# Digital Revolution in Education

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Migrant indigenous children from Oaxaca mountain regions

**PocketSchool for those who have no access to school**
**StoryReader coupled with paper stories!**

Do you believe sesame street was helpful for children to learn?
How about mobile sesame street? More important matter is that smartphones of today are going to be much better than just mobile sesame street.

**Never owned a book in his life.**

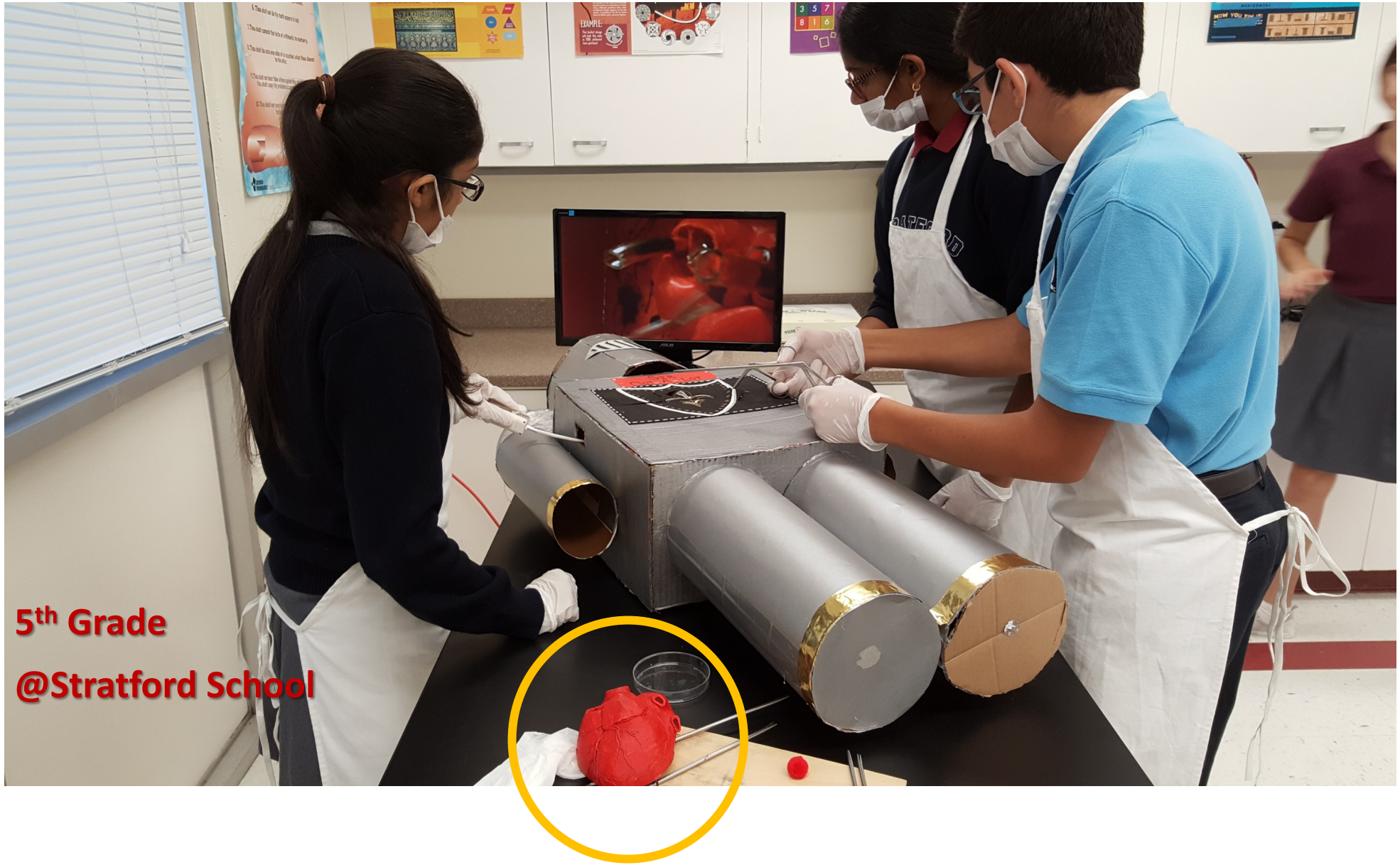
# Eric Hanushek

**The level of cognitive skills → Economic Development**
**Measured Teacher Quality → Student Income**

# Pedagogical divide – **Instructionism** vs. **Constructionism**

**Lecture-based Learning**

**Team/Design/Project /Inquiry–based Learning**


5th Grade
@Stratford School

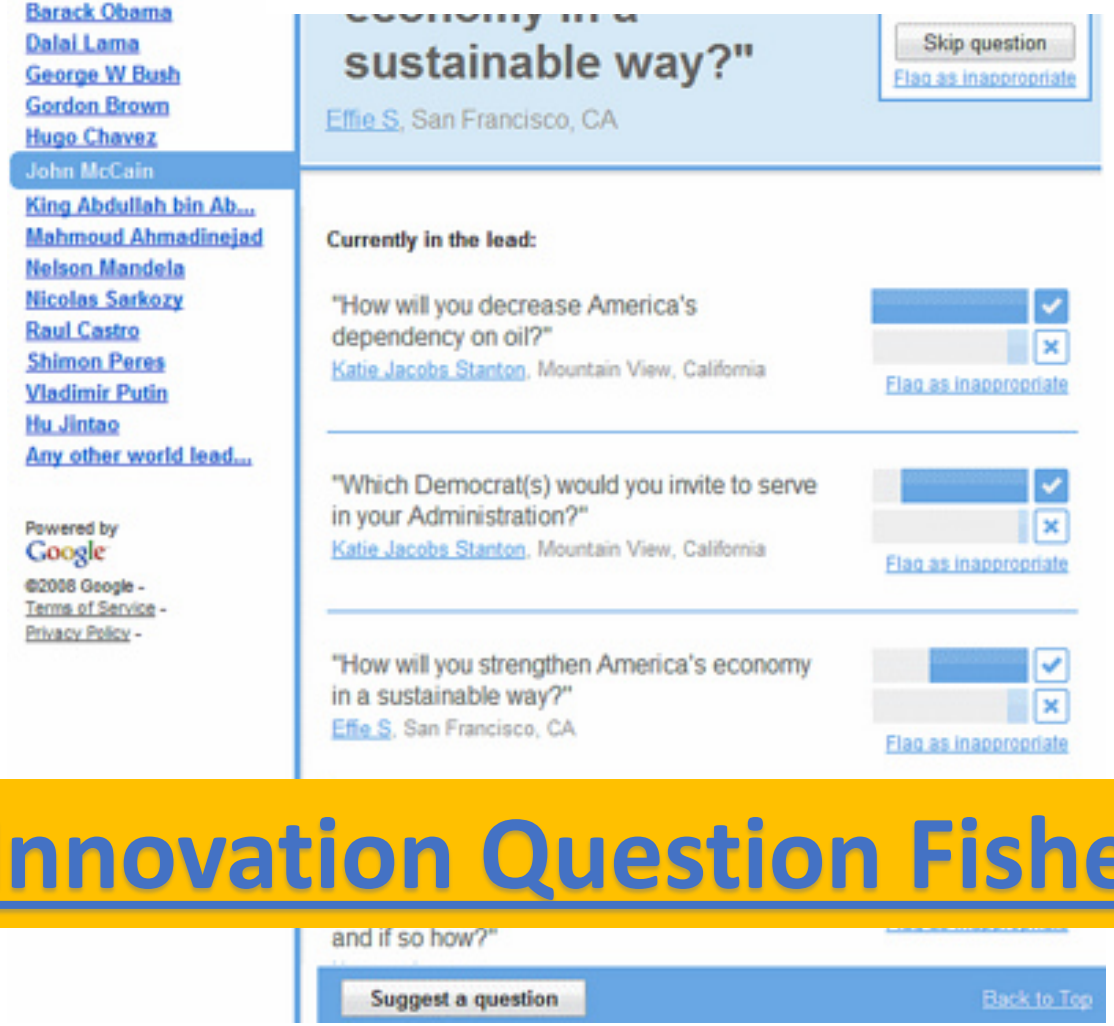
AERIX
UNO
ARDUINO
PNY
128GB

# Google's Secrets Of Innovation: Empowering Its Employees

**Laura He,** CONTRIBUTOR

*Covering billionaires and Chinese entrepreneurs.* **FULL BIO**

Opinions expressed by Forbes Contributors are their own.



## Innovation Question Fisher: DORY

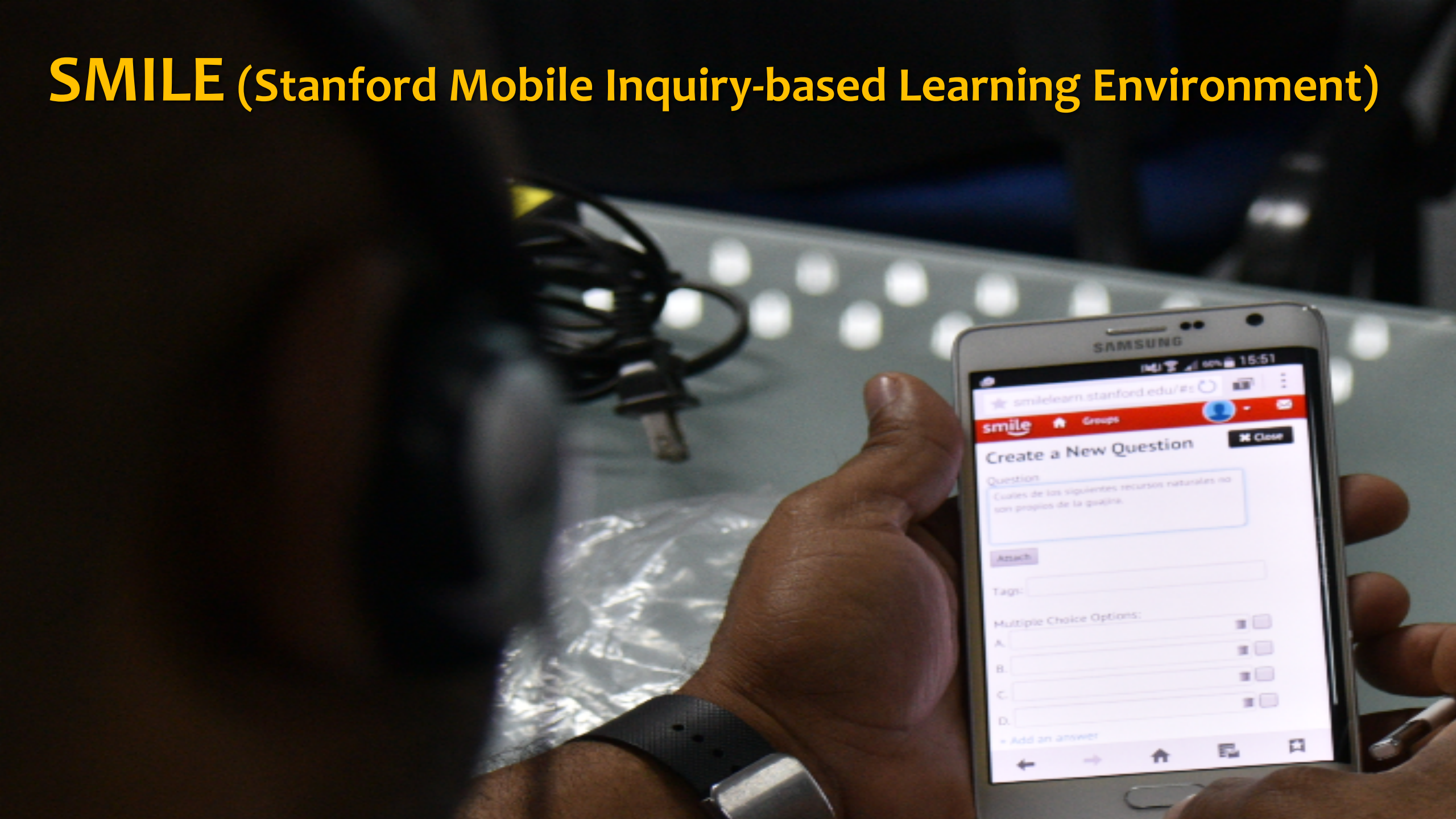
**A child asks about 40,000 questions between the ages of 2 and 5.**

