

Storytelling with Data

How nonprofits can
measure and show
impact



A little about us!



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5 golden rules for storytelling with data

5 golden rules everyone will have in their toolkit by the end of this talk:

1. Answer 3 questions early on
 - a. Why should your audience care?
 - b. Why are you best positioned to solve this problem?
 - c. What is the desired outcome?
2. Good data collection matters
3. Understand your audience
4. Borrow from Others
5. Focus on the story

1. Answer 3
important
questions early
on, or risk losing
your audience.

a. Why should
your audience
care?

State your goal at the very beginning.

Start by communicating the key takeaways, don't wait until the end for the big reveal.

This helps frame in your audience's mind everything that follows.



Example: Why are we all here today? Why should your organization care about storytelling with data?

So what is
storytelling with
data?

Data needs to be actionable



“Measurement only matters if it changes the way you act.”

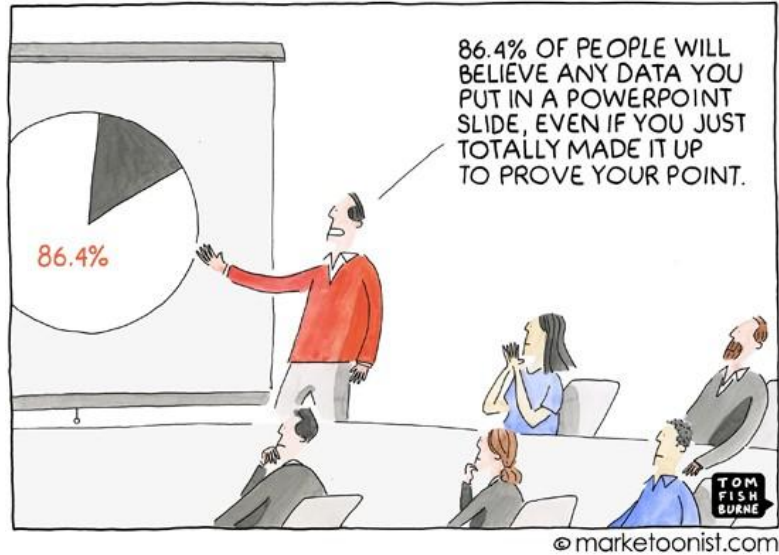
Marc Koenig, Author at [nonprofithub](#)

Good storytelling makes your data actionable

- Enables key stakeholders to make decisions
- Acknowledges failures & scales successes
- Communicates impact



Storytelling is not cherry picking data



Social impact organizations are forced to hold themselves accountable more often because they are beholden to grant recipients.

- Grant requirements are often different from internal needs

Leveraging data is crucial because we now live in a flood of data.



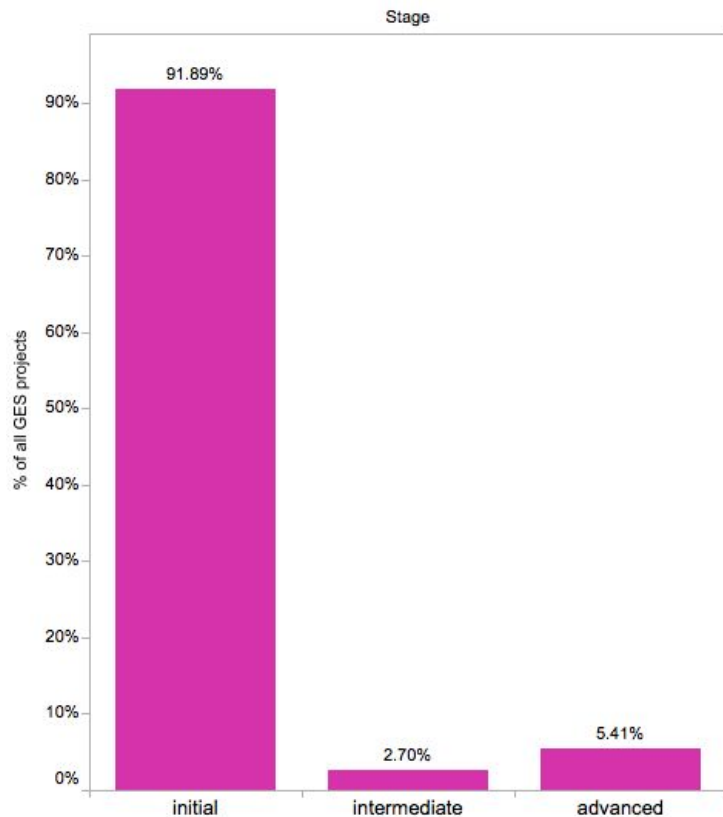
Data has become an expected component of how we communicate.

Nonprofits are pushing the hardest for data

- focus on accountability
- desire to understand impact

What about your
projects?

GES 2017 Projects Stage of Data Collection



90% of GES delegates are at the very beginning of their data journey.

Initial:

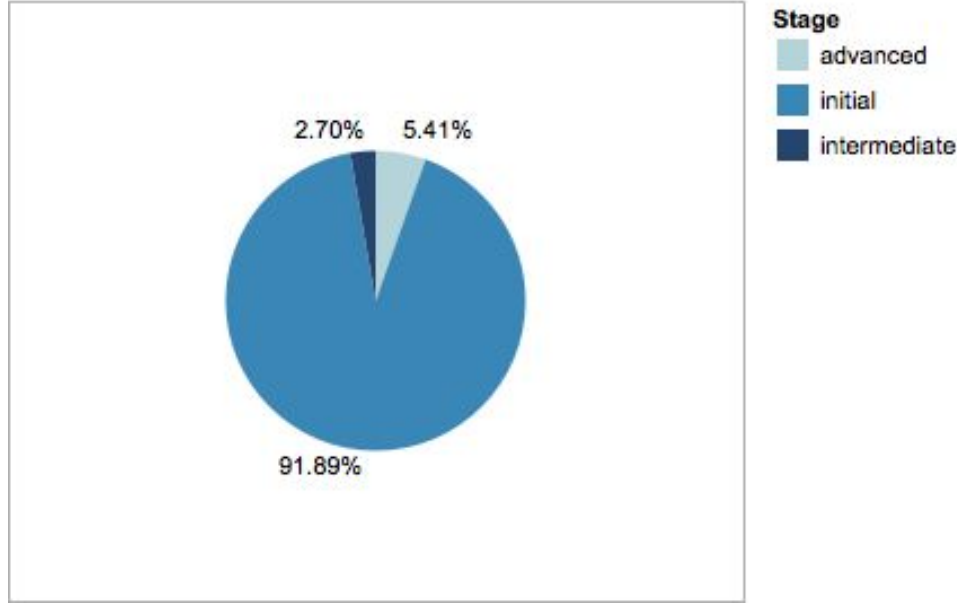
no ongoing data collection

Intermediate:

