

Investing in Human Capital During Wartime: Experimental Evidence from Ukraine

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National Student Support Accelerator

The Stakes: Human Capital Cannot Wait Until After the War

Failing to invest in human capital during conflict **undermines long-term economic development** — fewer years of schooling, worse health, lower earnings.

INTERNALLY DISPLACED PERSONS
62.5M
UNHCR, 2024

OF WHOM ARE CHILDREN
29.4M
women & children overrepresented

UKRAINE: POPULATION DISPLACED
11%
7th largest IDP crisis globally

Source: UNHCR Global Trends 2024; World Bank WDR 2023

What Displacement Costs Children

Families lose assets and stability

- ▶ **Physical assets** — homes, land, livestock
- ▶ **Human capital** — skills depreciation, credentials not recognised
- ▶ **Social capital** — community ties and networks
- ▶ **Economic stability** — legal barriers to work, persistent wage penalties

Children fall behind in school

- ▶ Enrollment does **not** mean learning
- ▶ IDP children show lower test scores and higher dropout rates
- ▶ Teacher bias is widespread
- ▶ Equivalent to **more than one year of lost schooling**

Children's mental health deteriorates

- ▶ **1 in 10** displaced persons has PTSD
- ▶ Mental health disorders **2–5× more prevalent** in displaced children than host populations
- ▶ Directly impairs learning and recovery

The Intervention: Online Tutoring for 6 Weeks

Online Tutoring Program — Requested by the Ministry of Education, implemented in partnership with Teach for Ukraine
6 weeks · 2 sessions/week · 1.5 hrs each · Grades 5–10 · Groups of 3 · 45 min Math + 45 min Language



Program 1 — Core

Tutors trained to align support with the learning objectives of the Ukrainian curriculum.



Program 2 — Core + Light-Touch Academic Support Tools

Assessment at enrollment · Grouping by ability level · Diagnostic reports for tutors · Curriculum-based formative assessments



Program 3 — Core + Academic Support + Psychosocial Support

Storytelling · Deep breathing · Icebreakers & tapping exercises · Mood check-ins (*Happy Faces*)

Study Design: Three Randomized Experiments

How we identify the impact

- ▶ Demand exceeded program capacity in each experiment — creating a clean basis for **random assignment** to treatment and control groups
- ▶ **10,000 students** across three experiments, enrolled via Teach for Ukraine's social media
- ▶ Estimated effects represent the **intent-to-treat** impact of being offered the tutoring program

What we measured

- ▶ **Baseline** — student, parent, and tutor surveys at enrollment
- ▶ **Follow-up** — learning assessments and validated mental health instruments immediately after the program (response rates: 62%, 49%, 54% across experiments)
- ▶ **Compliance** — 111,904 session-level observations by tutors and focus groups to support interpretation

Consent and assent required for participation. Stratified randomization ensures balance across key student characteristics.

Tutoring in Action: Inside the Virtual Learning Environment

Розв'язування системи двох рівнянь з двома змінними

$$\begin{cases} x + 3y = 2 \\ 2x - y = 11 \end{cases}$$

Розв'язалимо системою графічних методів.

$$\begin{cases} 3y = 2 - x \\ -y = 11 - 2x \end{cases} \quad | \cdot 4 | \quad \left. \begin{cases} y = \frac{2-x}{3} \\ y = 2x - 11 \end{cases} \right\}$$
$$\begin{array}{r} x \quad | \quad 2 \quad | \quad 11 \quad | \quad 8 \\ y \quad | \quad 0 \quad | \quad -1 \quad | \quad -2 \end{array} \quad \left. \begin{array}{r} x \quad | \quad 4 \quad | \quad 3 \quad | \quad 6 \\ y \quad | \quad -2 \quad | \quad 0 \quad | \quad 4 \end{array} \right\}$$