**During that span, a shift occurs in the kind of questions being asked:**
**from simple factual ones (name of object) to questions seeking explanations.**

**Falling-off-the-cliff phenomenon as students move from elementary school through high school.**

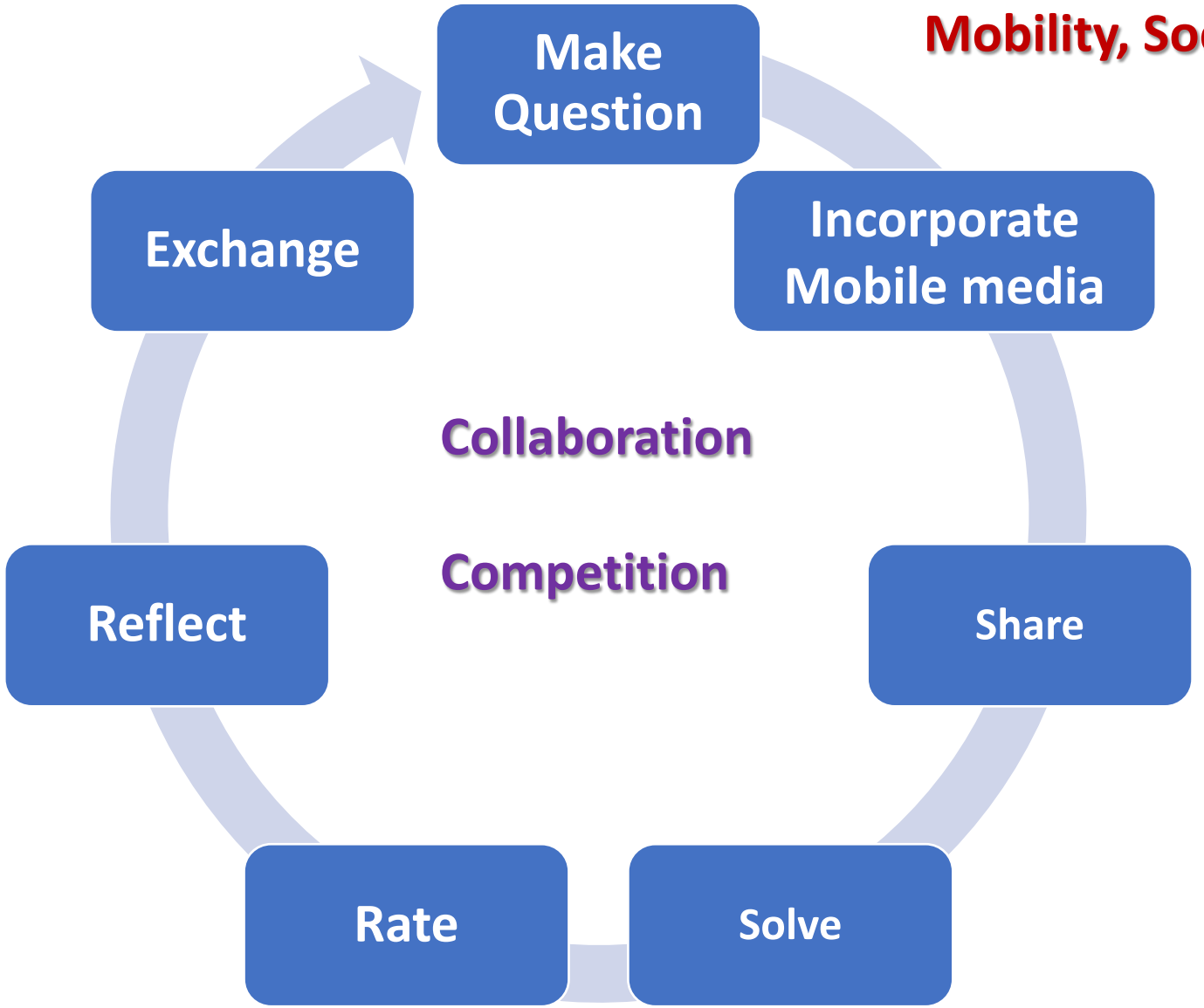
Paul Harris, Harvard University

# SMILE (Stanford Mobile Inquiry-based Learning Environment)



# SMILE Process

**Mobility, Social Networking, & Gamification**



# Create a New Question

Question

Why is there a continuous pedagogical divide between public and private schools around the world?

Attach

Tags:

Add Multiple Choice Options

Evaluate My Question

Show evaluation metric

**Disagree?** Submit your evaluation below

Level 1 | Level 2 | Level 3 | Level 4 | Level 5

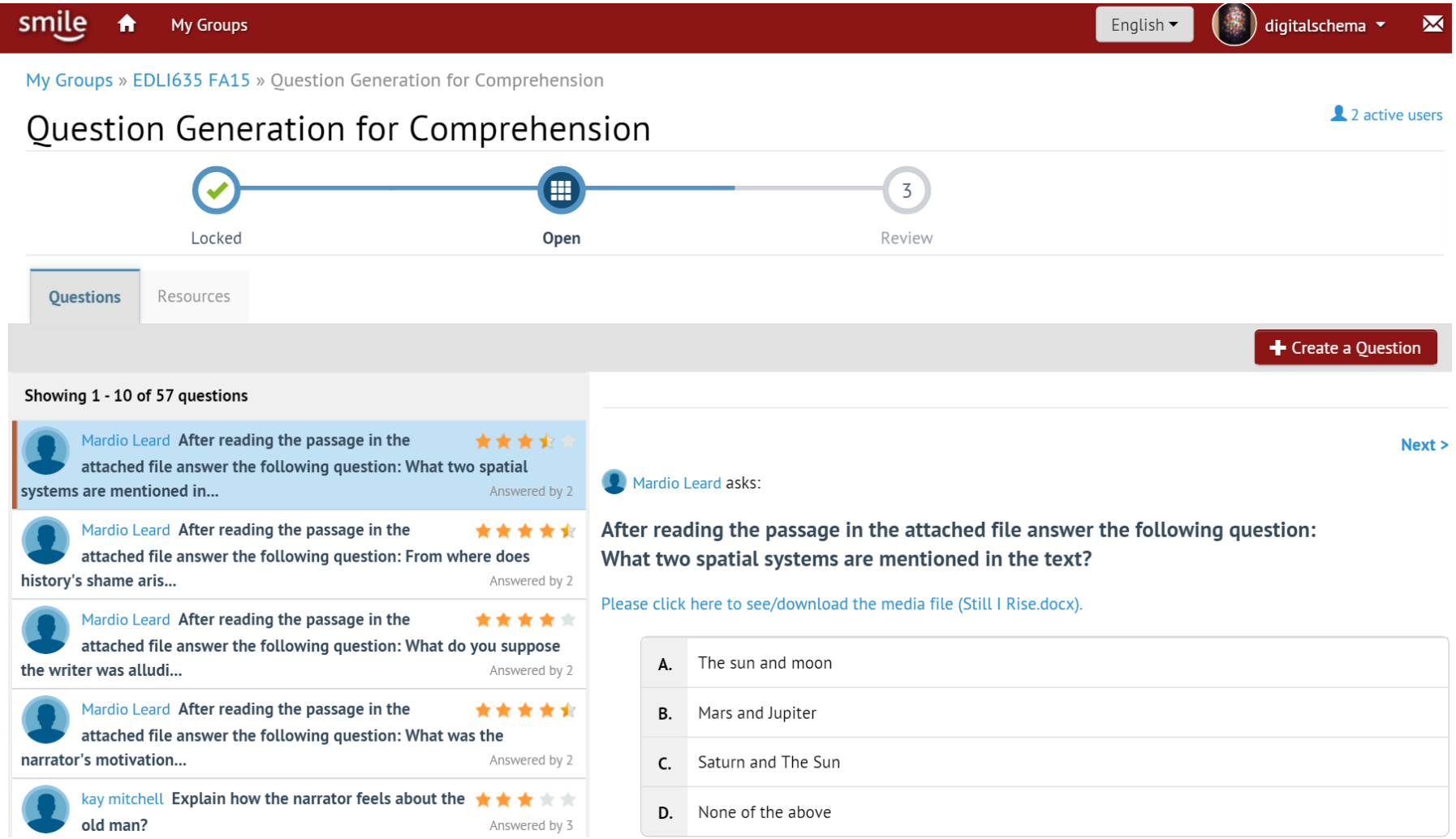
Submit Question

Professor

**Professor:** I've never seen these many questions from my students…

**Students:** Why didn't we do this from the first semester?

*“We need to argue about the correct answer here…”*

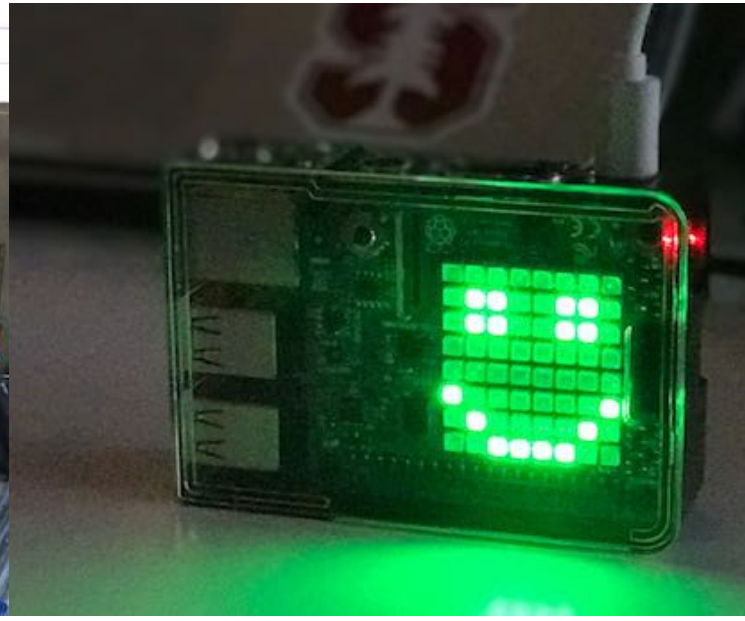



- Public v.s. Group
- Prompter
- Synchronous
- Asynchronous
- Anonymity
- OEQ->MCQ
- Brainstorming

