

Providing Books For Schools and Libraries in Africa:

Educational Return on Investment for Literacy Initiatives - A Cost-Benefit Analysis

Presentation to World Literacy Summit, Oxford University
April 2012

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Exploring Return on Investment of Donated Education Materials

- What is ROI?
- How is literacy linked to wealth?
- Who is interested in promoting global literacy?
- Why should we promote literacy in Africa?
- How do books impact literacy rates?
- How does Books For Africa improve literacy rates in Africa?
- How can we optimize the ROI of literacy programs in Africa?



What is Literacy?

The ability to identify, understand, interpret, create, communicate and compute information using printed and written materials associated with varying contexts.

Source: "The Plurality of Literacy and Its Implications for Policies and Programs."
UNESCO Education Sector Position Paper. 13. 2004.



What Do We Mean by Return on Investment?

Amount of profit, usually expressed as a percentage of the original total cost invested

BFA Donated Book:
1 child learns to read
50 ¢

E-book:
1 child learns to read
\$249.49

Locally Printed Book:
1 child learns to read
\$16.50

Source: www.dictionary.reference.com



Why Does It Matter?

10% increase in literacy = 0.3% increase in annual growth
(USAID Education Strategy/2011-2015)

More reading = more wealth!

AND

More wealth = more reading!

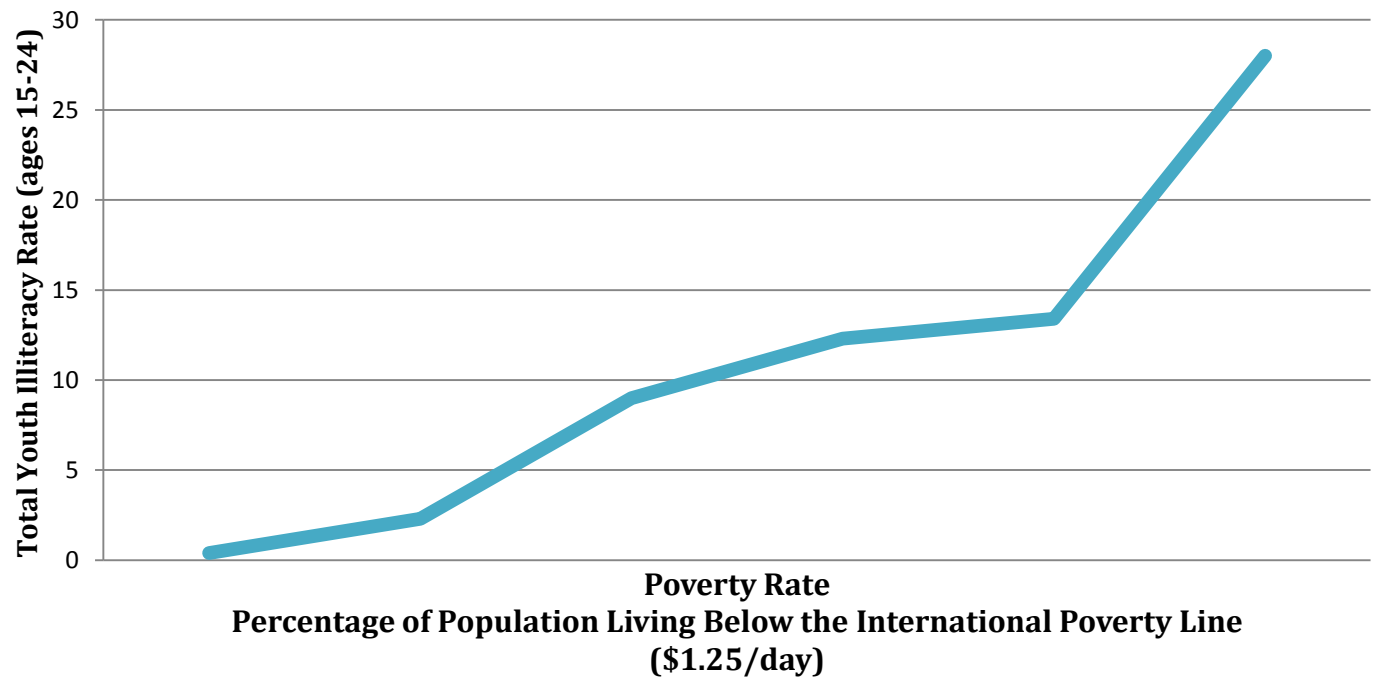


Pass the Books. Hold the Oil.

