

Tradition & Innovation walk into a bar...

Chris Gamrat (IST), Bart Pursel (TLT),
Pat Shope (Outreach), and Kyle Peck (COIL)

Penn State University

So a man walks into a bar and says to the bartender, "Hey, will you give me a free beer if I show you something amazing you've never seen before?"

The bartender says, "sure, but it'd better be good."

The man reaches into his coat pocket and pulls out a hamster. He sets the hamster down on the bar, and the hamster runs along the bar, jumps off the end, turns a somersault in midair and lands on the piano. He then proceeds to play the piano beautifully. The bartender says, "Wow! That was incredible! Have a beer."

The man finishes his beer and says to the bartender, "Hey, if I show you something else amazing, that you've never seen before, will you give me another free beer?"

"If it's as amazing as the hamster, sure," the bartender replies. So the man reaches back into his coat pocket, and pulls out a frog. He sets the frog down on the bar, and the frog begins to sing beautifully. The bartender is again amazed, and gets the man another beer.

As the man is drinking his beer, another man rushes over and says "Wow!! A singing frog! I'll give you \$200 for that frog."

The first man says "Deal!" and sells him the frog. The bartender walks over and says, "It's none of my business, but that was a singing frog, for heaven's sake. Why would you sell it for only \$200? You could have made millions." ...

The man says,
"Don't worry."

The hamster is also
a ventriloquist."

A horse walks into a bar.

The bartender asks,
“Why the long face?”

A room temperature superconductor
walks into a bar.

The bartender says, "Hey, we don't
serve room temperature
superconductors in this bar!"

The room temperature
superconductor leaves
without any resistance.

Wow!!!

- Crazy time, Eh? A LOT going on.
- MOOCs, Digital Badges, Prior Learning Assessment, Competency-based Education
- Online Shopping, Social Media, Mass Customization
- Our “Life” is changing.
- Our agenda for this session:
MOOCs, Badges, PLA, **DISCUSSION!!**

So... Tradition, Meet Innovation!

Swimming in MOOC Data

Bart Pursel
(TLT)



The Pennsylvania State University

Founded in 1855 as Pennsylvania's only land-grant university, The Pennsylvania State University combines academic rigor with a vibrant campus life. A nationally recognized Research-I institution, Penn State teaches students to be leaders with a global perspective. Supporting not only the citizens of our Commonwealth, Penn State engages in collaborative activities with industrial, educational, and agricultural partners in the United States and abroad to generate, disseminate, integrate, and apply knowledge that is valuable to society.



Energy, the Environment, and Our Future

Jan 6th 2014



Creativity, Innovation, and Change

Sep 1st 2013

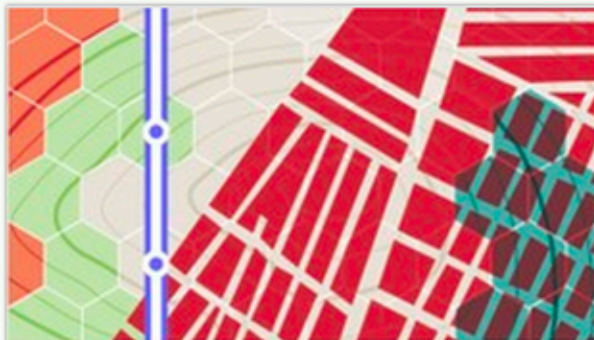


Epidemics - the Dynamics of Infectious Diseases

Oct 15th 2013



Introduction to Art: Concepts & Techniques



Maps and the Geospatial Revolution

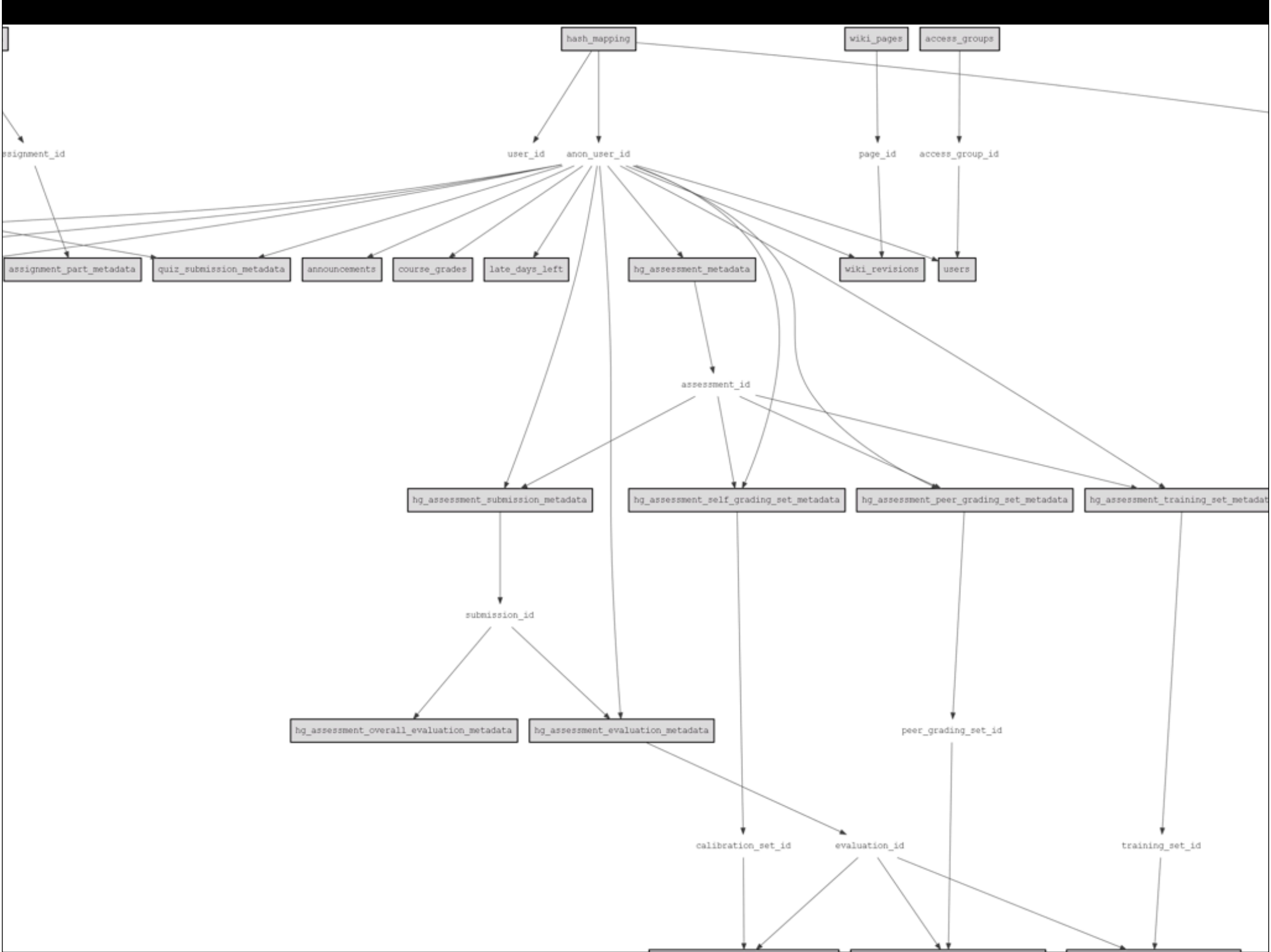
Date to be announced.

