

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



Google's Secrets Of Innovation: Empowering Its Employees

Welcome

You've contributed:

3 votes

0 questions

Pick a topic:

[Angela Merkel](#)

[Barack Obama](#)

[Dalai Lama](#)

[George W Bush](#)

[Gordon Brown](#)

[Hugo Chavez](#)

[John McCain](#)

[King Abdullah bin Ab...](#)

[Mahmoud Ahmadinejad](#)

[Nelson Mandela](#)

[Nicolas Sarkozy](#)

[Raul Castro](#)

[Shimon Peres](#)

[Vladimir Putin](#)

[Hu Jintao](#)

[Any other world lead...](#)

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Laura He, CONTRIBUTOR

Covering billionaires and Chinese entrepreneurs. [FULL BIO](#) ▾

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...conomy in a
sustainable way?"

[Effie S.](#), San Francisco, CA

Skip question

[Flag as inappropriate](#)

Currently in the lead:

"How will you decrease America's dependency on oil?"

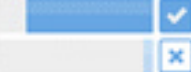
[Katie Jacobs Stanton](#), Mountain View, California



[Flag as inappropriate](#)

"Which Democrat(s) would you invite to serve in your Administration?"

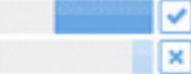
[Katie Jacobs Stanton](#), Mountain View, California



[Flag as inappropriate](#)

"How will you strengthen America's economy in a sustainable way?"

[Effie S.](#), San Francisco, CA



[Flag as inappropriate](#)

and if so how?"

[Suggest a question](#)

[Back to Top](#)



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**.**

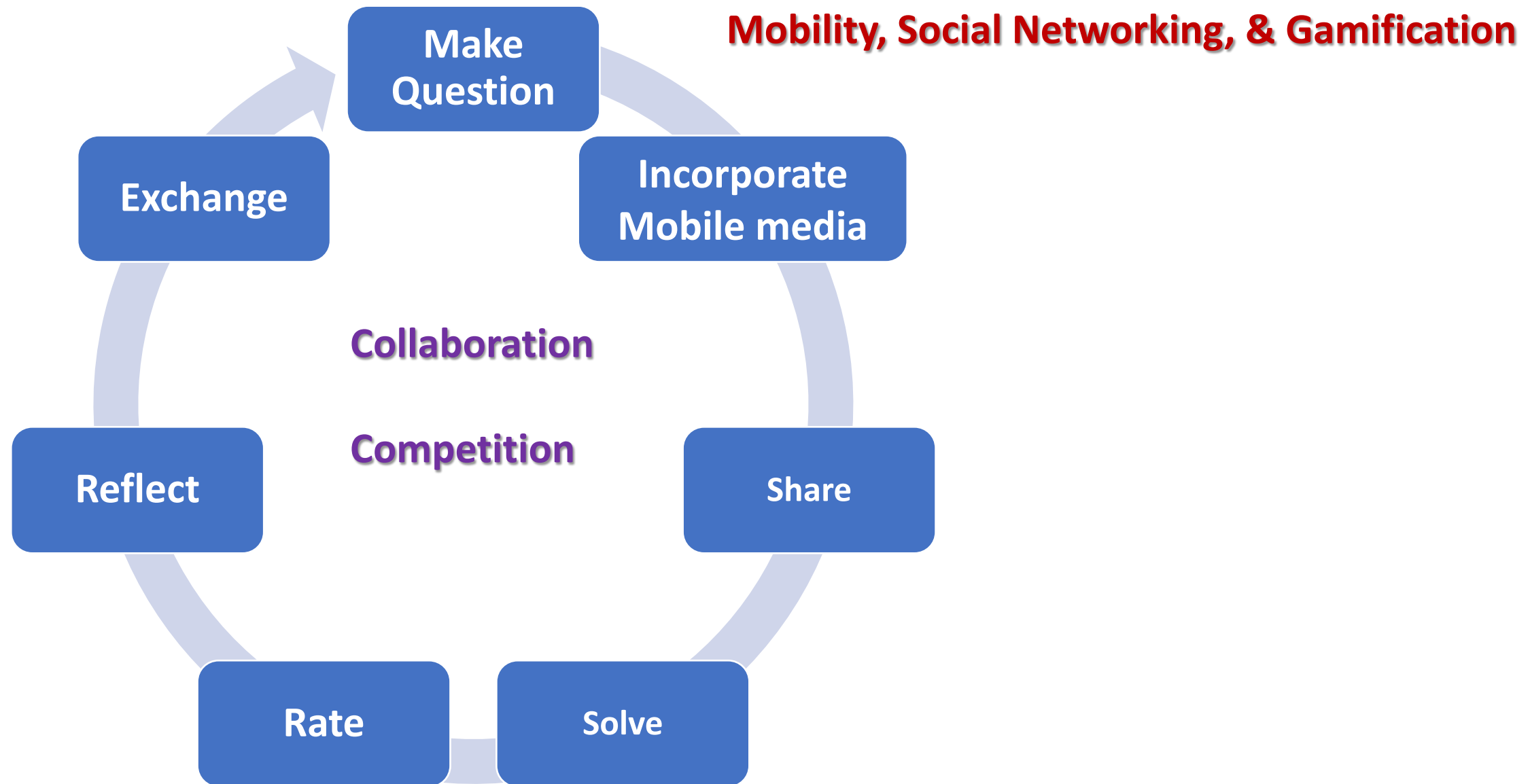
Falling-off-the-cliff phenomenon as students move from elementary school through high school.

Paul Harris, Harvard University

SMILE (Stanford Mobile Inquiry-based Learning Environment)



SMILE Process







Account



Dashboard



Courses



Calendar



Inbox



Commons



Help



smile



My Groups

Consortium

Fall 2018

Home

Roster Photos

Syllabus

Attendance

Assignments

Discussions

Grades

Announcements

People

Files

Pages

SMILE

Conferences

Quizzes

Outcomes

Collaborations

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..."

Question Generation for Comprehension

2 active users



Questions

Resources

Create a Question

- Showing 1 - 10 of 57 questions
- Mardio Leard
After reading the passage in the attached file answer the following question: What two spatial systems are mentioned in...

★★★★★

Answered by 2

Mardio Leard
After reading the passage in the attached file answer the following question: From where does history's shame aris...

★★★★★

Answered by 2

Mardio Leard
After reading the passage in the attached file answer the following question: What do you suppose the writer was alludi...

★★★★★

Answered by 2

Mardio Leard
After reading the passage in the attached file answer the following question: What was the narrator's motivation...

★★★★★

Answered by 2

kay mitchell
Explain how the narrator feels about the old man?

★★★★★

Answered by 3

Mardio Leard asks:

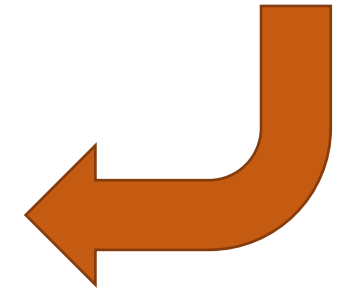
After reading the passage in the attached file answer the following question: What two spatial systems are mentioned in the text?

Please click here to see/download the media file (Still I Rise.docx).

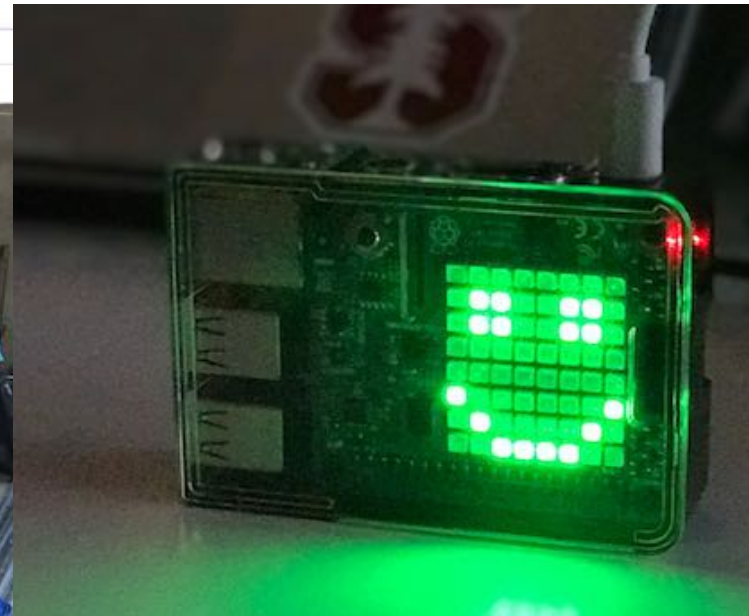
A.	The sun and moon
B.	Mars and Jupiter
C.	Saturn and The Sun
D.	None of the above

Next >

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



SMILE-pi



\$35

Choose your application

Top Applications



...
Stanford Mobile Inquiry--
based Learning Environment

SMILE flips a traditional classroom into a highly interactive learning environment by engaging learners in critical reasoning and problem solving while enabling them to generate, share, and evaluate multimedia-rich inquiries.

