




# Online education

Beyond the Ordinary



It is not necessary to change.  
Survival is not mandatory. –  
*W. Edwards Deming*

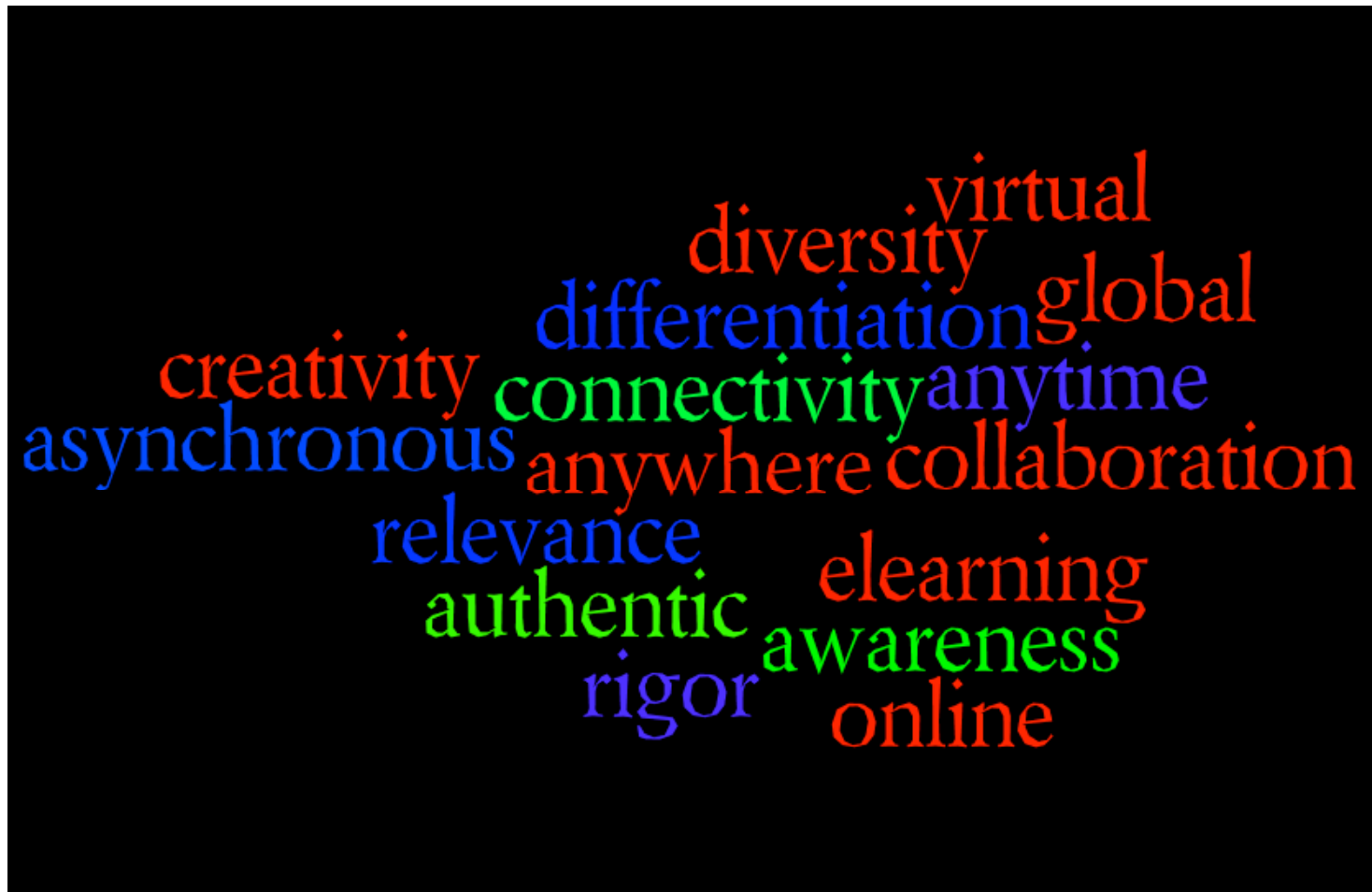


# Virtual

Merrriam-Webster:

« being such in essence or effect though not formally recognized or admitted »

<http://www.wordle.net/>.





# What About Our Students' Brains?

[thecommittedsardine/Handouts.html](http://thecommittedsardine/Handouts.html)



# Old Brain Science Beliefs

- Born “hard-wired” @ birth, stable by age of 3 with fixed number of brain cells.
- Fixed memory, Fixed processing power, Fixed intelligence

# Neuroplasticity

- Brain is **plastic** throughout our lives based on...
  - our experiences we have
  - **intensity** and **duration** of inputs

# Memory & IQ



The eyes of older generations unconsciously find intersection about 1/3 of the way down the page and 1/3 of the way in from the left side - the Greeks called this intersection the Golden Mean - and then we read in what's called a Z curve. A complex Z curve if there's lots of information, and a simple Z curve if there's only a small amount of information.

