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Education Technology Investments Require Local Evidence: Lessons from Côte d'Ivoire's PETV Programme

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Key messages

- **Require rigorous local evaluation before scaling education technology programmes.**

  Evidence from Côte d'Ivoire shows that television-assisted instruction did not improve long-term educational or labour market outcomes.

- **Base investments in education technology on context-specific evidence and cost-effectiveness assessments,** rather than assuming successful interventions from other countries will produce similar results.

Figure 1: Television usage in a classroom in Côte d'Ivoire for the PETV program



Notes: Source: Crépeau (1975).

Why education technology investments demand context-specific evidence

Many African countries continue to face persistent teacher shortages, unequal access to quality education, and limited resources to improve learning outcomes. These challenges have renewed interest in education technology as a means of expanding access to quality instruction, particularly in underserved communities.

Between 1971 and 1982, Côte d'Ivoire introduced the *Programme d'Éducation Télévisuelle* (PETV), one of Africa's earliest large-scale education technology initiatives. The programme combined televised classroom instruction with teacher training to improve learning quality, reduce rural–urban disparities, and address shortages of qualified teachers.

Although the programme initially improved some education indicators, including reducing grade repetition and narrowing rural–urban disparities, it was discontinued because of high implementation costs, operational challenges, and growing political resistance.

Today, governments and development partners are once again investing heavily in digital and technology-assisted learning. The PETV experience provides valuable evidence on whether such investments produce lasting educational and labour market benefits, helping policymakers make more informed decisions about future education technology programmes.

Data and methodology

This study examines the long-term effects of Côte d'Ivoire's *Programme d'Éducation Télévisuelle* (PETV), a large-scale education technology initiative implemented between 1971 and 1982. The objective is to assess whether exposure to television-assisted instruction during primary school translated into improved educational attainment and labour market outcomes later in life.

The analysis uses data from the World Bank's Living Standards Measurement Study (LSMS), which provides information on individuals' educational attainment, employment status, and demographic characteristics. To identify the causal effect of PETV exposure, the study exploits the

abrupt nationwide termination of the programme in 1982. It compares individuals who entered primary school during the PETV period (1975–1981) with those who entered after the programme ended (1982–1988).

A Regression Discontinuity in Time design is used to estimate the programme's impact. The year of primary school entry serves as the running variable, while standard demographic controls and regional fixed effects are included to improve the precision of the estimates.

By examining outcomes many years after programme participation, the study provides rare evidence on the long-term consequences of a large-scale education technology intervention. The findings offer insights that can help policymakers assess the potential benefits and limitations of similar technology-assisted learning initiatives being considered today.

Key findings

The study finds that television-assisted instruction under the PETV programme did not produce better long-term educational or labour market outcomes than conventional education.

- Individuals exposed to PETV were around 10 percentage points less likely to attain lower secondary education than those who were not exposed.
- The programme had no measurable effect on upper secondary education, tertiary education, or labour market outcomes, including employment in high-skill occupations, self-employment, or government employment.
- The findings suggest that substantial public investment in television-based instruction did not translate into sustained improvements in educational attainment or employment outcomes.

These results highlight the importance of evaluating education technology interventions using local evidence before committing significant public resources or expanding similar programmes.

Policy options

Governments seeking to improve education quality while addressing teacher shortages have several policy options (Table 1).

The evidence from Côte d'Ivoire suggests that education technology should complement—not replace—investments in strengthening education systems and teacher capacity.

Table 1: Policy options for improving education quality

Policy option	Potential benefits	Key considerations
Strengthen the teacher workforce through recruitment and professional development	Builds long-term education system capacity and supports sustained improvements in learning.	Requires substantial financial investment and sustained implementation.
Introduce technology-assisted instruction alongside classroom teaching	Can expand access to learning where qualified teachers are limited.	Should only be scaled after demonstrating effectiveness, affordability, and sustainability within the local context through rigorous evaluation.

Table 2 shows that television-based instruction stands out for its combination of moderate cost and high impact demonstrated in several country contexts, making it a financially attractive option compared to recruiting and training unqualified teachers, which tends to yield only low impact despite its high cost. The PETV experience nonetheless cautions that results are context-specific and that alignment with secondary transition requirements must be carefully ensured.

Policy recommendations

1. **Require rigorous local evidence before scaling education technology.**

   Ministries of Education and development partners should commission independent evaluations before expanding technology-assisted learning programmes, recognising that successful experiences in other countries may not produce similar outcomes locally.

