

Digital Finance for the Real Economy: Education

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Digital finance can help make universal access to quality education a reality.



Sustainable Development Goal No. 4:

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

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Photo: Jon Snyder

Development Challenges in Education

The stakes are high: Benefits of education¹

Income



Increase in an individual's earnings with each additional year of education.

Health



A child whose mother can read is **50%** more likely to live past the age of 5.

Poverty



420 million could be lifted out of poverty²

If they received a secondary education. This would reduce the number of poor worldwide by half.²

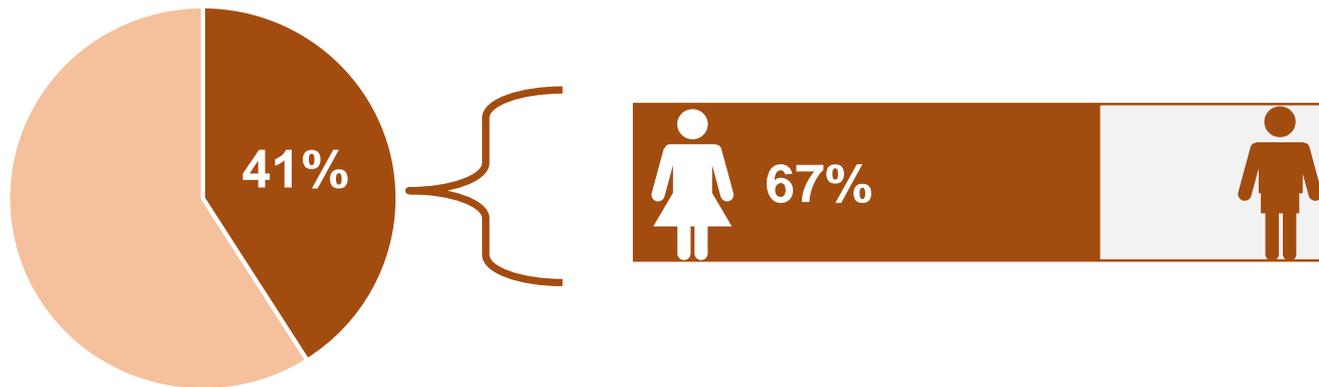


Education crisis: Many children do not attend school ...

263 million children and youth out of school worldwide⁵

Of those not currently in school, 41% will never enroll.⁶

Of those who will never enroll, 2/3 are girls.⁷



For those in school, attendance is often inconsistent—they are asked to leave when their parents can't pay.

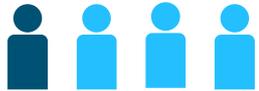
Development Challenges in Education

Education crisis: Even those in school are not learning basic skills

“Schooling is not the same as learning. In Kenya, Tanzania, and Uganda, when grade 3 students were asked recently to read a sentence such as “The name of the dog is Puppy,” three-quarters did not understand what it said.”

– World Development Report, 2018¹⁴

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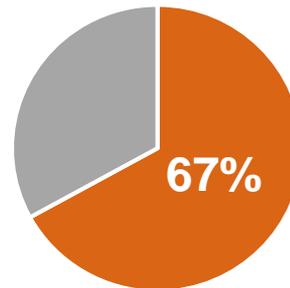


young people in low- and lower-middle income countries are illiterate⁴

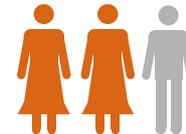
80%

of grade 2 students in India and Ghana could not read a single word of a short text¹⁴

758 million adults cannot read and write³



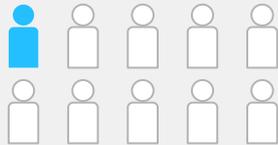
Of the adults who cannot read and write, two-thirds are women.³



Development Challenges in Education

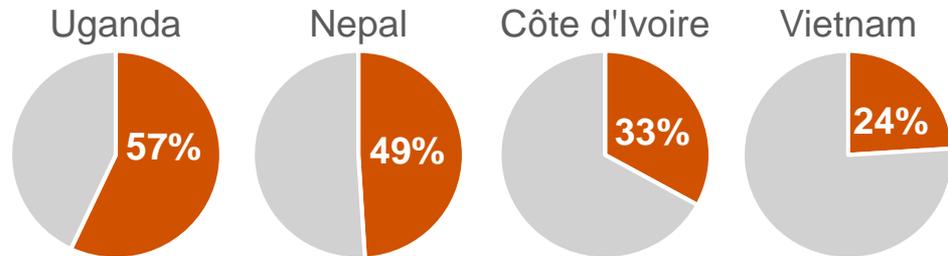
Poverty prevents many children from attending school

Inequitable distribution of resources in low-income countries:



are allocated to educate the **top 10%** most educated students¹⁵

In low-income countries, an **average of 40% of education spending comes from households**.¹⁶ That figure varies by country:



In 12 African countries, **nearly half of the household's education budget was spent on expenses other than school fees**.¹⁷ Even in countries with free public school, the cost of books, supplies, uniforms, and transport can be prohibitive for low-income households.