[Make a Question](#)



Wikipedia
The Free Encyclopedia

Wikipedia is the free encyclopedia that anyone can use!

[Explore Wikipedia](#)



KA--Lite
Khan Academy Lite

Khan Academy offers videos and practice exercises for a range of subjects.

[Challenge Yourself](#)


Literacy Applications



African Storybooks
...

A collection of illustrated children's stories from many African cultures.

[Read Stories](#)



FANTASTIC PHONICS

Fantastic Phonics is a complete 16-week intensive reading scheme for schools and families, with 60 printable stories, multimedia and video.


[Learn and Practice Reading](#)



Cat & Dog
Fun early reading books.

Fun books about a cat and a dog that encourage young readers!

[Read Fun Stories](#)



1001 Stories Project
From Seeds of Empowerment

Children love to tell stories. However, in many places in the world, their creative voices are rarely heard or cultivated. The 1001 Stories Program conducts storytelling workshops that build on children's natural potential to become original storytellers.

[Read Stories](#)



Project Gutenberg
A large selection of public domain books.

Thousands of books in digital format (text) from Project Gutenberg. Organized by bookshelves.

[Read Stories](#)




Children's Books
Colorful Children's Books

A selection of books for children from Project Gutenberg in PDF format.

[Read Stories](#)

Coding Applications



Blockly Games
Block-based Programming Tutorial

Blockly Games is a series of educational games that teach programming. It is designed for children who have not had prior experience with computer programming. By the end of these games, players are ready to use conventional text-based languages.

[Learn to Program](#)



LOGO Programming Environment
LOGO Interpreter

LOGO is an educational programming language, designed in 1967 by Wally Feurzeig, Seymour Papert and Cynthia Solomon.

[Learn LOGO](#)



Snap! Learn to Program!

Snap! Block-based Programming

Snap! is a visual, drag-and-drop programming language. It is an extended reimplementation of Scratch (a project of the Lifelong Kindergarten Group at MIT Media Lab). Capabilities like first class lists, first class procedures and continuations make it a suitable serious introduction to computer science.

[Learn Programming](#)



Turtle Academy

Introduction to LOGO Programming

The easy way to learn programming! Turtle Academy makes is surprisingly easy to start creating amazing shapes using the LOGO language.

[Learn Programming](#)



Learn Javascript!

Code Monster
Introduction to Javascript from a funny character.

Code Monster gets kids excited about programming. It is a combination of a game and tutorial where kids experiment with learning to code.

[Learn Javascript](#)

Digital Skill Building



Typing Practice
A Typing Tutor

If you are on a laptop or desktop computer, use this program to practice your typing skills!

[Practice Typing](#)



GCF Learn Free
Learn Technology Skills

Hundreds of high-quality illustrated articles and videos focusing on technology, job training, reading, and math skills, produced by the Goodwill Community Foundation.

[Explore Skills](#)

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](#)



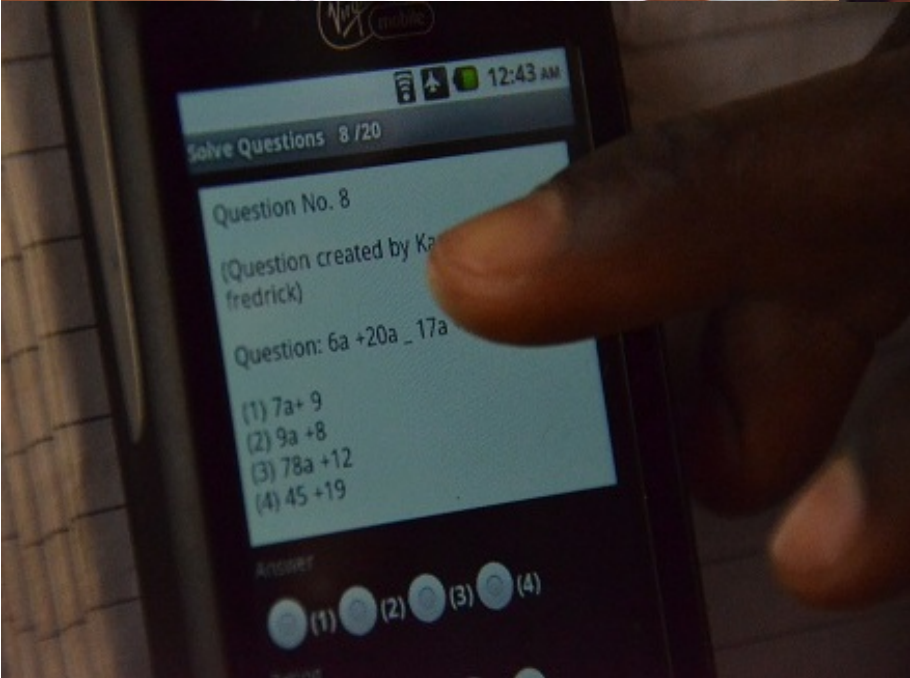
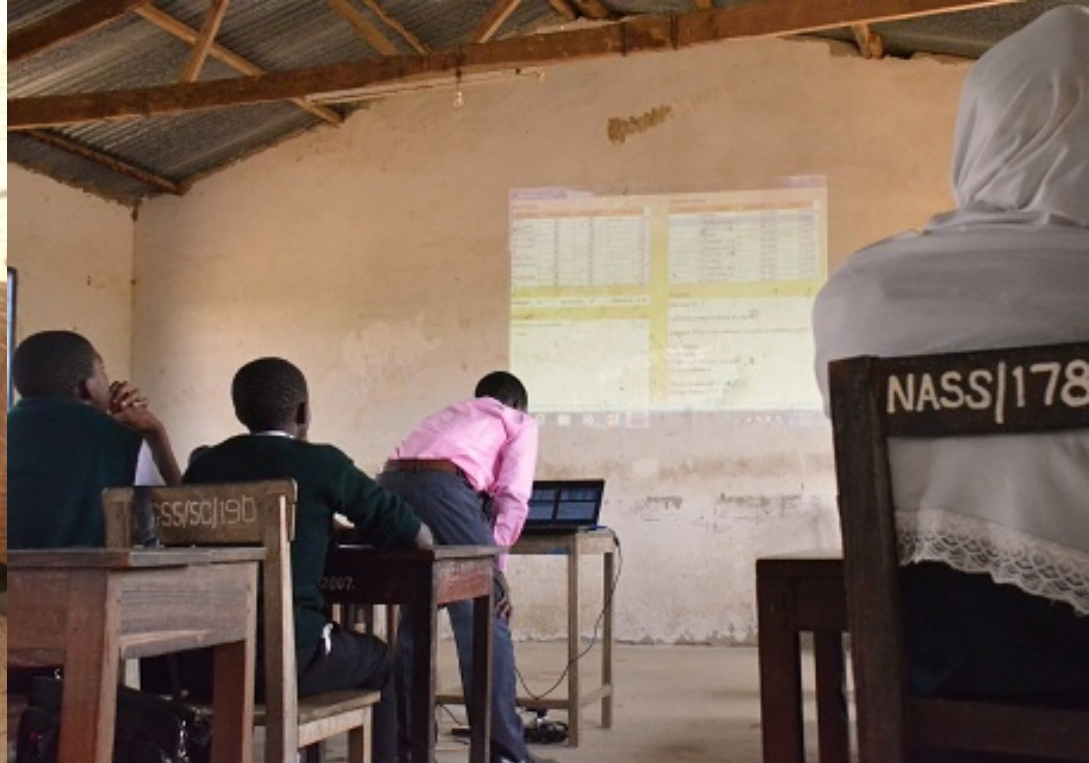
CK-12