The Data

- Demographics
- Pre-course survey
- Course database
- Post-course survey
- *Clickstream data**

Course Database

- Powers the Coursera platform
- Captures most interactions (grades, forum posts, video views, etc)
- 41 table relational database
 - *...not the easiest data to work with*

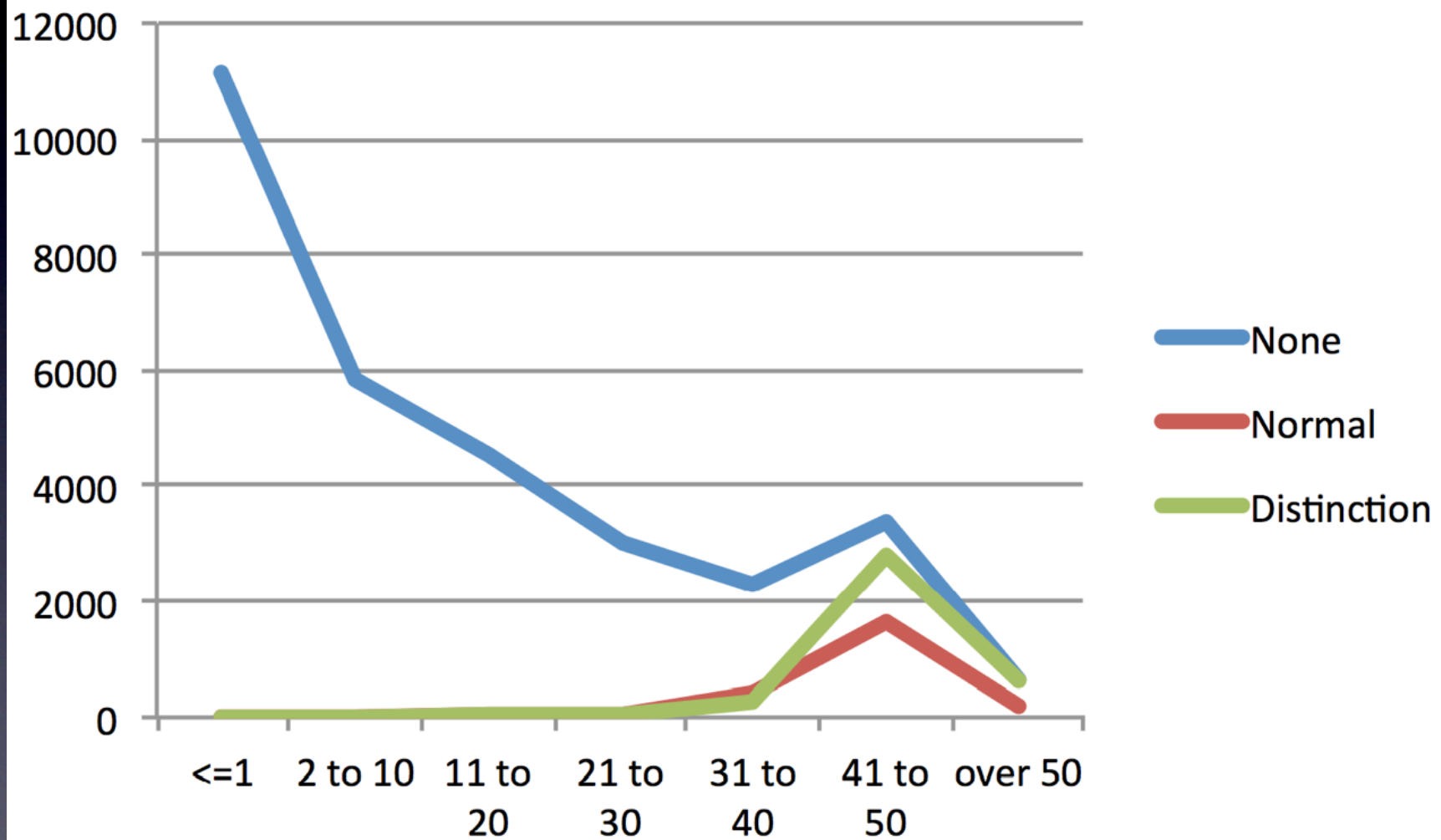


Clickstream Data

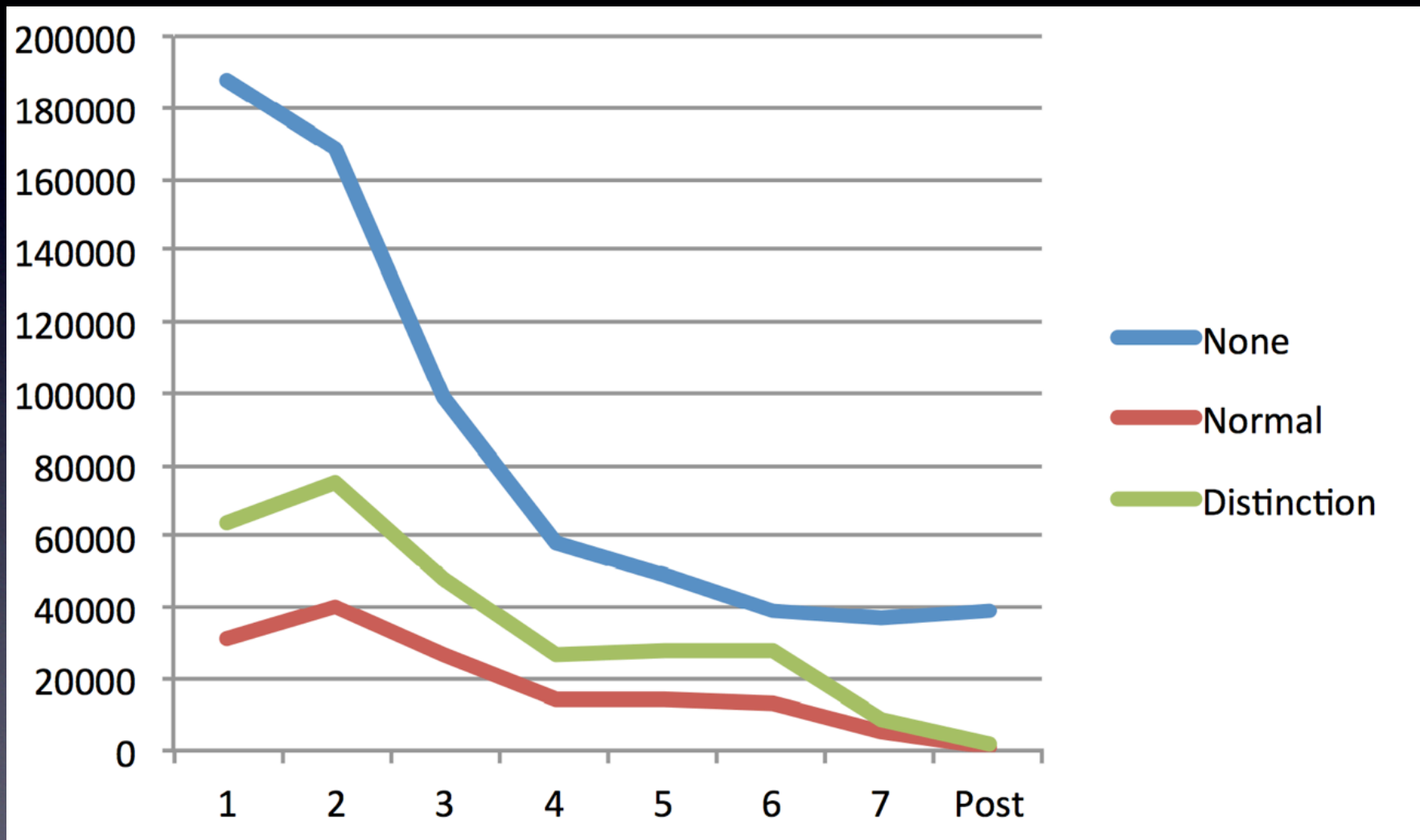
- Every click a student makes in the course.
- Primarily page views and video player interactions.

```
{"key": "pageview", "value": "{}", "username":  
"60b18e495077ee02adea51d5426dc6934f5a52c8", "timestamp":  
1380246767933, "page_url": "https://class.coursera.org/maps-001/  
class", "client": "spark", "session":  
"857547661-1377913149643", "language": "zh-TW,zh;q=0.8,en-  
US;q=0.6,en;q=0.4", "from": "https://www.coursera.org/course/  
maps", "user_ip": "140.122.211.58", "user_agent": "Mozilla/5.0 (Windows  
NT 6.0) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/  
29.0.1547.76 Safari/537.36", "l2": [{"height": 800, "width": 1280}],  
"l3": [0], "l4": [https://www.coursera.org/course/maps]}
```


Activity Duration



Video Views



Completion vs. Engagement

- We know completion percent is low (~10%)
 - “Engagement” closer to 30-40%
 - Signature track is 98% completion

Degrees and Certificates

[REQUEST INFO](#)[APPLY NOW](#)

You are Here: [Home](#) » [Degrees and Certificates](#) » [Undergraduate Certificate in Digital Arts](#) » Overview