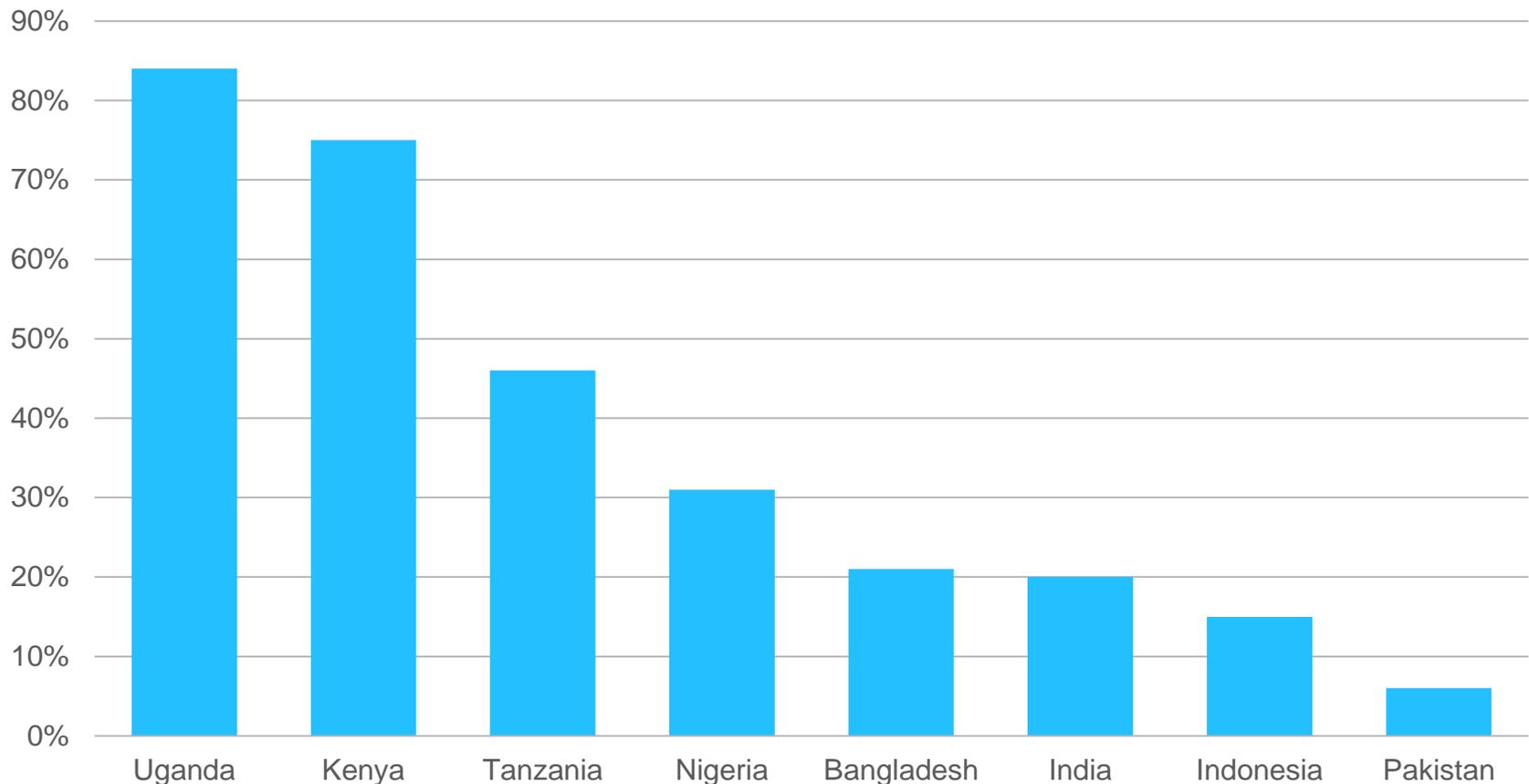
All of this **disproportionally impacts low-income households** whose children go to schools that receive less government funding and are less likely to be able to contribute themselves.¹⁸



Development Challenges in Education

Families often lack the funds to keep children in school on a consistent basis

Percent who have lacked funds to pay part or all of schooling costs



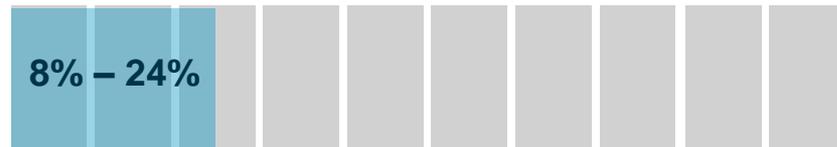
Development Challenges in Education

In Uganda, education is cost-prohibitive for many low-income families



Those just above the poverty line (middle 40% of the population) face difficult trade-offs among other expenses (health, food) or prioritize boys over girls.