Thomas Friedman,
NY Times Op-Ed Columnist
March 10, 2012

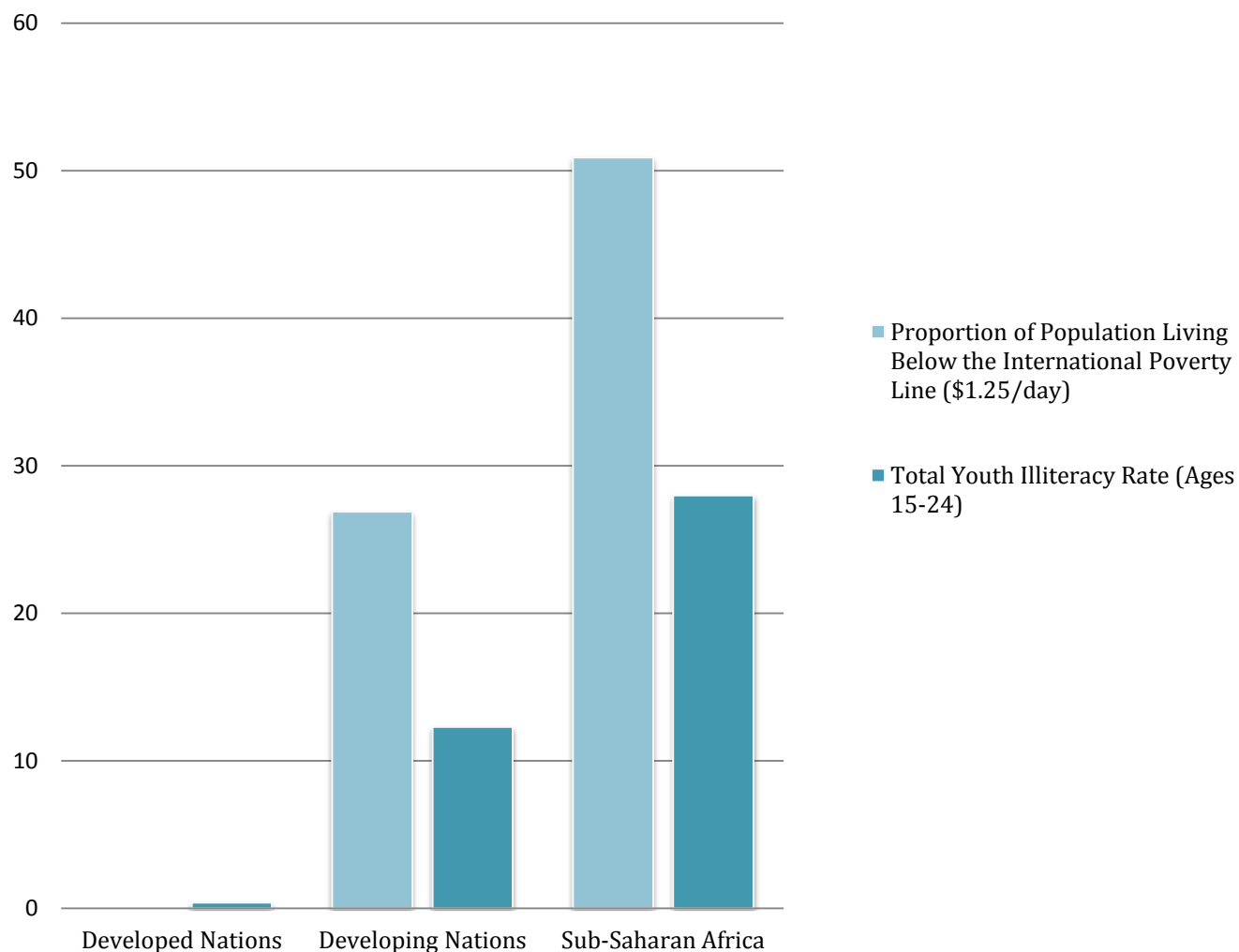
- OECD study compared Total Natural Resource Earnings (as % of GDP) and Program for International Student Assessment (PISA) exam scores for 65 countries
- Significant negative correlation between natural resource extraction and PISA scores
- **Combating the Natural Resource Curse: build a culture of learning**
“The only sustainable way is to grow our way out by giving more people the knowledge and skills to compete, collaborate and connect in a way that drives our countries forward” Andreas Schliecher, OECD