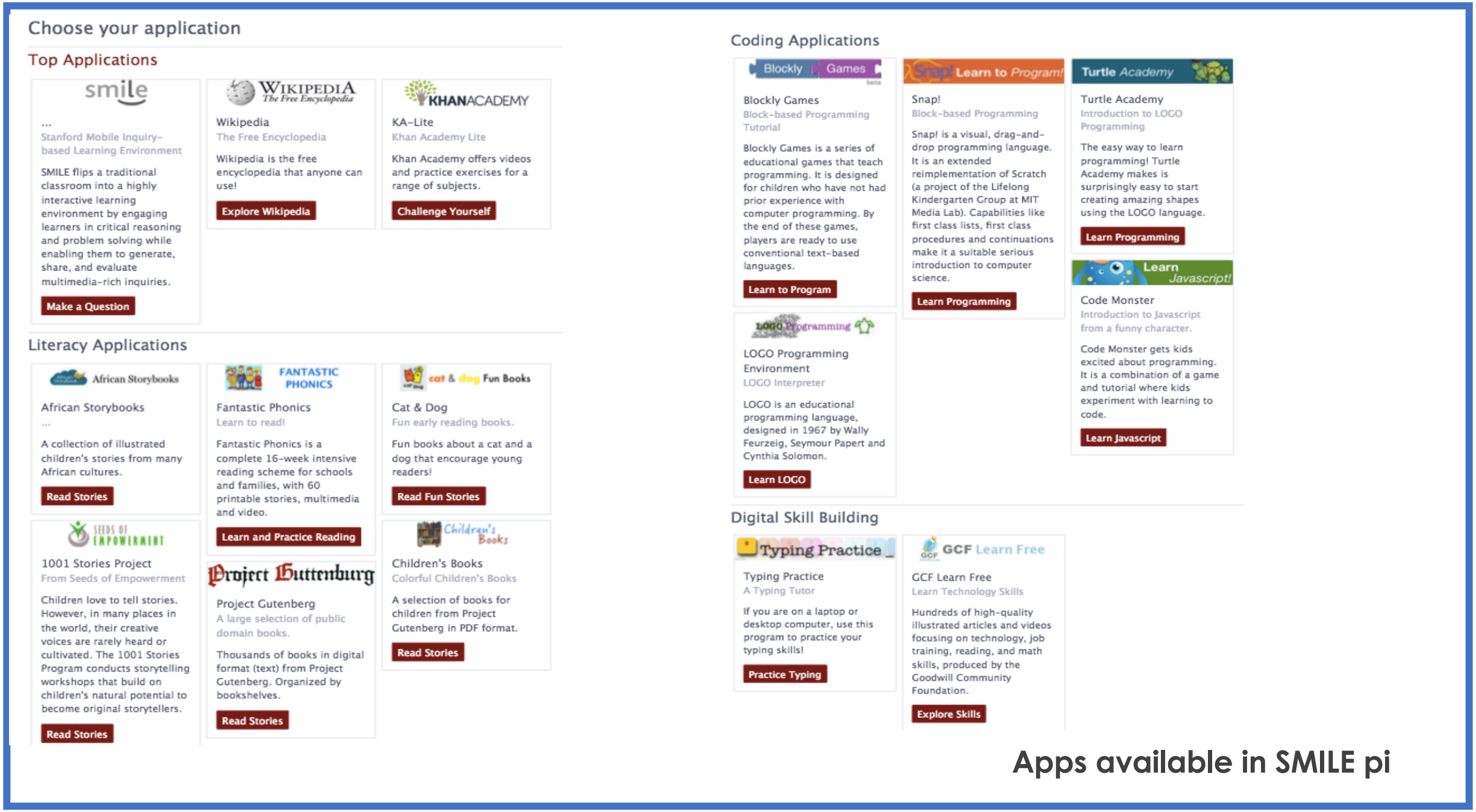
SMILE

UNIVERSITY OF ZIMBABWE
COLLEGE OF HEALTH SCIENCES

# SMILE-pi



$35




**Apps available in SMILE pi**

## Bible Applications

The Bible Project

Animated Videos about the Bible

The Bible Project utilizes short-form, fully animated videos to make the biblical story accessible to everyone, everywhere. We explore the Bible's unified story by focusing on its overarching themes and each book's literary design.

Explore Bible Videos

Bible for Children

Colorful stories from the Bible

Daily Devotional and bright, colorful stories written for children.

Read Bible Stories

Holy Bible (ASV)

...

The Revised Version, Standard American Edition of the Bible, more commonly known as the American Standard Version, is a version of the Bible that was first released in 1900.

Read the Bible

World English Bible

...

The World English Bible. The Holy Bible tells you what you need to know and believe to be saved from sin and evil and how to live a life that is truly worth living, no matter what your current circumstances may be.

Read the Bible

## Fun Applications

Edify Draw and Paint

Create Digital Art

Create your own digital paintings.

Create drawings

Edify Music

Make your own music!

Learn about music notation, and make your own music!

Create Music

World Map

Travel the world without leaving your chair!

Enjoy exploring the world beyond the horizon. This searchable, colorful world map provides a way to explore the world from your device!

Explore the Globe

## Other Applications

PhET Interactive Simulations

Discover through simulation

Free educational simulations covering a diverse selection of topics designed by the University of Colorado.

Learn Science

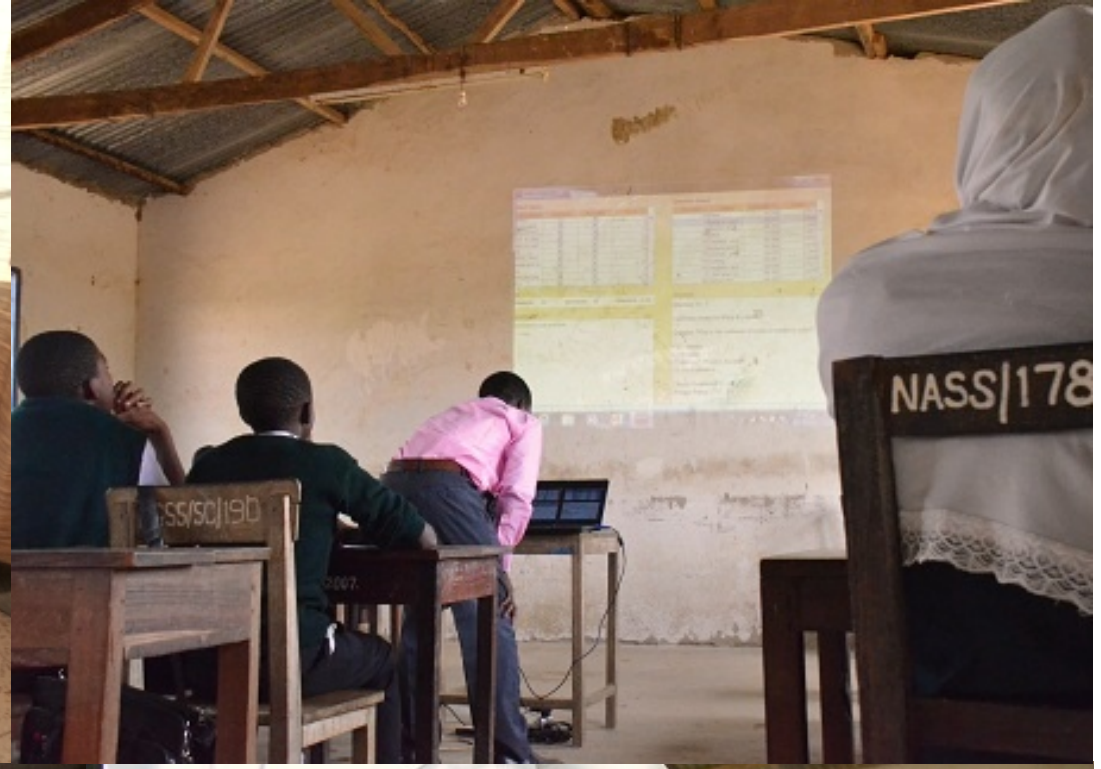
CK-12

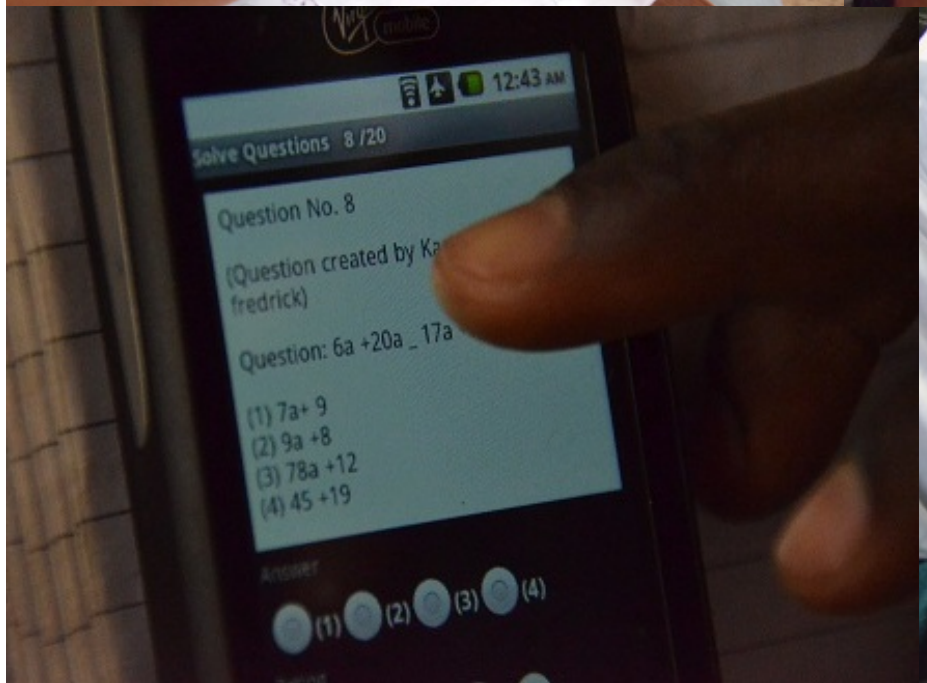
An assortment of textbooks.

High quality and curated Textbooks collection on STEM (Science, Technology, Engineering and Math) from ck12.org. PDF format.