Percentage of annual income devoted to education of ONE child



For those below the poverty line (bottom 40% of the population), the cost of education is prohibitive.

Percentage of annual income devoted to education of ONE child



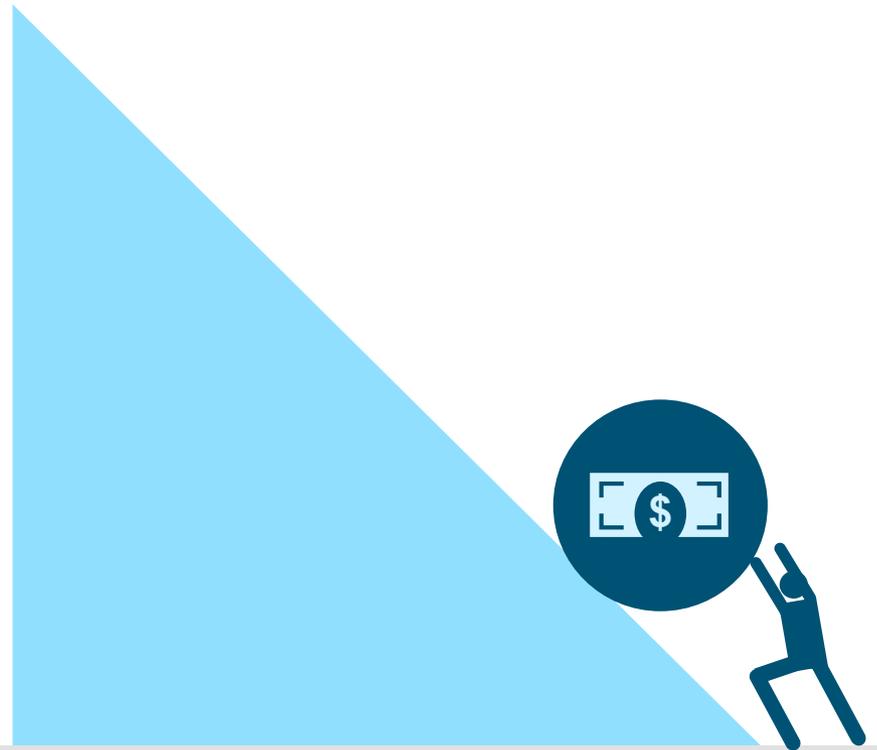
Development Challenges in Education

Making payments can be expensive and time consuming for many households

Unpredictable costs beyond tuition
(books, uniforms, transport, activity fees)

Lumpy payments due at the beginning
of each term don't always correspond to
when money is available

Inconvenience of cash results in wasted
time and money making payments at the
school or bank, often several times per
term until payment is made in full.¹⁹



“You have to pay in bits because it's hard to have a lump sum.” — Charles, Uganda

Development Challenges in Education

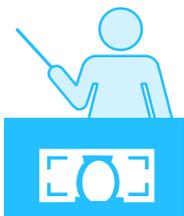
Cash-based systems at schools waste resources and contribute to the high cost of education



Paper-based systems for managing payments and data on employment and attendance are subject to human error and are more likely to produce **inaccurate and limited data**. Government budgets and capitation grants from governments to schools are based on these data .



