AI-BASED ANALYTICS FOR STUDENT ACHIEVEMENT TRENDS IN LITHUANIAN SCHOOLS



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1 GOAL

The main goal of the No-Gap tool is to transform large-scale student achievement data into clearly interpretable insights that help school leaders monitor changes, identify disparities, and plan targeted interventions.

2 DATASET

- 2017–2024 years
- 642 schools
- 81283 students

A national, population-level dataset covering three cohorts of 8th-grade students, together with their longitudinal achievement records dating back to grade 4.

STUDENTS AND THEIR ACHIEVEMENT

This section provides an overview of the social and economic context across Lithuanian schools, alongside key indicators used to assess student achievement. It also presents changes in these indicators over time and the relationships among them.

Proportion of students who receive support

2021 - 2022

2022 - 2023

2023 - 2024

(%)

To
We students who receive support

2021 - 2022

2023 - 2024

(%)

To
We students who receive support

2021 - 2022

2023 - 2024

Yearly change in math grades

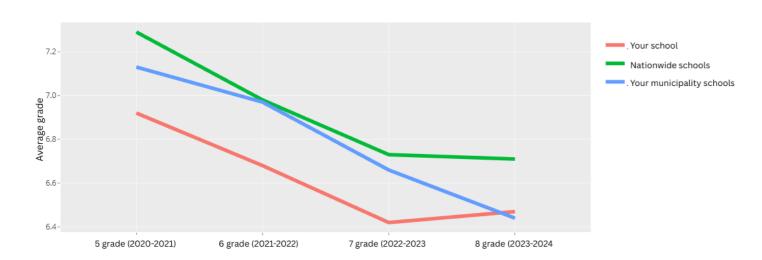
Receive support

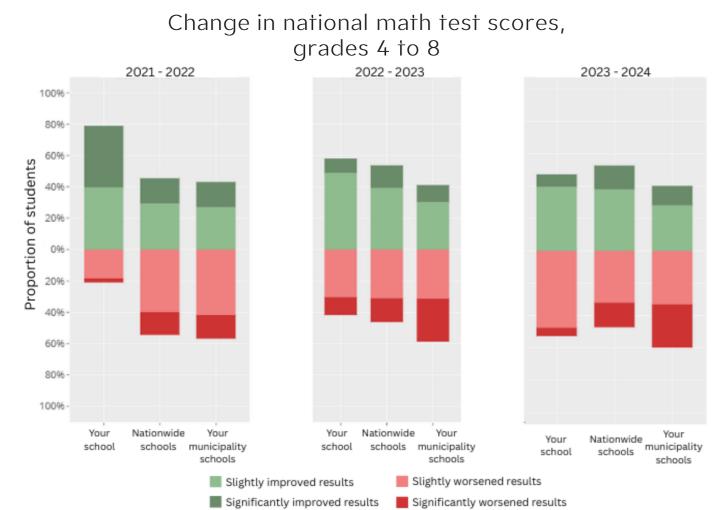
schools municipality

school

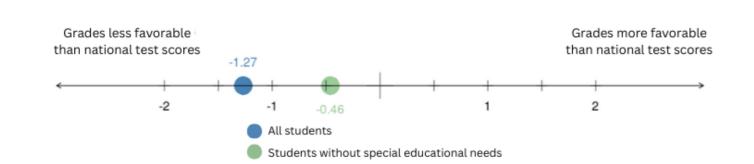
schools municipality

schools municipality





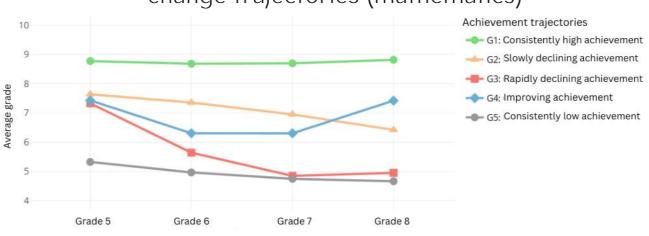
Evaluation: grades vs. national test results