very little data collected

Advanced:

steady stream of data

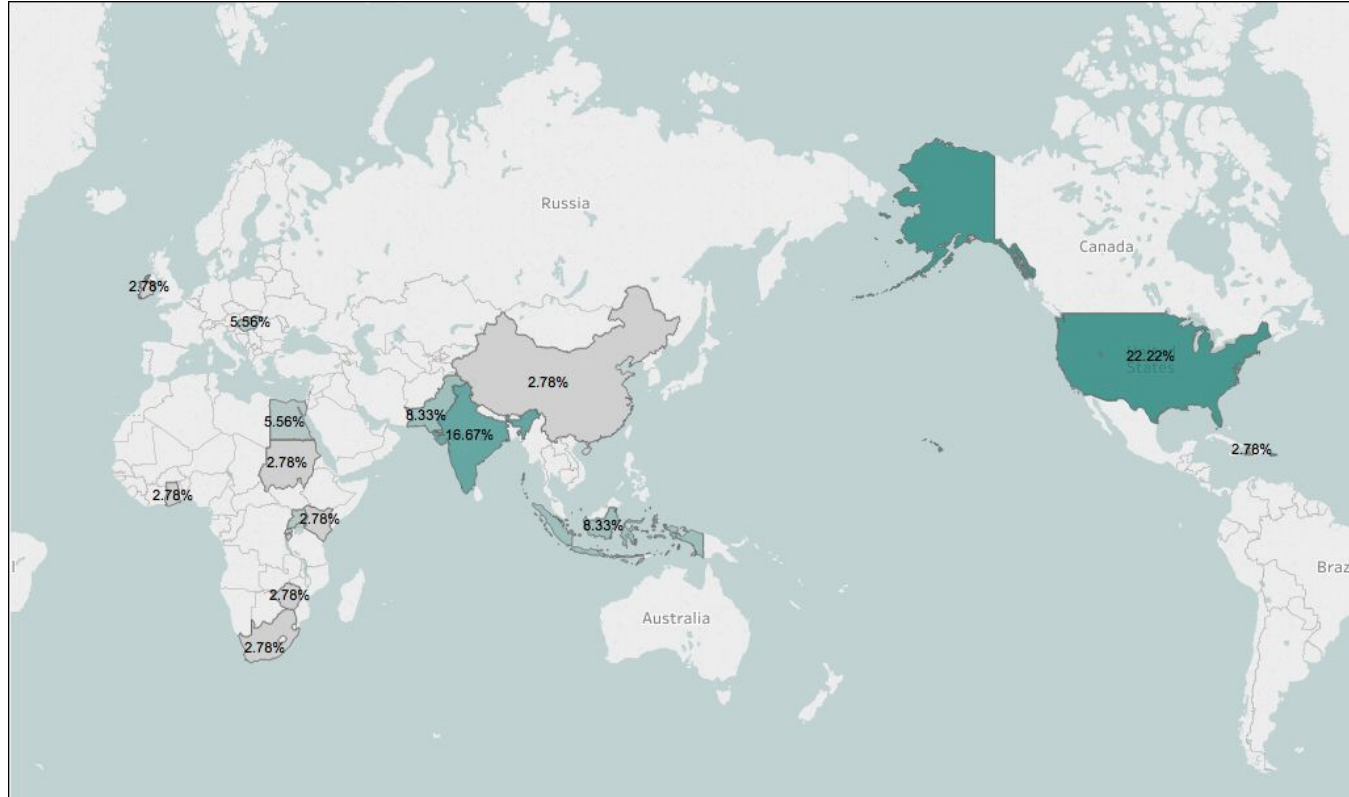


At initial data collection stage, thinking carefully about what you want to collect and how it is actionable is crucial to success.

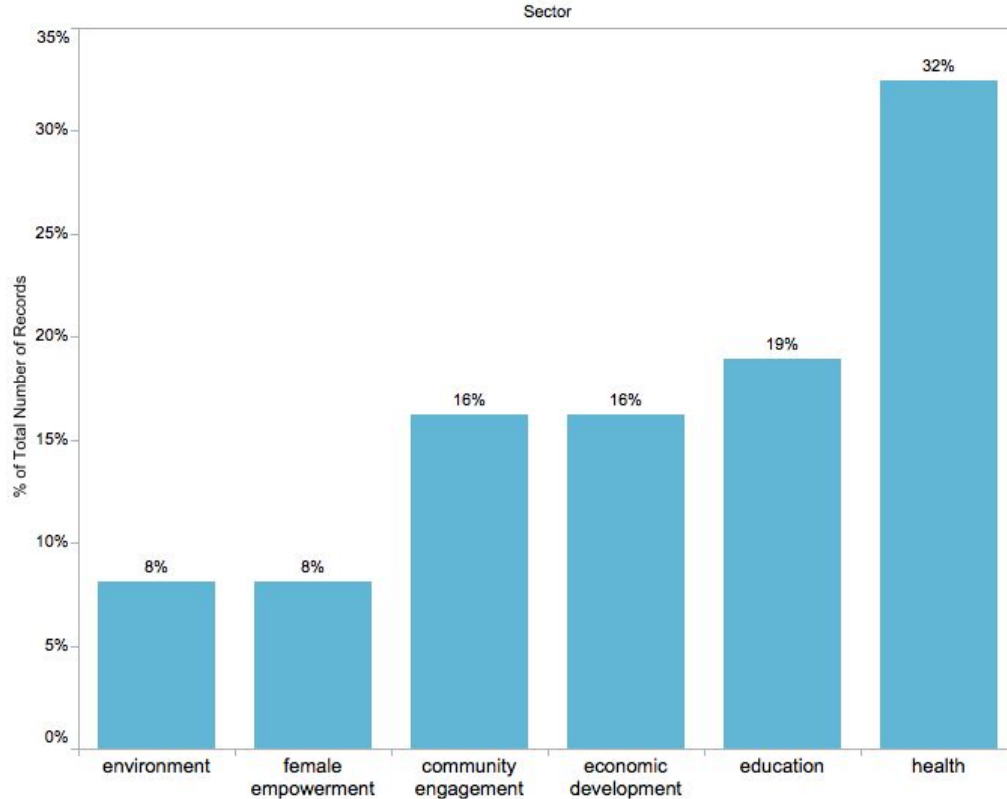
Collecting data always has a cost. The level of difficulty is driven by:

- What sector you are trying to serve?
 - For example, health care data is more difficult to collect because of privacy requirements.
- What community are you serving?
 - Serving remote communities that are hard to reach regularly has a higher cost than serving and collecting data at your local school.
- What medium does your project use?
 - A mobile app automatically generates a stream of data. A workshop demands conscious data collection.