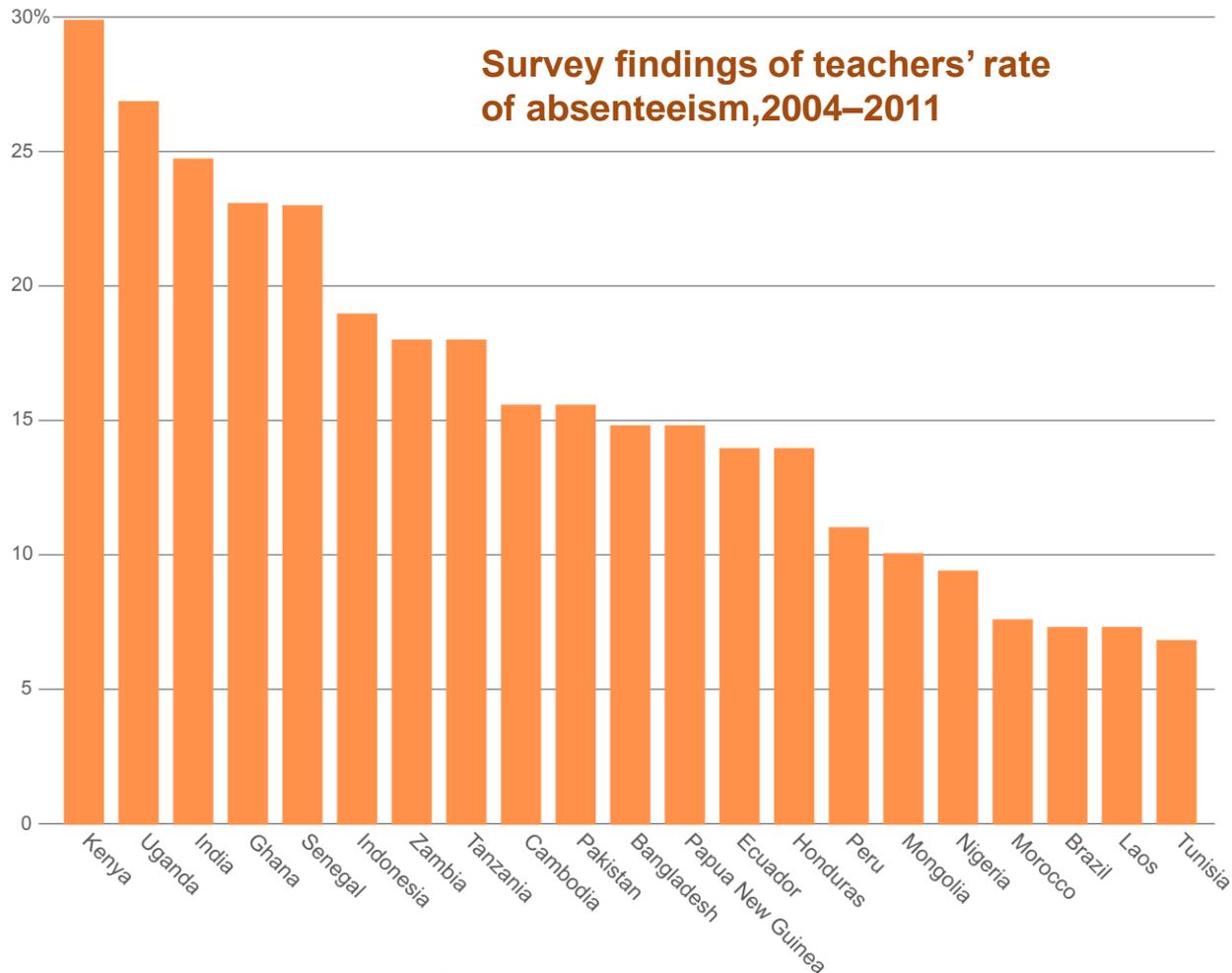
Lack of controls can allow for leakage and overcharging parents. In addition to school fees, schools often charge parents for exams and activities, even when prohibited by the government.



Insufficient accountability and transparency contributes to “ghost teachers.” In India, ghost teachers who collect a salary but do not do their job cost the government **an estimated \$1.5 billion per year**.²⁰

Development Challenges in Education

Cash-based systems contribute to teacher absenteeism, which impedes academic success



Teachers travel long distances to collect a salary, which results in time out of the classroom and contributes to low-quality education.

Chronic challenges with teacher absenteeism cost an estimated 10–24% of primary education expenditures.²¹

Teachers in attendance often spend less than 50% of the academic day teaching.

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Roles for Digital Finance

Digital finance can address several systemic barriers to high-quality global education



Improve Transparent Use of Public Funds

Increase accountability and oversight of funds in the education sector.



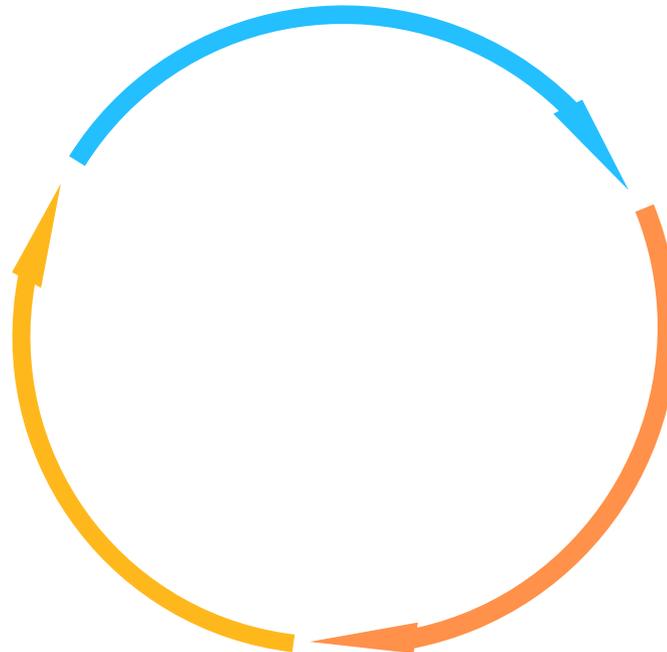
Expand Access to Financial Services

Financial products could help more parents keep their children in school.