Global Poverty and Illiteracy Rates



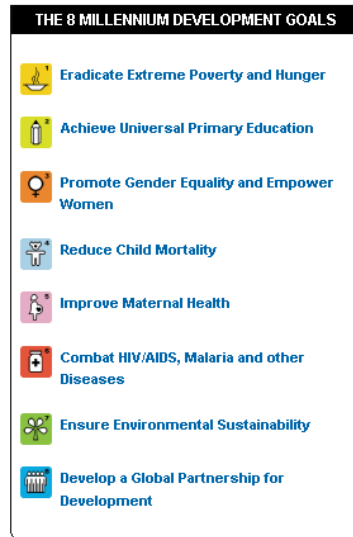
Developed Countries exhibit higher literacy and lower poverty rates than Developing Countries

Poverty and Illiteracy Rates



Source: The Official United Nations Site for the MDG Indicators. <http://mdgs.un.org/unsd/mdg/Default.aspx>

Millennium Development Goals: Literacy



Millennium Development Goal 2

Ensure that by 2012 children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.

Indicator 2.3

Youth literacy rate: ability to read of men and women ages 15-24

Millennium Development Goal 3

Eliminate gender discrimination in primary and secondary education.

Indicator 3.1

Ratio of boys to girls in primary, secondary and tertiary education

USAID Literacy Goals

Goal 1: Improved reading skills for 100 million children in primary grades

Result 1.1: Improved Reading Instruction

- Provide adequate age and language appropriate materials
- Establish school libraries
- Link teacher training to reading materials
- Support reading both in school and at home



Result 1. 2: Reading Delivery Systems Improved

- Improve distribution and use of books
- Develop relevant reading curricula
- Support appropriate, cost-effective and scalable technologies that improve reading or reading system performance

Result 1.3: Greater engagement, accountability and transparency by communities and the public

Major USAID Reading Initiatives 2012

Country	RFA Amount
Tanzania	\$50 million
Ethiopia	\$45 million
Uganda	\$57 million
Nigeria	\$50 million (estimated)
All Children Reading Contest	\$7.5 million



So, why focus on Africa?



INSIDE THIS WEEK: TECHNOLOGY QUARTERLY

The Economist

DECEMBER 3RD - 9TH 2011

[Economist.com](http://economist.com)