GES delegates are serving very different communities all over the world.



Sectors Served by GES Delegates 2017



Health care is a sector 30% of GES proposals are serving.

Does the sector you are serving pose additional difficulties?

GES Delegates are impacting their communities through many different channels.

level of difficult	Medium For Change	
easy	education fund	3%
	online platform	6%
	mobile app	14%
intermediate	wearable	8%
hard	raising awareness through publication	11%
	workshop	11%
	providing a service or good	14%
	workshop or training	33%

Formats like workshops are harder to generate data from:

- Metrics tend to be harder to define
- Require timely, conscious collection.

For 70% of the GES proposals, data collection is costly.

level of difficulty	
easy	22%
intermediate	8%
hard	69%

Cheap data

Your core offering generates a stream of data.

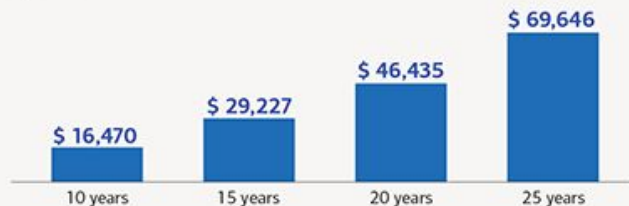
Costly data

Your project does not automatically generate any data.

The choices you make now will have an outsized impact on your ability to communicate using data.

If you invested an extra \$25 a week

Imagine taking the money you spend on little splurges — a couple of take-out lunches or a few cups of coffee — and investing it in your retirement account. As shown below, a bit of sacrifice and reinvestment can really add up over time.*



Finding an extra \$25 a week to invest:



Delaying investment in data the critical mistake that many new organizations make.

There is a premium return on effort put in early on.

b. Why are you
best positioned
to solve this?

Establish your credibility to answer the pain point you established in 1).

Example: Jonathan and I need
to convince you we have
relevant experience to share
during this talk.



3 years ago, we
started Delta
Analytics, a 501(c)3
nonprofit to help
other nonprofits
better leverage
their data.



Delta Analytics fills
the technical skill
gap and enables
nonprofits to
accelerate their
impact.

Our Impact

26 projects with
nonprofits and
social impact
organizations

90+ Fellows
volunteering
part-time over 3
years

\$0.00 charged
for services

**16 US and 10
International**
projects
(Tanzania, UK,
Kenya, and
more)

Over **15,000** hours
donated



Delta Analytics has helped
nonprofits all over the world
tell their story.

Some of our projects:

Community Engagement



Education



Economic Development



Environmental

LIVELYHOODS



What did we do to establish credibility?

1. We have a clear narrative arc, starting with the mission statement of Delta.



2. Simple aggregate metrics communicate our scale and longevity.

80+ Fellows
volunteering
part-time over 3
years

3. Our sector map is rich and exciting. We provide more information by using logo images instead of text.



c. What is the desired outcome?

Don't leave your audience guessing about what they should take away.

C should add more specificity to the overarching goal you state in a.

Think of a. as the destination, c. should be the directions to get there.



Example: Jonathan and I tell
you what you will leave with
by the end of this workshop.

5 point roadmap everyone will have in their toolkit by the end of this talk:

1. Answer 3 questions early on
2. Good data collection matters
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What did we do to communicate outcome?

1. By setting an agenda early on, we provide a roadmap for the session.

2. Simple visual cues highlight where we are in our journey. This helps the audience place a point within the larger framework.

- 
- 1. Answer 3 questions early on
 - 2. Good data collection matters

3. Repetition of the agenda at the end of every section allows us to track progress.

- 
- 1. Answer 3 questions early on
 - 2. Good data collection matters
 - 3. Understand your audience

2. Good data
collection = the
bricks that build
your story.

Key data collection mistakes



- Unsustainable data collection: some orgs try to collect too many data points at once, which often becomes unsustainable.
- Erratic data collection: some orgs change key metrics frequently, which results in messy data and inconsistent coverage.

Why do social impact orgs struggle to define core metrics?



- Scarce resources: data collection often costly
- High personnel churn: core metrics need to be collected consistently over time

Define what success looks like from day 1

What is your vision?

**What are the
outcomes that define
your vision?**

Who are you serving?

**What is your value
add?**

**What parts of your
impact can be
measured using data?**

Defining the vision of your organization is crucial for establishing what data you should collect.



Define Core Metrics

Before you collect data, make sure you are able to sustain the commitment.

Define Core Metrics

What data do you need?

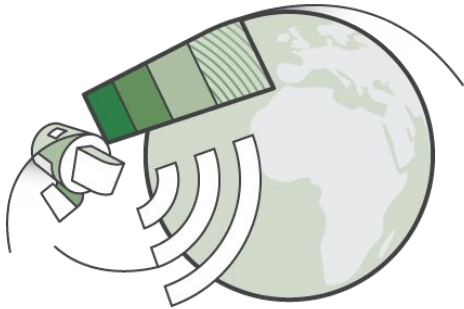
How will the data be collected?

How will the data be stored?

How often will the data be collected?

How you collect data and the frequency of updates determines the **cost of data collection**.