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





Higher Order Learning

Behavioral & Cognitive

Evaluation

Creation

Analysis

Synthesis

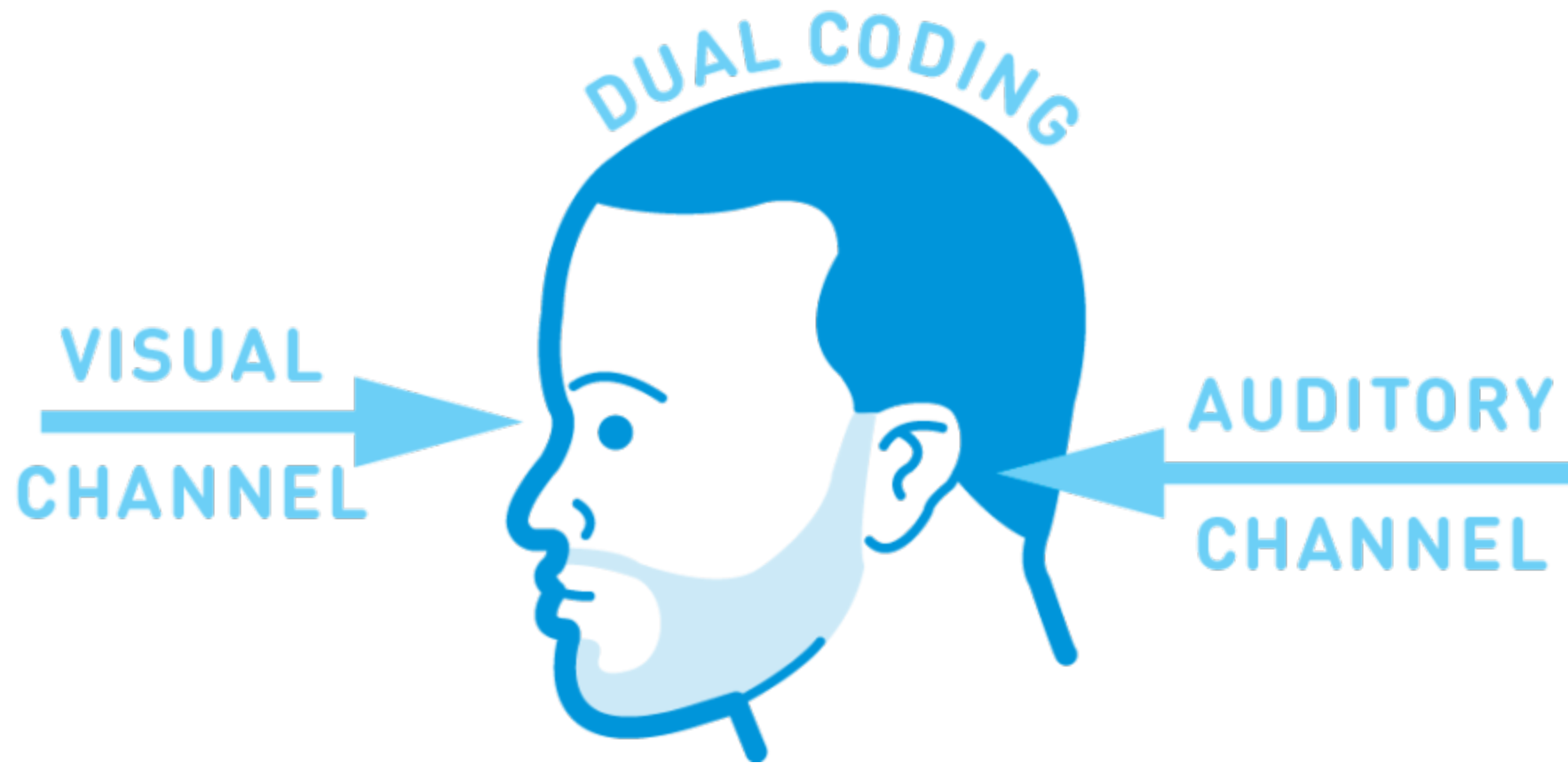
Presentation

Perceptual

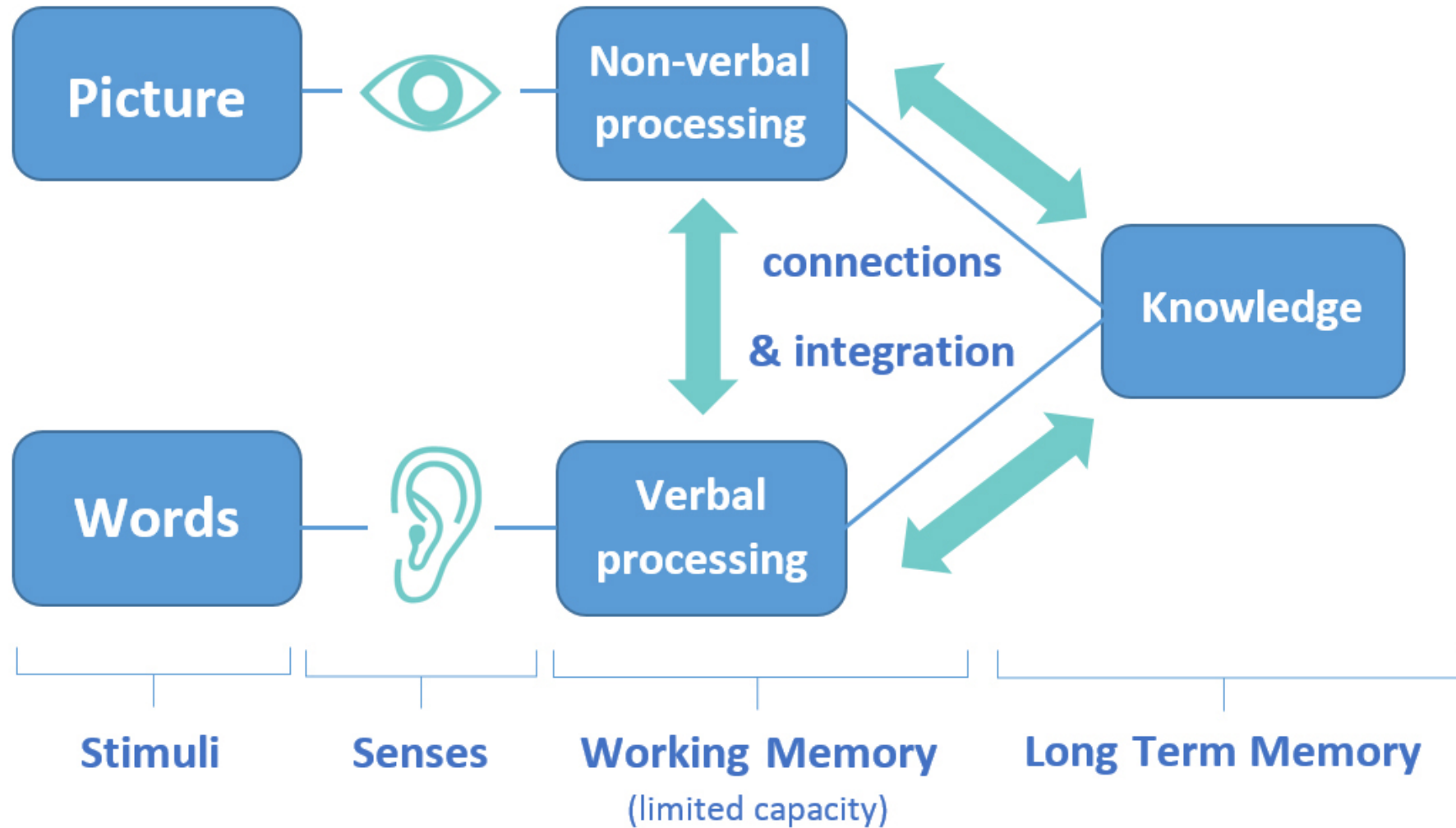
Sense of Achievement

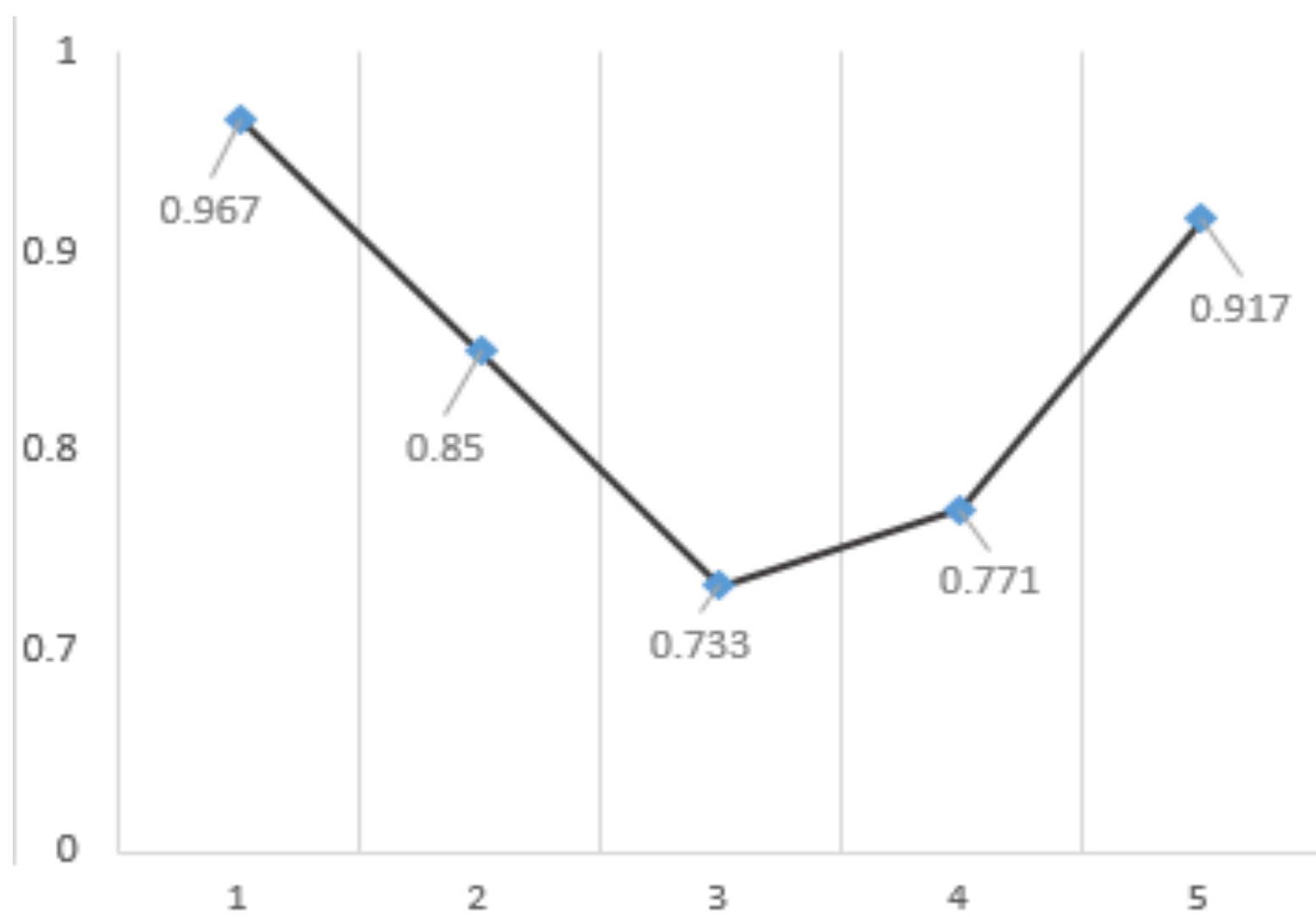
Sense of Ownership

Sense of Self-Efficacy



Allan Paivio's Dual-Coding Theory







Questions

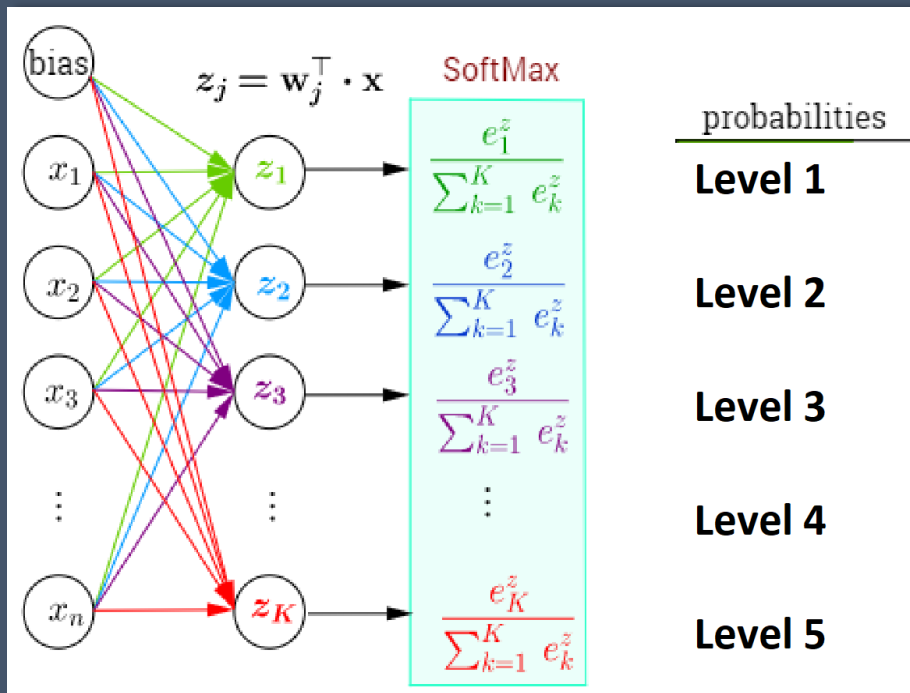
