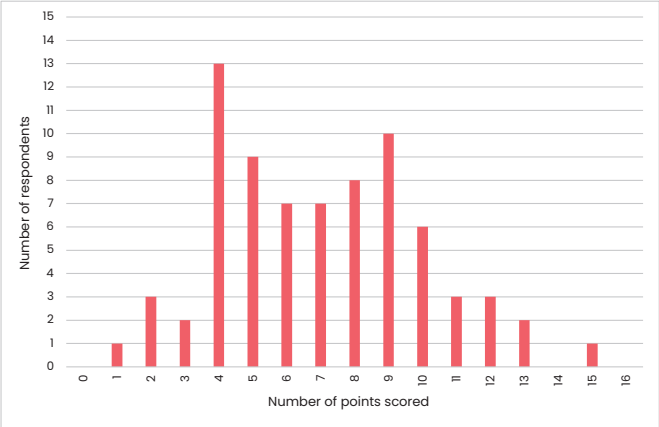
Graph 21 HU — Raw score distribution



Graph 22 PL — Raw score distribution



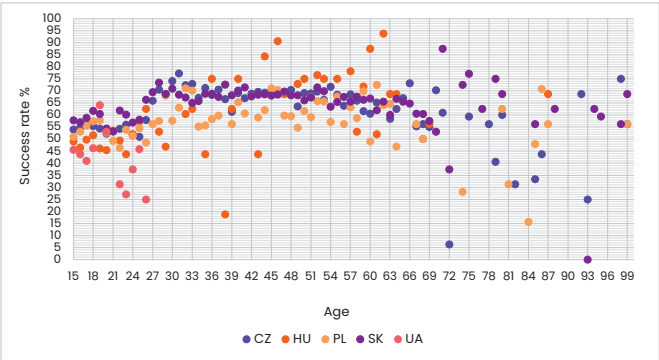
Graph 23 SK — Raw score distribution



Graph 24 UA — Raw score distribution

Comparing the distribution of raw scores reveals differences among countries. In Slovakia and the Czech Republic, the peak of the distribution is at 10 points. In Poland and Hungary, it is at 9 points. The number of Ukrainian respondents is small. Compared to last year, the distribution is shifted further to the right, and test success rates were higher; however, it should be noted that the test structure also changed.

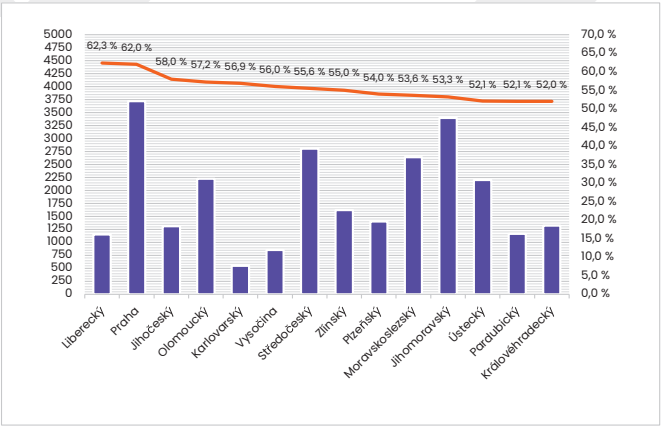
B. Success rate of respondents by age group



Graph 25 Success rate of respondents by age group

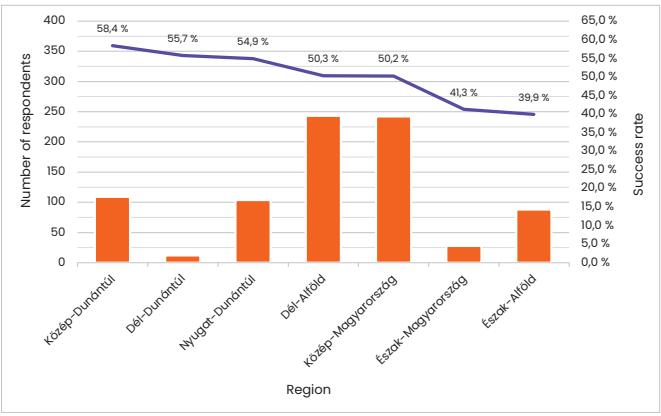
The number of respondents over the age of 20 is small in the respective age categories, so no relevant conclusions can be drawn from the data. Most respondents are under the age of 20.

C. Success rate of respondents by region



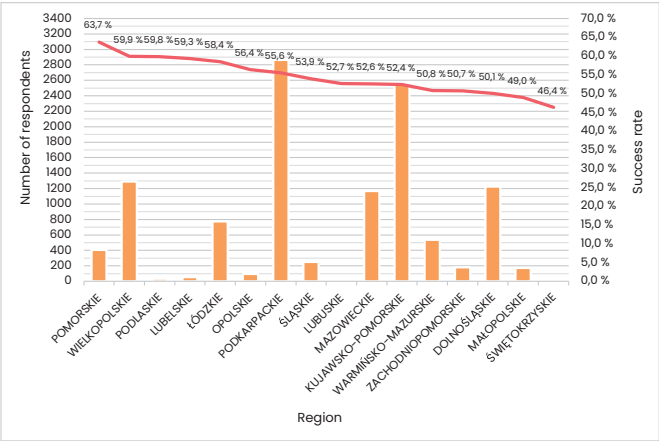
Graph 26 CZ — Success rate of respondents by region

The highest success rate was achieved by respondents in the Liberec Region, at 62.3%, and the lowest in the Hradec Králové Region, at 52.0%. The differences in success rate are significant, reaching approximately 10 percentage points. Respondents from Prague had the highest participation in testing. The Karlovy Vary Region had the lowest participation. The chart indicates that a region's success rate is not directly related to the number of respondents.



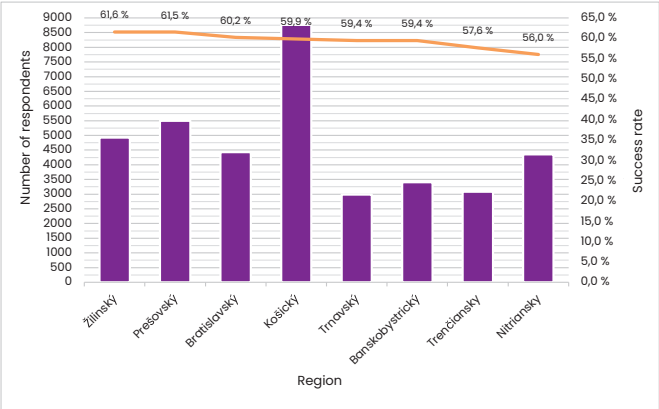
Graph 27 HU — Success rate of respondents by region

The highest success rate was achieved by respondents in the Közép-Dunántúl region, at 58.4%. In the Észak-Alföld region, the success rate was the lowest, at 39.9%. It is worth noting that the sample of respondents tested in the regions was very small. The differences in success rate are significant, reaching approximately 18 percentage points. The highest participation in testing came from the Dél-Alföld and Közép-Magyarország regions.



Graph 28 PL — Success rate of respondents by region

In Poland, there are insufficient respondents in at least half of the voivodeships to allow for relevant comparisons. The highest participation in testing was observed in the Podkarpackie and Kujawsko-Pomorskie voivodeships.