OVERVIEW

COURSES

COSTS

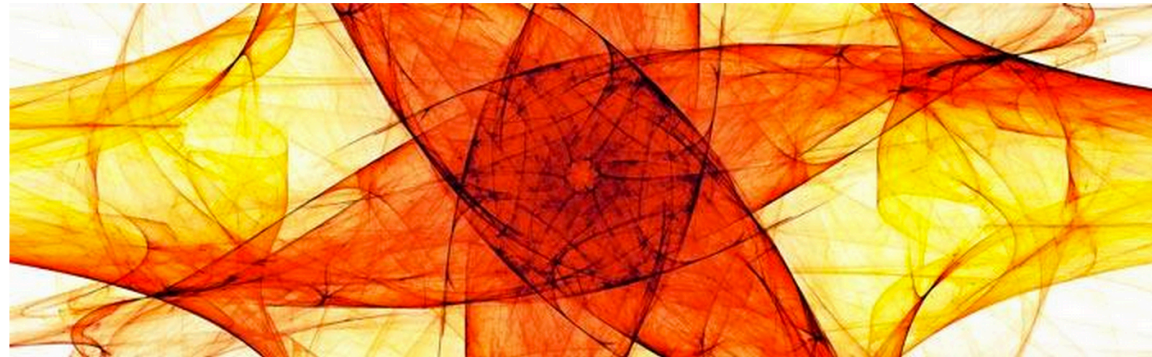
FACULTY

HOW TO APPLY

CONTACT THE PROGRAM

It is really nice to be able to take

Undergraduate Certificate in Digital Arts

[SHARE](#)[PRINT](#)

- 15 credit Certificate
- What if the MOOC awarded 1 or 2 credits?
- Lead to conversions?

Video Viewing Habits

- Week 1: 22%
- Week 2: 19%
- Week 3: 51%
- Week 4: 45%
- Week 5: 52%
- Week 6: 53%
- Week 7: 57%

Explore...

- the ideal length of an instructional video.
- the ideal number of videos per week/module.
- how students interact with videos to identify pain points.
- Use other sources of data (IE: demographics) to further explain pain points.

Digital Badges



Who would like badges, and why?

- Students?
- Employers?
- Employees?
- Universities?

Combining depth, transparency, and validation

Degrees/
Transcripts

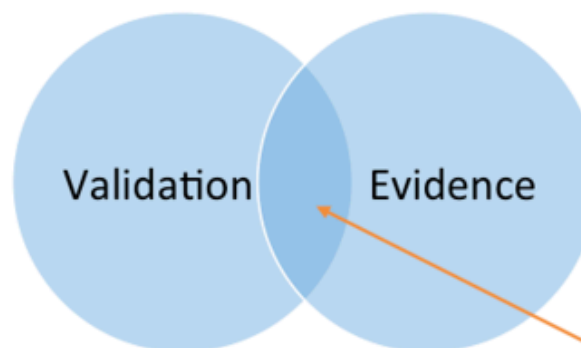
How was it assessed?
Who taught this?
What criteria/performance was required?
How rigorous was the process?

ePortfolios

"Trust me... I was totally president of all these clubs."



Badges for the
win!



Badges are here

Growing Interest

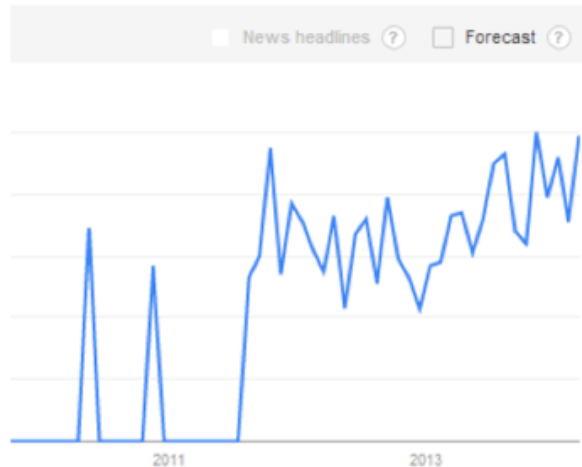
UW flexible option
UNIVERSITY OF WISCONSIN SYSTEM

Contact Student Services: 1-877-895-3276

Home Programs Getting Started Current Students

A University of Wisconsin degree on your busy schedule?

Now, it's an option.



accreditrust

DIGITAL CREDENTIAL CURATION AND VALIDATION SERVICES

THE BADGE ALLIANCE

The members of the Alliance collaboratively tackle important issues, questions and opportunities for the optimal evolution of the badging ecosystem.

MacArthur Foundation

About Us | What We're Learning | Explore Our Grantmaking

By Program By Topic By Location

Digital Badges

Digital badges are an assessment and credentialing mechanism that is housed and managed online. Badges are designed to make visible and validate learning in both formal and informal settings, and hold the potential to help transform where and how learning is valued.

DAVIS
Sustainable Agriculture
and Food Systems

TRISH A.

Arch Hunting

Moab, Utah



Aug 28-29, 2013
Searching for arches under the hot Utah summer sun.

EXPLORATION

VIEW FULL DETAILS

VIEW ALL

Prior Learning Assessment

- The evaluation and assessment of an individual's learning for college credit, certification, or advanced standing toward further education or training.
- Learning may be acquired through work, corporate training, military service, independent study, etc.
- In order to be considered “credit worthy” the learning must be “college-level” and include both theoretical and applied knowledge.
- Based on agreed upon learning outcomes

Knowledge

- Course
- Workshop

- Accredited School
- High School
- Military
- Industry

MOOCs

Assessment

- Exam
- Project

- Transcript
- AP Exams
- CLEP/DSST
- American Council on Ed.
- Credit by Exam
- Credit by Portfolio

Credential

- Credit
- Certificate

Badges



So... Tradition, Meet Innovation!

Wow!!!

- Crazy time, Eh? A LOT going on.
- MOOCs, Digital Badges, Prior Learning Assessment, Competency-based Education
- Online Shopping, Social Media, Mass Customization
- “Life” is changing. I don’t believe we’ll be selling “degrees” or “courses” (as now defined) in 30 years.