President Newt? Brace yourselves

Britain's coming recession

Why India needs Walmart

France tries to stay AAA

The science of ethical foie gras

Africa rising



BOOKS
FOR
AFRICA



December 2011

www.un.org/africarenewal

AfricaRenewal



United Nations
Department
of Public
Information

NEPAD

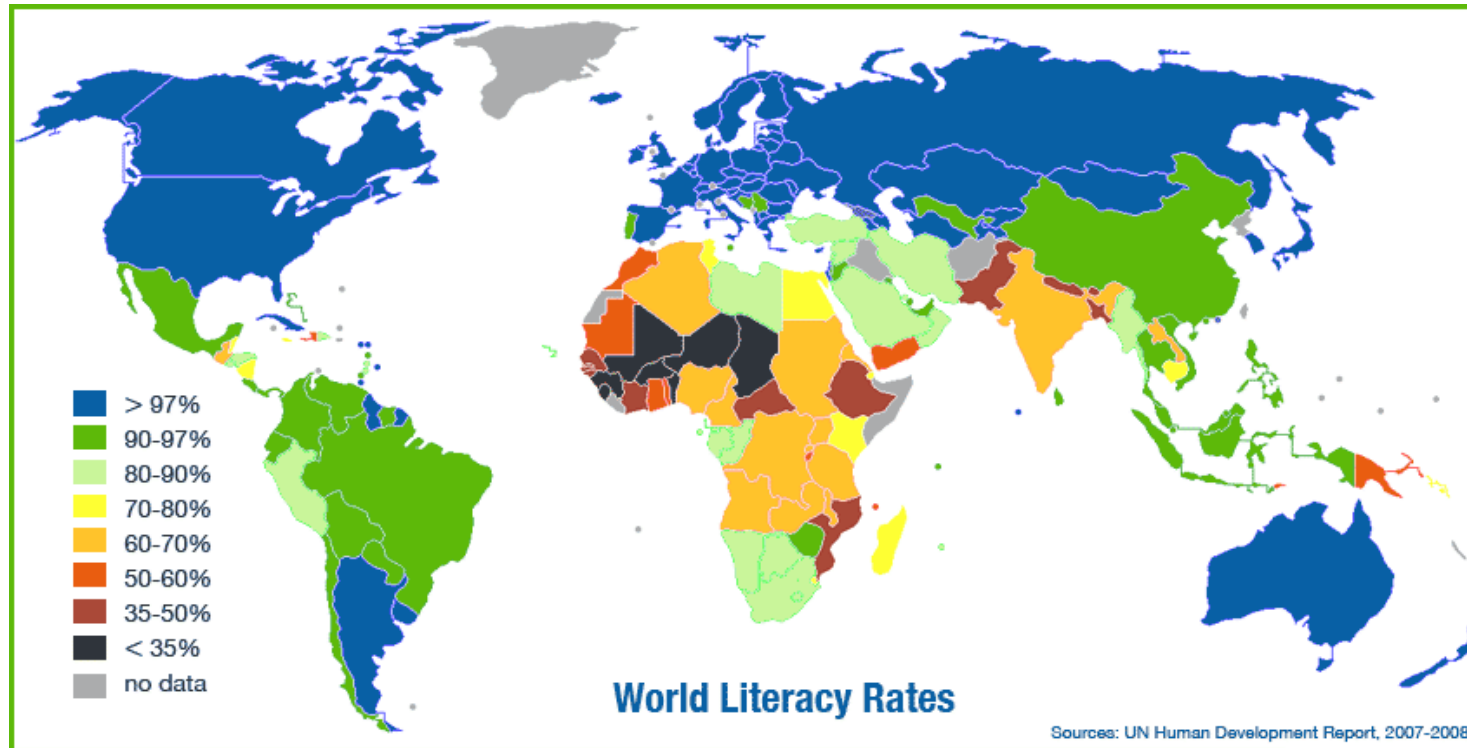
Building foundations for a new Africa

Social media for
a social cause

Millennium Villages:
a lasting impact?