Watermarkly

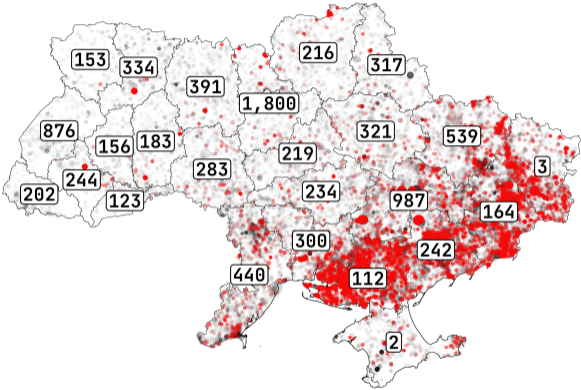
Zoom Meeting

Учасники: [video thumbnails]

Легко не впізнати! Ну такі маленькі собі. Я не самознаток! Ресурсивності! Споглядують кожну щупу! Треба розбиратися! Дайте їм трохи! Плаваю в темі!

UBS Optima Foundation x UBS x WORLD BANK GROUP x НАВЧАЙ ДЛЯ УКРАЇНИ x освітній суп

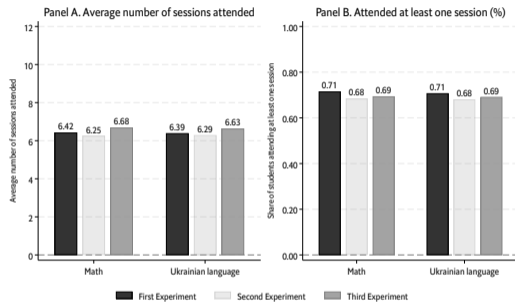
Reaching Students Across the Conflict Zone



Notes: War Fire Activity from Feb, 2023 to Mar, 2024
Source: The Economist

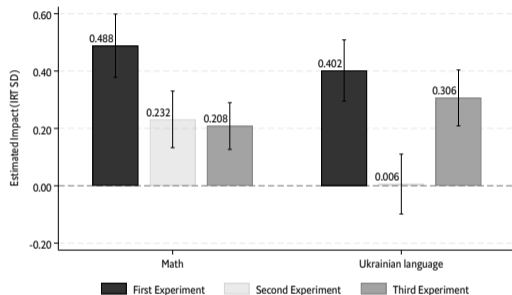
Findings: Feasibility of the Online Tutoring Program

70% of students attended at least one session, 6-7 sessions attended on average

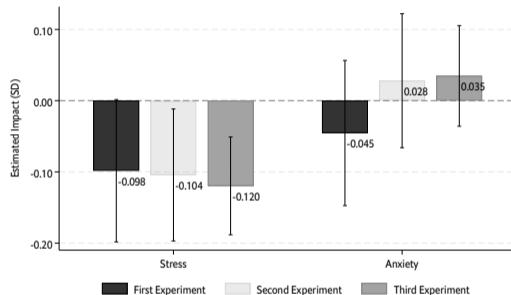


- ▶ Attendance was largely consistent over time
- ▶ Student engagement during tutoring sessions remained consistently high
- ▶ Overall, most absences were attributed to issues unrelated to the program

It Worked: Impact of the Online Tutoring Program on Learning and Mental Health



Students in the treatment group score up to 0.49SD higher in math and up to 0.40SD higher in language



Students in the treatment group improve their stress levels by up to 0.12SD, no improvement is observed on anxiety

Conclusions and Takeaways

- ▶ Online tutoring improved academic outcomes and mental health, with high take-up and participation — suggesting effectiveness, feasibility, and scalability in conflict settings.
- ▶ The benefit-to-cost ratios indicate that small investments (\$90/student) can yield large lifetime earnings gains, strengthening the case for prioritizing human capital during conflict.

Practical Takeaways

- ▶ Support low-cost, high-impact education programs in fragile contexts.
- ▶ Invest in scalable, resilient platforms that combine academic and psychosocial support.
- ▶ Partner with NGOs for delivery and explore private sector roles in tech and infrastructure.