MOOCs have changed our thinking.

- “We” (higher education) are (more) ready to give away content.
- Tools that will improve peer assessment and peer support are evolving and learners will be able to master increasingly difficult content without our help.
- The population of college and university students will grow from 150 million to 250 million by 2025.
- Access to technologies makes participation in even synchronous classes possible from a distance.

We need to act on the changes we see.

- We need to understand and **accept the “unbundling”** of content and delivery from assessment and certification.
- We need to define and sell our products and services **in units smaller than courses and degrees.**
- We need to allow people to **prove what they have learned on their own** and with peer support and **give them credit for it.**

We need to act on the changes we see.

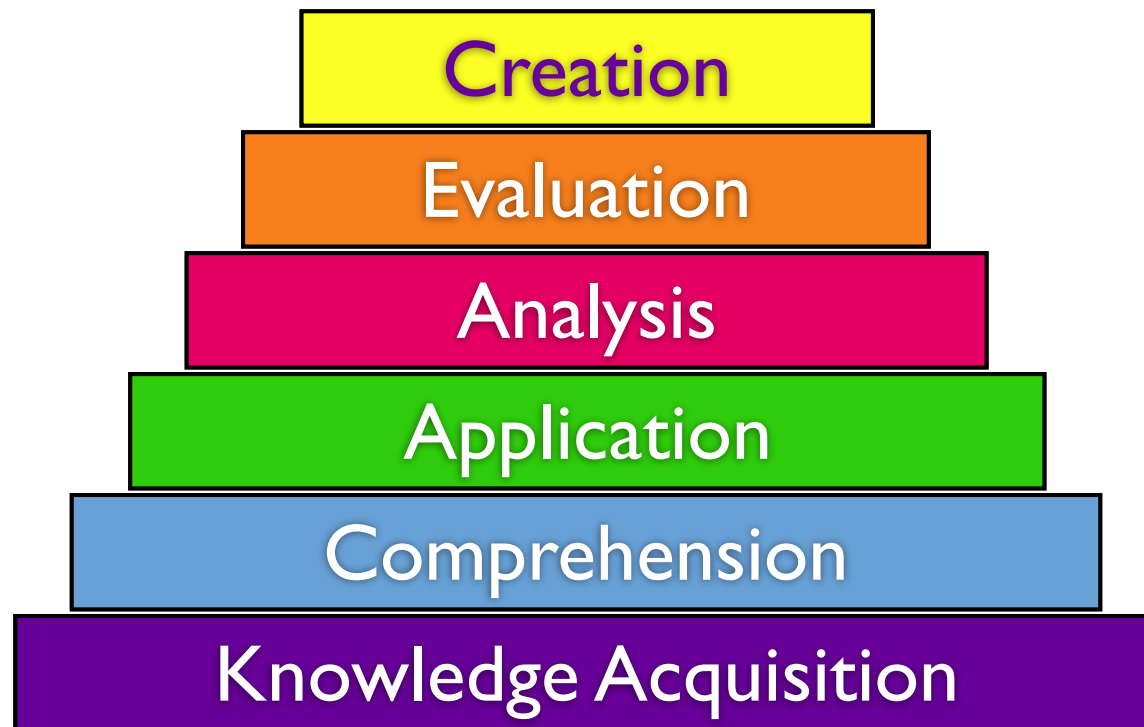
- Our primary business is **no longer content delivery**. It is **Support, Assessment, and Certification**.
- Others want to do that for us, but allowing that would be giving away the store.
- We need to differentiate ourselves through:
 - The types of **learning communities** we create
 - The rigor and **quality of our learning outcomes and assessments**
 - The **efficiencies** we can offer learners.

So, how do we...

- **Contribute Open Educational Resources** to support learning of things we believe are important
- **Give people credit** for what they know and learn on their own
(or at least let them skip these things)
- **Provide support and coaching** to those who can afford it
- **Create a flow of learners into certificate and degree programs**, and
- **Recover the investment** it takes to make this happen?

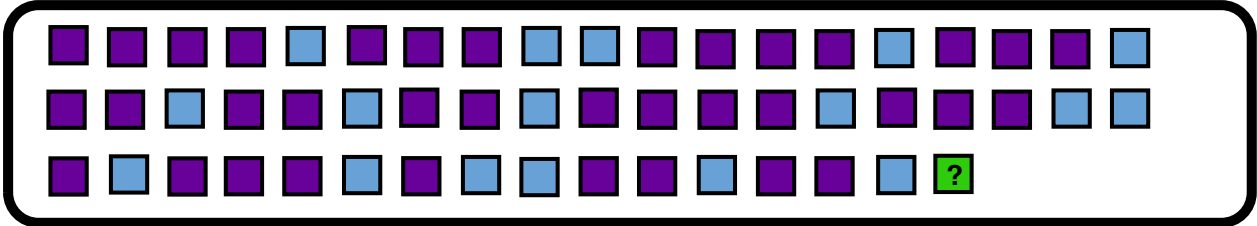
Many possible answers!! Here's one.