Open Textbooks

**Apps available on SMILE plug**


NASS/178


12:43 AM
Solve Questions 8 /20
Question No. 8
(Question created by Ka
fredrick)
Question: 6a +20a _ 17a
(1) 7a+ 9
(2) 9a +8
(3) 78a +12
(4) 45 +19
Answer
(1) (2) (3) (4)

# Higher Order Learning

## Behavioral & Cognitive

Evaluation

Creation

Analysis

Synthesis

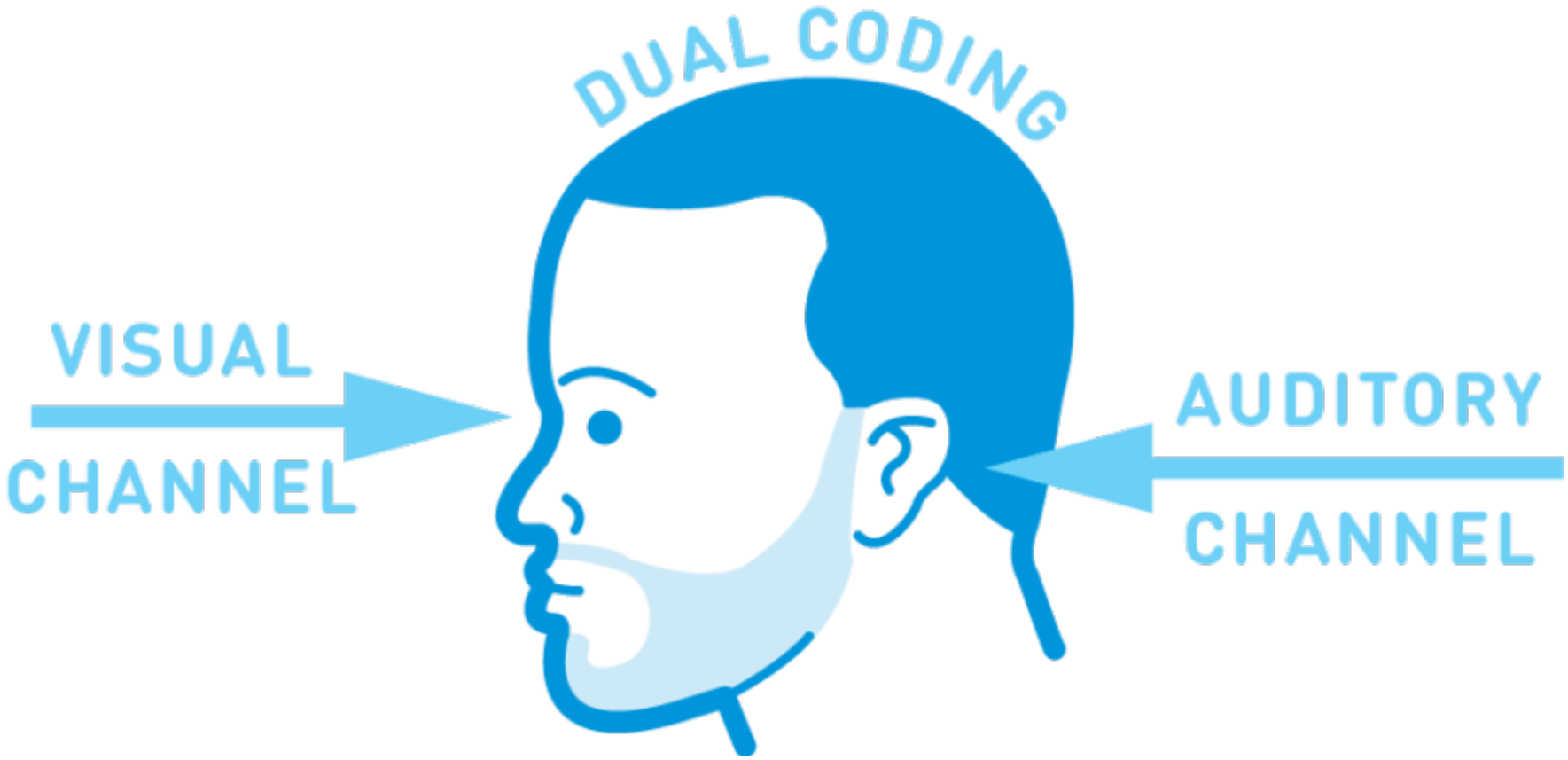
Presentation

## Perceptual

Sense of Achievement

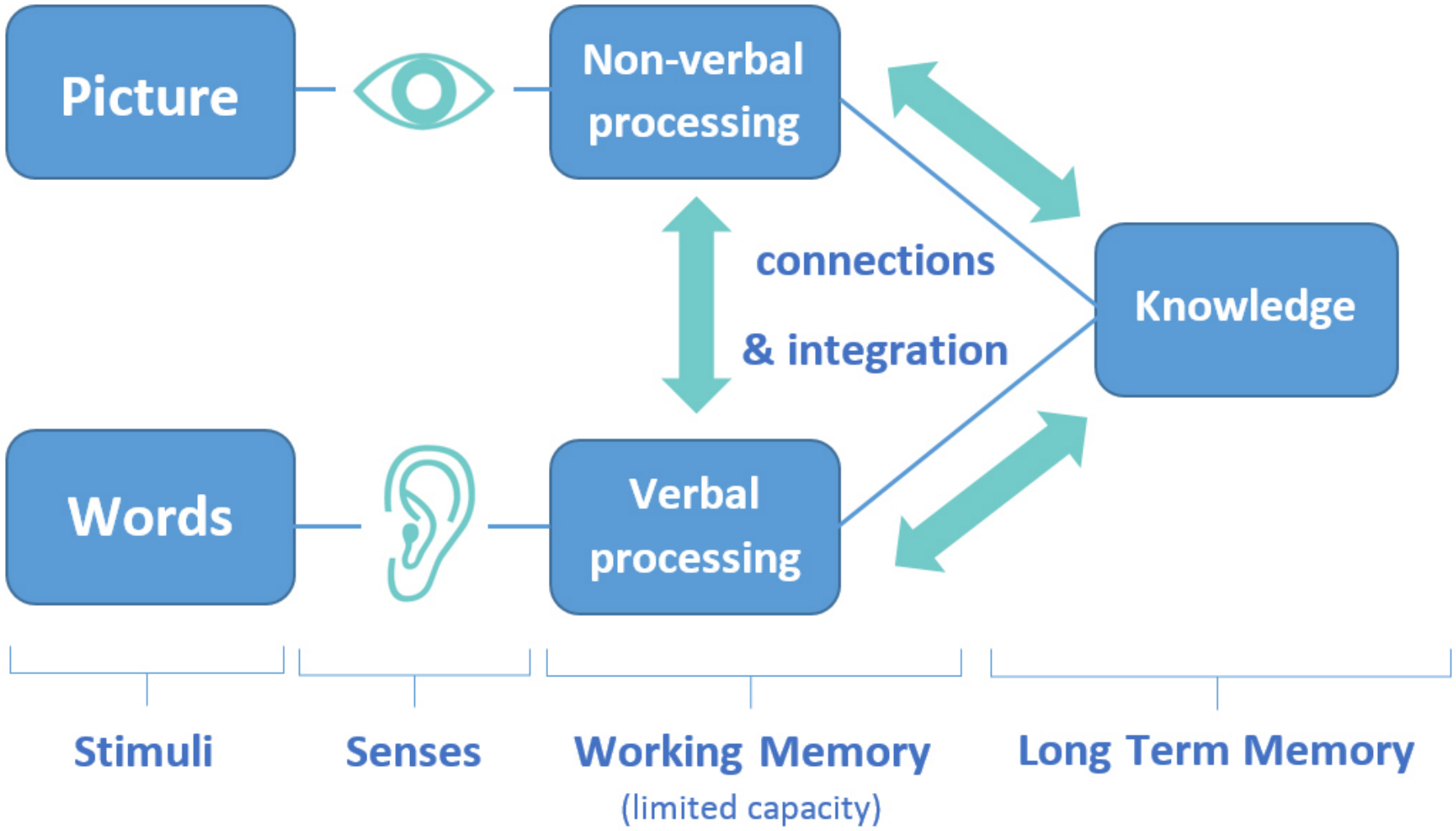
Sense of Ownership

Sense of Self-Efficacy

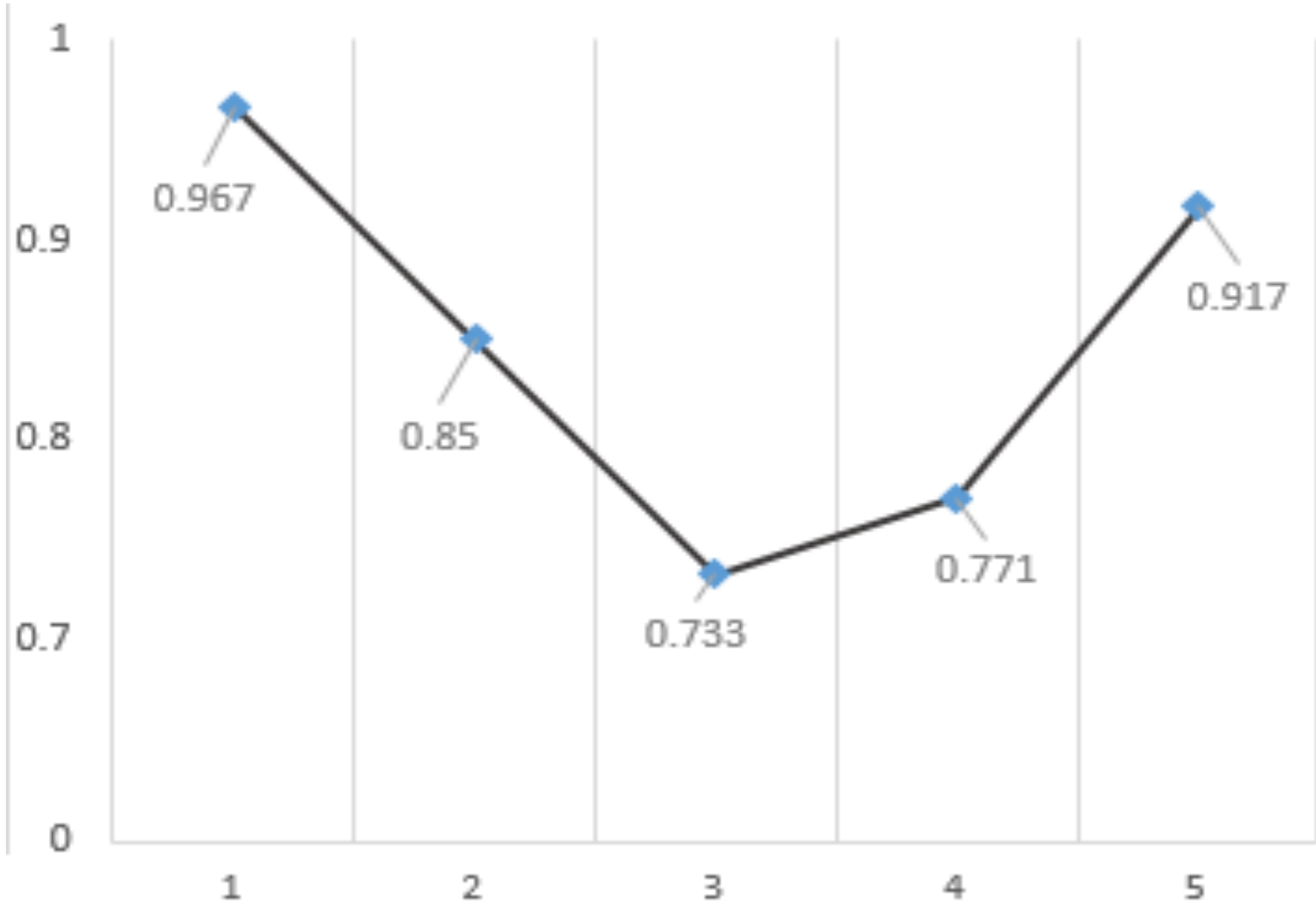



https://teachinghow2s.com/blog/dual-coding-sketchnote-summary

# Allan Paivio's Dual-Coding Theory




http://kru-mon.com/2017/12/dual-coding-theory/


1
0.9
0.8
0.7
0
0.967
0.85
0.733
0.771
0.917
1
2
3
4
5

Lenovo

Country / Region / City / School / Class

**Individual Question History**

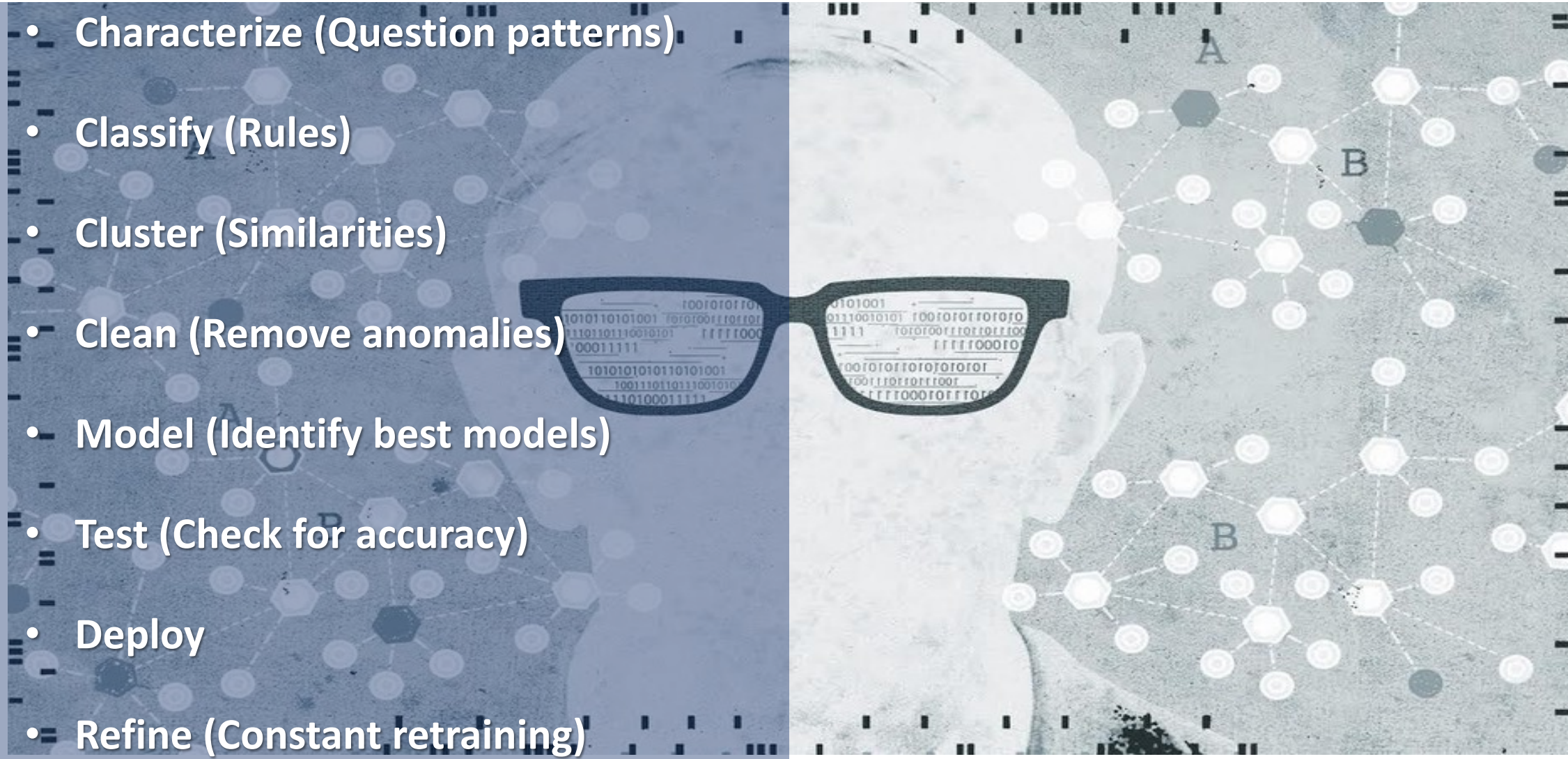
# Questions

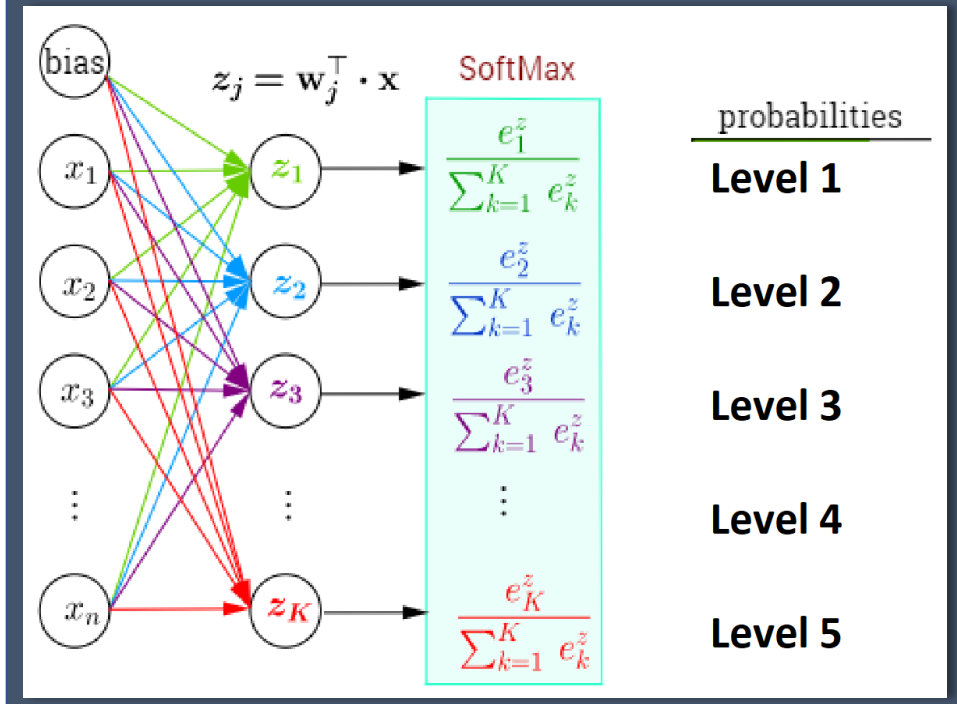
Show 10 entries

Search:

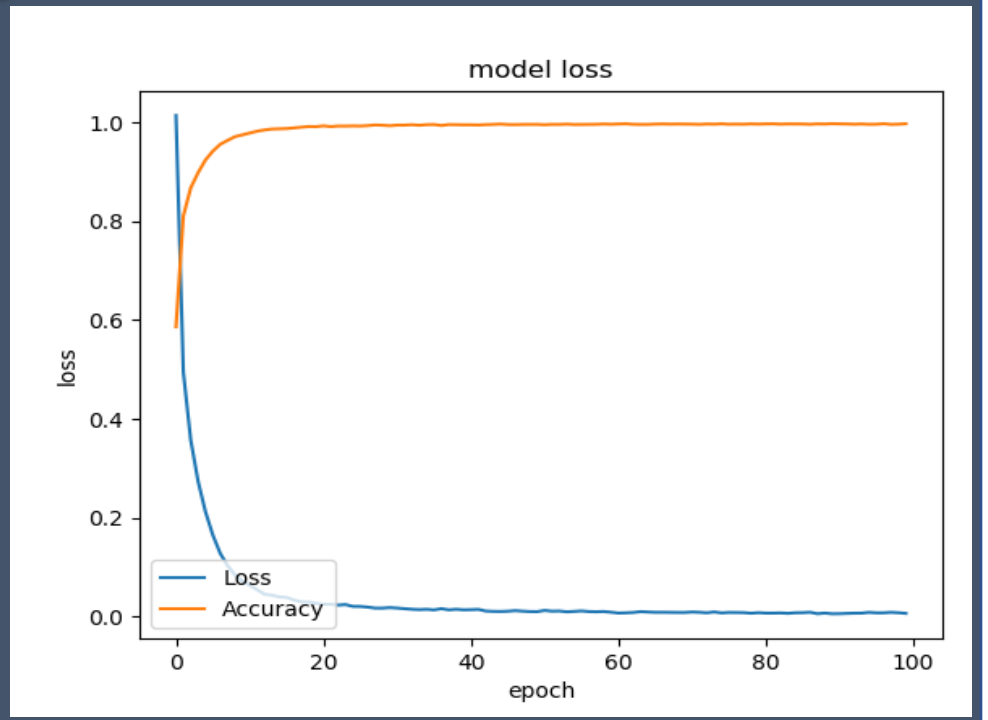
| School | Question Text | Question Type | Resource type | | | |
|---|---|---|---|---|---|---|
| Cejose Wisdom International | 5.What is ergonomic keyboard? b)State two reasons why ergonomic keyboard was created. c)What category is this device classified into? | knowledge | openEndedQuestion | Show | Edit | Destroy |
| Cejose Wisdom International | a. What is this? b.What category of device is this? c.What is the function of this device? | evaluation | openEndedQuestion | Show | Edit | Destroy |
| Cejose Wisdom International | 1.What is the name of the device below? 2.Define the device shown and give two function. 3.Mention three ways of caring for the device. 4. Give two advantages of the device. | knowledge | openEndedQuestion | Show | Edit | Destroy |