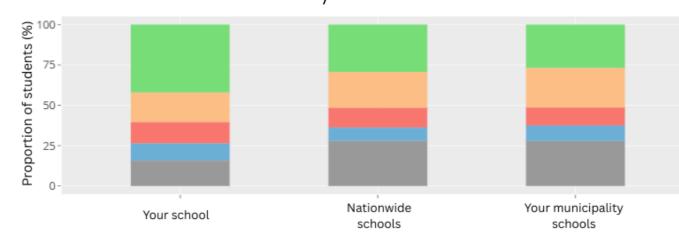
ACHIEVEMENT TRAJECTORIES

Five achievement trajectories were identified by analyzing changes in both Lithuanian language and mathematics grades in Lithuanian schools.

Nationwide patterns of the five achievement change trajectories (mathematics)



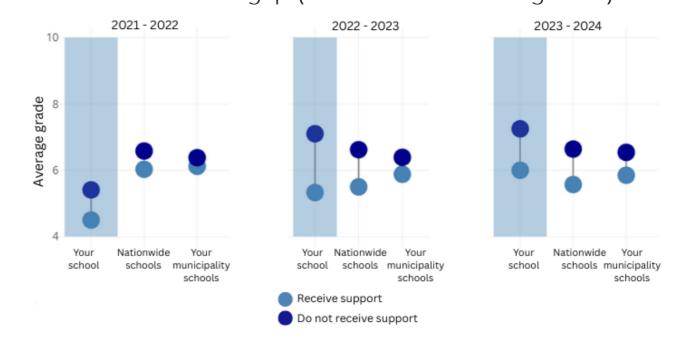
Proportion of students per grade change trajectory in your school



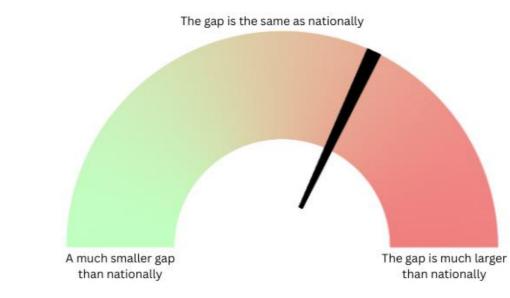
5 ACHIEVEMENT GAP

This section displays information on the achievement gap between students from different socio-economic backgrounds (students who receive support and those who do not). Resilient students are those who receive support but still achieve higher grades than the average student who does not receive support.

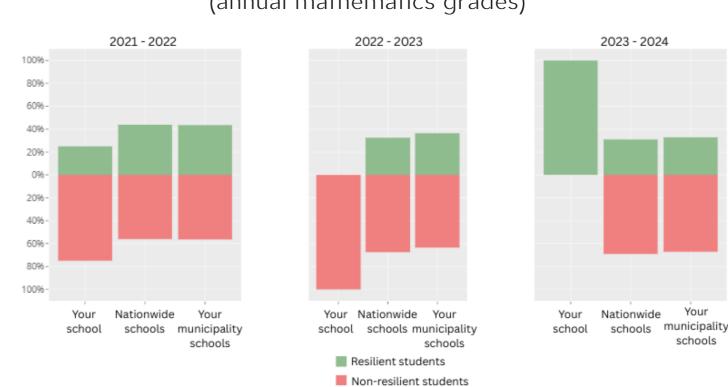
Achievement gap (annual mathematics grades)



How does your school's achievement gap compare to the national situation?



Proportion of academically resilient students (annual mathematics grades)



6 CONCLUSIONS

The No-Gap tool helps schools interpret large-scale student achievement data by summarizing socio-economic context, achievement indicators, and learning patterns. These insights schools guide understanding how their students compare nationally and where additional support is needed.

7 FUTURE PLANS

We plan to expand the tool to include more grade levels and improve system performance and usability. Schools will be able to download their own reports in needed formats, making it easier to use the insights for internal planning or to present to local authorities.