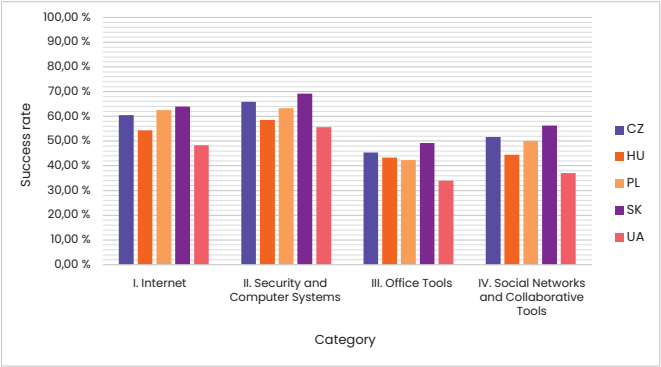


Graph 29 SK — Success rate of respondents by region

In Slovakia, respondents from the Košice Region again had the highest participation in testing, as last year. The Trnava Region had the lowest participation. The highest success rate was achieved in the Žilina Region, at 61.6%, and the lowest in the Nitra Region, at 56.0%. Compared to other countries, Slovakia and the Czech Republic exhibit the smallest regional differences in success rates, approximately 5.6 percentage points.

D. Success rate across the test categories

The test was divided into four thematic categories. Each category contained four test tasks. The next table shows the average success rate in the individual categories (Table 7).



Graph 30 Success rate across the test categories

The highest success rates are in the *Security and Computer Systems* category (in all countries). All countries achieved the lowest success rate in the *Office Tools category*.

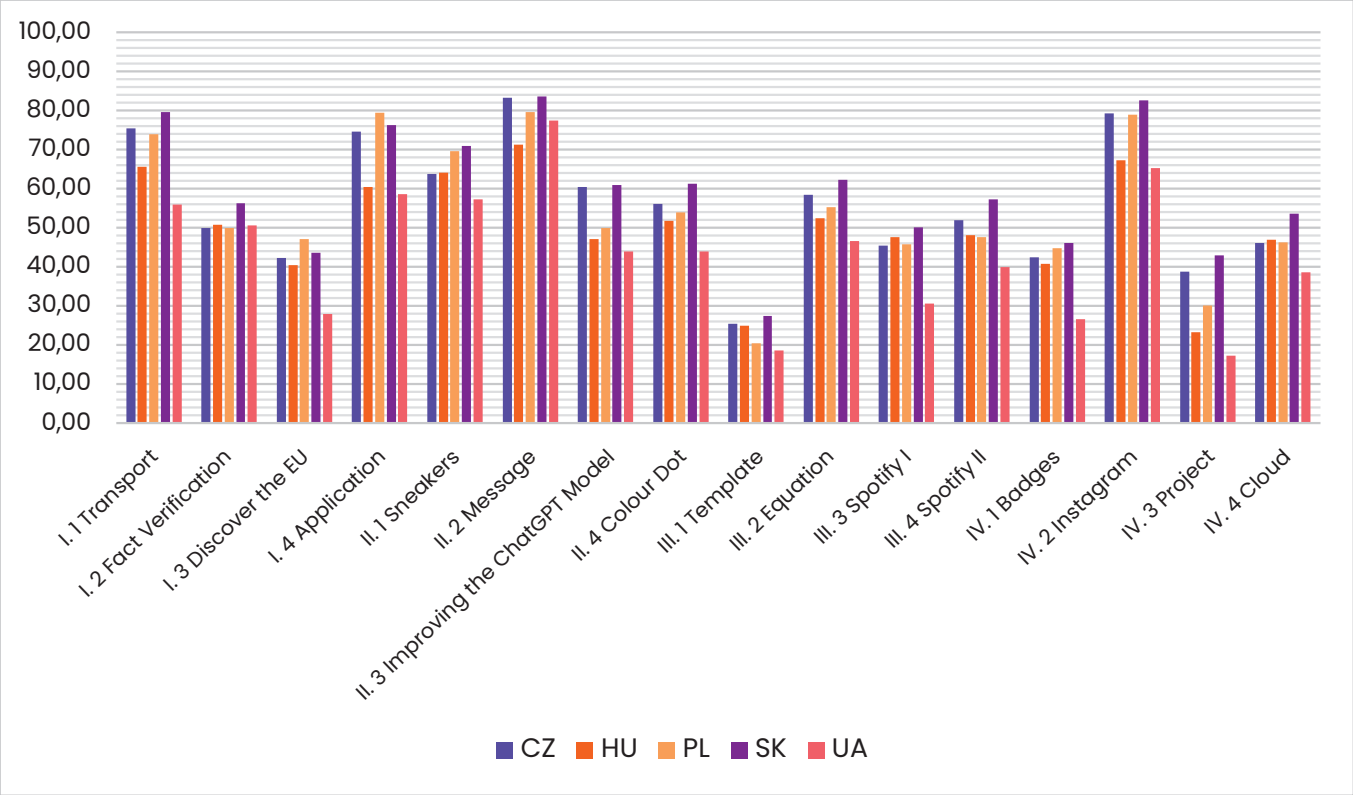
The maximum differences (highest and lowest success rate) among countries in the individual test categories reach 19 percentage points in *Social Networks and Collaborative Tools*. The smallest differences between countries are (as last year) in the *Security and Computer Systems* category, yet they are still substantial — around 13 percentage points.

	Success rate				
Category	**CZ**	**HU**	**PL**	**SK**	**UA**
I. Internet	60.51%	54.29%	62.57%	63.92%	48.33%
II. Security and Computer Systems	65.93%	58.61%	63.29%	69.15%	55.67%
III. Office Tools	45.33%	43.31%	42.25%	49.25%	34.00%
IV. Social Networks and Collaborative Tools	51.63%	44.53%	50.01%	56.31%	37.00%

Table 7 Success rate across the test categories

E. Success rate across the test tasks

Another parameter of interest in evaluating the test results was the success rate of individual tasks.



Graph 31 Success rate across the test tasks (in %)

The following table shows the combined average success rate across all four variants of each task.

	Success rate				
Task	**CZ**	**HU**	**PL**	**SK**	**UA**
I. 1 Transport	75.38%	65.57%	73.89%	79.53%	56.00%
I. 2 Fact Verification	49.90%	50.72%	49.88%	56.34%	50.67%
I. 3 Discover the EU	42.20%	40.42%	47.07%	43.58%	28.00%
I. 4 Application	74.51%	60.39%	79.40%	76.18%	58.67%
II. 1 Sneakers	63.74%	64.10%	69.62%	70.91%	57.33%
II. 2 Message	83.32%	71.28%	79.64%	83.60%	77.33%
II. 3 Improving the ChatGPT Model	60.39%	47.17%	49.89%	60.88%	44.00%
II. 4 Colour Dot	56.15%	51.81%	53.99%	61.19%	44.00%
III. 1 Template	25.47%	24.98%	20.44%	27.52%	18.67%
III. 2 Equation	58.36%	52.49%	55.30%	62.21%	46.67%
III. 3 Spotify I	45.42%	47.59%	45.74%	50.10%	30.67%

	Success rate				
Task	**CZ**	**HU**	**PL**	**SK**	**UA**
III. 4 Spotify II	52.01%	48.10%	47.55%	57.18%	40.00%
IV. 1 Badges	42.51%	40.79%	44.76%	46.18%	26.67%
IV. 2 Instagram	79.23%	67.17%	78.91%	82.62%	65.33%
IV. 3 Project	38.69%	23.25%	30.13%	42.86%	17.33%
IV. 4 Cloud	46.05%	46.92%	46.24%	53.54%	38.67%

Table 8 Success rate across the test tasks

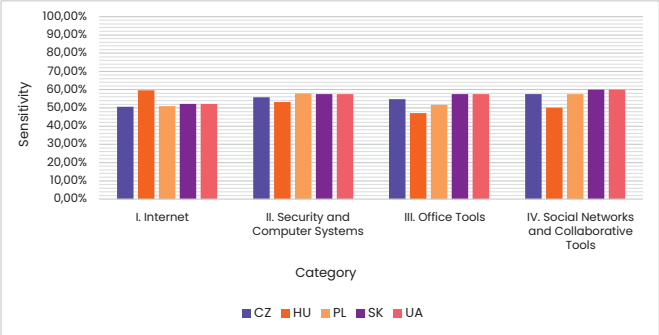
Respondents achieved the highest success rate in the *Message* task (category *Security and Computer Systems*) in all countries, although the gap between countries reached 12 percentage points.