Show 10 entries

Search:

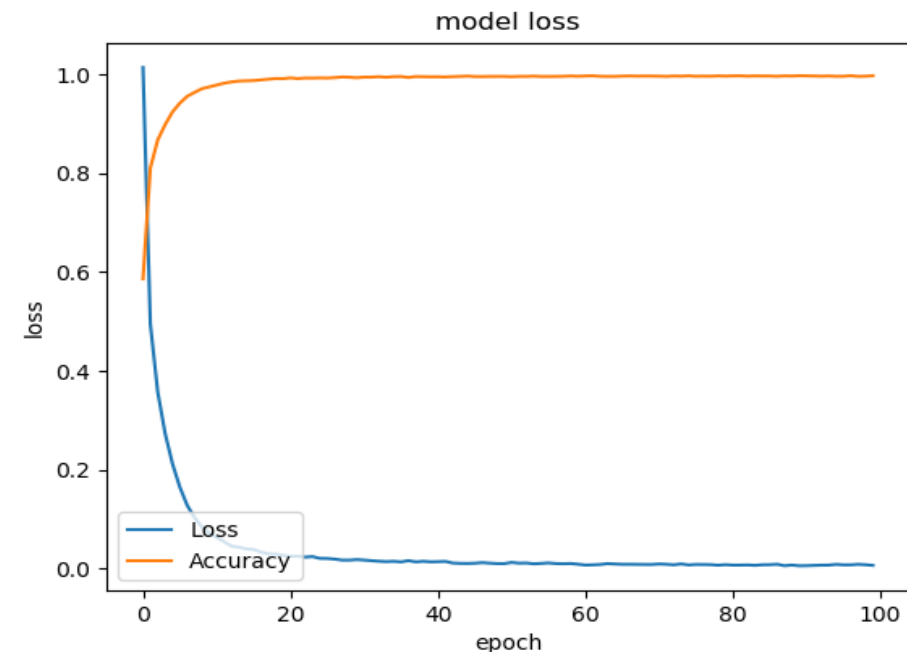
School	Question Text	Question Type	Resource type			
Cejose Wisdom International	5.What is ergonomic keyboard? b)State two reasons why ergonomic keyboard was created. c)What category is this device classified into?	knowledge	openEndedQuestion	Show	Edit	Destroy
Cejose Wisdom International	a. What is this? 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:

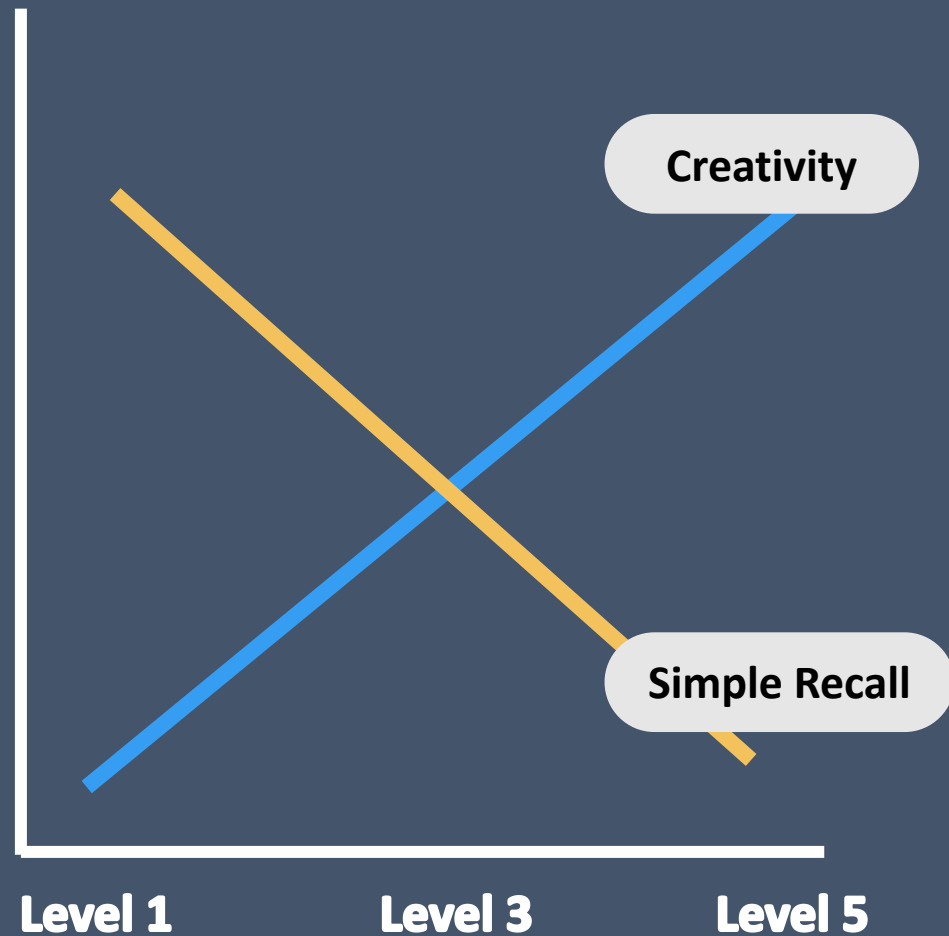
Add Multiple Choice Options

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 V

30 results in 24 hours

If the British had ne

Why is Delhi the ca

What is the capital

How much more nitro

What is acceleration?

How many different classes of lever are there?

Level4 (0.98)

Level5 (0.01)

Level3 (0.00)

Level2 (0.00)

Level1 (0.00)

Level4 (0.52)

Level1 (0.29)

Level2 (0.16)

Level5 (0.02)

Level3 (0.02)

Level1 (0.79)

Level2 (0.18)

Level5 (0.01)

Level4 (0.01)

Level3 (0.01)

Level2 (0.70)

Level1 (0.26)

Level4 (0.01)

Level5 (0.01)

Level3 (0.01)

Level1 (0.68)

Level2 (0.27)

Level3 (0.02)

Level5 (0.02)

Level4 (0.01)

Level2 (0.75)

Level4 (0.15)

Level3 (0.04)

Level1 (0.04)

Level5 (0.02)

Classify

✓

✗

✓

✗

✓

✗

✓

✗

✓

✗

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.

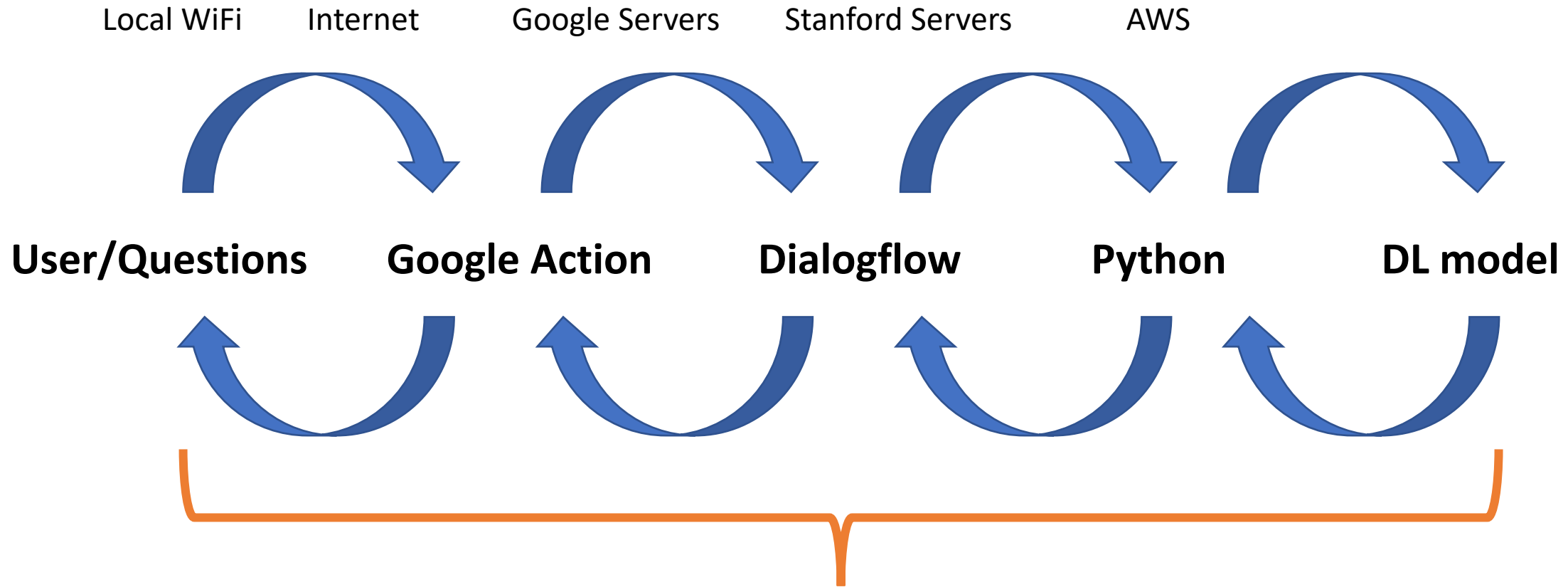
Construction crews first discovered the ancient remains of an infant in 1968 on private property owned by the Anzick family in western Montana. Dubbed Anzick-1, the one-year-old boy is the only human skeleton that has been identified as a member of the widespread, sophisticated Ice-Age culture known 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

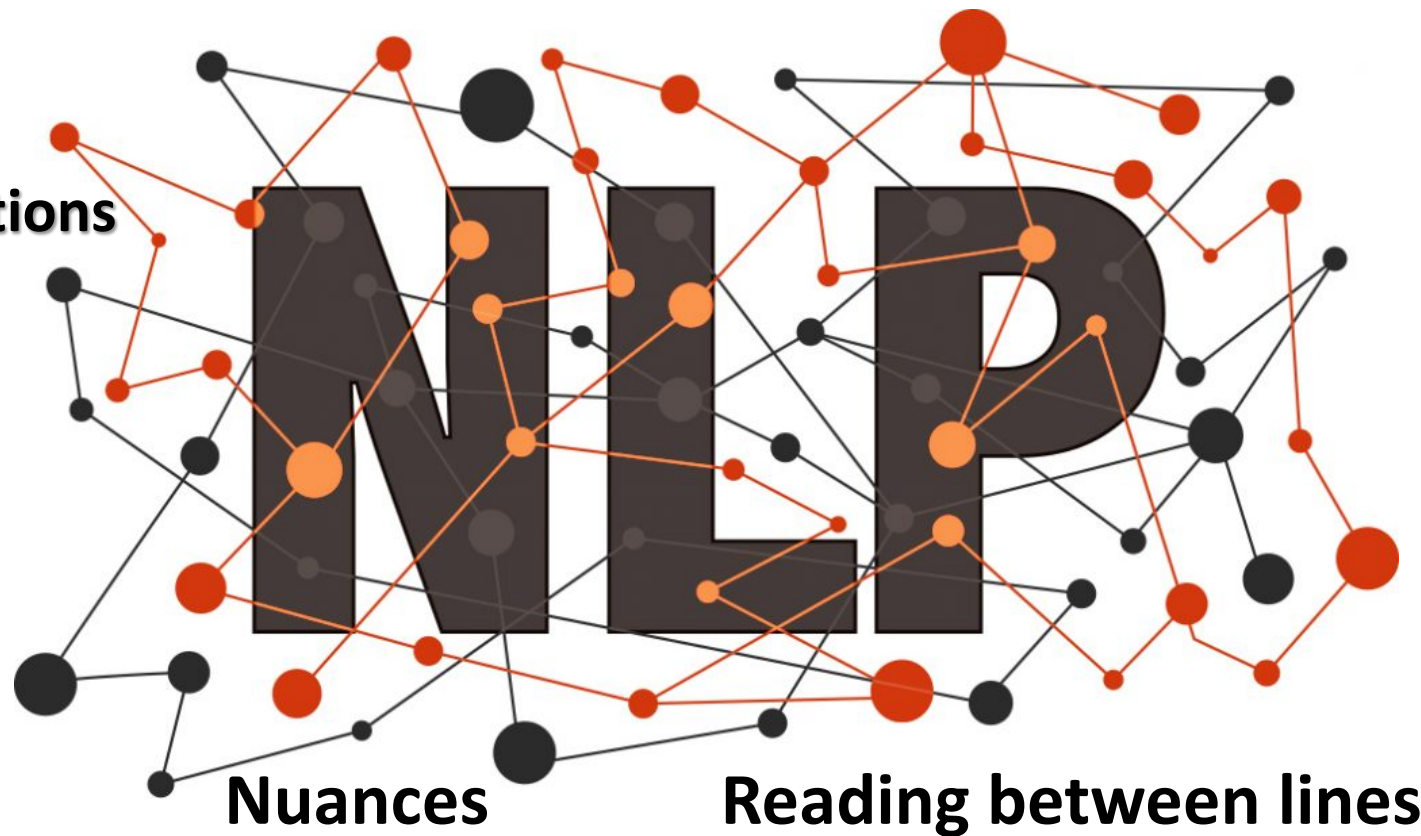
Can AI be a new assistant coach?