Increase Teacher Presence

Improve teacher accountability; reduce time spent to collect salaries.



Roles for Digital Finance

3 ways digital finance can support systemic change and remove barriers to education

1



Digitize School Fee Payments

Make it easier for households to make payments.

2



Digitize Savings, Credit, Remittances

Provide tools for parents to better manage the cost of education.

3



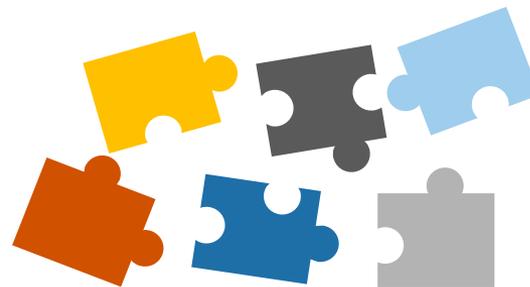
Digitize Teacher Salaries

Reduce time and cost for teachers to collect salary.



Roles for Digital Finance

1. Digitize School Fee Payments



Benefits

- Households **save time and money**
- Better **transparency and controls** at schools, less potential for leakage
- More **automated and accurate record keeping**, which can include attendance and performance data
- **Mobilize funds from the social network** to keep children in school

Challenges

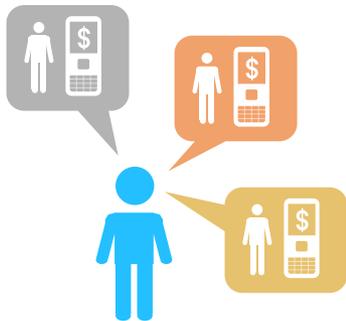
- **Limited school capacity and infrastructure**: electricity, connectivity, computers, and staff capacity.
- **Value proposition** to parents and schools. May save time and/or money and improve convenience, but also requires behavior change.
- **Informal record keeping** allows for negotiation between parents and schools.
- Need to balance accountability with **local customs and social norms**.



Roles for Digital Finance: Digitizing School Fee Payments

Making payments easy for schools and payers can improve payment rates and attendance

Rex Mercury, Kenya



Step 1

Students provide contact information for all those who help pay for school (Payers)



Step 2

School sends SMS invoice to all Payers informing of student balance and payment instructions.



Step 3

Payers use M-PESA to send funds to school, via Rex Mercury platform.



Step 4

School uses app to reconcile student accounts and monitor attendance and performance.



Roles for Digital Finance: Digitizing School Fee Payments

Making payments easy for schools and payers can improve payment rates and attendance (cont'd)

Key Elements of Rex Mercury Model



Hold in-person parent meetings to support registration process. Even though parents were familiar with M-PESA, using the service to pay school fees was new to them .



Make it as easy—and as cheap—as possible to make payments. Requiring payers to enter a school ID, student ID, and amount was too difficult. Instead, the school and Rex use back-end reconciliation to match phone numbers to student accounts.



Use an app to track payments, and potentially more. The school previously had no formal system for tracking outstanding balances. A simple app helps to clean up past balances and provide transparency and accountability going forward.



Pilot Results (ongoing)

- Improved transparency and accountability of student accounts and data
- Paying with mobile money is less expensive than cash or check
- Increased on-time payment



Roles for Digital Finance: Digitizing School Fee Payments

Government-led initiative in Côte d'Ivoire produced better education data through payments digitization

School Fee Digitization in Côte d'Ivoire

Government initiated digital payments for university and secondary school to digitize education data. GSMA reports:²²

- **99%** of secondary school registration payments were paid by mobile money in the 2015–2016 school year.
- Students and parents **save time and money** by paying the fee digitally.
- Mobile payments led to increase in overall fee collection and thus **larger budgets for schools**.
- **Better data** help the government monitor students and schools and better allocate resources.

Looking ahead, how to increase impact of digital school fee payments...

Only 9% of smallholder farmers in Côte d'Ivoire used mobile money to pay school fees.²³

Due to **limited infrastructure and familiarity with mobile money**, schools and parents use others to make school registration payments on their behalf.

Collaboration between government, mobile money providers, and schools could help to increase adoption and use of mobile money and generate more and better data for the education sector.





Roles for Digital Finance



2. Digital financial services for households²⁴

Benefits

- Products that **smooth payments** help match irregular income flows of low-income households.
- Quickly and efficiently **mobilizing funds from a social network** can increase funds available for school.
- Building savings for education can **reduce stress** of finding the money at the last minute.