But research tells us that the eyes of Digital Natives first scan the bottom and edges before they read the page in what's called an F-pattern. This is a series of thermographic prints developed at Kent State University for a company called Sinsidynix from Toronto. A heat map tracks eye movement of students in different reading configurations and then sums the records. The brighter the color the more the reader has focused on the information in that area.

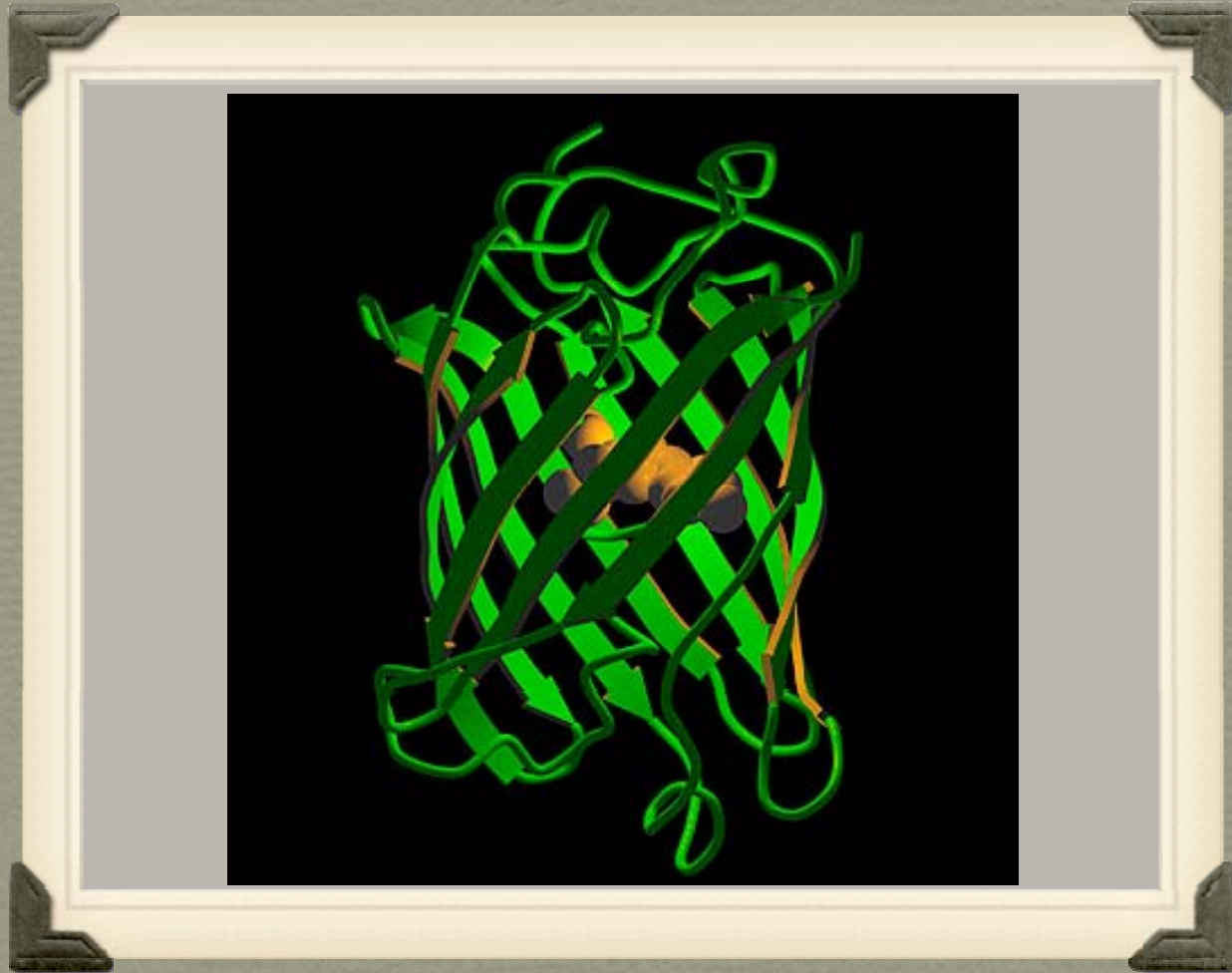


As you can see here, digital natives read in what's called an F-Pattern. Typically they will unconsciously ignore the right side and bottom half of the page. Unless they are highly motivated Digital Natives typically tend to unconsciously ignore the right side and bottom half of the page and will only read content on the right side and bottom of the page if they are highly motivated to do so. Do you think this holds any implications for designing engaging reading materials?