| Cejose Wisdom International | a)What is one function of the device. b)The device converts _____ to_____. c)Does the device allows a user to take printed pictures?If yes explain. | application | openEndedQuestion | Show | Edit | Destroy |
| Cejose Wisdom International | 1.What is this device use for? 2. Which professions usually use this device? | knowledge | openEndedQuestion | Show | Edit | Destroy |
| Cejose Wisdom International | 5 a..What type of company produces this devices. b.Give two advantages of this device | knowledge | openEndedQuestion | Show | Edit | Destroy |
| Cejose Wisdom International | 8.What is this device? 9.Where can it be found? 10.State the function. | knowledge | openEndedQuestion | Show | Edit | Destroy |
| Cejose Wisdom International | 3.a.What can of device is this?What is this device use for?What can be use to replace the thumb? | knowledge | openEndedQuestion | Show | Edit | Destroy |
| Cejose Wisdom International | Where can this device be found. what category does this device belong to. Give it name. | knowledge | openEndedQuestion | Show | Edit | Destroy |
| Cejose Wisdom International | 11.What is this device? 12.Mention two devices that can be found on it. | knowledge | openEndedQuestion | Show | Edit | Destroy |

- Characterize (Question patterns)
- Classify (Rules)
- Cluster (Similarities)
- Clean (Remove anomalies)
- Model (Identify best models)
- Test (Check for accuracy)
- Deploy
- Refine (Constant retraining)






# Classification Model with Multinomial Logistic Regression



smile My Groups

## Create a New Question

Question

If the public education systems in the U.S. are all federalized, what would be the pros and cons?