Challenges

- **Longer-term credit products** to space out payments over the academic year are needed, but lenders are reluctant to lend for longer periods.
- **Saving for school** in advance can be difficult to prioritize among other pressing needs and competes with notion that money should be “working” at all times.





Roles for Digital Finance: Education Finance



Mobile-based savings can help parents stay on track with education savings

Econet, Zimbabwe

Econet's mobile-based savings account helps families save gradually for their child's school fees (pilot launched January 2018).



Product Features

- No minimum monthly savings.
- SMS reminders to keep customers on track.
- Savings are locked and can be used only for school fees.
- At the beginning of the school term, funds are paid directly to the school using EcoCash, saving parents time.



Roles for Digital Finance: Education Finance



Fenix International's school fee loan helped parents pay fees and keep children in school

Fenix, Uganda²⁵



Product offered to PAYGo solar customers with good repayment history on their completed solar loan. Solar unit acts as collateral.



Easy sign-up and approval process over USSD. Funds disbursed directly to customer's mobile wallet.

Repayment schedule provides for some flexibility and allows customers to manage repayment according to their own ability.

Education Outcomes

(self-reported by customers)

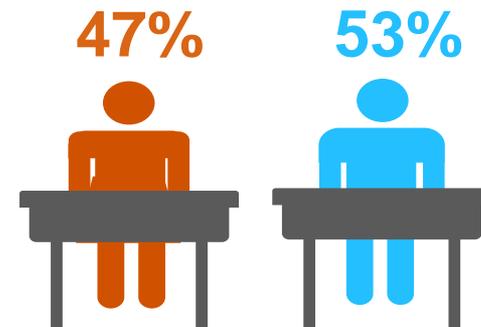
Higher level of attendance.

Only 15% missed more than one day of school vs 24% in control group.

Better academic performance.

91% reported improved grades vs 67% in control group.

Reached a similar number of **girls** and **boys**.





Roles for Digital Finance: Education Finance



Advans CI's digital credit product helped 24% more children start school in Côte d'Ivoire

Advans CI, Côte d'Ivoire ²⁶



Digital education loan (average size of \$165) was offered to select users of Advans' savings products, identified in partnership with farmers' cooperatives.



Cooperatives identified creditworthy borrowers, farmer training and education, and payment collections; they underwrote 30% of the education loan balance.



Easy sign-up and automatic approval over USSD. Funds disbursed directly to customer's mobile wallet at the time of school fee payment (Aug/ Sept); repayable over 3 months.

Outcomes

(self-reported by customers)

24% more children started school in the 2016 school year
(increase from 49% to 73%)

60% farmers said the loan amount met their children's educational needs

All 242 loans were repaid in full, on time. Based on the success of the pilot, Advans has increased the number of farmers it is lending to in the current season by **5X**



Roles for Digital Finance: Education Finance

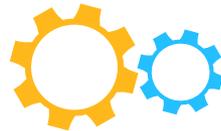


Facilitating domestic and international remittances can increase funds available for education

Flexipay, Kenya²⁷



Many families rely on routine remittances or occasional financial **support** from family and friends to support their children's education.



Sending digital payments directly to schools could reduce the number of children who miss school because of lack of funds.



Flexipay, a pilot in Kenya, found that children whose fees were paid via M-PESA **missed fewer days** than those not using M-PESA.



Researchers' assumption is that using mobile money allowed families to more quickly mobilize funds from their social network.

Evidence on International Remittances²⁸



Increase in remittances when the sender had the ability to **label funds for education**