Students recorded the lowest success rates in two tasks: *Template* (category *Office Tools*) and *Project* (category *Social Networks and Collaborative Tools*). Success rates across countries also varied widely in these two tasks. In the Czech Republic, Poland, and Slovakia, the lowest success rate was in *Template*, with *Project* the second lowest. In Hungary and Ukraine, it was precisely the opposite. The *Project* task also recorded the largest difference in success rate between countries, 25 percentage points (42.86% in Slovakia versus only 17.33% in Ukraine). Marked differences between countries were present in almost all tasks, averaging roughly 17 percentage points. The smallest differences between countries were in the *Fact Verification* task (*Internet* category). In most tasks, respondents from Slovakia achieved the best results. In two tasks, respondents from Poland achieved the top results.

F. Sensitivity across the test categories

	Sensitivity				
Category	**CZ**	**HU**	**PL**	**SK**	**UA**
I. Internet	50.61%	59.60%	51.00%	52.10%	52.10%
II. Security and Computer Systems	55.82%	53.25%	57.89%	57.50%	57.50%
III. Office Tools	54.75%	47.17%	51.63%	57.59%	57.59%
IV. Social Networks and Collaborative Tools	57.60%	50.02%	57.47%	60.04%	60.04%

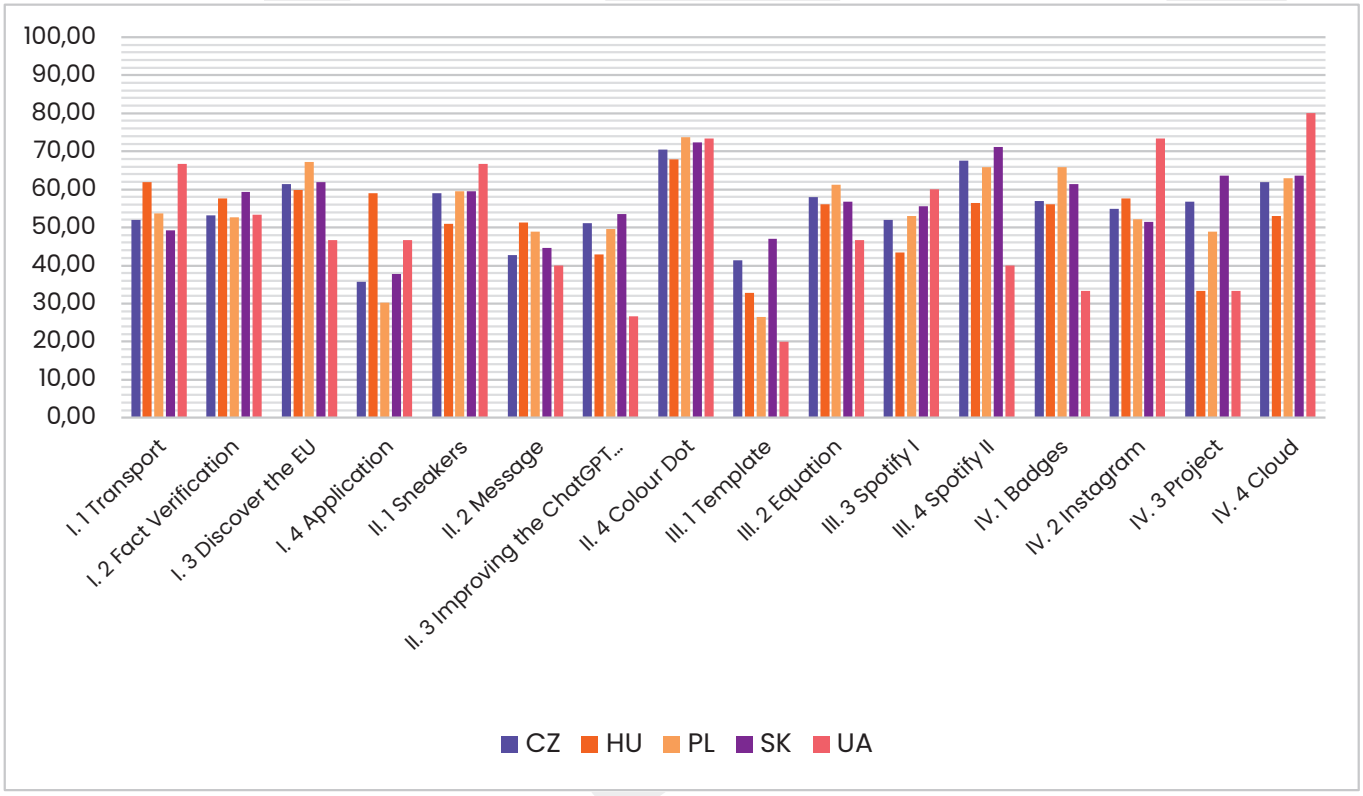
Table 9 Sensitivity across the test categories



Graph 32 Sensitivity across the test categories

Sensitivity was outstanding across all categories. Each category differentiated the tested sample very well. There are only minor cross-country differences in sensitivity. The most pronounced differences appear between the task sensitivities of respondents from Hungary and those of the other countries. The categories themselves had comparable sensitivities-essentially in the 50—60% range. No category has markedly lower sensitivity than the others. The lowest, though still good, sensitivity appears in the *Office Tools* category among Hungarian respondents.

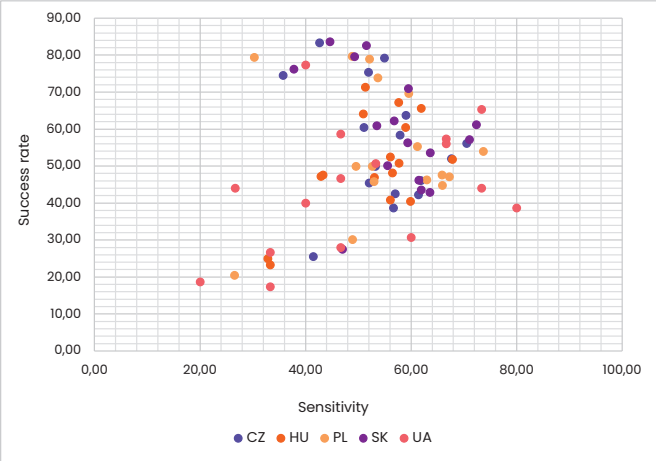
G. Sensitivity across the test tasks



Graph 33 Sensitivity across the test tasks (in %)

The graph shows the sensitivity of the individual test tasks (combining all four variants). Overall, almost all tasks have good sensitivity. Only task II.3 lacks good sensitivity among Ukrainian respondents, and the *Template* task lacks good sensitivity in Ukraine and Poland. The highest sensitivities are in the *Colour Dot* task from the *Security and Computer Systems* category. Compared across countries, individual tasks exhibit greater differences in sensitivity than the categories as a whole.