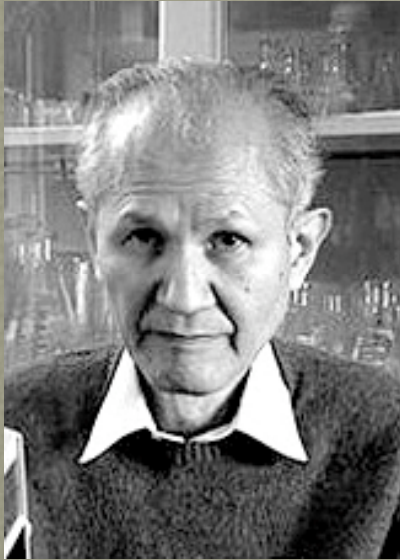
#### Color of Text

And while Digital Immigrants typically find it distracting to read text of different colors, specific colors attract and repel Digital Natives when they're reading. Blood red or pink (depending on gender) draws their attention first, followed by neon green and burnt orange are skittered - and unless highly motivated, black is ignored completely. Do you think this finding might have any implications for strategies we might want to develop to teaching of reading?

Both of these findings become even more significant because according to respected writer Eric Jensen and others, at least 87% of students in any given



GFP

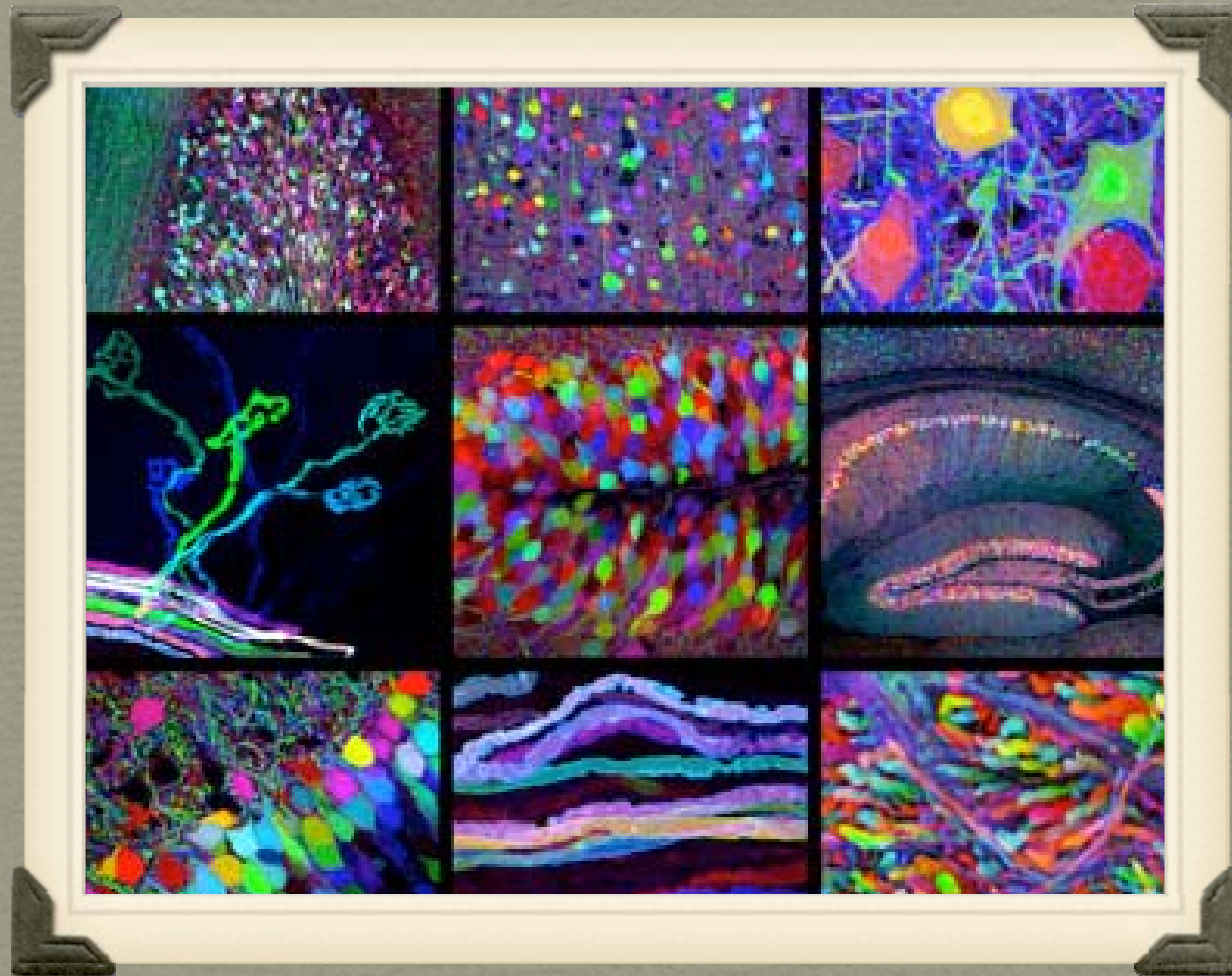


Osamu Shimomura

Martin Chalfie

Roger Y. Tsien

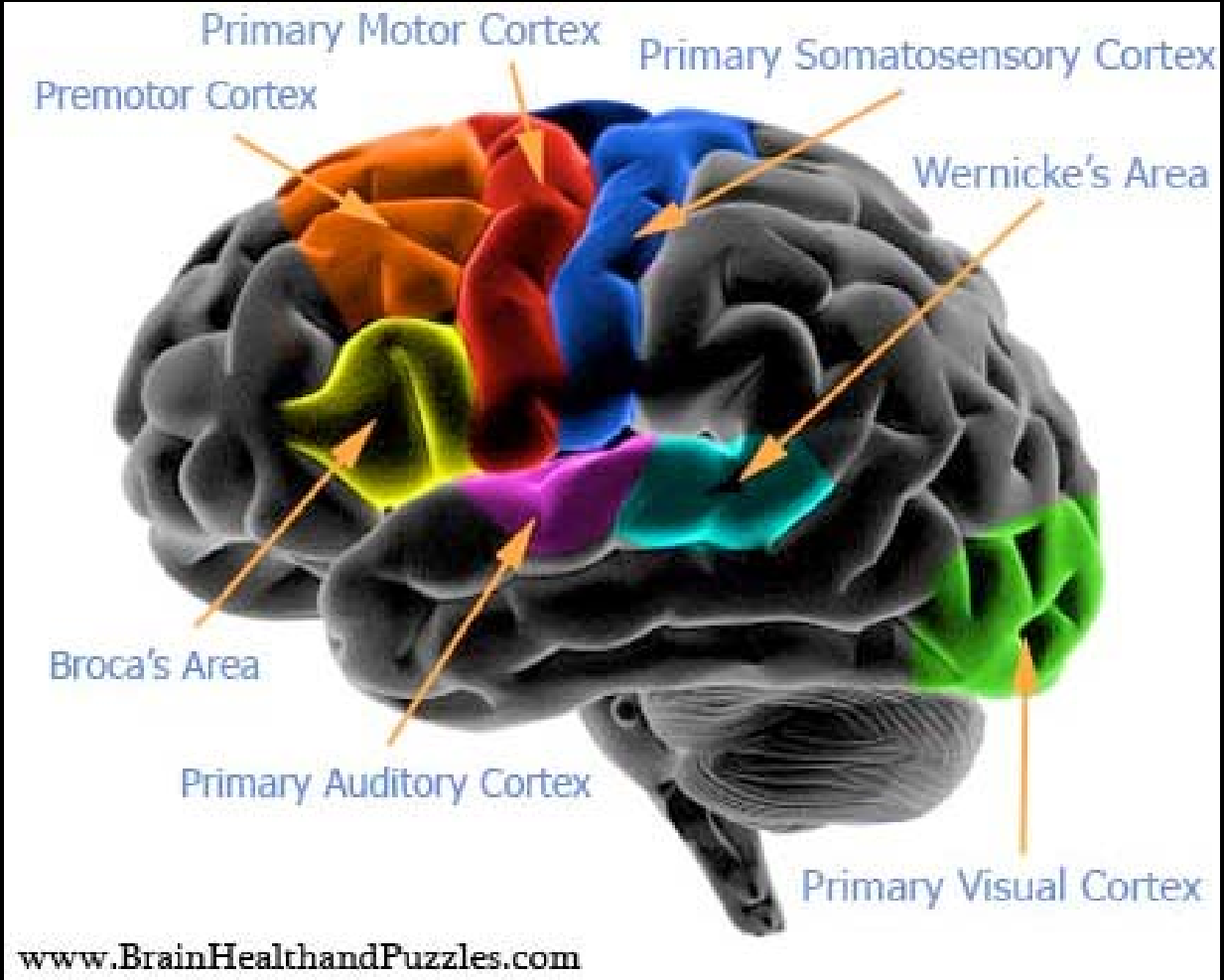




# The BrainBow

# 3M Study

- 100 photos to Digital Natives = 90% recall
- 100 photos to Digital Immigrants = 60%
- 100 photos to Digital Dinosaurs = 10%