Bloom's Taxonomy of Cognitive Processes (Revised, 2001)

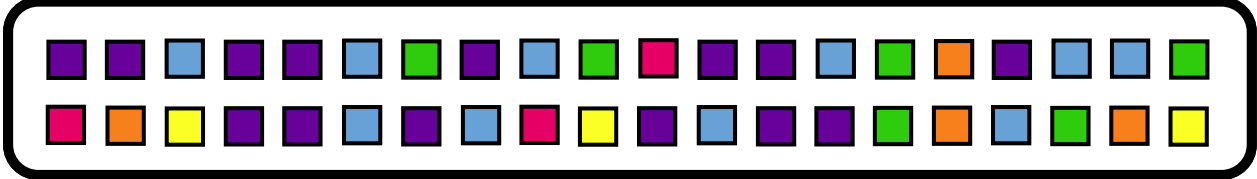


Anderson, L.W., & Krathwohl, D.R. (Eds.). (2001). *A taxonomy for learning, teaching and assessing: A revision of Bloom's taxonomy of educational objectives*. New York:

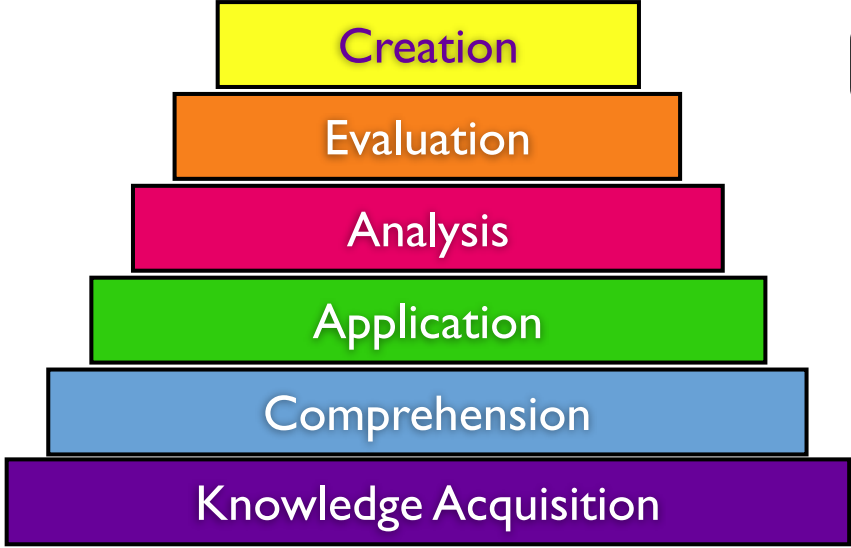
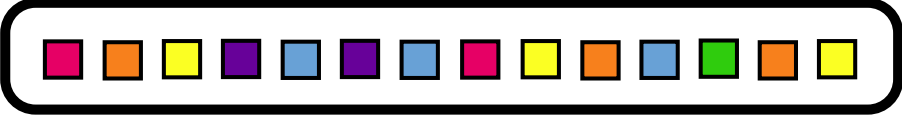
ABC 101 “Introduction to ABC”



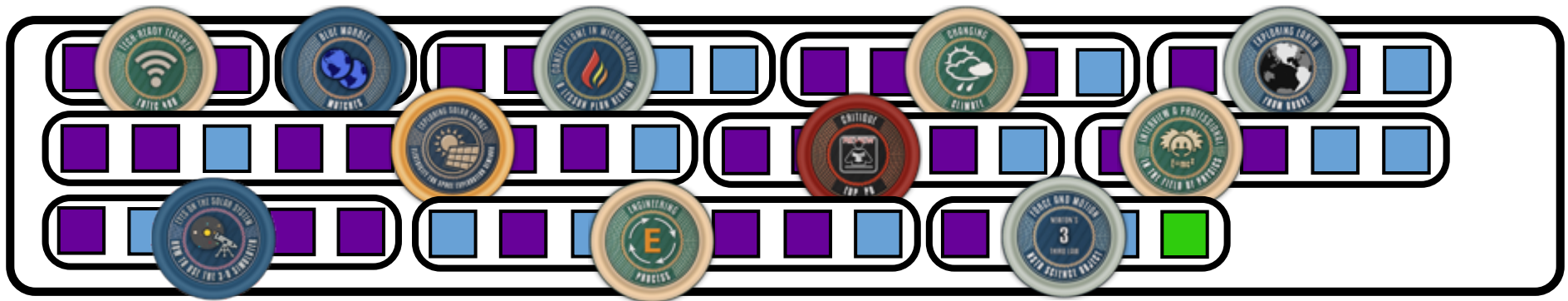
ABC 451 “Advanced ABC”



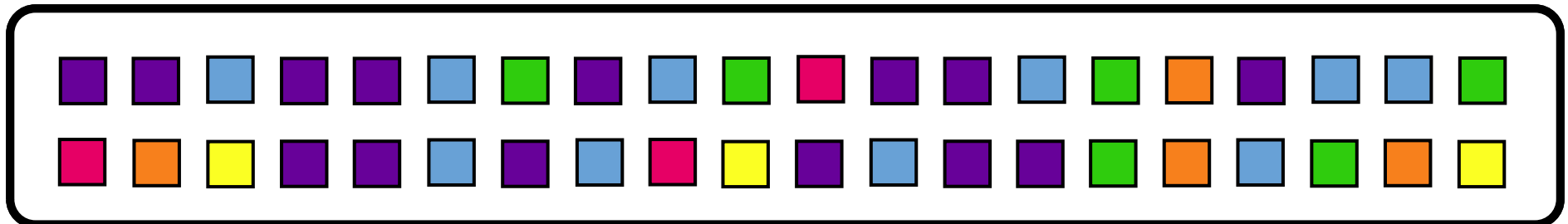
ABC 601 “Dissertation Research”