Task II.3 had low sensitivity among Ukrainian students, and the *Template* task had low sensitivity in Ukraine and Poland. All other tasks demonstrated good to excellent sensitivity, thereby effectively differentiating the tested respondents.



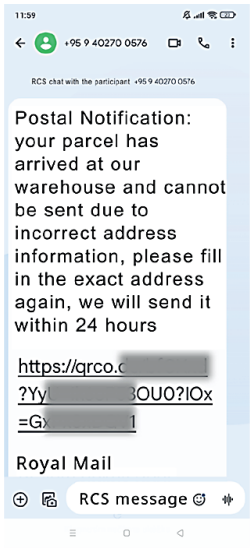
Graph 34 Success rate and sensitivity of the test tasks (in %)

H. Examples of selected tasks in the test for high schools and universities

Task with the highest success rate (all countries) — II. Security and Computer Systems — Message

Success rate:
CZ: 83.32%; HU: 71.28%; PL: 79.64%; SK: 83.60%; UA: 77.30%
Sensitivity:
CZ: 42.68%; HU: 51.30%; PL: 48.83%; SK: 44.61%; UA: 40.00%

Task assignment:
Lucia received a message on her mobile phone, which we can see in the image.



Decide whether the following statements are true or false:
(1) Lucia received a standard message requesting clarification of information, and she should click the link and provide the required details.

TRUE / FALSE

(2) If she clicks on the link, even if it takes her to a site that uses the same design as [Country's Postal Service], it could still be a fraudulent site pretending to be the postal service.

TRUE / FALSE

(3) A message from a foreign phone number can be trustworthy if the package is for Royal Mail and was sent from abroad.

TRUE / FALSE

Task with the highest sensitivity — II. Security and Computer Systems — Colour Dot

This task had the highest sensitivity of all tasks in the Czech Republic, Hungary, Poland, and Slovakia.

Success rate:
CZ: 56.15%; HU: 51.81%; PL: 53.99%; SK: 61.19%; UA: 44.00%
Sensitivity:
CZ: 70.55%; HU: 67.86%; PL: 73.68%; SK: 72.40%; UA: 73.33%

Task assignment:
Six friends from different countries are working together on an international project focused on IT security. Jana from the Czech Republic shared an interesting article published on the portal zive.cz, which explains how to detect suspicious apps. Since the article is written in Czech, she also provided links to translations created using Google Translate.

Links to the article in different languages:
English: *https://drive.google.com/file/d/1wKIk-k5Z31lQhn80gul80zJY3N4bARJUM/view?usp=sharing*
Czech: *https://mobilmania.zive.cz/clanky/co-znamena-zelena-oranzova-nebo-bila-tecka-v-horni-lis-te-displeje-pomuze-odhalit-podezrele-aplikace/sc-3-a-1361761/default.aspx*
Hungarian: *https://drive.google.com/file/d/1k818OdA-B60O5EAgl0C-JR4kzWFMRO2o4/view?usp=sharing*
Polish: *https://drive.google.com/file/d/1nwIcFng-VZcHVk8WcuId_9MrYnoHJU-VK/view?usp=sharing*
Slovak: *https://drive.google.com/file/d/14iRtp3AydP2L-jvwDl7Ub9nDAf7MSM2nU/view?usp=sharing*
Ukrainian: *https://drive.google.com/file/d/1pELBP_ZcI-mLgXeGT6CGwy75iu2tpBXKX/view?usp=sharing*

Review the article in your language and decide whether the following statements are true or false:
(1) Coloured dots appear when a critical error occurs in the application, causing it to shut down.

TRUE / FALSE

(2) The meaning of the colour of the dots displayed in the status bar can differ depending on the brand of the phone.

TRUE / FALSE

(3) On iPhones, a white dot indicates that the app is accessing both the microphone and the camera at the same time.

TRUE / FALSE

(4) If a colour dot appears without any direct action (e.g., launching an app), it may indicate that an app is doing something without the user's knowledge.

TRUE / FALSE

IId. School performance in the test for high schools and universities in Poland

A total of 264 schools participated in the test for high schools and universities. Of these, 121 schools had at least 10 students aged 15 or older. The following table presents the ranking of the most successful schools (including universities), including the school's percentile (above 85%), the average success rate of the school, the average age of the students tested, and the number of students who completed the test.

Rank	Schools	Percentile	Average success rate	Average age	Number of students
1.	ZESPÓŁ SZKÓŁ POLITECHNICZNYCH IM. KOMISJI EDUKACJI NARODOWEJ, ul. Aleje Politechniki 38, Łódź-Górna	100.00%	78.27%	18.1	21
2.	VIII LICEUM OGÓLNOKSZTAŁCĄCE IM ADAMA MICKIEWICZA, ul. Hipolita Cegielskiego 1, Poznań-Stare Miasto	99.10%	77.50%	15.9	40
3.	TECHNIKUM ELEKTRONICZNE NR 1, ul. Marcina Kasprzaka 19/21, Warszawa	98.30%	74.37%	18.7	76
4.	ZESPÓŁ SZKÓŁ ELEKTRONICZNYCH IM. WOJSKA POLSKIEGO, ul. Mieczysława Karłowicza 20, Bydgoszcz	97.50%	72.83%	16.8	23
5.	ZESPÓŁ SZKÓŁ NR 36 IM. MARCINA KASPRZAKA, ul. Marcina Kasprzaka 19/21, Warszawa	96.60%	70.60%	18.7	20
6.	ZESPÓŁ SZKÓŁ NR 2 W PABIANICACH IM. PROF. JANUSZA GROSZKOWSKIEGO, ul. św. Jana 27, Pabianice	95.80%	69.64%	18.1	148
7.	TECHNIKUM ELEKTRONICZNE NR 7 IM. WOJSKA POLSKIEGO W BYDGOSZCZY, ul. Mieczysława Karłowicza 20, Bydgoszcz	95.00%	69.10%	17.5	376
8.	ZESPÓŁ SZKÓŁ OGÓLNOKSZTAŁCĄCYCH NR 13 III LICEUM OGÓLNOKSZTAŁCĄCE Z ODDZIAŁAMI DWUJĘZYCZNYMI IM. BOHATERÓW WESTERPLATTE W GDAŃSKU, ul. Topolowa 7, Gdańsk	94.10%	69.00%	17.9	227
9.	ZESPÓŁ SZKÓŁ ELEKTRYCZNYCH NR 2 IM. KS. PIOTRA WAWRZYNIAKA, ul. Świt 25, Poznań	93.30%	68.90%	16.4	128
10.	TECHNIKUM ZAWODOWE, al. Aleja Jana Pawła II 18, Radzymin	92.50%	68.30%	17.4	14
11.	TECHNIKUM NR 4 W ZESPOLE SZKÓŁ ELEKTRYCZNYCH, ul. Toruńska 77/83, Włocławek	91.60%	68.11%	18.9	49
12.	III LICEUM OGÓLNOKSZTAŁCĄCE IM. JANA PAWŁA II, ul. Oświęcimska 90, Ruda Śląska	90.80%	67.27%	16.9	38
13.	V LICEUM OGÓLNOKSZTAŁCĄCE IM. KLAUDYNY POTOCKIEJ, ul. Zmartwychwstańców 10, Poznań	90.00%	67.24%	16.5	203