Attach

Tags:

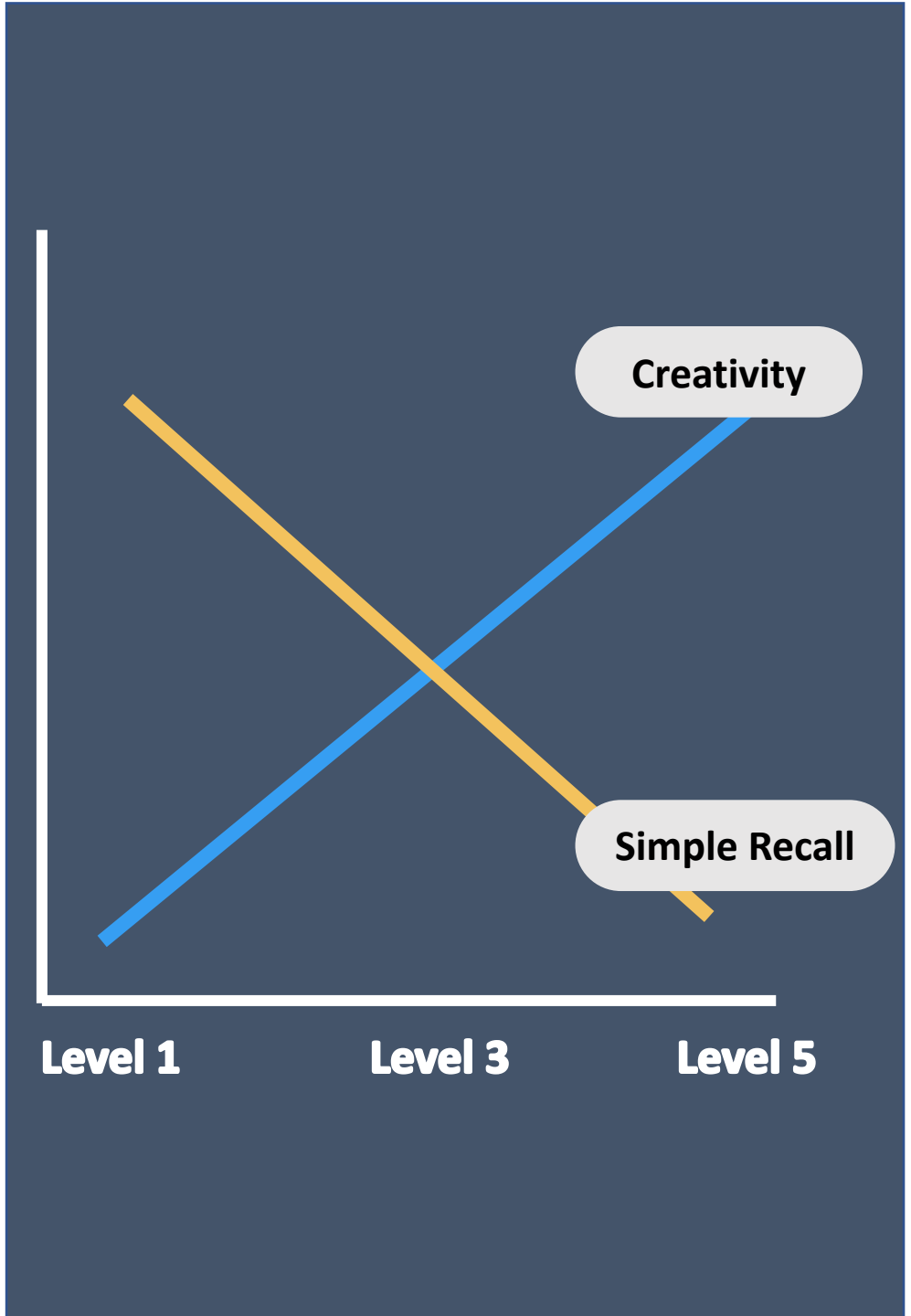
Add Multiple Choice Options

Evaluate My Question

**Level5 question; 99.999452% confidence**

Show evaluation metric

Submit Question



# Improve performance

Use test data

Review live system texts that have incorrect or low-confidence classifications and add them to your training data. Then train a new classifier with the updated data.

Enter text to test W

Classify

*30 results in 24 hou*

If the British had never ruled India, what would India be like today?

Level4 **(0.98)** Level5 **(0.01)** Level3 **(0.00)** Level2 **(0.00)** Level1 **(0.00)**

If the British had ne

Level4 **(0.98)**

Why is Delhi the capital of India?

Level4 **(0.52)** Level1 **(0.29)** Level2 **(0.16)** Level5 **(0.02)** Level3 **(0.02)**

Why is Delhi the ca

Level4 **(0.52)**

What is the capital of India?

Level1 **(0.79)** Level2 **(0.18)** Level5 **(0.01)** Level4 **(0.01)** Level3 **(0.01)**

What is the capital

Level1 **(0.79)**

How much more nitrogen than carbon dioxide is there in the atmosphere?

Level2 **(0.70)** Level1 **(0.26)** Level4 **(0.01)** Level5 **(0.01)** Level3 **(0.01)**

What is acceleration?

Level1 **(0.68)** Level2 **(0.27)** Level3 **(0.02)** Level5 **(0.02)** Level4 **(0.01)**

How many different classes of lever are there?

Level2 **(0.75)** Level4 **(0.15)** Level3 **(0.04)** Level1 **(0.04)** Level5 **(0.02)**

Read this article and raise a question.

# Ancient Infant's DNA Provides Key to Native American Ancestry.

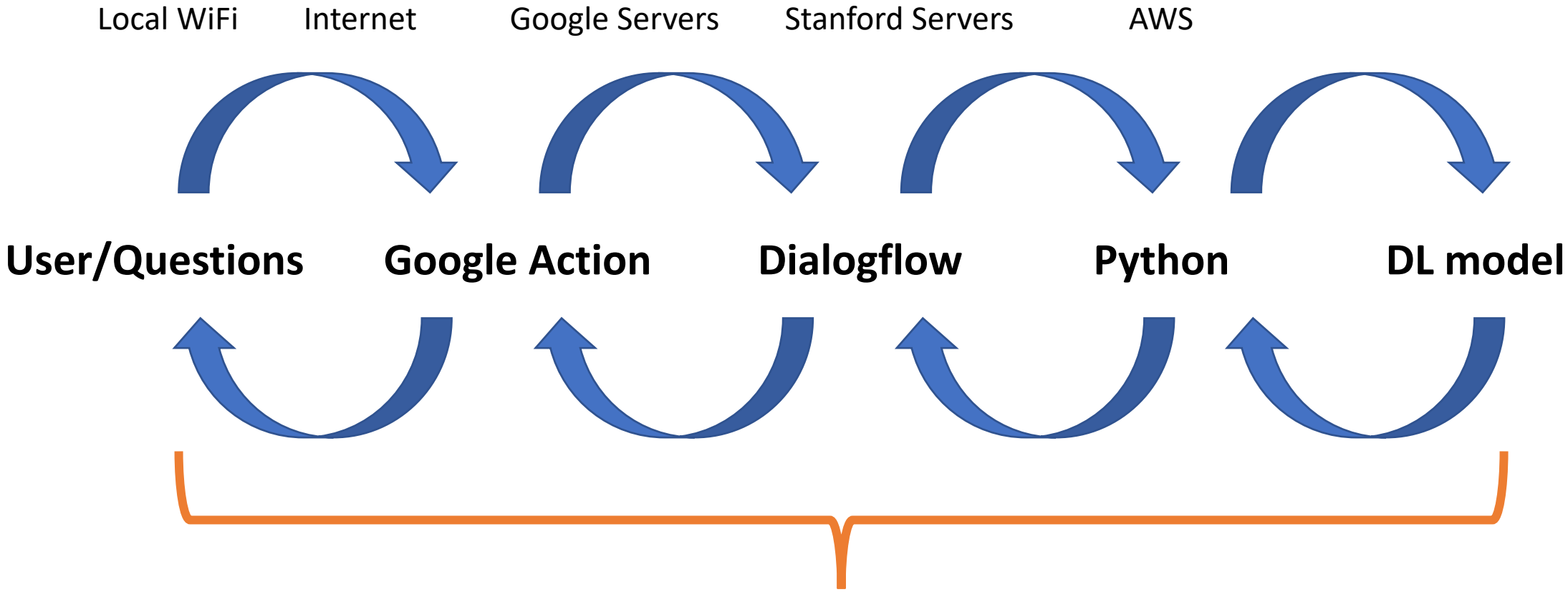
Between 13,000 and 12,600 years ago, members of the Clovis culture appeared in North America, where they made and used distinctive stone-tipped spears to hunt mammoth, bison and mastodon. Until recently, all that archeologists knew about the Clovis people came from studying their tools, which have been unearthed at wide-ranging sites across the country. Now, DNA analysis of a single human skeleton--that of a one-year-old boy buried in a rocky field in modern-day Montana--has allowed scientists to link the Clovis culture to Native Americans throughout the Western Hemisphere.

Construction crews first discovered the ancient remains of an infant in 1968 on private property owned by the Anzick family in western Montana. Dubbed Anzick-1, the one-year-old boy is the only human skeleton that has been identified as a member of the widespread, sophisticated Ice-Age culture known as Clovis. Now, a team of scientists has succeeded in mapping the infant's DNA, in the oldest genome sequence of an American individual ever performed. According to their findings, published in the journal Nature in February 2014, the Clovis people are direct ancestors of many Native Americans now living in North America, and can be linked to many native peoples in Central and South America as well.

**Create your question**

Evaluate Relevancy

# Talk to “Stanford SMILE”




# Less than 4 Seconds

# 1 second ideal in normal conversations

# Can AI be a new assistant coach?

**AI avatar w/ your favorite coach’s look and voice**

Intonations

Nuances

Reading between lines

Break a leg!
Really?
Get out of here!

# Turn Big Data Into Big Benefits For Students

**BrightBytes' end-to-end data management solution** *integrates* purposeful data across ed tech systems, *analyzes* results against research-based frameworks, and delivers *actionable* information

**11.1M**

Students Served

**4M**

Student Data Processed Daily in DataSense

**300M**

Public Data Points

**4.3Bn**

Student EdTech Tool Sessions Logged (1Bn/month)