Increase when funds were sent directly to school



3. Digitizing Teacher Salaries

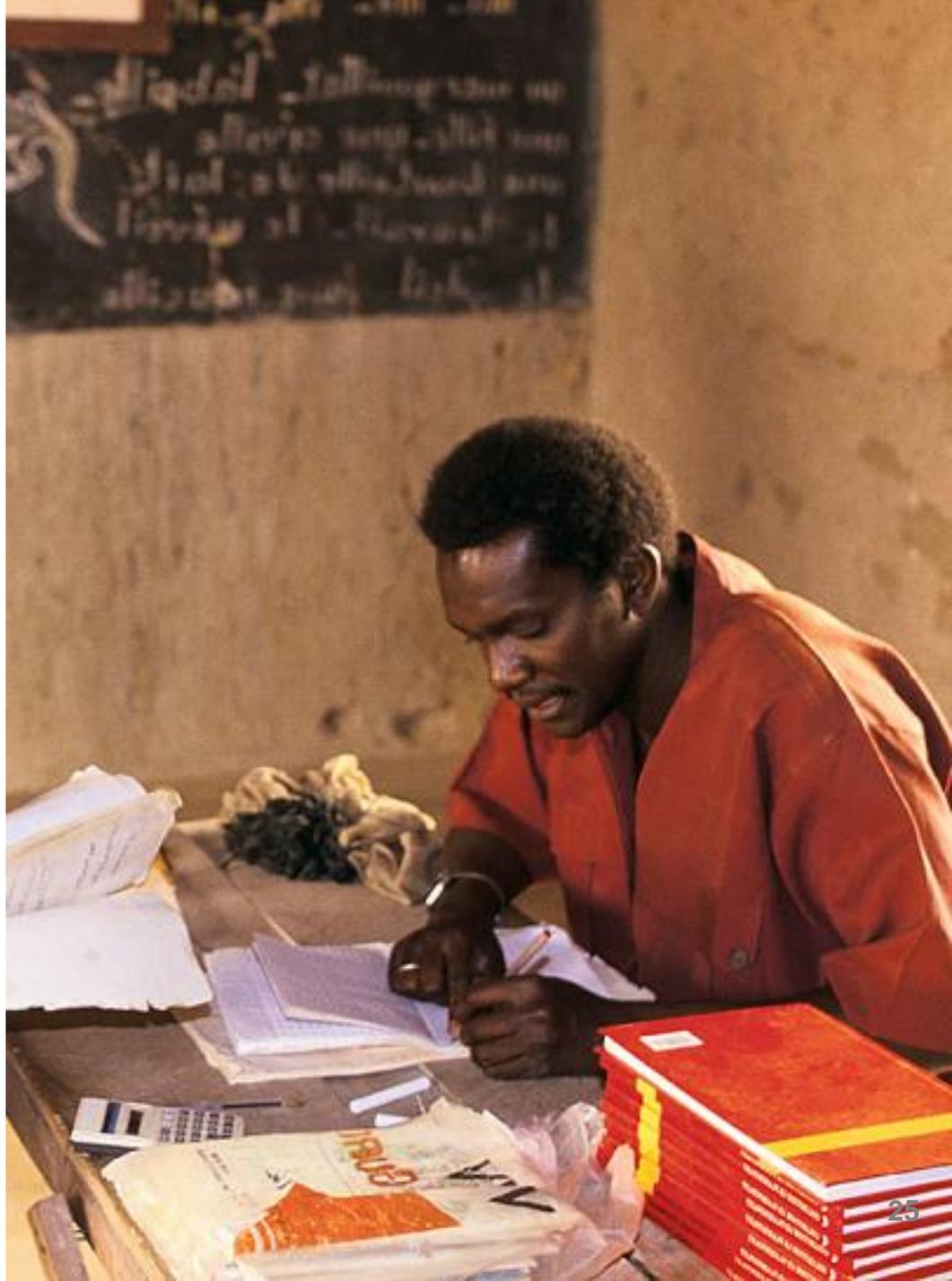
Benefits

- More **reliable** salary payments
- Increase **tracking and accountability** of teachers
- **Less time** spent collecting salaries
- Teachers give others in the community **mobile money advice and support**
- **Save money** due to reduced leakage and no ghost teachers

Challenges

- Political buy-in
- Requires **strong agent network** to manage liquidity challenges
- Building **ecosystem to reduce cash-out** requires significant behavior change for customers

Photo: © Curt Carnemark / World Bank





Roles for Digital Finance: Digitizing Teacher Salaries

Digital salary payments can save money and reduce the time teachers spend out of the classroom

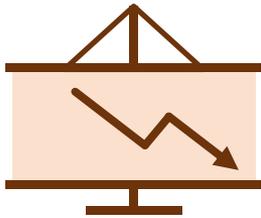
USAID Pilot to Digitize Teacher Salaries in Liberia²⁹



Biometric registration
allows government to link
salaries to attendance

**\$4
million**

Estimated annual cost savings
to government, enabled it to
cover 50% of cash-out fee for
teachers



Reduced cost to collect
salary from \$25 to \$2

96%

Reduced missed class time
Teachers spent more time in
class because they spent less
time collecting their salary