Rank	Schools	Percentile	Average success rate	Average age	Number of students
14.	ZESPÓŁ SZKÓŁ OGÓLNOKSZTAŁCĄCYCH W WYDMINACH, ul. Grunwaldzka 94, Wydminy	89.10%	67.08%	17.9	15
15.	ZESPÓŁ SZKÓŁ I PLACÓWEK OŚWIATOWYCH IM. EMILA GODLEWSKIEGO W NYSIE, ul. Marii Rodziewiczówny 1, Nysa	88.30%	66.88%	21.9	10
16.	CXXII LICEUM OGÓLNOKSZTAŁCĄCE IM. IGNACEGO DOMEYKI, ul. Leopolda Staffa 3/5, Warszawa	87.50%	66.86%	16.7	182
17.	IV LICEUM OGÓLNOKSZTAŁCĄCE IM. MARII SKŁODOWSKIEJ-CURIE W OLSZTYNIE, al. Aleja Marszałka Józefa Piłsudskiego 56, Olsztyn	86.60%	65.30%	16.5	29
18.	I LICEUM OGÓLNOKSZTAŁCĄCE IM. TADEUSZA KOŚCIUSZKI W LEGNICY, pl. Klasztorny 7, Legnica	85.80%	65.22%	18.2	46
19.	ZESPÓŁ SZKÓŁ TECHNICZNYCH IM. EUGENIUSZA KWIATKOWSKIEGO, ul. Adama Matuszczaka 7, Rzeszów	85.00%	64.50%	17.6	344

Table 10 Most successful schools in the test for high schools and universities (students aged over 15)

IIe. Interpretation of results and recommendations for the test for high schools and universities

The test authors aim to create a test each year that clearly differentiates respondents with strong knowledge and skills from those with weaker ones. A well-designed test should yield an average success rate of 50 — 60%. Since tasks are not piloted in advance, estimating their parameters is highly challenging.

The overall success rate for all respondents aged 15 and older was 55.85% in the Czech Republic, 50.19% in Hungary, 54.53% in Poland, and 58.69% in Slovakia — all within the target range. Ukrainian students achieved a success rate of 43.75%, but this result cannot be considered reliable due to the very low number of respondents tested.

In this year's testing, the overall structure of the test was significantly revised, with the former *Complex Tasks* category split into a separate IT Master Test. For this reason, it is inappropriate to compare overall test results with those of previous years. Some comparisons can, however, be made based on specific tasks and observed trends in individual areas of testing.

From a purely technical perspective, results were markedly better in all tested countries this year, improving by around 15 percentage points. However, as noted above, the structural changes to the test mean no definitive conclusions can be drawn.

The test differentiated respondents very effectively. Overall sensitivity (the test's discriminative power) across countries was approximately 55%, which is considered very good. Sensitivity was also enhanced by the well-composed tasks, which had appropriate levels of difficulty. Sensitivity remained comparable to last year, even though overall success rates showed greater variation.

In the ***Internet*** category, respondents achieved the second-best results overall (this was consistent across all countries tested). In previous years, this category typically achieved the highest success rates.

Respondents from the Czech Republic, Hungary, and Slovakia achieved their best results in the task *Transport*, where they had to find a suitable public transport connection in an unfamiliar city. Respondents from Poland achieved their best result in the task *Application*, where they were asked to identify an app based on a given picture. Conversely, all countries scored lowest in the task *Discover the EU*. This task required locating an information source and verifying the truthfulness of statements based on it. It proved highly discriminative, showing the highest sensitivity in the category.

Students are generally good at searching online and can verify a simple claim using a single information source. However, when tasks require drawing conclusions from multiple connections, success rates decline.

The largest performance differences between countries in the Internet category were in the *Transport* and *Application* tasks. By contrast, the smallest cross-country differences were in the *Fact Verification* task.

The ***Security and Computer Systems*** category was the most successful across all countries, though average success rates varied significantly.

Respondents achieved the highest success rate in the task *Message* (also the highest of the entire test), across all countries, even though the difference between them reached 12 percentage points.

The weakest results in this category were recorded in the Czech Republic for the task *Coloured Dot*, which focused on personal data protection and understanding an information source about suspicious applications. Despite this, the task still showed very high sensitivity. In the other countries, respondents scored lowest in the task *Improving the ChatGPT Model*, which required understanding ChatGPT settings and their impact on how the service operates.

Students demonstrated relatively good ability to identify various security risks and respond to them. Their weaker results came in new or unfamiliar situations, especially when tasks required interpreting an information source and making the correct decision based on it. Students performed poorly in situations less commonly discussed in society. Even when provided with supporting material or instructions, they often failed to understand the text and draw accurate conclusions fully.

In the ***Office Tools*** category, respondents have consistently achieved the lowest results, and this year was no exception. The weakest results were in the task *Template*, where only about one-fifth to one-quarter of respondents answered correctly. This task required knowledge of advanced word processing tools, including headers, footers, and automatic numbering, which high school students should be familiar with or be able to learn and apply. Results show that students (and schools) often focus more on end goals than on understanding the underlying concepts, relationships, and implications. Similarly, in a task requiring the correct input of a chemical equation in a text editor, high school students still demonstrated notable gaps in their ability to use appropriate tools, even though this version of the task was more complex than the one in the test for primary schools.

Respondents also struggled with spreadsheet-based tasks, such as *Spotify I* and *Spotify II*. These tasks required working with large datasets, understanding their structure, identifying information with specific properties, and utilising sorting or filtering functions.

From practice, we know schools often focus on small, simple tables, where results are quickly obtained and the efficiency of the process is less critical. However, skills in handling more complex data are crucial, as they also foster critical thinking.

In this category, cross-country differences in success rates were more pronounced. Although the results in Slovakia were not entirely satisfactory, respondents from Slovakia performed slightly better than those from the other countries. Despite the lower overall success rates, these tasks demonstrated high sensitivity and effectively differentiated respondents.

In the ***Social Networks and Collaborative Tools*** category, differences between countries were greater. The highest success rates were in the *Instagram* task, where respondents demonstrated familiarity with social media tools and strategies to increase the reach of posts. The lowest success rates were in the *Project* task, which focused on collaborative tools. Respondents had to work with a shared text document, track changes,

and find comments and replies. Students showed significant gaps in using collaboration-focused tools, with Hungarian respondents performing the weakest and Slovak respondents the strongest (though still insufficiently).

Tasks in this category also showed good sensitivity. Respondents are familiar with social media, can identify basic information, and interpret it. They are, however, less capable of verifying information when required.

Cross-country comparisons revealed the largest differences in the *Project* task, with up to 25 percentage points between results. Similar to last year, the findings show that students across all countries lack teamwork skills, which many employers consider essential.

Finally, with the increasing availability of AI tools, we have observed small changes in how respondents approach test tasks. Evidence (including observations during testing) suggests some students are using AI tools. While we expected their impact to be greater, it appears their effect was modest. Slight influences may be reflected in the distribution of scores, where peaks shifted rightward and score distributions became more varied.

We believe only a small portion of respondents used AI tools, and their assistance was limited. At the same time, results indicate that students are less skilled at understanding connections and predicting the impact of their problem-solving methods, focusing more on achieving an end result. This reliance may reinforce the use of AI tools. Still, the findings also show that while AI can assist with problem-solving, core knowledge, competencies, and-above all-critical thinking skills remain essential.