**705M**

Survey Responses

**18,011**

Schools in Clarity

**2,724**

Districts on Clarity

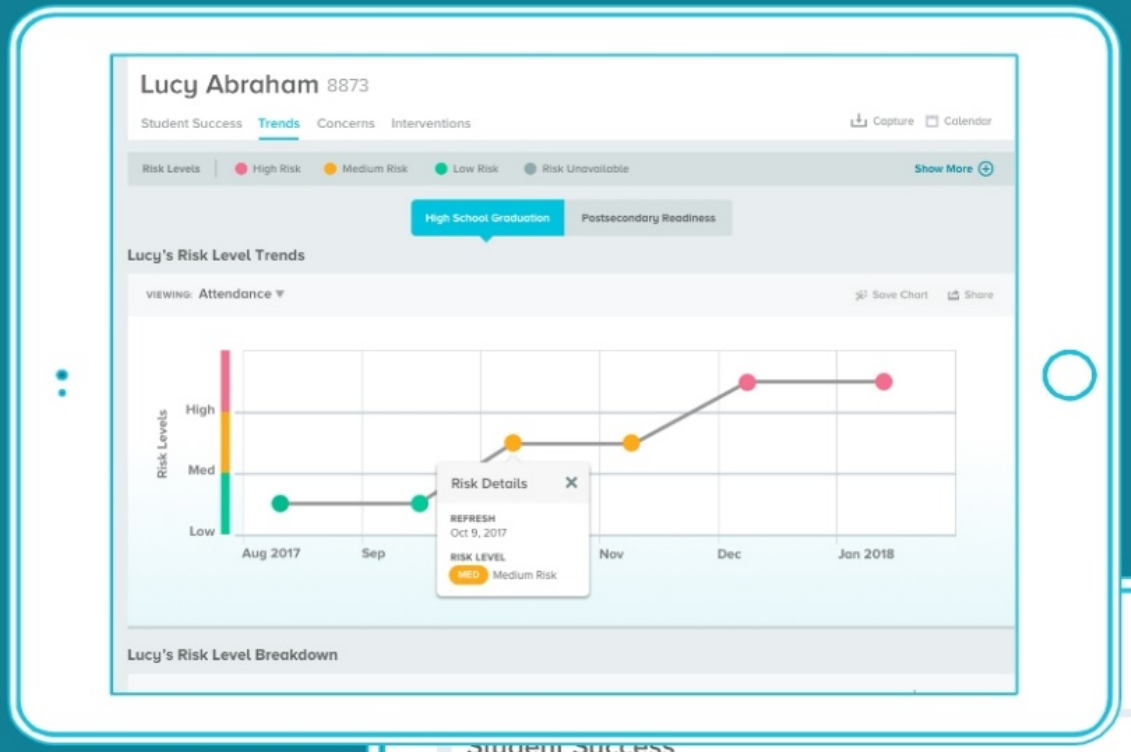
**32Bn**

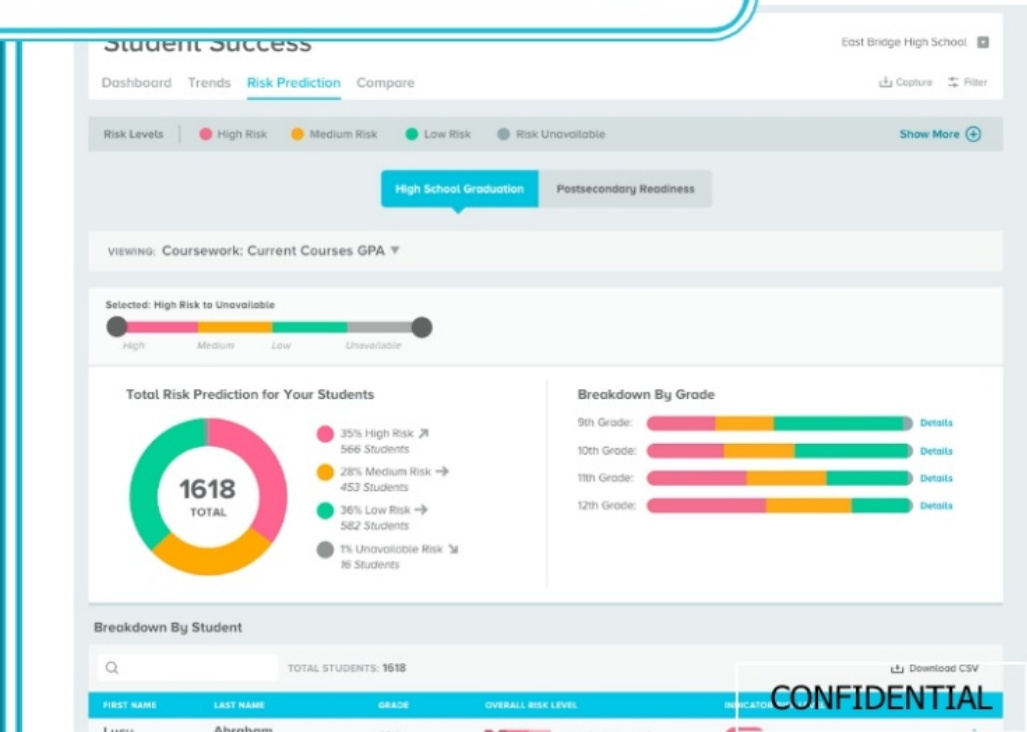
Individual SIS Data Points

EARLY WARNING

# STUDENT PROFILE

- Domain and Indicator Risk Levels
- Trends
- Concerns
- Intervention



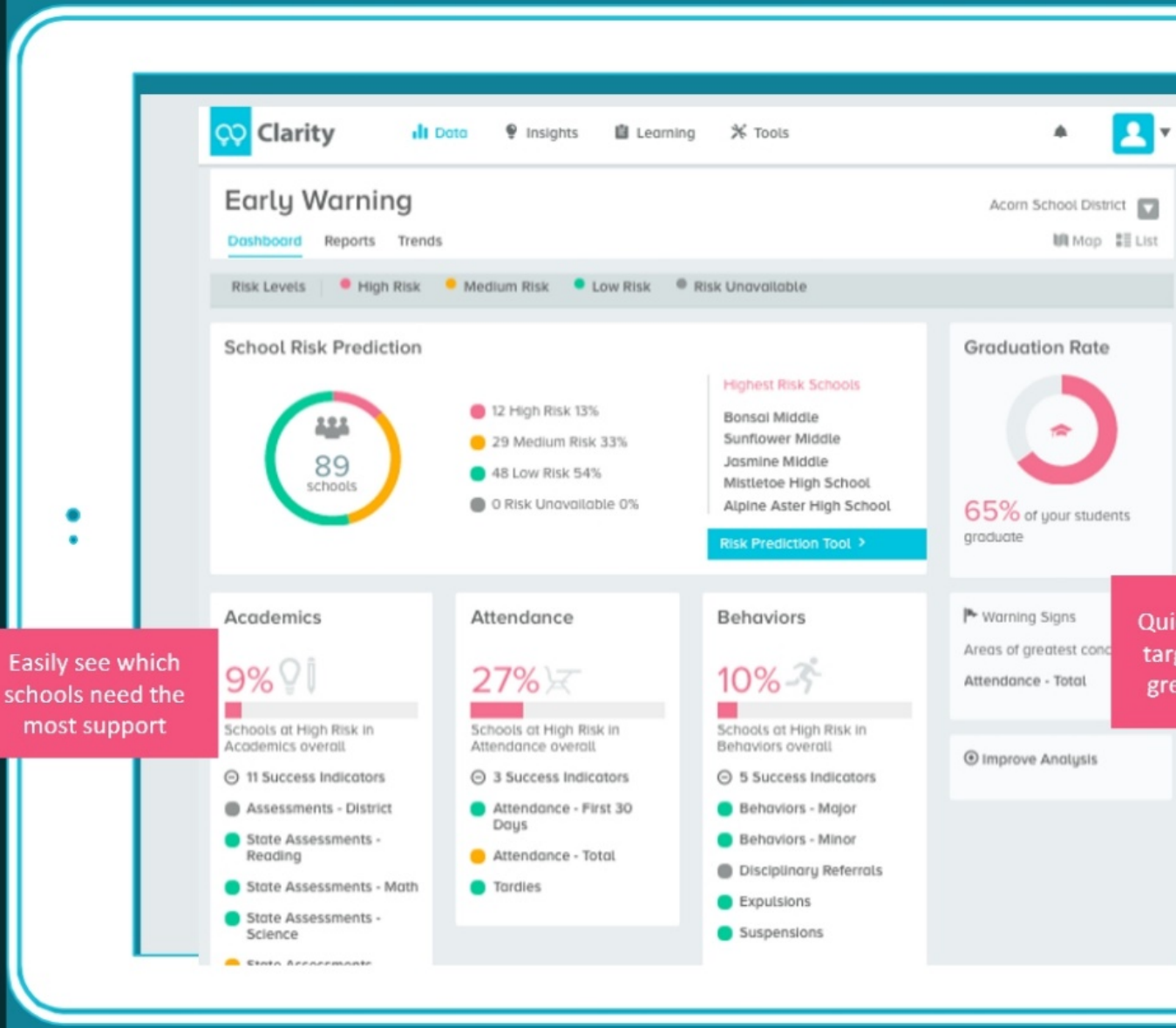

CONFIDENTIAL

EARLY WARNING

# STUDENT SUCCESS

## Comprehensive Dashboards to Highlight Target Areas

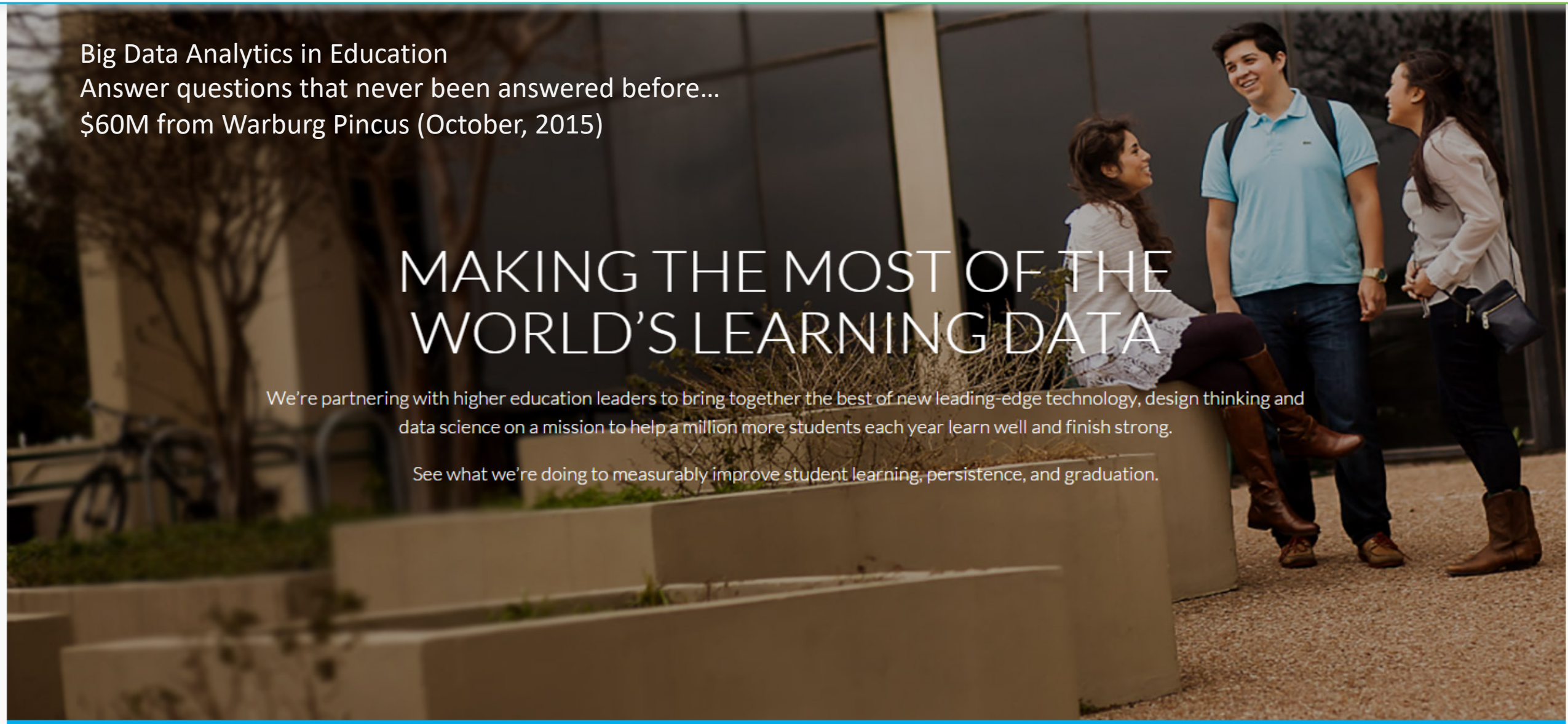
- Easily see which schools need the most support
- Quickly identify target areas of greatest need



CIVITAS LEARNING

ABOUT ANALYTICS SOLUTIONS STRATEGIC PARTNERSHIPS CAREERS

Big Data Analytics in Education
Answer questions that never been answered before…
$60M from Warburg Pincus (October, 2015)