Reduced time to collect
salary from 2 days per
month to 25 minutes

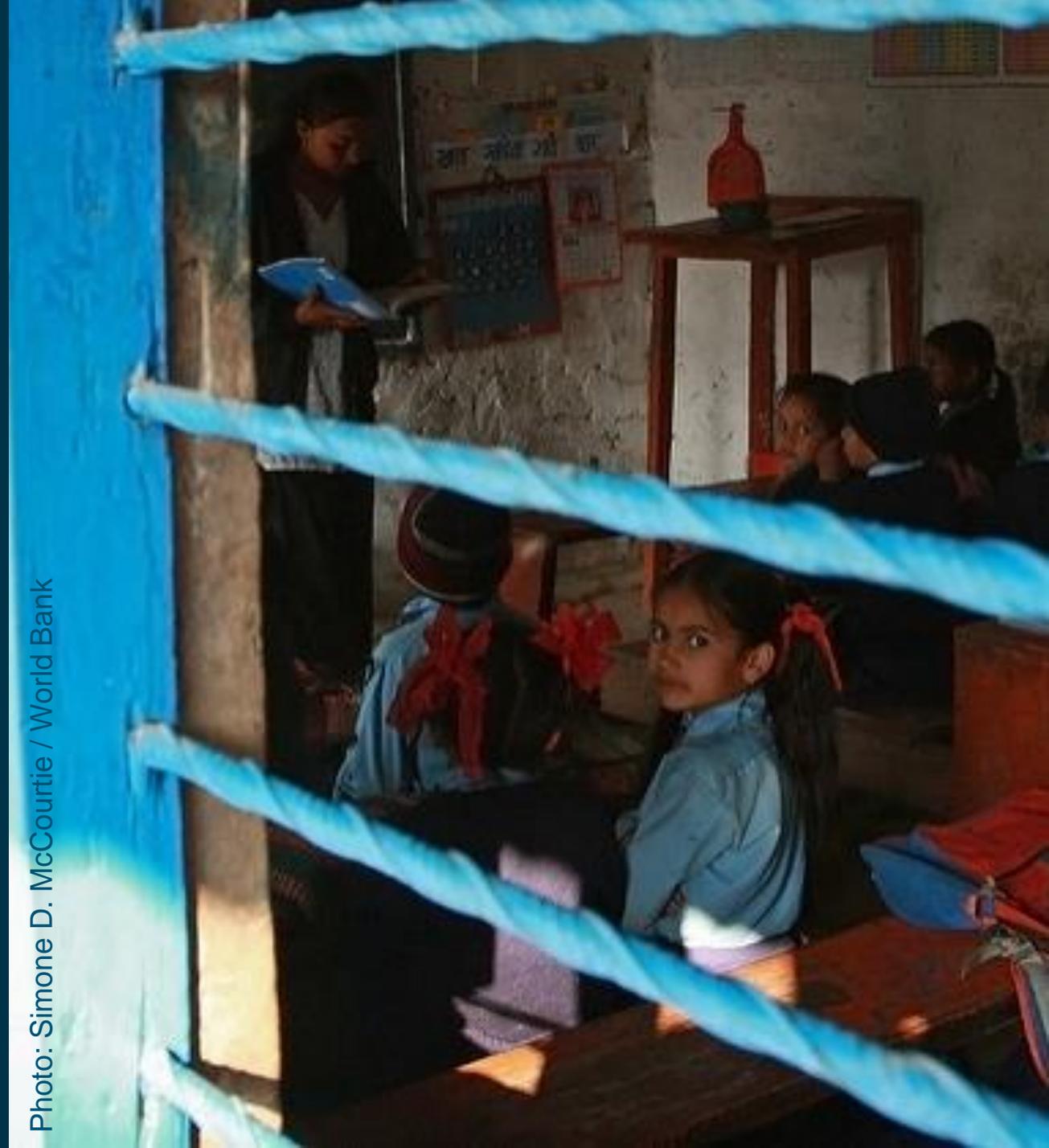
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Photo: Simone D. McCourtie / World Bank



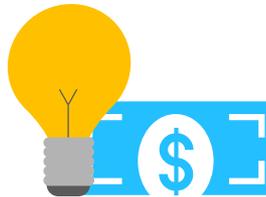
Opportunities

Topics for further research



Links between DFS and education outcomes.

Ongoing pilots link use of DFS to specific objectives, such as reducing cost, but not enough evidence links these efforts back to education outcomes. More evidence can lead to more funding from the education sector for long-term opportunities that improve the sector.



Experimentation with digital education finance products.

A few providers have created specific digital savings and credit products for education, but more innovation and experimentation is needed. DFS should help make it easier to expand access to credit for previously excluded customers and offer product terms that match customer needs, such as flexible payment.



More use cases. Mobile learning companies that offer short courses or tutoring support, paid in small amounts via mobile money, have potential to expand access to education and/or improve learning outcomes, especially in crisis and conflict settings. More work is needed to understand the potential impact of these products and how DFS can support their use.

Opportunities

New digital finance-enabled business models could benefit education



Digital Tutoring. These services can reinforce learning for those in school or replace the classroom for those out of school (due to poverty or crisis/conflict environments where schools are closed). Mobile money or digital vouchers could help make this affordable.



Adult Learners. The increase in smart phones can enable adults to use mobile money to pay for education that improves their employability and supports the shifting nature of work stemming from rural to urban migration.



Classroom Technology. Improvements in connectivity and availability of tablets and smart phones will enhance classroom learning experiences . Mobile payments can help parse content in small amounts, e.g., textbooks, and make it more affordable for providers to collect small payments from a distributed set of customers.

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End Notes

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