If data collection is costly, try to first leverage data that already exists

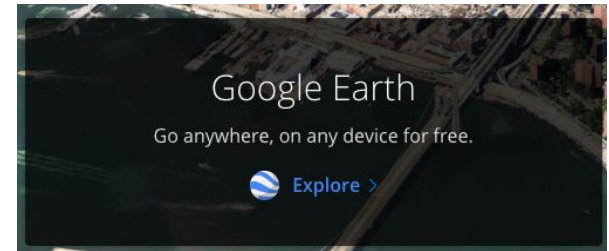


1000 Genomes Project and AWS



THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

kaggle

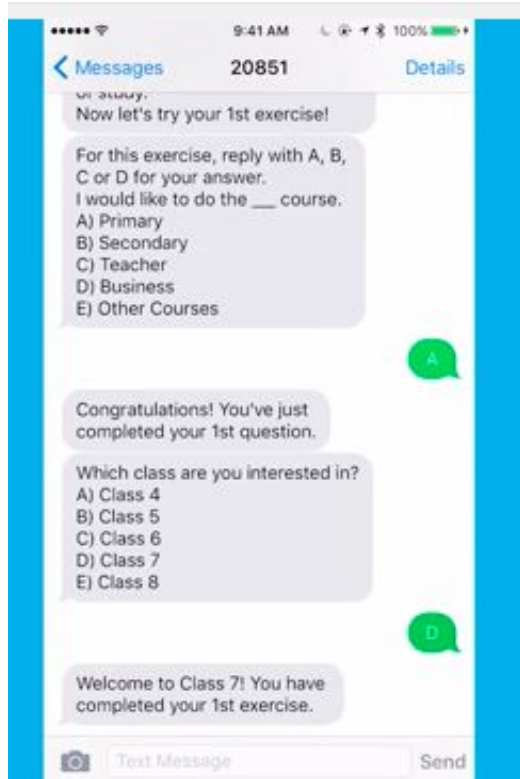


Example of a GES proposal that is already doing this:

“Street-children that loiter around every traffic light and marketplace in Pakistan are a common sight for those who live here. Most survive on the streets through a combination of strategies: they pick trash from large, unhygienic rubbish dumps, sort and sell the waste product to assorted dealers for a pittance.

**According to the current
UNICEF statistics, estimates 30 million in Asia
and 1.2 million street children only
in Pakistan...”**

Key advice for successful data collection:



- Automate wherever possible: Avoid paper.
- Store data purposefully (E.g. avoid ad hoc data storage, such as an excel sheet somewhere. Use Github, google sheets, salesforces, etc.).

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3. Understand
your audience.

Three Dimensions of Your Audience

**RELATIONSHIP TO
YOUR ORG**

**COMMUNICATION
MEDIUM**

CALL TO ACTION

**GENERAL
AUDIENCE**

PUBLICATION

BE CONVINCED

**EXTERNAL
STAKEHOLDERS**

PRESENTATION

**BEHAVIOR
CHANGE**

**INTERNAL
STAKEHOLDERS**

WEBSITE

CONTRIBUTE

⋮

⋮

⋮

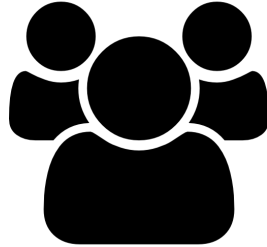
How is your audience related to you?

GENERAL AUDIENCE



- Lack context
- No “buy in”

EXTERNAL STAKEHOLDERS



- Bought in
- Tailor to perspective

INTERNAL STAKEHOLDERS



- Bought in
- Understand internal systems

How are you communicating to them?

PUBLICATION



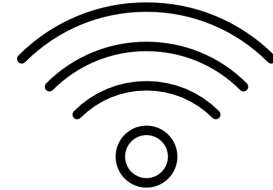
- Focus in depth on one topic

PRESENTATION



- Focus in depth on one topic

WEBSITE



- Broad overview

What do you want your audience to do?

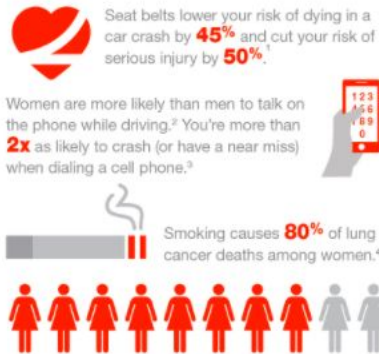
BE CONVINCED

50,382

People Fed

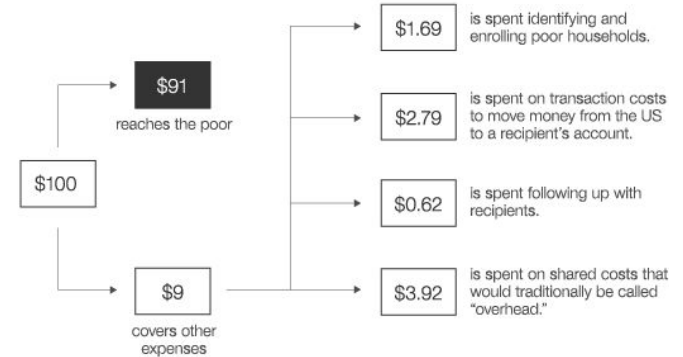
Transferration
(GES 2015)

BEHAVIOR CHANGE



WomensHealth.gov

CONTRIBUTE



GiveDirectly

5 point roadmap everyone will have in their toolkit by the end of this talk:

1. Answer 3 questions early on
2. Good data collection matters
3. Understand your audience
4. Borrow from Others
5. Focus on the story