# More Fun Facts

- Eye processes images 60,000 times faster than words
- Nerve cells in brain devoted to visual processing = 30% of cortex
- 8% = touch
- 3% = hearing

- • Exercise improves cognition
- • We are designed to never stop learning and exploring
- • Memories are volatile
- • Sleep is powerfully linked with the ability to learn
- • Stress changes the way we learn
- • **Vision trumps all of the other senses**



Youth aren't waiting for traditional  
models of learning

(Ito M., Horst H., et. Al)  
**Peer-based, self-  
directed and informal  
learning online**



**CAUTION!**



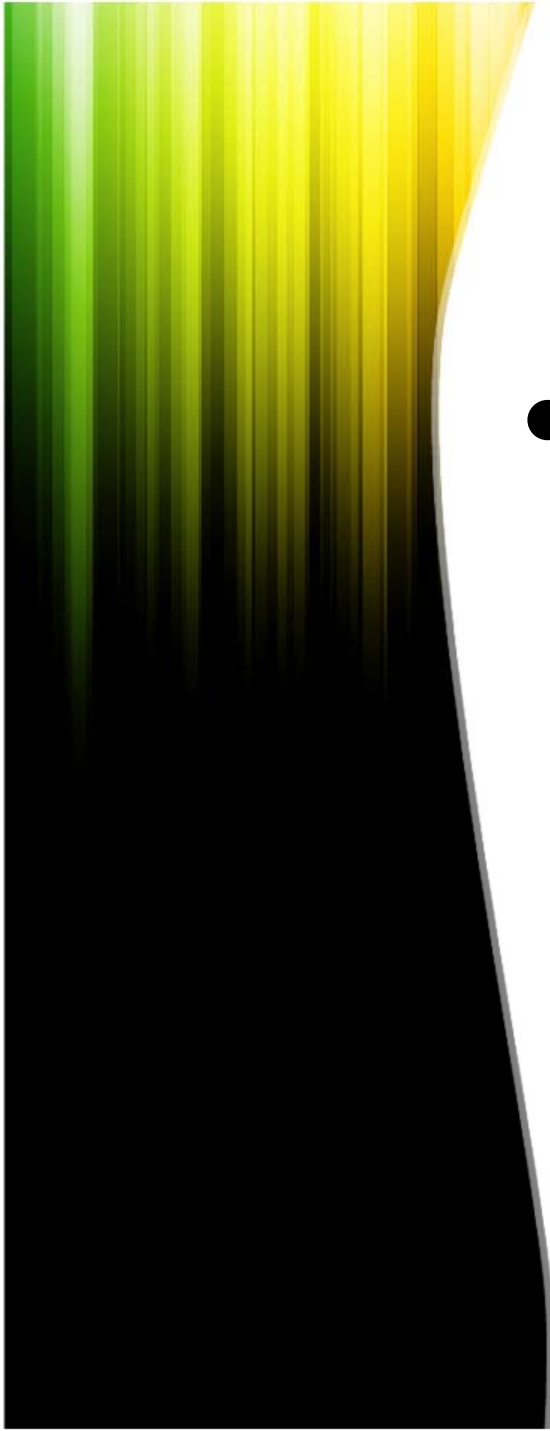
**CONTINUOUS  
PARTIAL ATTENTION**

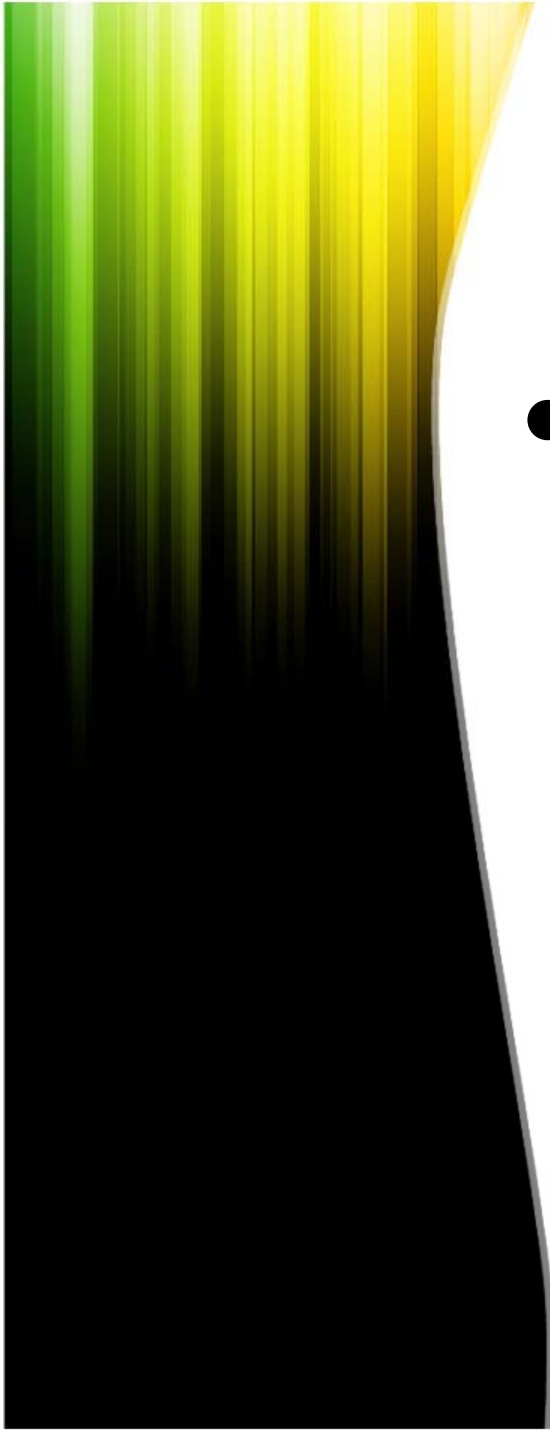


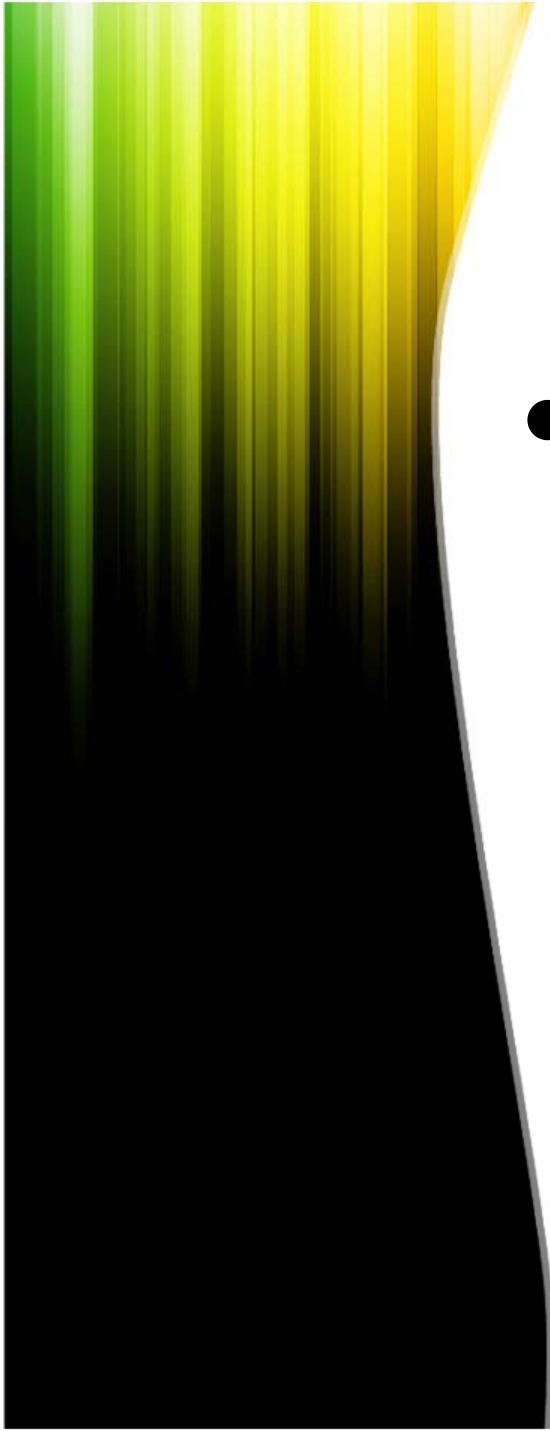
What are Issues You Face?