III. EVALUATION OF THE IT MASTER TEST

IIIa. Basic overview

	CZ	HU	PL	SK	UA
Total number of respondents	2,139	231	1,091	1,942	4
Average success rate of students	49.49%	—	60.74%	60.40%	—
Average success rate of teachers	76.18%	—	73.03%	73.02%	—
Test sensitivity of students	69.26%	—	68.27%	76.94%	—
Test reliability of students (Cronbach's alfa)	0.754	—	0.758	0 828	—

Table 11 Basic psychometric parameters of the IT Master Test

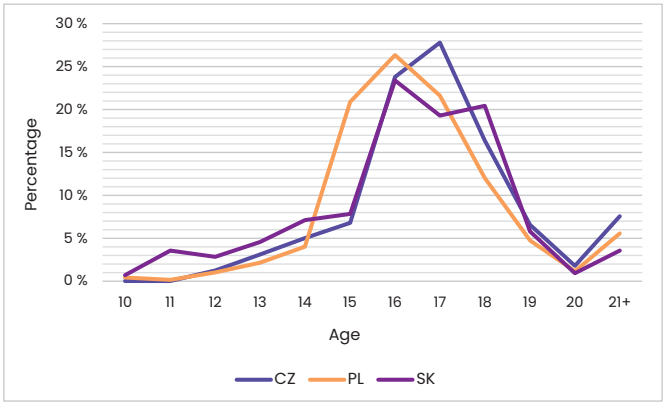
IIIb. General information about respondents

Since the test was published on a publicly accessible portal, anyone who provided the required details could take part. The total number of respondents was **5,413**. The analysis includes respondents who identified as students or teachers and submitted a completed test within the allotted time (i.e., their test did not expire). Teachers are evaluated separately from students. In the following sections, we present results based on data from **3,631 respondents** by various criteria. To sit this test, respondents first had to complete either the IT Fitness Test for primary schools or the IT Fitness Test for high schools and universities. Due to the very small samples from Hungary and Ukraine, those countries are omitted from further evaluation (their data are not statistically significant or reliable).

A. Distribution of respondents by age group

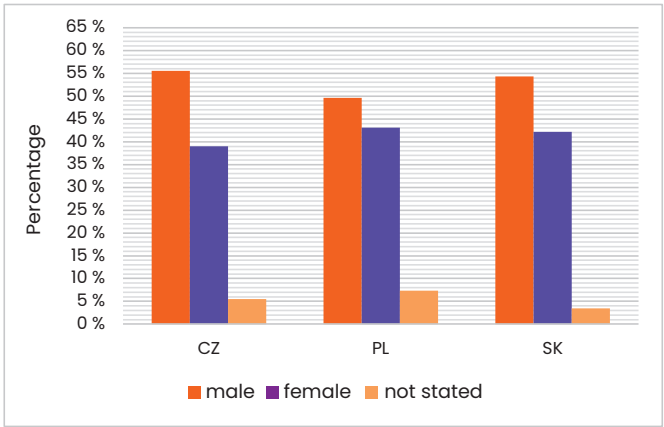
Because this test was offered for the first time, we did not restrict participants by age. Accordingly, the analysis uses the full student sample (without age limits).

As the graph shows, the largest age group consisted of respondents aged 15 — 18, corresponding to high-school students.



Graph 35 Distribution of respondents by age group

B. Gender distribution of respondents



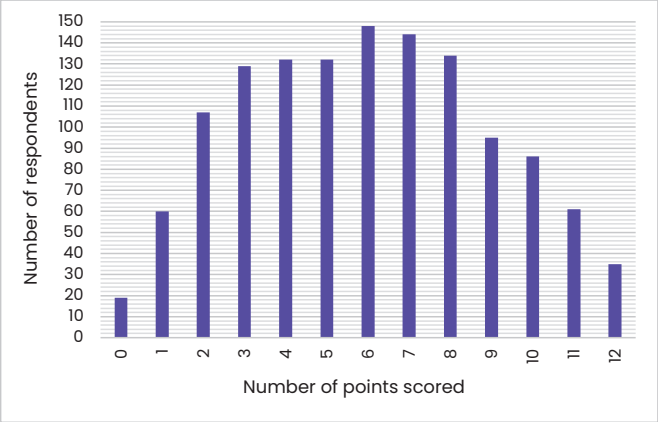
Graph 36 Gender distribution of respondents

Across all countries, men made up a significantly larger share of respondents, most markedly in the Czech Republic and least so in Poland.

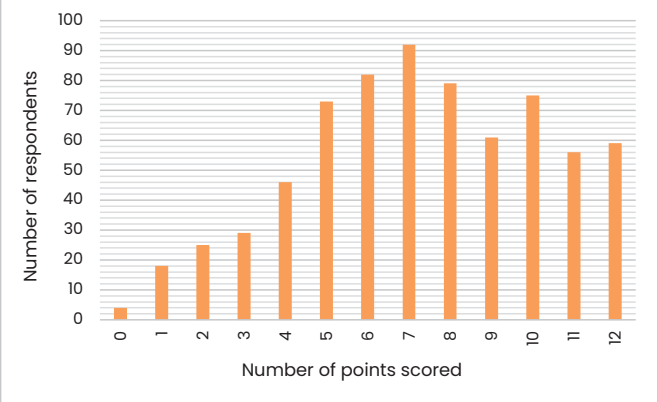
IIIc. Evaluation of the testing section of the IT Master Test

A. Raw score

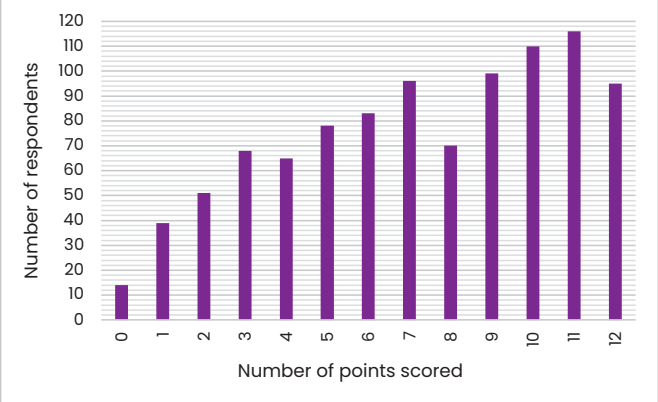
Raw score distributions indicate the number of respondents who achieved each total number of points.



Graph 37 CZ — Raw score distribution



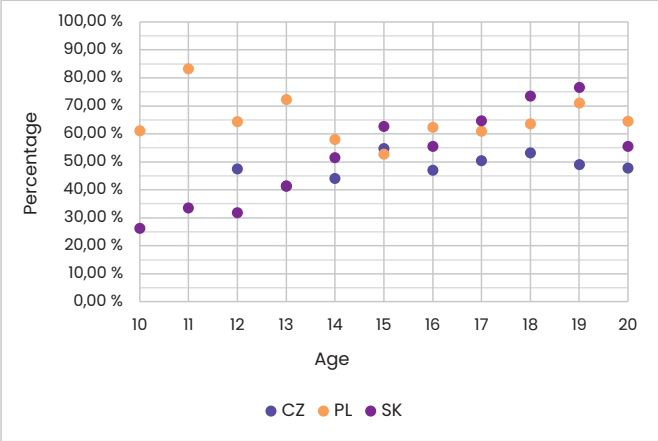
Graph 38 PL — Raw score distribution



Graph 39 SK — Raw score distribution

Comparing raw-score distributions across countries reveals differences. It is essential to emphasise that the group taking the test was not homogeneous — both primary and secondary school students were eligible to participate, and there was no narrowly defined target cohort. This heterogeneity, combined with the smaller overall sample, likely resulted in multiple local peaks in the graphs.