4. Be inspired by
existing work

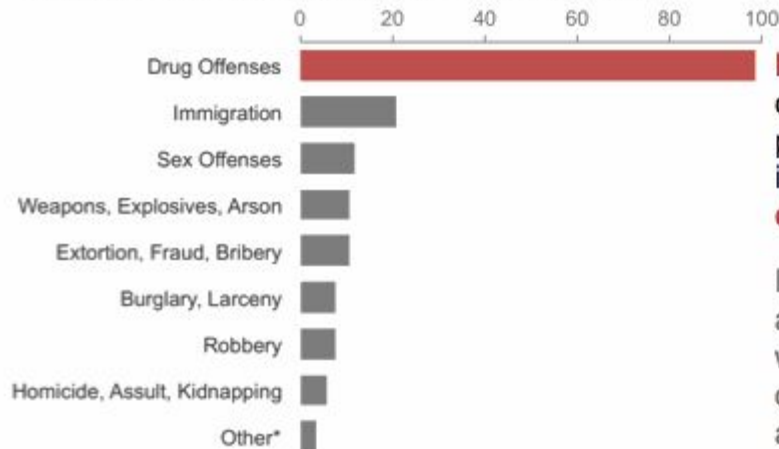
Highlight the takeaways

storytelling  data®

US Prison Population by Primary Sentencing Reason

As of January 25, 2014

Primary Sentencing Reason | Number of US Prisoners, in Thousands



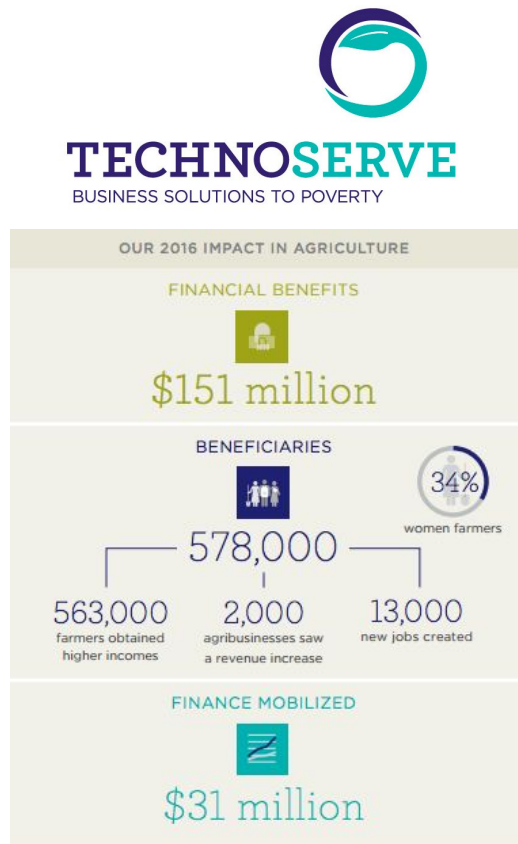
More than half of the current US prison population were incarcerated due to **drug offenses**.

Follow this up with additional context on why this is interesting or noteworthy, call to action, etc.

Other includes Banking and Insurance, Counterfeit, Embezzlement, Courts or Corrections, Continuing Criminal Enterprise, National Security and other miscellaneous sentencing reasons, accounting for <1% of total each.

Data source: US Sentencing Commission

Start general, dive deep



Financial benefits in 2016, sized by amount and disaggregated by sector



A FARMER SUSTAINABLY INCREASES HIS INCOME

In northern Mozambique, cashew farmer Carlos Lassimo joined TechnoServe's MozaCajú program and learned good agronomy practices, such as pruning and cleaning, that have increased his trees' productivity. We connected him with agricultural inputs so he could grow and provide seedlings to expand cashew farms in the community. The project also provided business training and helped Carlos organize with other farmers to aggregate his harvests and sell at higher prices.

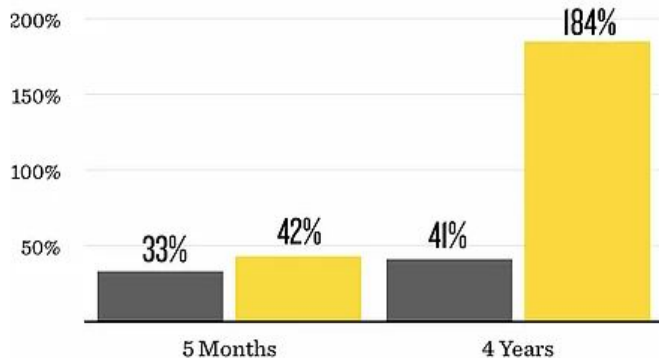


Use comparable baselines to measure impact

sama**source**

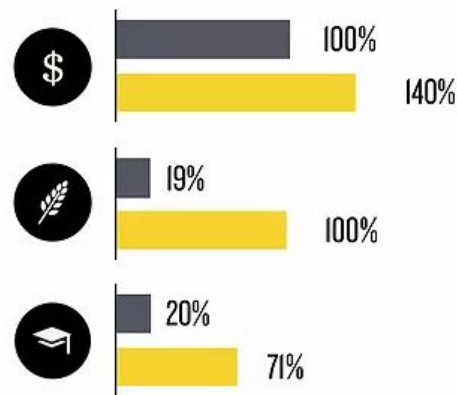
Samasource Give Work Model

Monthly Income Increase
(East Africa)



Unconditional Cash Transfer

Monthly increase (5-mo) in Household Spend
on Savings, Food, and Education in Kenya



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5. Focus on the story

Data should always be part of a larger story you are trying to tell.



Do not add charts without purpose.

Some outcomes cannot be quantified. Do not force it!

Good storytelling is about weaving different elements (data, quotes, pictures) together seamlessly.

Let me tell you a short story
about one of our grant
recipients, Eneza Education.

Eneza Education



Spreading Education Everywhere

Eneza Education



Eneza Education is a pre-smart phone technology company question bank accessible on a low cost mobile phone.

Eneza Education

Eneza Education is a pre-smart phone technology company question bank accessible on a low cost mobile phone.