AI avatar w/ your favorite coach's look and voice

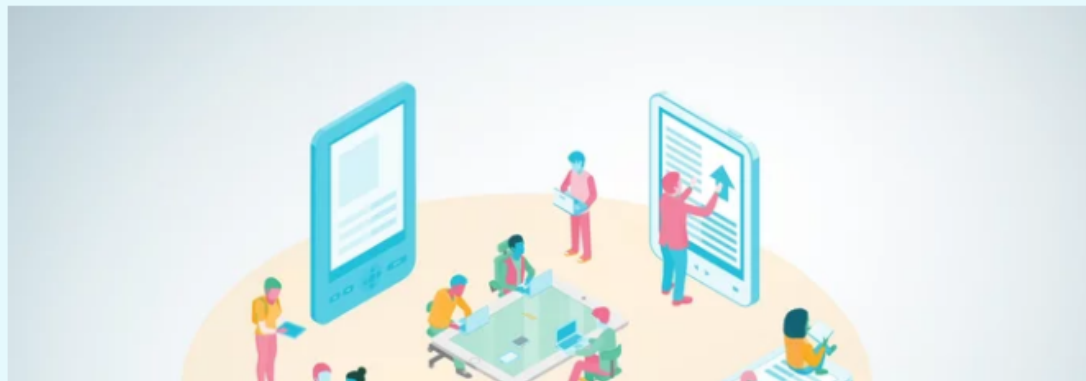
**Break a leg!
Really?
Get out of here!**

Intonations





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 that drives learning.



11.1M

Students Served

4M

Student Data
Processed Daily in
DataSense



705M

Survey Responses



300M

Public Data Points



4.3Bn

Student EdTech
Tool Sessions
Logged
(1Bn/month)



18,011

Schools in Clarity

2,724

Districts on Clarity



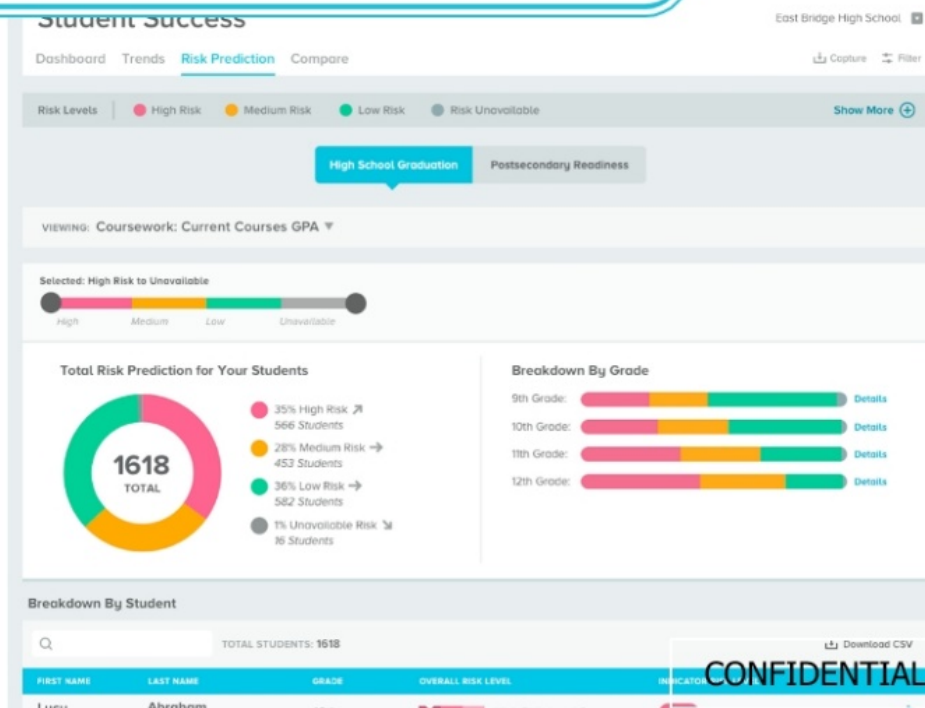
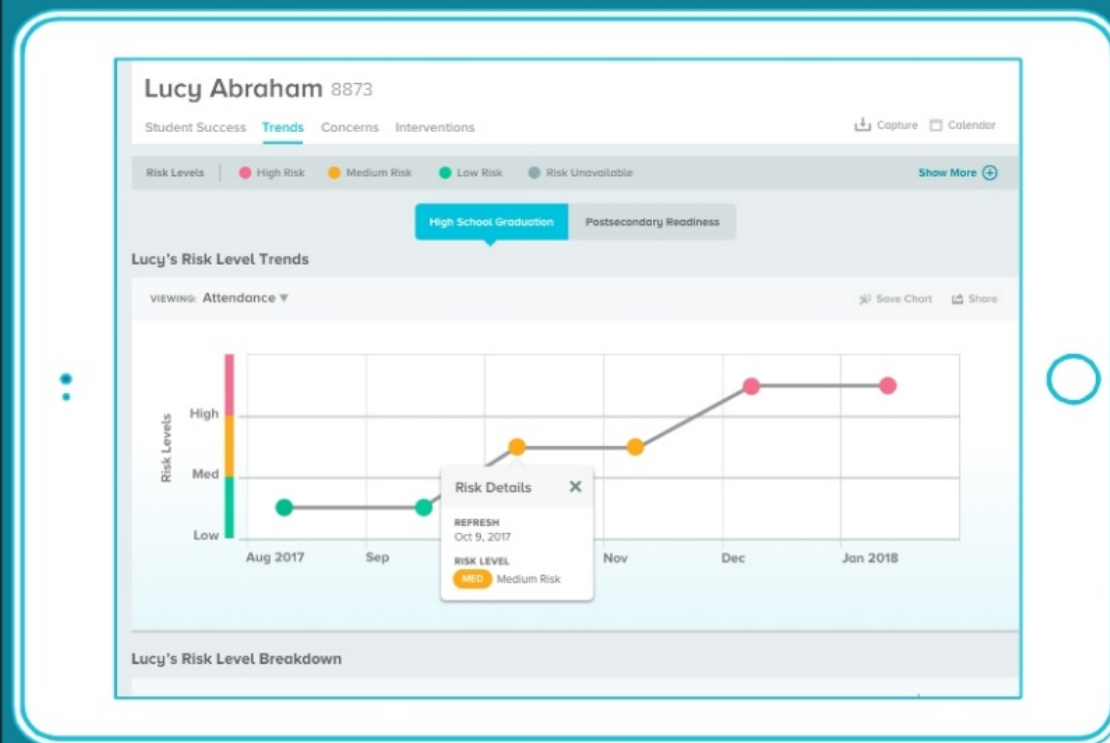
32Bn