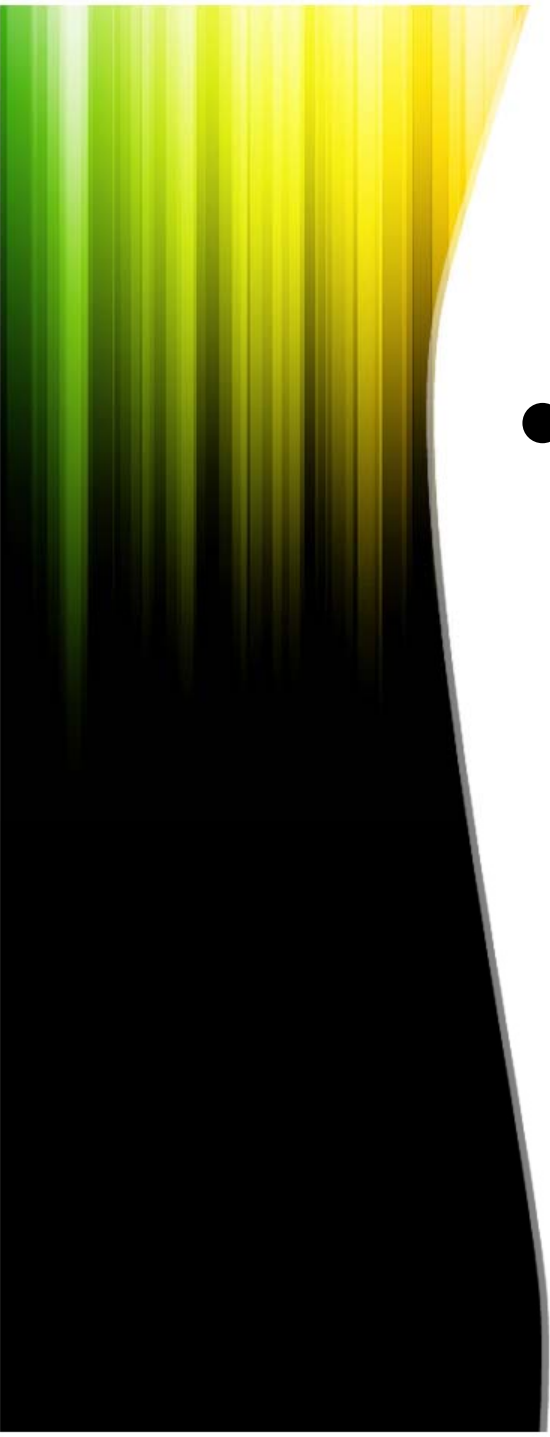


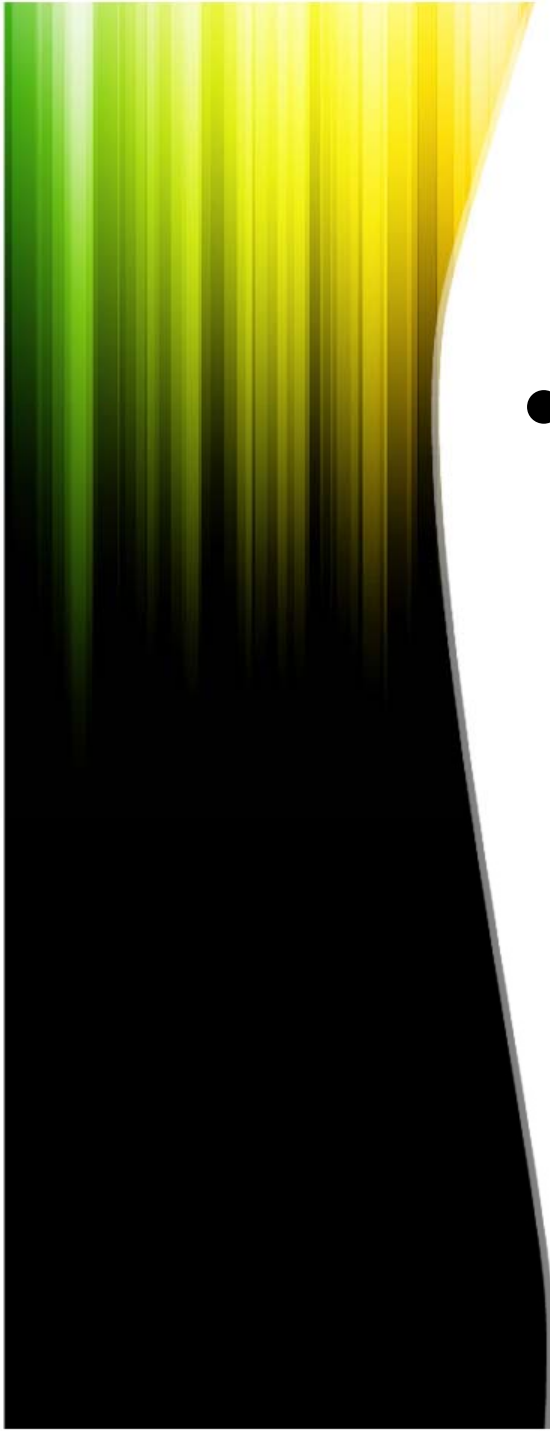
# Reasons to offer an course online

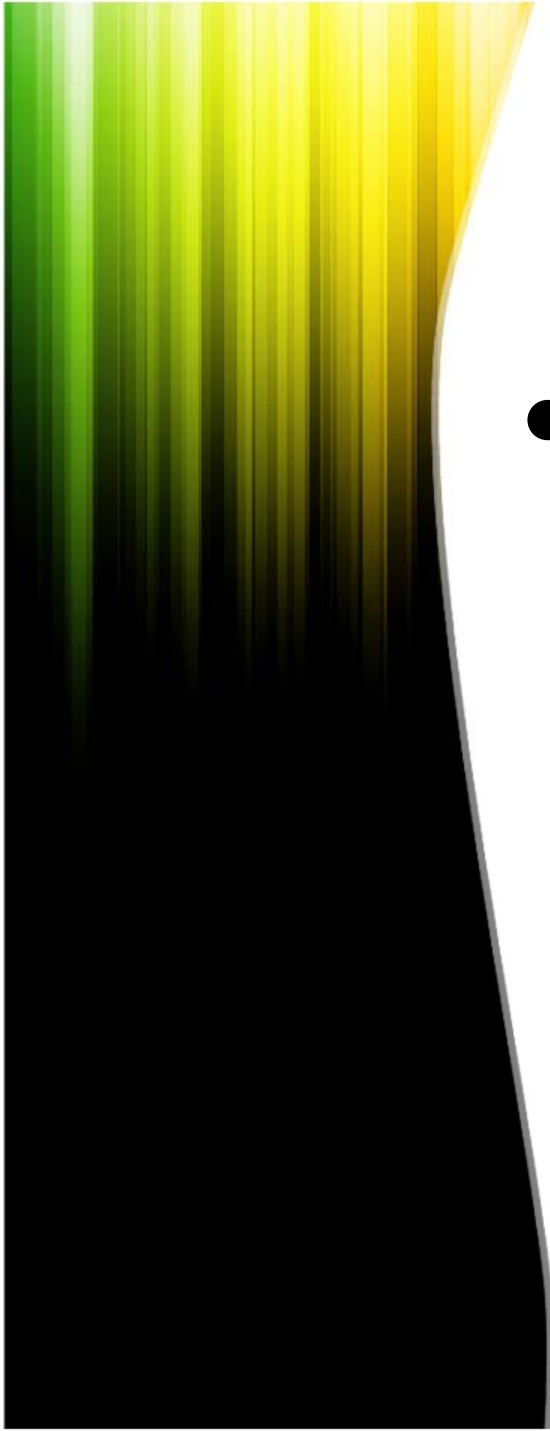
- 
- Expand the range of courses and opportunities offered to students

- 
- Allow students to take a course when there are too few students to justify a face to face course.

- 
- Provide courses for students whose schedules prevent them from taking a course when it is offered.

- 
- Provide equity for students who cannot access courses.

- 
- Provide an online experience for students who will become lifelong learners and use 21st-century technologies to access online learning throughout their lives.

- 
- Expand the range of courses and opportunities offered to students





# The Seven Magnificents

National Education Association's Guide to  
Online High School Courses




# Curriculum

## Student Centered



# Instructional design

## Collaborative community



Teacher quality  
NCLB Highly-qualified  
compliant



# Student roles

Private interaction with  
teachers\*Students learn to  
self-advocate.\*At-Risk, Gifted,  
Long-term illness,  
pregnancies



# Assessment

Variety of authentic and  
traditional



# Management and support systems

Tech support, orientations, on-  
site mentor



# Technological infrastructure

Reliable and Secure



# Assessment


Variety of authentic and  
traditional

# ORANGE LUTHERAN ONLINE





What About the Teachers?



**Will I lose my job?**  
**Will I lose my relationships  
with my students?**

A vertical rainbow gradient background with colors transitioning from green on the left to purple on the right.

# OLO Teachers are Independent Contractors

Recruited, trained, hired  
through careful process.



# Improving Student Outcomes

AP Pass Rates, College  
Acceptances, Transfers into  
Ground Courses



# Reducing costs for families


Blended Option

4 classes OG, 3 classes  
OL

Blended Tuition = \$9120

Fulltime tuition = \$12,160

Two blended students  
equal one fulltime student  
for enrollment count.



It costs  $\frac{1}{3}$  to educate a  
student online

Assumptions:  
After start-up costs



Play in the  
Sandbox!

*Looking to the Future*

**CONTINUOUS  
IMPROVEMENT**

CHANGE



How to Predict  
the Future(s)

Professor Michael Nelson, Ph.D.  
Communications, Culture & Technology  
Georgetown University



**Questions?**