Lesotho's economy catches flu

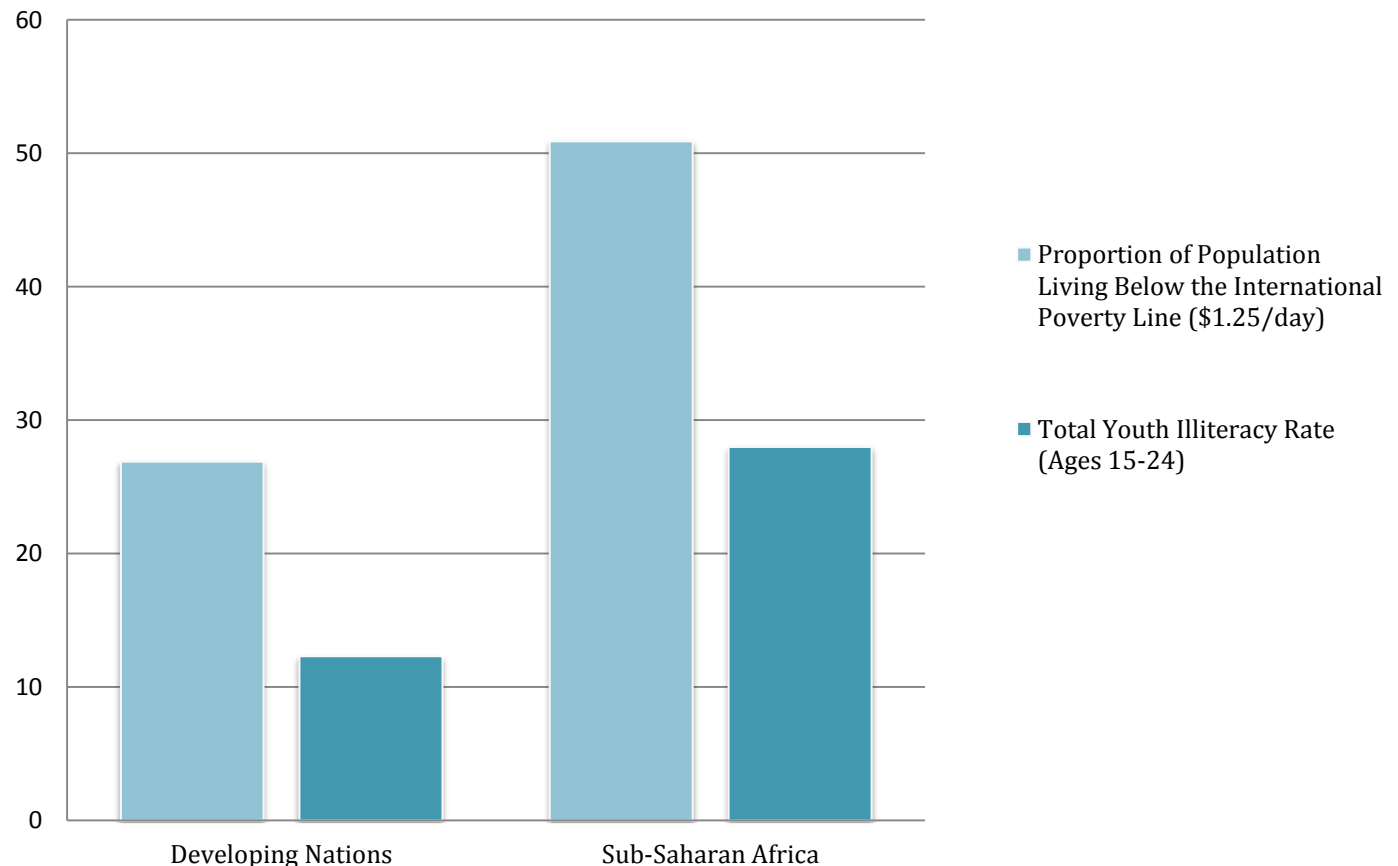
Literacy Rates in Africa are far below those in much of the world



Compared to other Developing Regions, Africa is lagging behind

- 2011 UN MDG Report: ½ of 63 million children not in school are in Sub-Saharan Africa
- UN estimates that to meet MDG indicator 2.3 Sub-Saharan Africa would need to double both teaching staff and classroom capacity

Poverty and Illiteracy Rates



Source: The Official United Nations Site for the MDG Indicators. <http://mdgs.un.org/unsd/mdg/Default.aspx>

Evidence That Books Increase Literacy

Books must be useful:

1. Content cannot be dated
2. Content must be in language that can be read and understood by the local population
3. Curriculum must be considered so that the materials can be integrated into the course of study
4. Types of books must be considered to fit community/school needs (e.g. textbooks versus readers)
5. Context of books cannot be too Eurocentric so that they are not useful for African student populations



Evidence That Books Increase Literacy

Books improve literacy as a part of an effective delivery model:

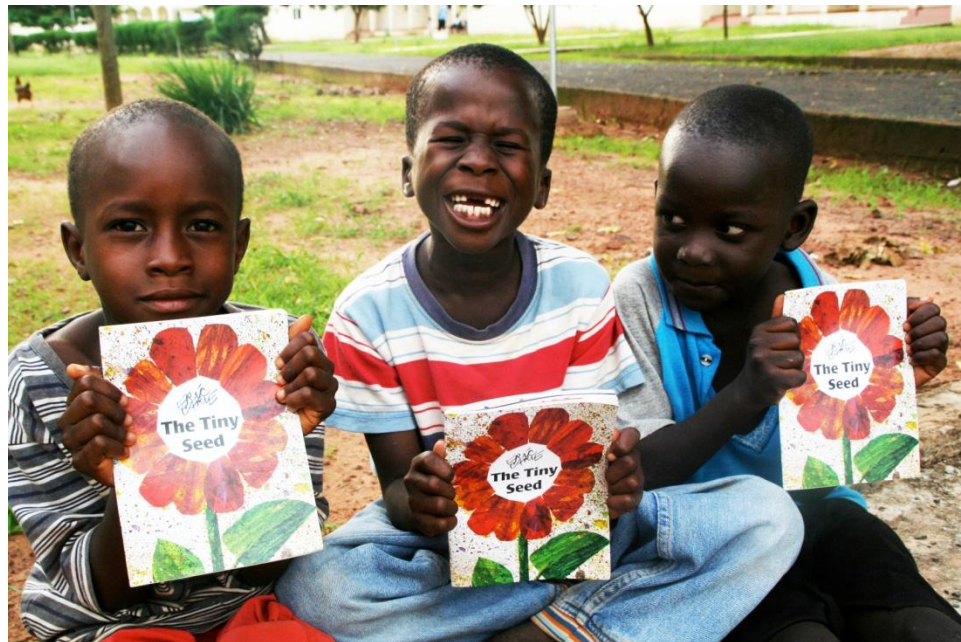
1. Stored in a proper library or school setting
2. Easily accessible by students and community
3. Can be checked out of library for home use, therefore increasing student exposure to reading materials



Evidence That Books Increase Literacy

World Bank Data (1987, 2002)

- Education projects in 89 African countries
- Confirmed books as useful in increasing literacy
 - Cost-effective delivery model
 - Customizable to curriculum, especially localized texts
 - Next to a good teacher, “a good textbook is the most effective medium of instruction”



Evidence That Books Increase Literacy

Michaelowa & Wechtler (2006)

- Education projects in 22 Sub-Saharan countries
 - 5-20% increase in literacy scores with 1:1 student to textbook ratio
 - 10% increase in literacy scores with presence of a school or classroom library



Fehrler, Michaelowa & Weber (2007)

- Complimentary study of education projects in same 22 Sub-Saharan countries
- Confirmed books as cost-effective, customizable and useful



Sources: Fehrler, S., Michaelowa, K. & Weber, A. *The cost effectiveness of inputs in primary education: Insights from recent student surveys for Sub-Saharan Africa*. Presented at Poverty Reductions, Equality and Growth Network Conference. Berlin, Germany, September 2007.

Michaelowa, K. & Wechtler, A. *The cost effectiveness of inputs in primary education: Insights from recent student surveys for Sub-Saharan Africa*. Paper presented at the Association for the Development of Education in Africa – Biennale on Education in Africa 2006

BFA Found that Donated English Text Books Positively Influence African Literacy Rates

- Case Studies in Tanzania and Liberia (2007-2009)
- Major factors preventing improved literacy rates
 - Low book access
 - Lack of library resources when books were supplied
 - Books designed for African curriculum would be more effective, but are not produced at critical mass



BFA Found that Donated English Text Books Positively Influence African Literacy Rates

- Advantages of donated books
 - Books had perceived value
 - Still a greater need for books, even after BFA shipments
 - No cultural harm to students caused by English books



BFA Found that Donated English Text Books Positively Influence African Literacy Rates

- English is official language of 19 African nations
- English-language books positively influenced reading comprehension scores
- Time with access to donated English language books led to statistically significant differences in reading fluency scores