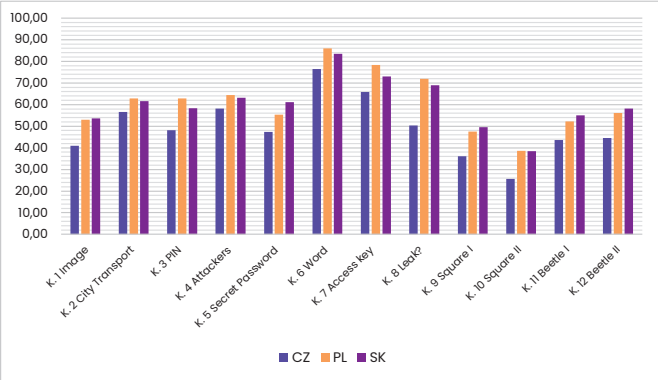
B. Success rate of respondents by age group



Graph 40 Success rate of respondents by age group

C. Success rate across the test tasks

Another parameter of interest was the success rate of individual test tasks.



Graph 41 Success rate across the test tasks (in %)

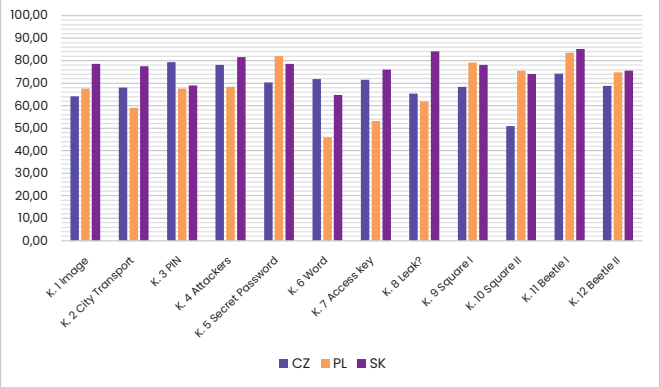
The following table gives the combined average success rate across all four variants of each test item.

	Success rate		
Task	**CZ**	**PL**	**SK**
K. 1 Image	40.89%	52.93%	53.56%
K. 2 City transport	56.54%	62.80%	61.59%
K. 3 PIN	48.21%	62.80%	58.33%
K. 4 Attackers	58.18%	64.38%	63.21%
K. 5 Secret password	47.35%	55.36%	61.18%
K. 6 Word	76.40%	85.98%	83.43%
K. 7 Access key	65.81%	78.25%	73.07%
K. 8 Leak?	50.39%	71.96%	69.00%
K. 9 Square I	36.14%	47.50%	49.59%
K. 10 Square II	25.70%	38.63%	38.52%
K. 11 Beetle I	43.69%	52.22%	55.08%
K. 12 Beetle II	44.55%	56.08%	58.23%

Table 12 Success rate across the test tasks

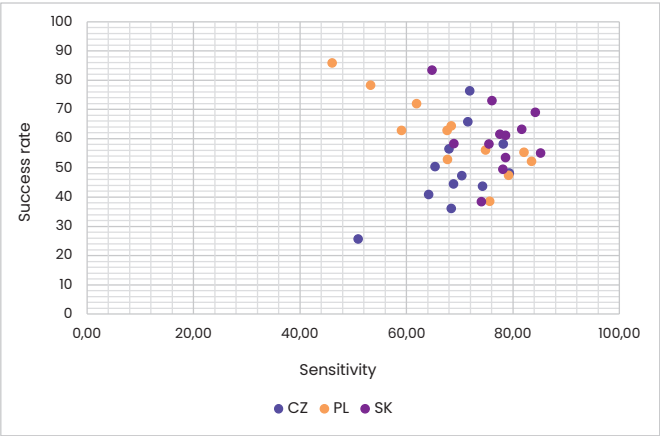
Students achieved the highest success rate in the task *Word* (focused on encoding information). Conversely, the lowest success rate was in *Square II*, a programming task that required predicting program behaviour and its reactions to different input sequences. The smallest cross-country differences were in *Attackers* (IT security), while the most significant differences were in *Leak?* (also IT security). In most tasks, Polish students performed best. Slovak students achieved the top result in five tasks. Compared with Slovakia and Poland, Czech students tended to score lower.

D. Sensitivity across the test tasks



Graph 42 Sensitivity across the test tasks (in %)

The following chart shows the sensitivity of individual tasks (combining all four variants). Overall, almost all tasks exhibited excellent sensitivity. Sensitivity varied substantially by country; the average gap between the minimum and maximum country sensitivities for a given task was about 16 percentage points. The smallest differences were in *Beetle II*. In Poland and Slovakia, *Beetle I* had the highest sensitivity; in the Czech Republic, *PIN* had the highest. *Word* had the lowest (though still excellent) sensitivity in Poland and Slovakia, primarily due to its high success rate. With such a high success rate, it is rare to maintain equally high sensitivity.



Graph 43 Success rate and sensitivity of the test tasks (in %)

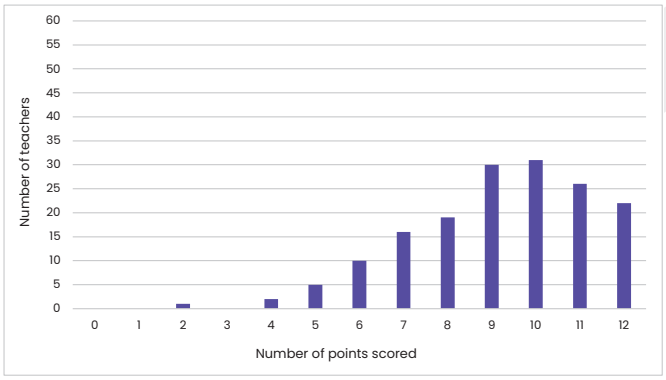
This graph again confirms that the tasks had excellent sensitivity, even at higher success rates. The cognitively more demanding tasks split the tested sample particularly well.

IIId. Teacher success rate in the IT Master Test

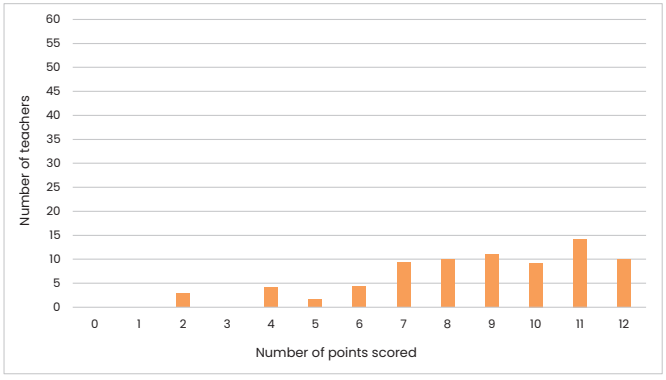
Country	Average success rate of teachers	Number of teachers tested	Average age
CZ	76.18%	163	39
PL	73.03%	76	44
SK	73.02%	263	45

Table 13 Teacher success rate by country

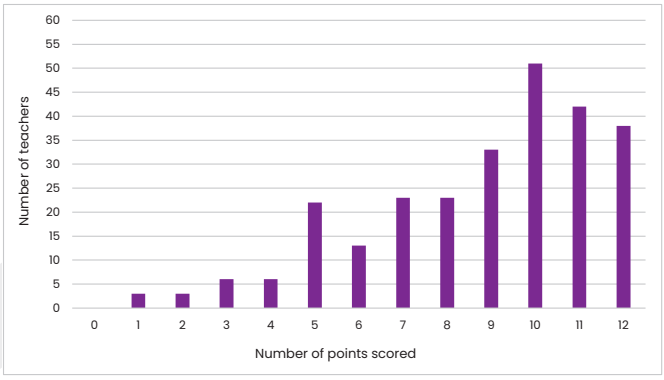
Teacher participation in the IT Master Test was highest in Slovakia. Due to the very low number of participating teachers in Hungary, we did not analyse that group. Given the small teachers' samples overall, it is not meaningful to break down teacher results further (e.g., by region).