Individual SIS Data
Points



STUDENT PROFILE

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



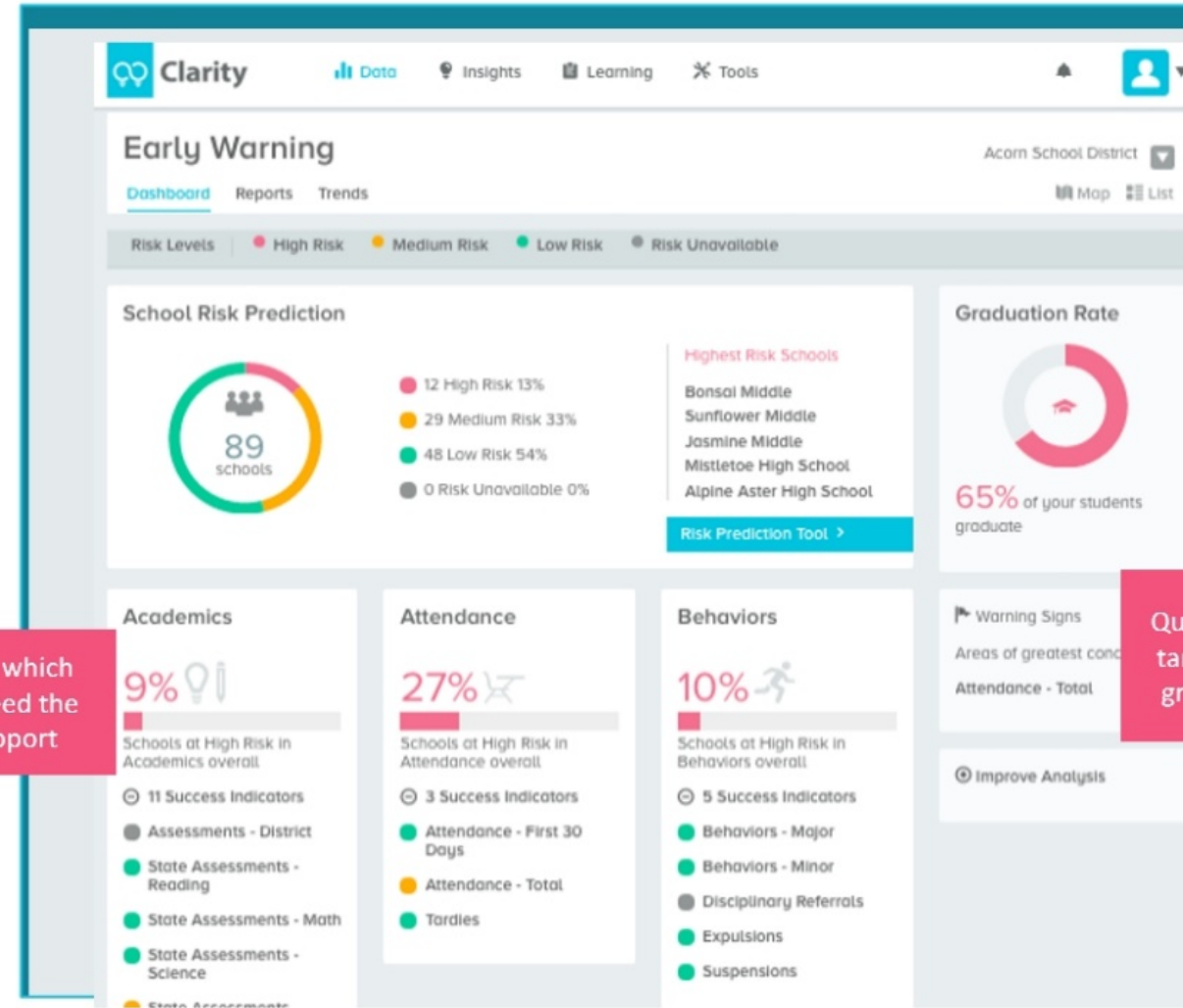


STUDENT SUCCESS

Comprehensive Dashboards to Highlight Target Areas

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

Easily see which schools need the most support

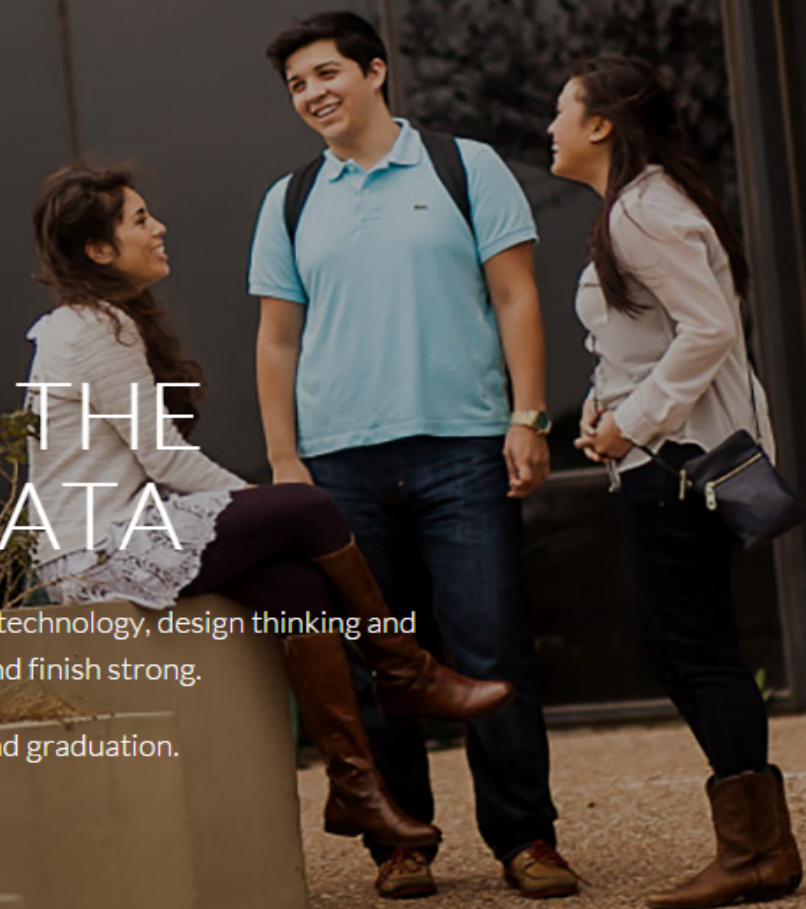


Big Data Analytics in Education
Answer questions that never been answered before...
\$60M from Warburg Pincus (October, 2015)

MAKING THE MOST OF THE WORLD'S LEARNING DATA

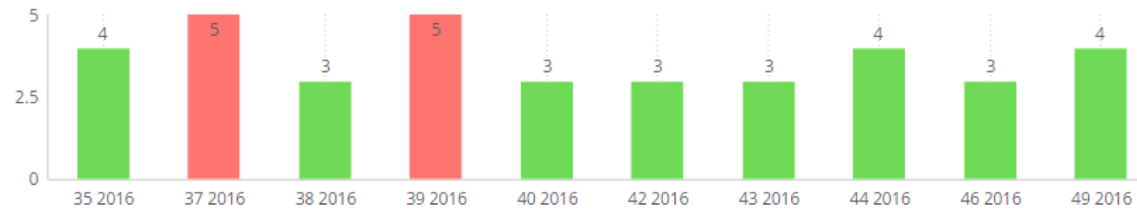
We're partnering with higher education leaders to bring together the best of new leading-edge technology, design thinking and data science on a mission to help a million more students each year learn well and finish strong.

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

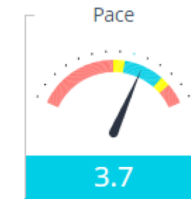


Trilogy Learning Analytics Platform

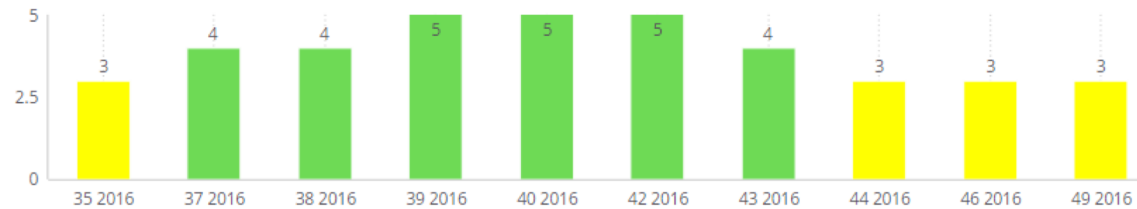
Pace Ratings Over Past Month (By Week)



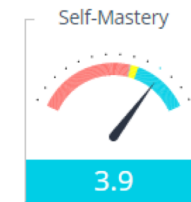
Overall Pace Rating (Target: 3.25 - 4:25)



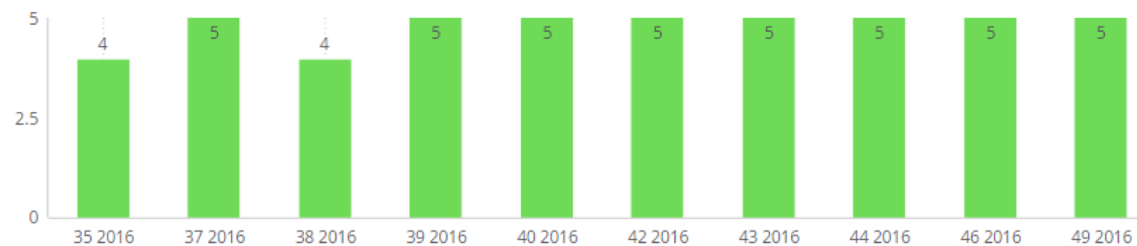
Self-Mastery Over Past Month (By Week)



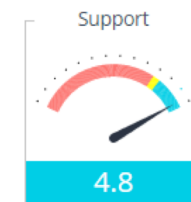
Overall Self-Mastery Rating (Target: >3.25, At-Risk: <3.0)