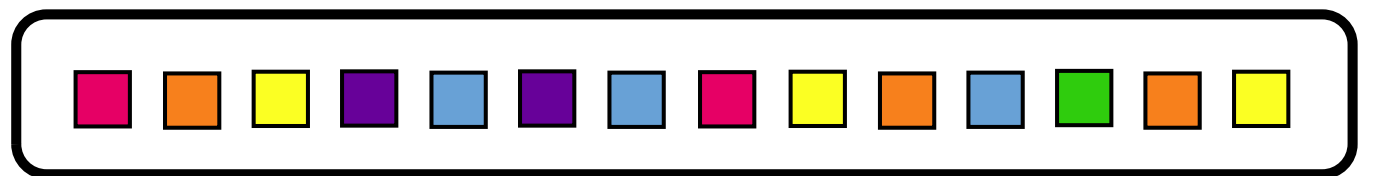
ABC 101 “Introduction to ABC”



ABC 451 “Advanced ABC”



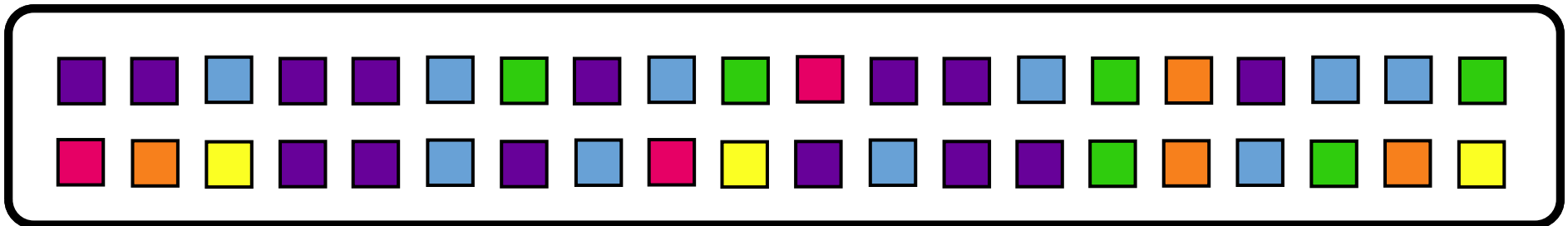
ABC 601 “Dissertation Research”



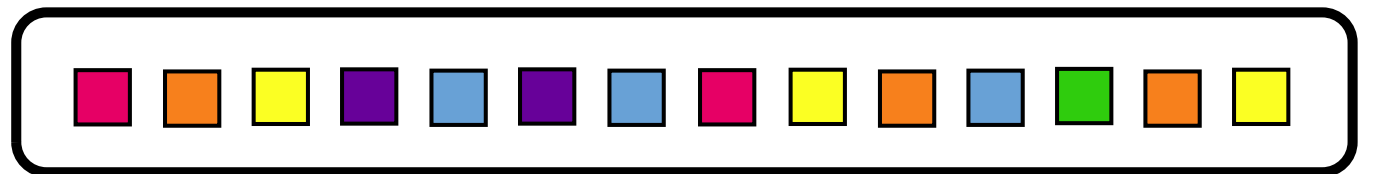
ABC 101 “Introduction to ABC”



ABC 451 “Advanced ABC”



ABC 601 “Dissertation Research”



ABC 101 “Introduction to ABC”

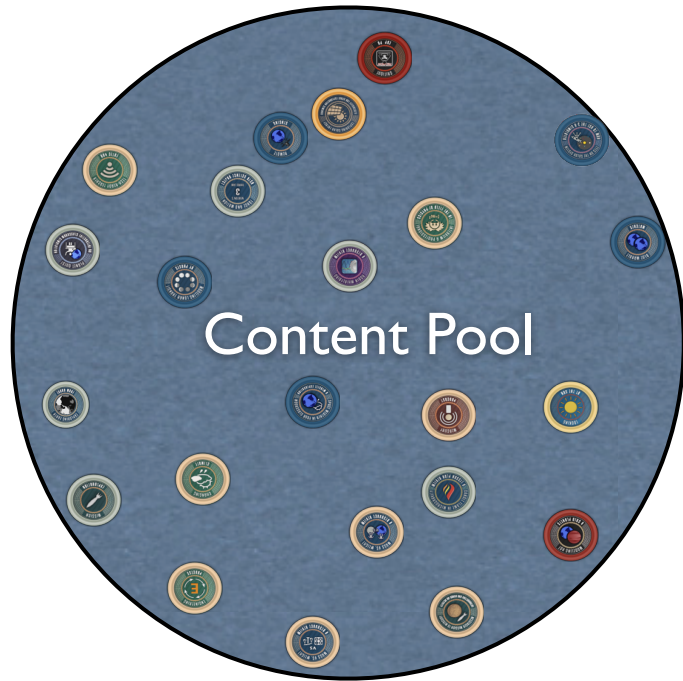


ABC 451 “Advanced ABC”