2012

Year Eneza Went Live

1,563,077

Number of Students on Eneza

10,144

number of quizzes available to students

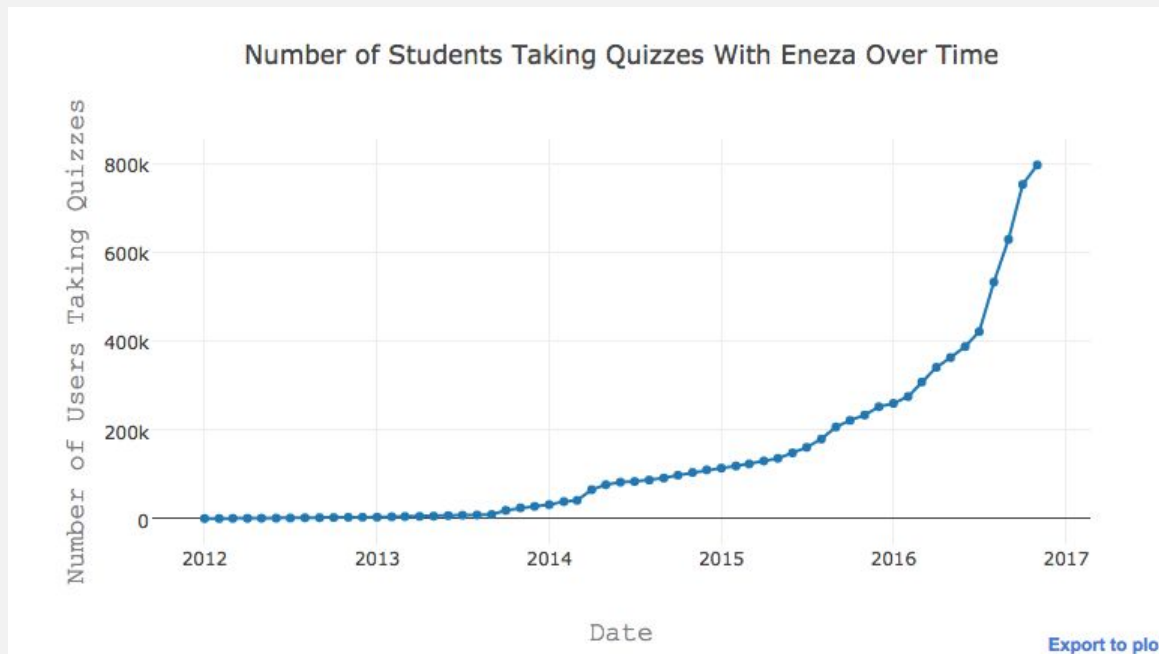
3,993,463

number of questions answered in October

41.20

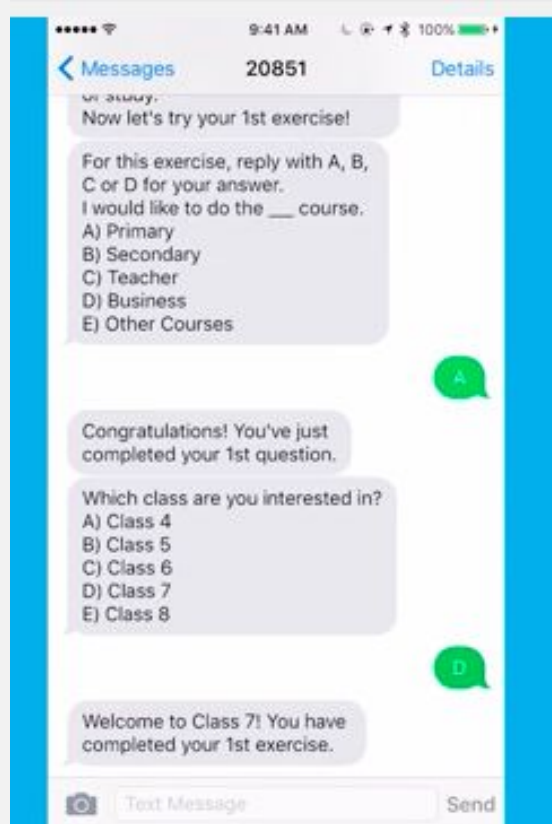
% of female students

Eneza Education



Incredible growth in number of students actively learning each month.

Eneza Education



Simple text based
model with instant
feedback to questions

Pre smart phone portal =
KES 10 for a weekly
subscription
(\$0.098).

How to use Shupavu



Study a topic

Choose a topic to begin studying. All topics are coded by UNIT and CLASS. I.e Animals801 is from the Animals Unit in Class 8 Science. The first question is sent through and SMS (text message). Respond with the correct answer choice. Receive a tailored response for your answer choice.



Receive a Mini Lesson

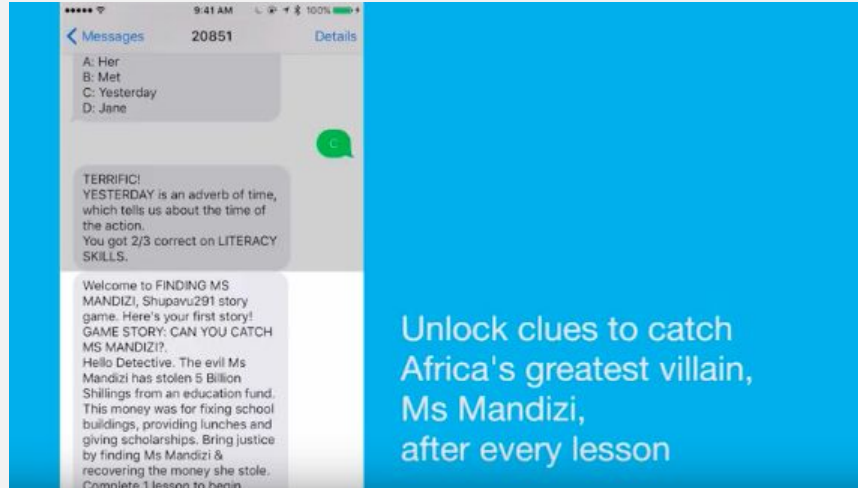
Lessons will always appear before your question. If you receive below 60% on a quiz, Eneza will tell you to review a mini lesson on the topic. Simply follow the directions at the end of the quiz to access the mini lesson. Type NEXT after receiving each SMS.



Ask a Teacher a Question

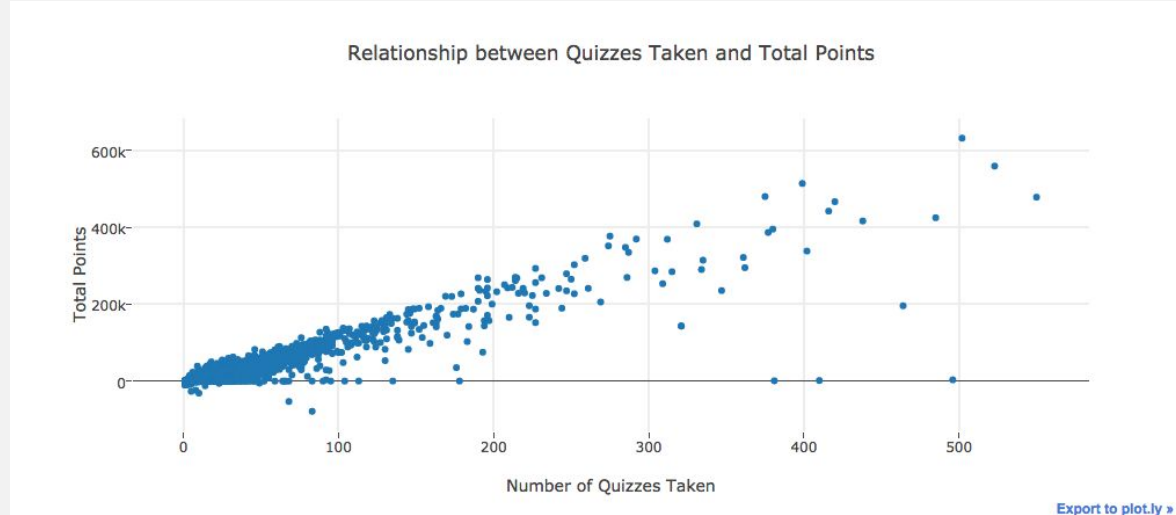
This service is only accessible after completion of 2 quizzes. Type the word WIKI followed by what you wish to search (e.g. WIKI Kenya). Send your message to our Safaricom number 20851. You will automatically receive the Wikipedia text for that topic.