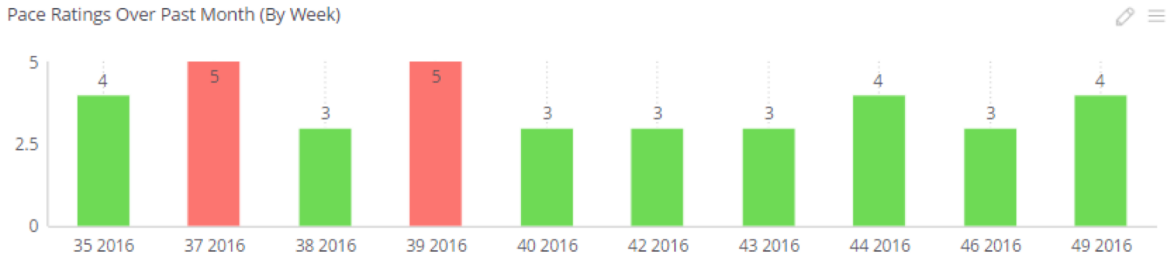


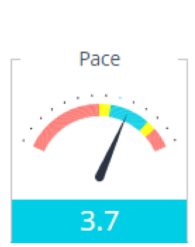
# MAKING THE MOST OF THE WORLD'S LEARNING DATA

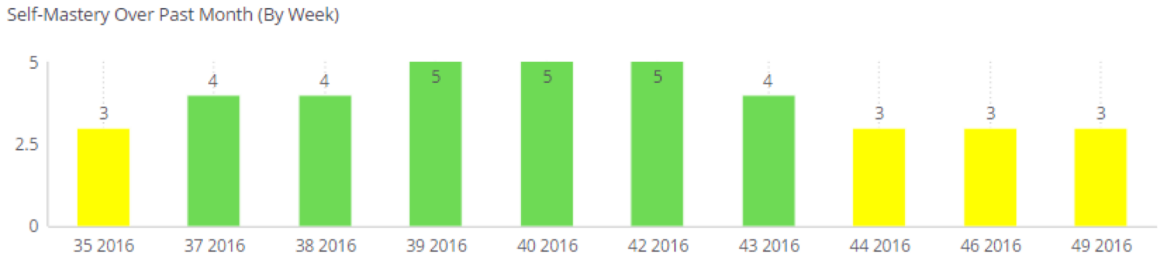
We're partnering with higher education leaders to bring together the best of new leading-edge technology, design thinking and data science on a mission to help a million more students each year learn well and finish strong.

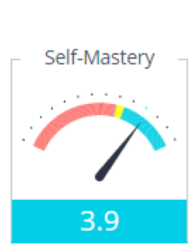
See what we're doing to measurably improve student learning, persistence, and graduation.

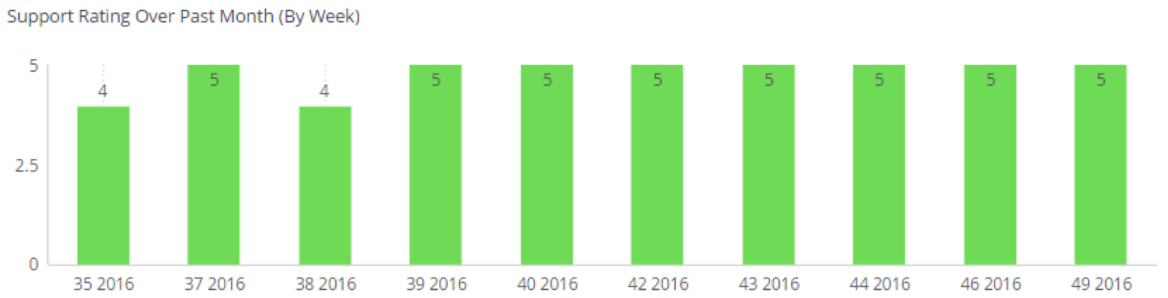
# Trilogy Learning Analytics Platform

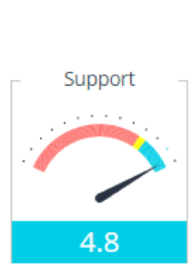


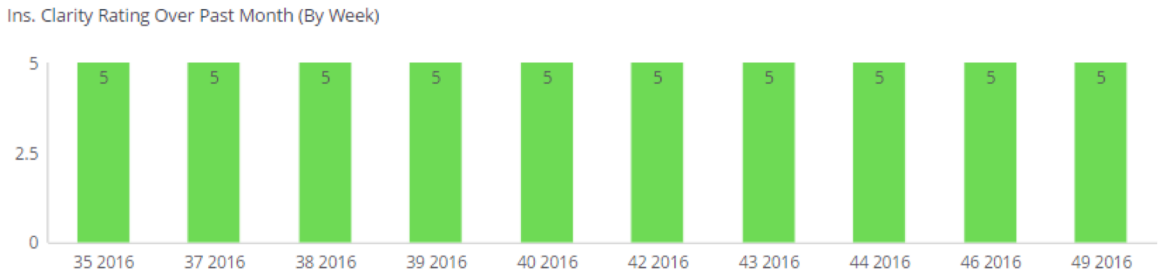



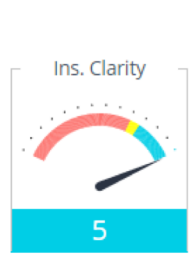

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AdmitHub

About Case Study Insights Press Jobs REQUEST DEMO

# Student Counseling

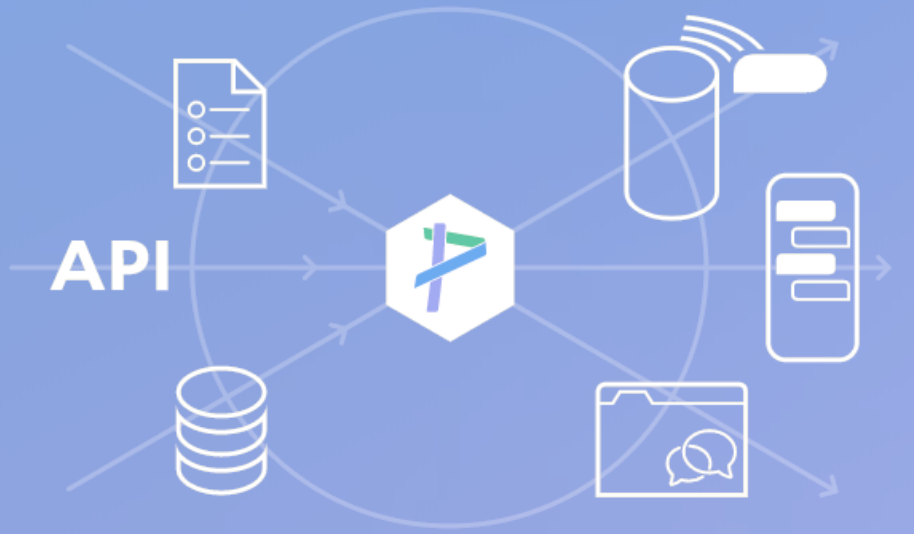
Product Platforms Testimonials Partners About Contact Login

**Course Selection Counseling**

# Passage AI

Our platform provides the AI, NLU/P and deep learning technology as well as the bot building tools to create and deploy a conversational interface for your business

Contact Us




## Plan

Start with our customizable templates or design your ideal end-to-end flow to acquire, engage, retain, and provide services to your

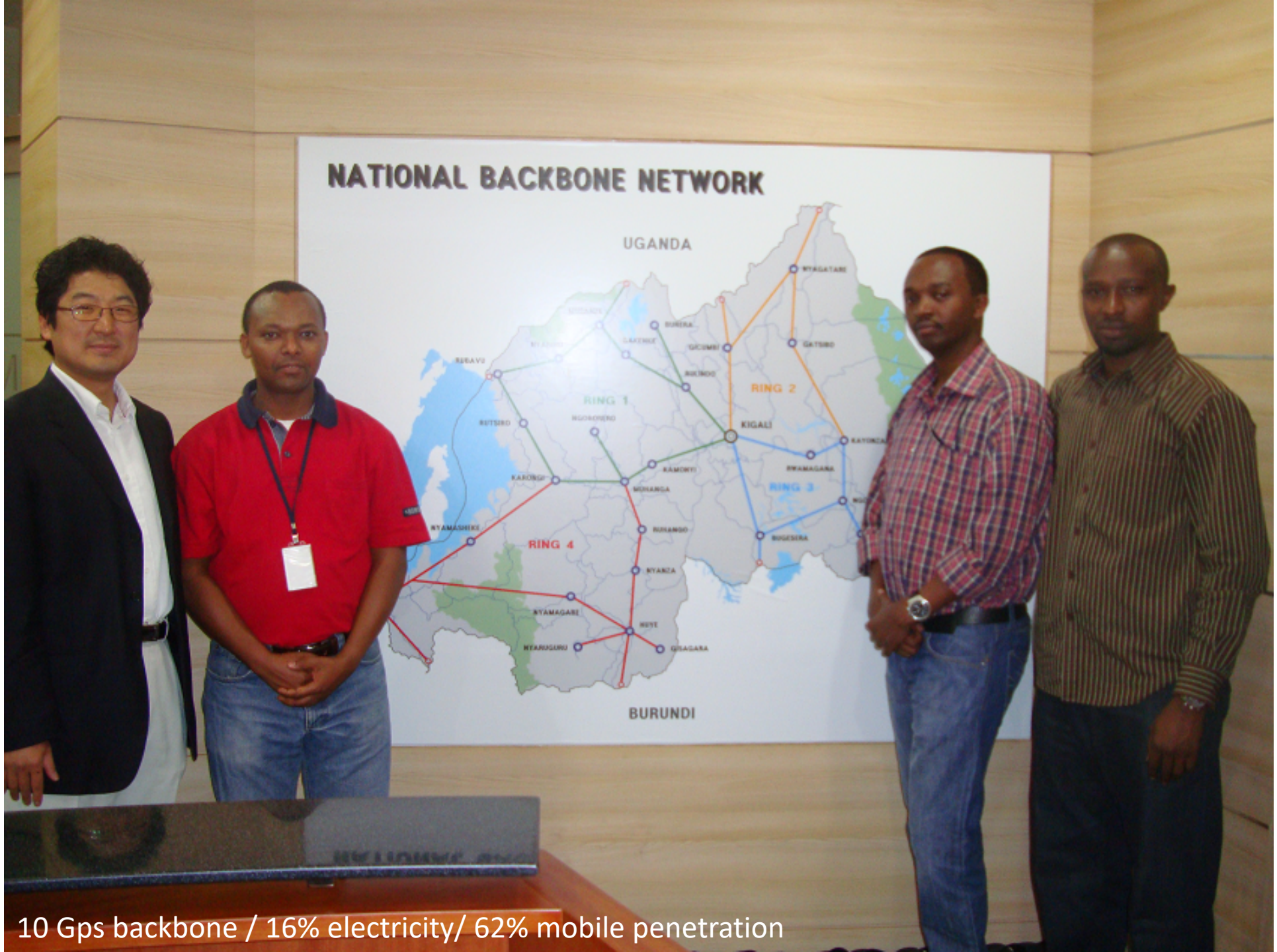
## Build

Create your conversational interface without writing code. From a simple bot to an intelligent assistant, our platform allows you

## Deploy

Launch your new bot across messaging services, voice platforms, and the web. Get analytics and insights from the

Hi.




10 Gps backbone / 16% electricity/ 62% mobile penetration

NBB Transmission Network

Email your comments to

phkim@Stanford.edu