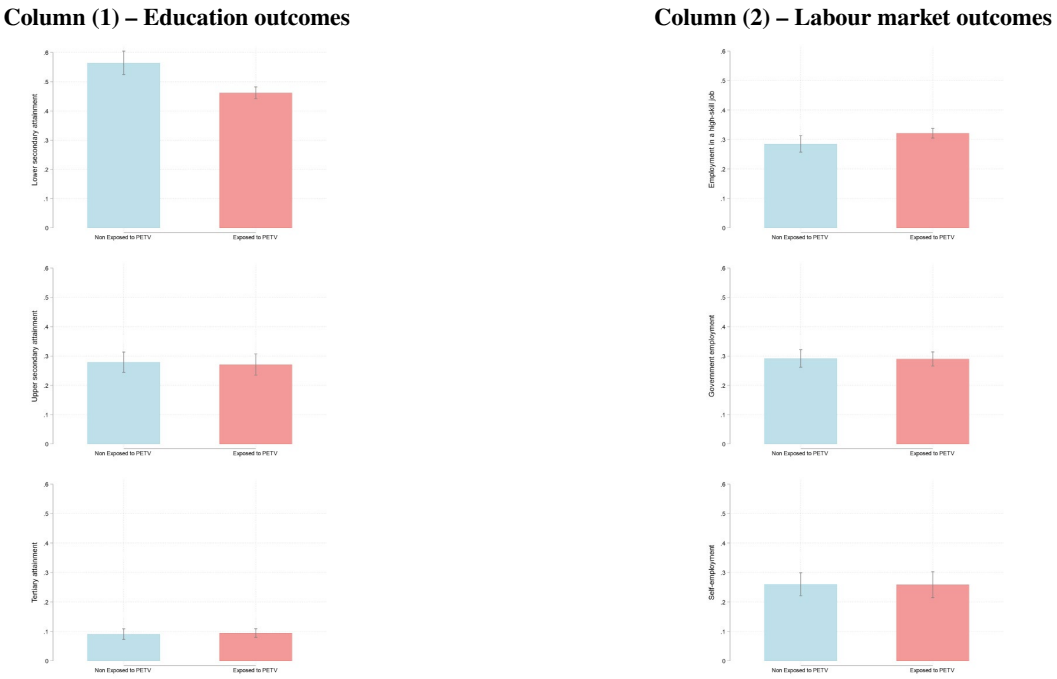
2. **Evaluate long-term outcomes, not only short-term learning gains.**

   Education technology initiatives should be assessed based on students' progression through the education system and later labour market outcomes, rather than immediate improvements in classroom performance alone.

3. **Compare education technology investments with alternative education reforms.**

   Governments should undertake cost-effectiveness analyses that compare technology-based interventions with other investments, such as strengthening teacher recruitment, training, and school infrastructure.

Figure 2: Impact of the PETV on education outcomes (column 1) and labour market outcomes (column 2)



Notes: The graphs compare individuals who were exposed to the PETV program during their primary school years and those who were not exposed. The bars represent the predicted probability for each group, after adjusting for observable characteristics using the regression model. The blue bar corresponds to individuals not exposed to PETV, while the red bar represents those exposed.

Table 2: Comparing teacher recruitment with television-based instruction

Policy option	Impact	Cost	Political feasibility	Risk
1. Recruit and train unqualified teachers	Low	High	High	Limited availability of teachers for long-term training
2. Television-based instruction	Extremely high in some countries (but context specific)	Moderate	High	Repeating past failures; misalignment with secondary transition

4 **Build local capacity to design, implement, and evaluate education technology.**

Sustainable education technology programmes require strong local technical, pedagogical, and evaluation capacity to ensure effective implementation and continuous improvement.

Policy roadmap

The findings of this study counsel caution rather than immediate action. The roadmap in Table 3 is therefore structured around evidence-building and critical assessment before any deployment decision is made. Each stage is conditional on the conclusions of the preceding one.

Table 3: Policy roadmap

Time horizon	Actions	Responsible actors
Short-term (0–2 years)	Commission independent, systematic reviews of edtech evidence in their specific country context, explicitly including studies with null or negative results (such as the PETV experience) before committing any resources to television-based instruction.	Ministry of Education, independent research institutions, and donors.
Medium-term (2–5 years)	Small-scale pilots should be conducted with pre-registered evaluation. Null or negative results should lead to discontinuation. Local expertise must be central to implementation from the outset.	Ministries of Education, curriculum development agencies, and independent evaluators.
Long-term (5+ years)	Scaling should only occur for interventions that have demonstrated positive effects in rigorous evaluations.	Governments, donors, finance ministries, and infrastructure planners.

About this brief

This brief is based on the AFEP Working Paper *Long-Term Effect of Television Usage in the Classroom: Evidence from the PETV Program in Côte d'Ivoire* (Ndayikeza, 2026).

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