

Policy brief: Critical Thinking, Media, and Democracy in an Age of Unchecked Technological Development

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Education against Technological Intrusion

The ever-accelerating digital technology development brings convenience and entertainment, but creates new avenues for exploitation and manipulation. It may threaten democracy through the spread of fake or misleading information on the Internet. As digital technology is part of everyday life, it needs to be addressed through education so that people can use it competently and understand its limitations and impact on society.

This brief seeks to answer the following questions:

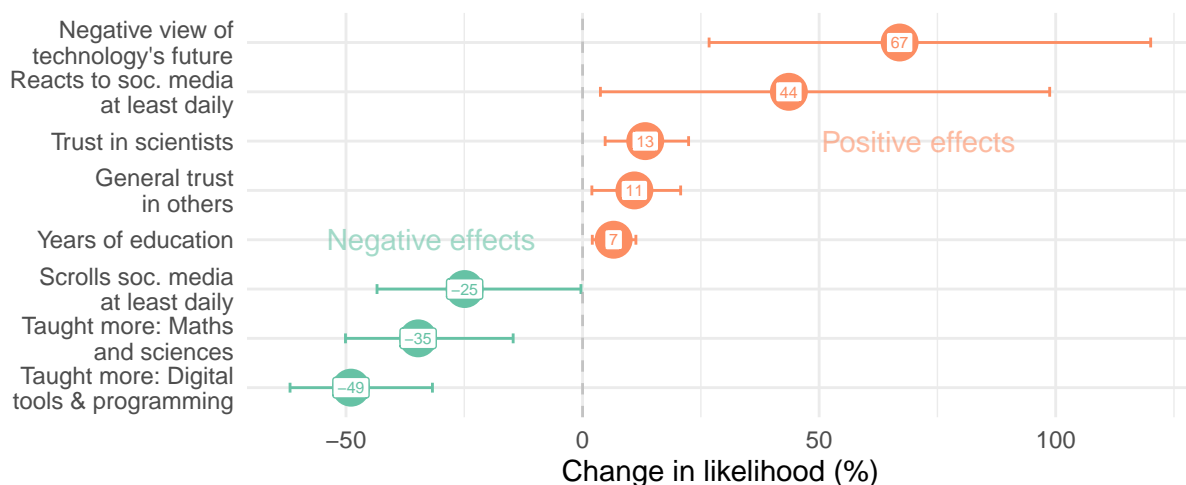
1. What influences Europeans' view that **critical thinking, media, and democracy should be taught more in compulsory education** in a time of rapid technological development?
2. What **policy recommendations can be formulated** to encourage this view?

The Demand for Civic Education

In the CRONOS3 survey, Europeans from 11 countries were asked "Which topics would you like to see being taught more in compulsory education?". They could choose up to 3 answers from a list of 6 categories, one of which was "Critical thinking, media and democracy". Across participating countries, as many as 73% of Austrians and as few as 31% of Hungarians selected this option. We analyzed 21 factors related to STEM education, modern technology use, and demography to understand what drives this support.

Factors of Support for Critical Thinking, Media and Democracy Education

Negative view of technology's future and reacting to social media are the strongest positive drivers; preferring more STEM education means lower support for critical thinking, media and democracy education.



Source: Own elaboration based on CRONOS and ESS survey data. Dots represent percentage change in likelihood; lines indicate uncertainty.

Click to see an [interactive plot for 21 studied factors](#).

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Value of Normative Orientations

The most impactful factor is education: **with every completed year, the likelihood of supporting more critical thinking, media, and democracy education increases by 7%**. A person who finishes high school is over 80% more likely to see the value of such education than someone with no formal education.

Next are trust in scientists and general trust in others, which increase the likelihood of valuing this type of education by **13% and 11% per each step up**. Most striking is the effect of views about the changes technology will bring to society. **Those who expect them to be negative are 67% more likely to support an increase in critical thinking, media and democracy education.**

Recommendation 1:

Involve authorities from expert and scientific communities in debates on technology and its impact on everyday life. Include both positive and negative examples

STEM Education Does Not Go Along with Critical Thinking, Media and Democracy

The most surprising results indicate that respondents who want more "**Digital tools and programming**" and "**Maths and sciences**" in compulsory education are also respectively **49% and 35% less likely** to support increased critical thinking, media and democracy education. Respondents may perceive STEM and civic-oriented education as competing paths.

Recommendation 2:

Introduce in STEM education curricula more critical thinking and civic-oriented training to raise awareness of social responsibility related to technology development. Introduce technology-focused elements in civic-education curricula to increase understanding of its impacts and limitations.

Engagement with Social Media Matters

Scrolling through social media feeds at least once a day **decreases by 25%** likelihood of support for critical thinking, media and democracy education. By contrast, reacting to social media content (e.g. commenting) at least once a day **increases it by 44%**. Reacting to social media raises awareness of the need for civic competencies, while passive consumption of its content decreases it.

Recommendation 3:

Access to social media should be limited or controlled among the youngest and relaxed over time, following training in how to safely and responsibly engage with it.

The Importance of Country Context

All previous results hold regardless of country context. Nevertheless, countries differ significantly in their support for critical thinking, media and democracy education. **In Hungary the likelihood of support is 73% lower, in Czechia 72% lower, and in Poland and Portugal 71% lower than in Austria**, the reference country.

Analytical note

We studied 21 factors of support for critical thinking, media and democracy education. Factors with no meaningful impact included: gender, age, household income, internet use frequency, posting on social media, social media attitudes, intentional digital avoidance, and ability to recognize AI-generated content. Logistic regression with country fixed effects was used.

Open data from CRONOS3 Waves 1–5 (<https://doi.org/10.21338/cronos3-w1>, <https://doi.org/10.21338/cronos3-w2>, <https://doi.org/10.21338/cronos3-w3>, <https://doi.org/10.21338/cronos3-w4>, <https://doi.org/10.21338/cronos3-w5>), ESS10 (https://doi.org/10.21338/ess10e03_3), ESS10sc (https://doi.org/10.21338/ess10sce03_2), and ESS11 (https://doi.org/10.21338/ess11e04_1) was used in the analysis. A total unweighted sample was $n = 10,081$.

GNU R code to reproduce our analysis are openly available at: <https://github.com/jakkada/I4NG-Datathon-2026>

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