Graph 44 CZ — Teacher score in the IT Master Test



Graph 45 PL — Teacher score in the IT Master Test



Graph 46 SK — Teacher score in the IT Master Test

IIIe. Interpretation of IT Master Test results

In previous years, both versions of the IT Fitness Test (for primary schools and high schools and universities) included a *Complex Tasks* category. This year, that category was expanded into a standalone test, the IT Master Test for advanced users, comprising 12 tasks. The test focused on four areas: 1. Encoding information; 2. Complex security tasks; 3. Complex search tasks; 4. Algorithmic thinking.

- Area 1. Encoding information contained two tasks — *Word* and *Secret Password.*
- Area 2. Complex security tasks consisted of four tasks: *PIN, Attackers, Access Key,* and *Leak?*
- Area 3. Complex search tasks consisted of two tasks: *City Transport* and *Image.*
- Area 4. Algorithmic thinking consisted of four tasks: *Square I, Square II, Beetle I,* and *Beetle II.*

The aim was to design a test containing tasks focused on higher cognitive levels of thinking, which are more demanding, require the integration of multiple skills, and also emphasise reading comprehension and critical thinking. We aimed for tasks that require multiple steps and more complex problem-solving than simple exercises. The test was designed to include both upper-grade primary pupils and high-school students as target groups. We did not strictly define or limit the primary age group, and our analysis, therefore, includes all participants who submitted a completed test.

The broad target group was reflected in the age distribution by country. In Poland, most test-takers were 15—17 years old. In the Czech Republic and Slovakia, respondents were slightly older on average — 16—18 with differing distributions between the two. These differences should be taken into account when interpreting country-level results.

From a reliability standpoint, this test showed higher reliability than the IT Fitness Tests and substantially higher sensitivity. Success rates were 49.49% in the Czech Republic, 60.74% in Poland, and 60.40% in Slovakia. The highest overall sensitivity was recorded in Slovakia, at 76.94%. More men than women took part in the test.

Task success rates ranged roughly from 25% to 86%. All tasks differentiated respondents excellently. In Slovakia, *Beetle I* achieved a sensitivity of 85.22%.

Security-focused tasks in this test were more demanding and more complex than in the IT Fitness Tests. Even so, their success rates were reasonable, suggesting that security is receiving greater attention in society than in the past.

The highest success rate was achieved in an Encoding information task; the second task from this area ranked around the middle of the success-rate table. This indicates respondents have solid foundations in encoding information and can apply them to problem-solving. Compared with other areas, respondents performed better in security area.

Tasks in Complex search area ranked in the mid-table to lower third by success rate. Here we see that when a task requires several steps — finding information, understanding the source, processing the data, and evaluating a claim — the cognitive load increases and fewer respondents reach the correct answer.

Tasks in Algorithmic thinking were located in the lower part of the success-rate ranking. Nevertheless, they excelled at differentiating respondents (showed high sensitivity). Strong performance in these tasks highlights respondents who are particularly capable in digital technologies. Even if it may appear that AI will reduce demand for programming and algorithmic skills, the results suggest that fostering algorithmic thinking has a significant positive impact on overall cognitive development and problem-solving abilities. We consider this capability, together with critical thinking, to be crucial for graduates' readiness for the job market.

Results show that the most significant gaps among students appear precisely in complex tasks requiring higher-order cognitive skills. Students require more exposure to complex tasks during instruction and preparation for unfamiliar situations where they cannot rely solely on previously learned routines; instead, they must train their thinking, thereby improving their readiness for the future.

An interesting finding is that teachers achieved their highest success rates on the IT Master Test, rather than in the IT Fitness Tests. It is possible, however, that the teacher cohorts differed between these tests.

IV. CONCLUSIONS AND RECOMMENDATIONS

Digital competency testing was conducted in three formats: the IT Fitness Test for primary schools, the IT Fitness Test for respondents aged 15 and above (high schools and universities), and the IT Master Test for advanced users. Each targeted a different audience, structure, and difficulty level, yet all assessed the ability to navigate digital environments and work with information, tools, and security scenarios.

Standard features of the tests:

All tests were designed to distinguish between respondents who are more and less digitally proficient. Success rates fell within the recommended 50—60% range, and the tests demonstrated good discriminative power. In all tests, the most successful category was *Security and Computer Systems*, where respondents could identify phishing, understood the consequences of password disclosure, and knew how to react to security alerts. The lowest success rates were in *Office Tools*, revealing gaps in work with spreadsheets, word processors, and structured documents.

Differences between the tests:

The test for primary schools targeted 14—16-year-olds with foundational tasks. The high schools and universities test (for respondents over 15 years) was more demanding and included extended tasks, whereas the IT Master Test concentrated on higher-order cognition, including critical and algorithmic thinking, complex tasks, and reading comprehension. The IT Master Test achieved the highest sensitivity (up to 76.94% in Slovakia), confirming its ability to discriminate between advanced and non-advanced respondents.

This year, cross-country differences narrowed. We assume that the testing process itself provides feedback and, to some extent, educates participants. It also draws teachers' attention to areas that deserve more focus in education. Results across categories were relatively balanced among countries, especially in the *Internet* and *Security and Computer Systems* categories. However, more pronounced differences emerged in *Office Tools* and *Social Networks and Collaborative Tools.*

Recommendations for teachers and education:

1. **Focus on process, not just outcomes — students should understand why a given tool is used.**
2. **Develop work with data — include larger datasets and, in spreadsheets, teach filtering, sorting, and interpretation.**
3. **Foster algorithmic and critical thinking — assign complex, multi-step tasks requiring decision-making and evaluation.**
4. **Use AI tools thoughtfully — teach students to understand the limits and implications of AI.**
5. **Improve office tools education — strengthen practical skills with word processors and spreadsheets.**
6. **Build teamwork skills — incorporate collaborative tools, shared documents, comments, and tracking changes in classwork.**

We observe that students often focus more on the result than on understanding relationships or the reasons behind outcomes. This suggests a need to adjust teaching approaches to demonstrate that, despite the existence of AI, a foundation of core knowledge and relationships is still necessary to respond quickly and appropriately to real-life situations.

AI tools have been available for some time in digital work. We observe subtle shifts in how tasks are solved, and based on our observations during testing, some respondents do utilise AI. We believe only a small share of respondents used AI, and its impact was limited. At the same time, respondents appear less able to understand relationships, to judge the implications of their approach, and tend to focus on just getting the answer. This may further encourage reliance on AI. The results show that while AI can help solve problems, core knowledge, competencies, skills, and especially critical thinking remain essential.

Strong performance in Algorithmic thinking and Complex tasks areas within the IT Master Test highlights those who are particularly capable in digital technologies. Even if AI might reduce demand for some programming roles, cultivating algorithmic thinking still has a significant impact on overall cognitive development and problem-solving. We regard this ability as well as critical thinking as vital for preparing future graduates for the labour market.

IT Fitness Test

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