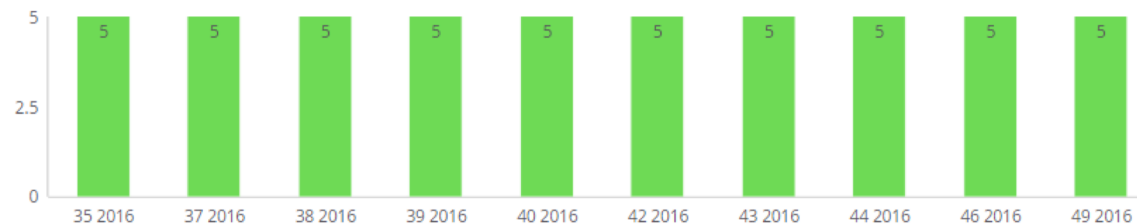
Support Rating Over Past Month (By Week)



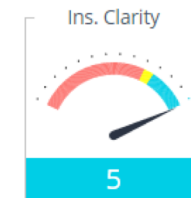
Overall Support Rating (Target: >4.0, At-Risk: <3.75)



Ins. Clarity Rating Over Past Month (By Week)



Ins. Clarity Rating (Target: >4.0, At-Risk: <3.75)



Student Counseling



**Conversational AI
for College Success**
YOUR SCHOOL MASCOT BROUGHT TO LIFE

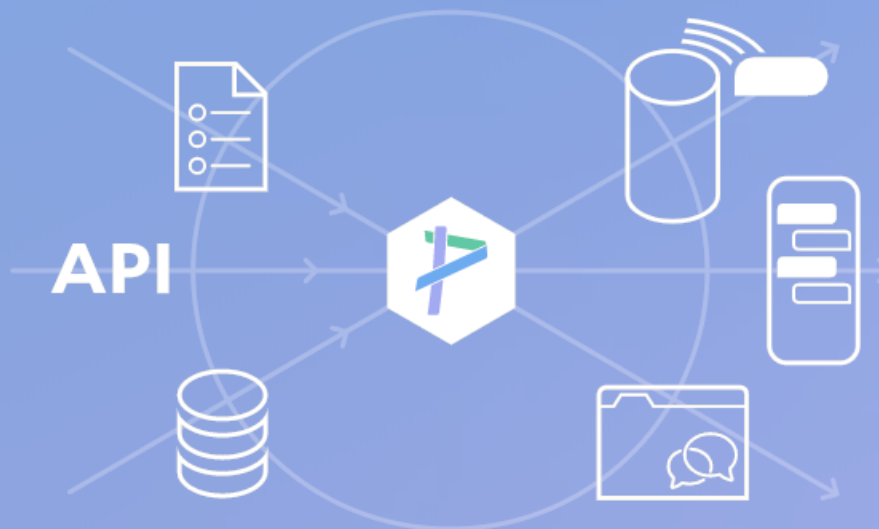


Course Selection Counseling

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

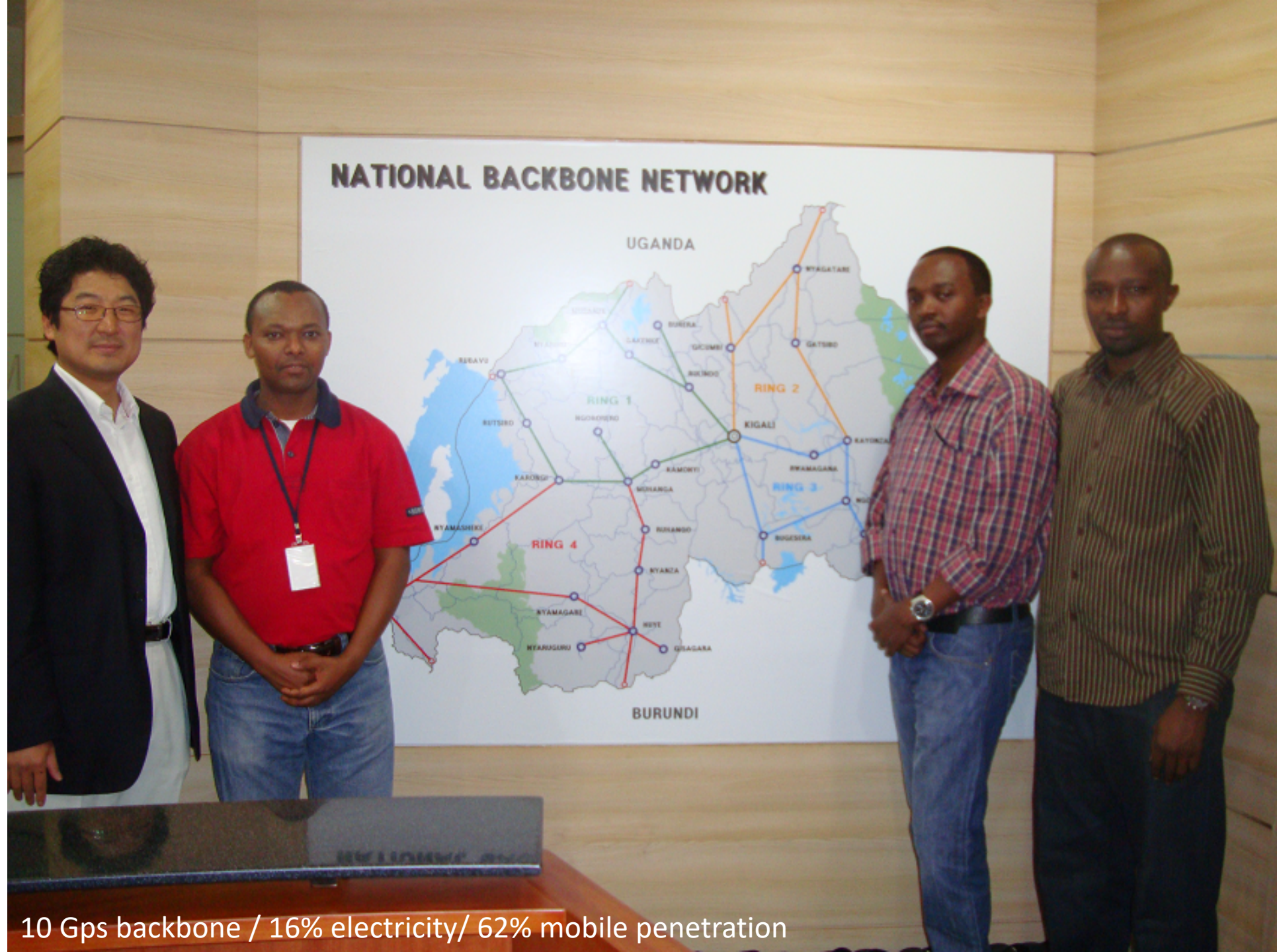
Create your conversational interface without writing code. From a simple bot to an intelligent assistant, our platform allows you

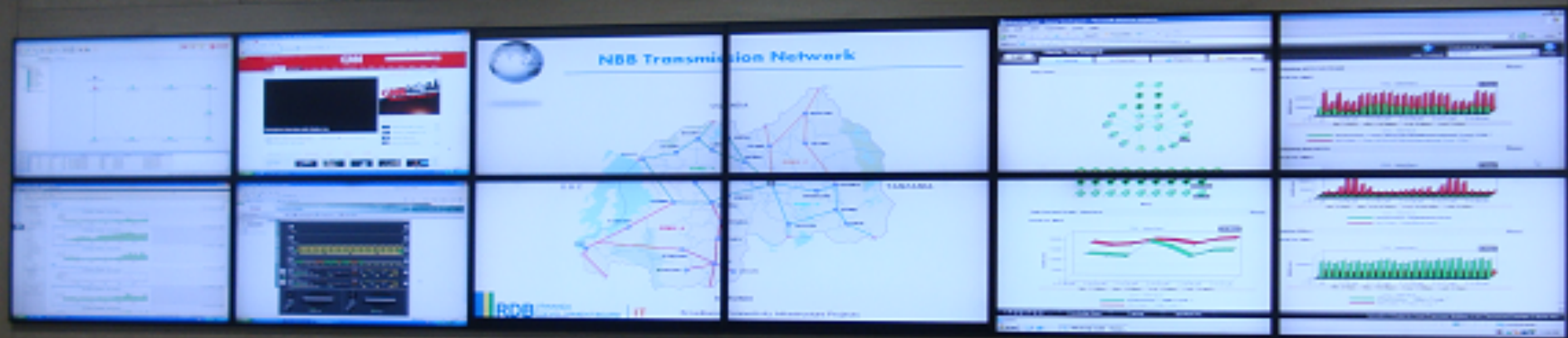


Deploy

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







Email your comments to
phkim@Stanford.edu