Books For Africa Background



2011 Shipment Information

Country	Containers	Country	Containers
Nigeria	43	Swaziland	3
Ethiopia	26	Botswana	2
Ghana	25	Egypt	2
Kenya	14	Madagascar	2
Tanzania	14	Malawi	2
South Africa	10	Namibia	2
Uganda	9	Sierra Leone	2
Liberia	5	Zambia	2
Cameroon	4	Zimbabwe	2
Sudan	4	The Gambia	1
Somalia	4		

Totals: 178 Container units, 1.9 million books sent to 21 countries in 2011

BFA also delivered 643 used computers in 2011

How Does Books For Africa Deliver Quality Educational Materials to African Schools and Libraries?



\$10,300



\$10,300 = 40 foot container of 22,000 books



50 ¢ = one book

50 kids read that 1 book...



That's a penny per impact!

Average price of desktop computer = \$600



BFA sends computers to Africa for about \$220
RACHEL software the equivalent to 100 of books
An estimated value of \$650



Comparing delivery models in literacy programs

What has the greatest return on investment?

- Donated Books?
- E-Books?
- Locally Printed Textbooks?

Optimizing ROI

- Deliver valuable educational materials
- Use cost-effective delivery model
- Use scalable model in which supply reflects demand



Optimizing ROI: value of educational materials

- **New Books:**
current books have longer shelf life
- **Curriculum Relevance:**
school needs must drive materials delivered to integrate texts into curricula
- **Cultural Relevance:**
texts cannot be too Eurocentric so they will be relevant to African student experience
- **Language of Text:**
texts must be in language read by students



Optimizing ROI: cost-effective delivery model



How many books will we need?

- 400 million children in Africa (*UN Demographic Yearbook 2008*)
- 10 books per child to become literate
- **4 billion books** to address African book famine

Optimizing ROI: cost-effective delivery model

Cost of Donated Books



Content Cost: 50 ¢ per book

Delivery Model Cost: none

Sharing capability: Yes

Repair cost: minimal

Optimizing ROI: cost-effective delivery model

Cost of E- Books



Content Cost: \$10.49 (average download)

Delivery Model Cost: \$239 (e-reader)

Sharing Capability: limited

Repair Costs: Includes cost of fix and transportation

Sources: Median cost of Kindle, Nook and iPad e-readers: \$239

Average Cost of Top 100 Best Sellers on Barnes and Noble and Amazon: \$10.49

Optimizing ROI: cost-effective delivery model

Cost of Locally Printed Books



Content Cost: \$16.50

Delivery Model Cost: none

Sharing Capability: yes

Repair Costs: minimal

Source: Content Cost: median price of books available from publishers in Africa., adjusted from local currency to USD. Found at Africa Focus online book store and affiliates. <http://www.africafocus.org/books/publishers.php>

*Prices depend on exchange rate and transportation costs from publisher/store

Optimizing ROI: cost-effective delivery model



How much will it cost to send 4 billion books to Africa?

- *Donated books:*
50 ¢ (book) + 50 ¢ (shipping) = \$1/book
\$4 billion for donated books
- *E-readers:*
\$23.90 (device cost/ book for 10 books) + \$10.49 (download) = \$33.39/book
\$133.6 billion for E-readers
- *Locally Printed Books:*
\$16.50 (book, no ship cost)
\$66 billion for locally printed books

Optimizing ROI: scalable delivery model

Scalable models:

- resource pool must be able to grow with demand (for example: from a single country solution to a continent wide solution)

How many books do we have?

- Largest inventory: 4 million pre-owned text books at Follett Publishers (2010)

Are funds available on the international book market?

- Est. \$120 billion total receipts for book publishing
- US accounted for 25% of market
- US Domestic sales valued at \$16.6 billion



Conclusion



- Donated books can help
- Ideal system optimizes ROI and provides more literacy for available resources by including:
 - Donated books
 - E-books
 - Locally printed books



Thank you!

“Books promote literacy, which promotes education, which promotes rural and urban economic development.”