Eneza Education



Gamification techniques to improve retention with students.

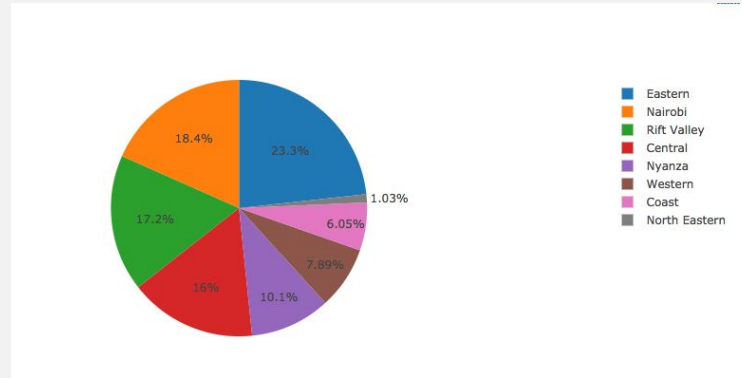
Eneza Education



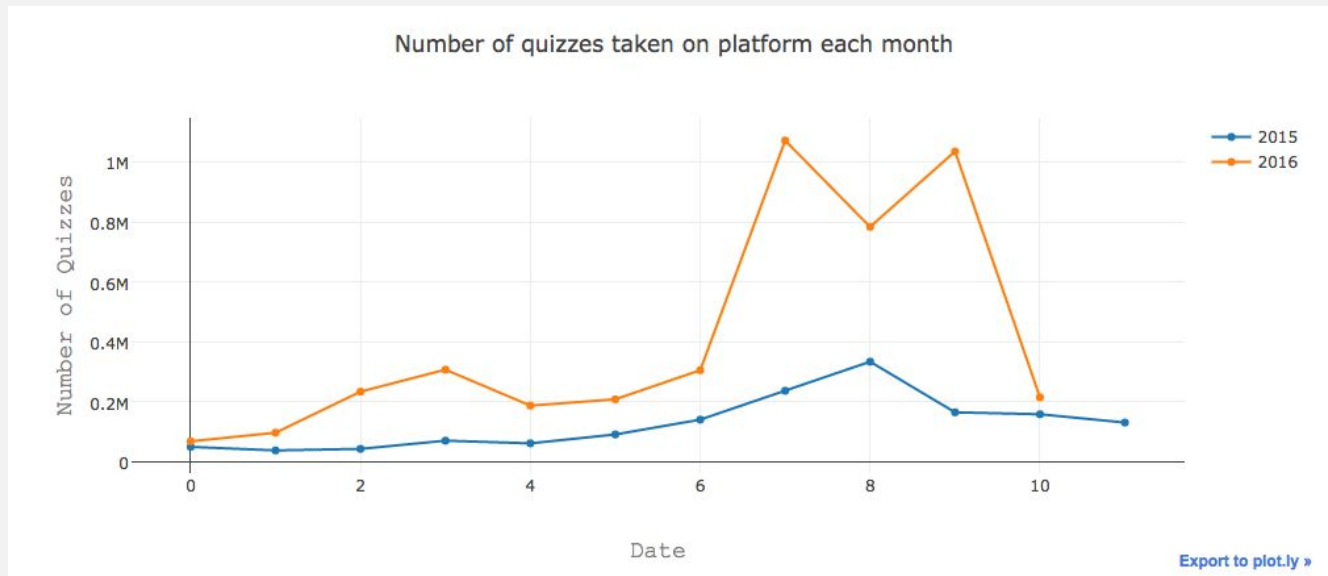
Gamification techniques to improve retention with students.

Eneza Education

Eneza started in Kenya, branching out to Tanzania and Ghana.

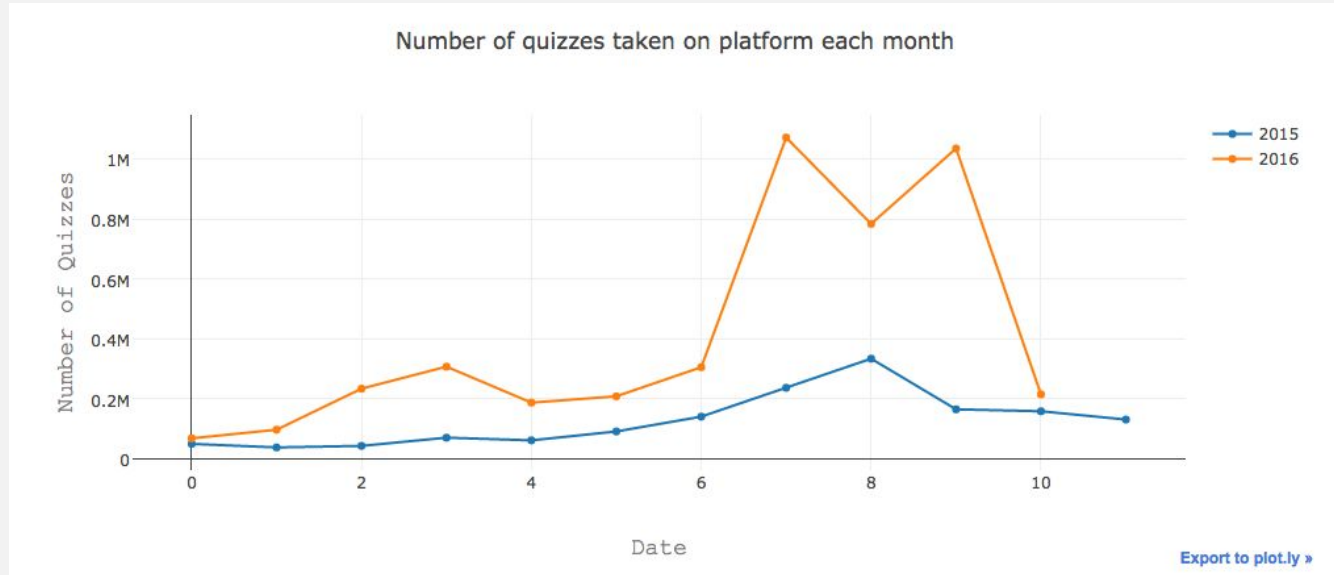


Eneza Education



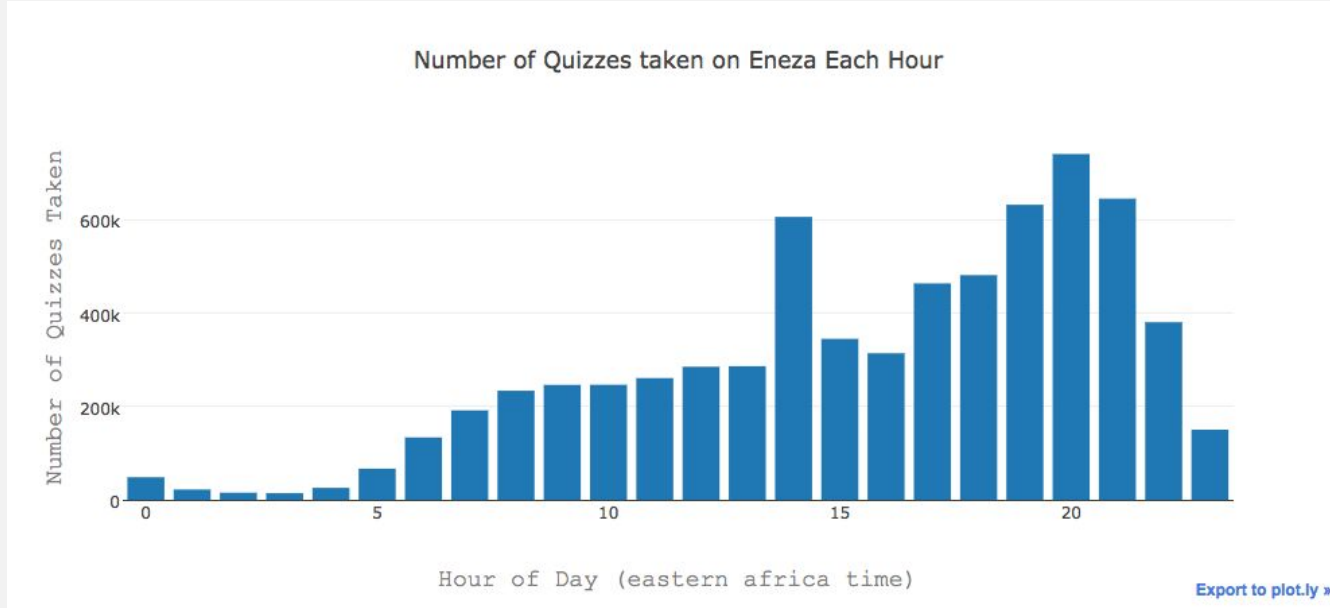
Why are there big spikes in July, September and October?

Eneza Education



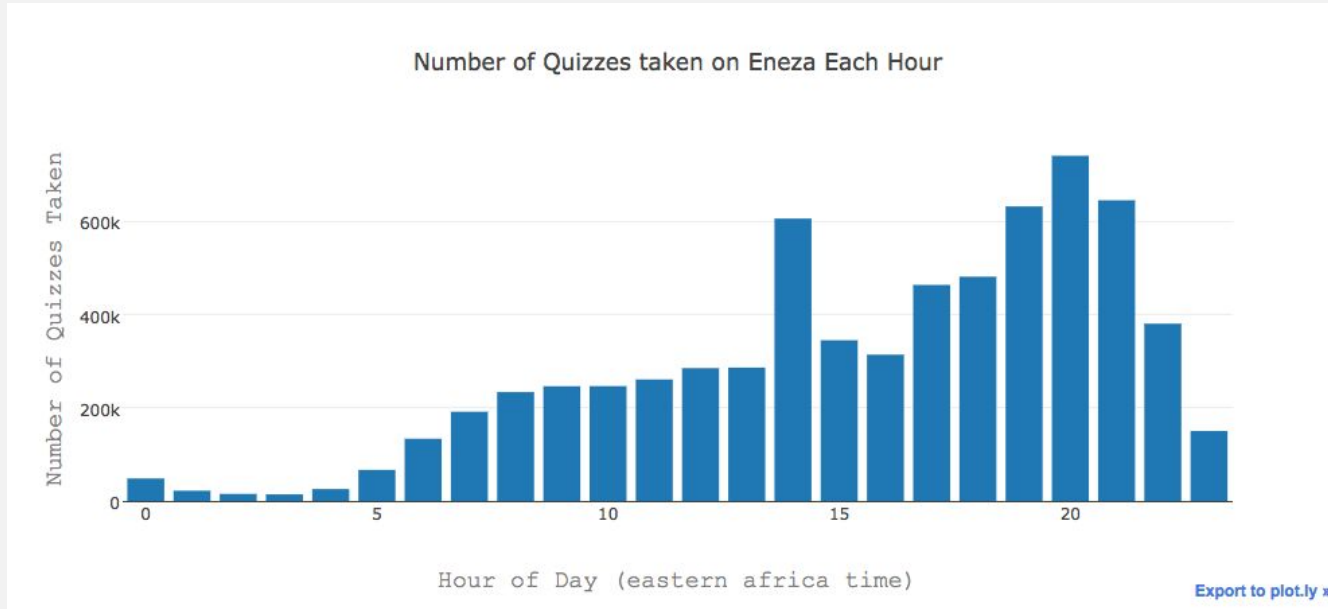
Activity peaks close to the Kenyan annual exams in October, it is at it's lowest in January after Exams.

Eneza Education



Why do you think activity for students is peaking in the evening?

Eneza Education



Students mainly use their parents cellphones to access Eneza.

Eneza Education

category	title
parent	How do I prepare for a future crisis or problem?
parent	Business
parent	Risks in Business
parent	What is Credit?
parent	How do I get my first customers?
parent	What is a contract?
parent	How do I keep my customers happy?
parent	What is VAT?
parent	How to budget for a Special Occasion?
parent	What is a cheque?

Since parents are key stakeholders, Eneza also caters to them with “parent” quizzes targeting key skills like personal finance & business.

What did we do to make this a compelling case study?

1. Data is always part of a larger story we are trying to tell. We use images to orientate our audience and data to drive our points home.



2. We use aggregated metrics to quickly orientate the audience to the scale of Eneza

1,563,077

Number of Students on Eneza

3. We engage the audience, asking them to come to their own conclusion before stating our own.

Why do you think activity for students is peaking in the evening?

2. We place the map and chart side by side because one adds to the understanding of the other.



Let's discuss.



Consider applying to
be one of our grant
recipients at
www.deltanalytics.org