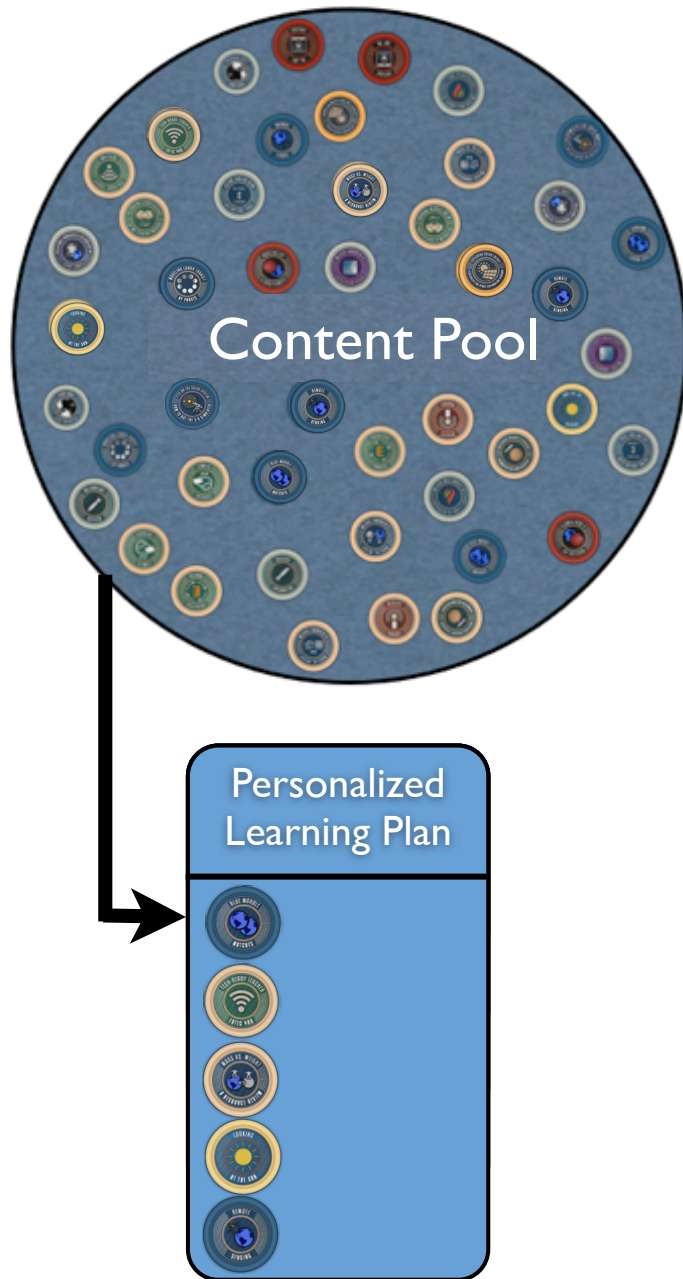
ABC 601 “Dissertation Research”



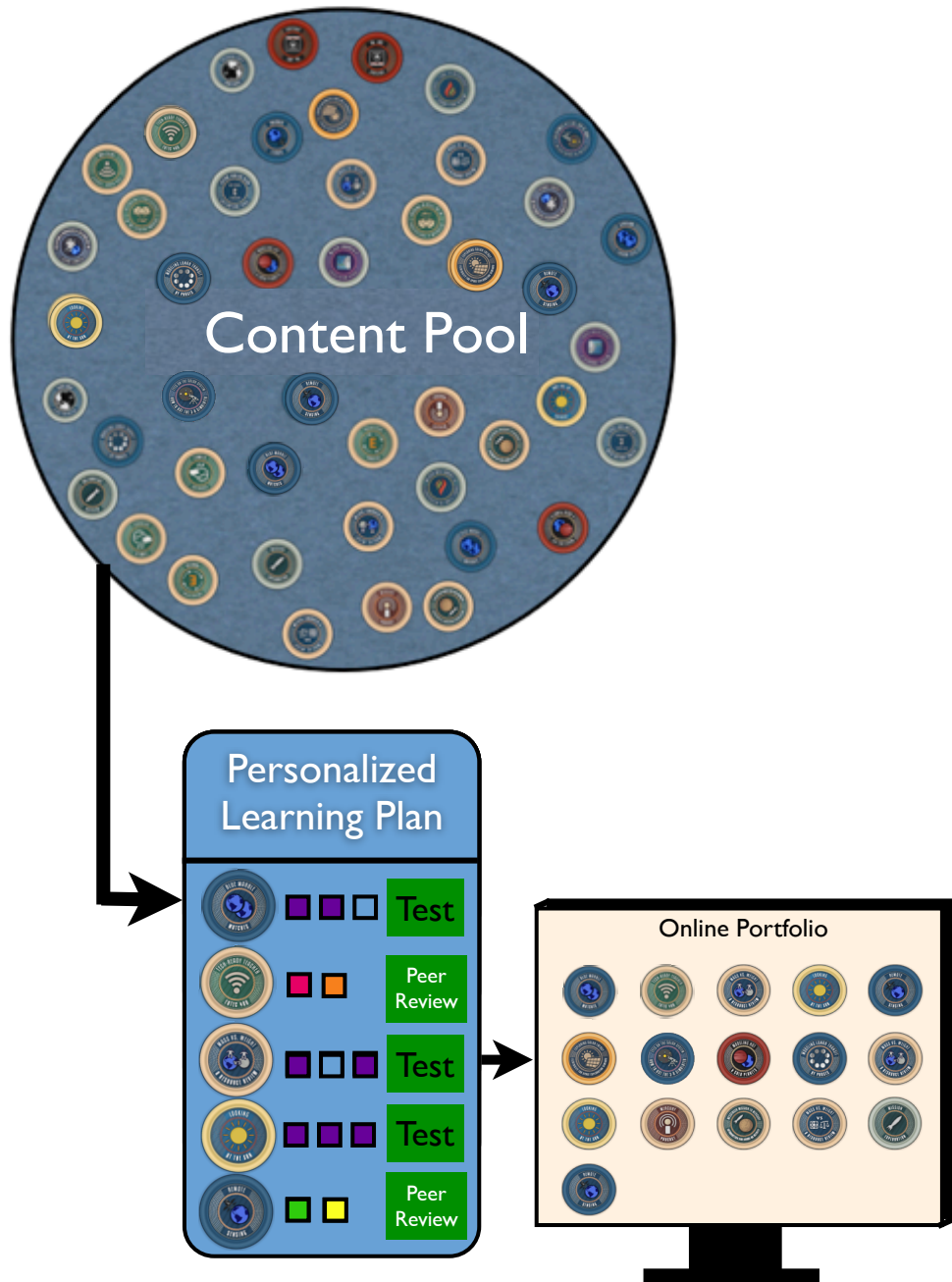


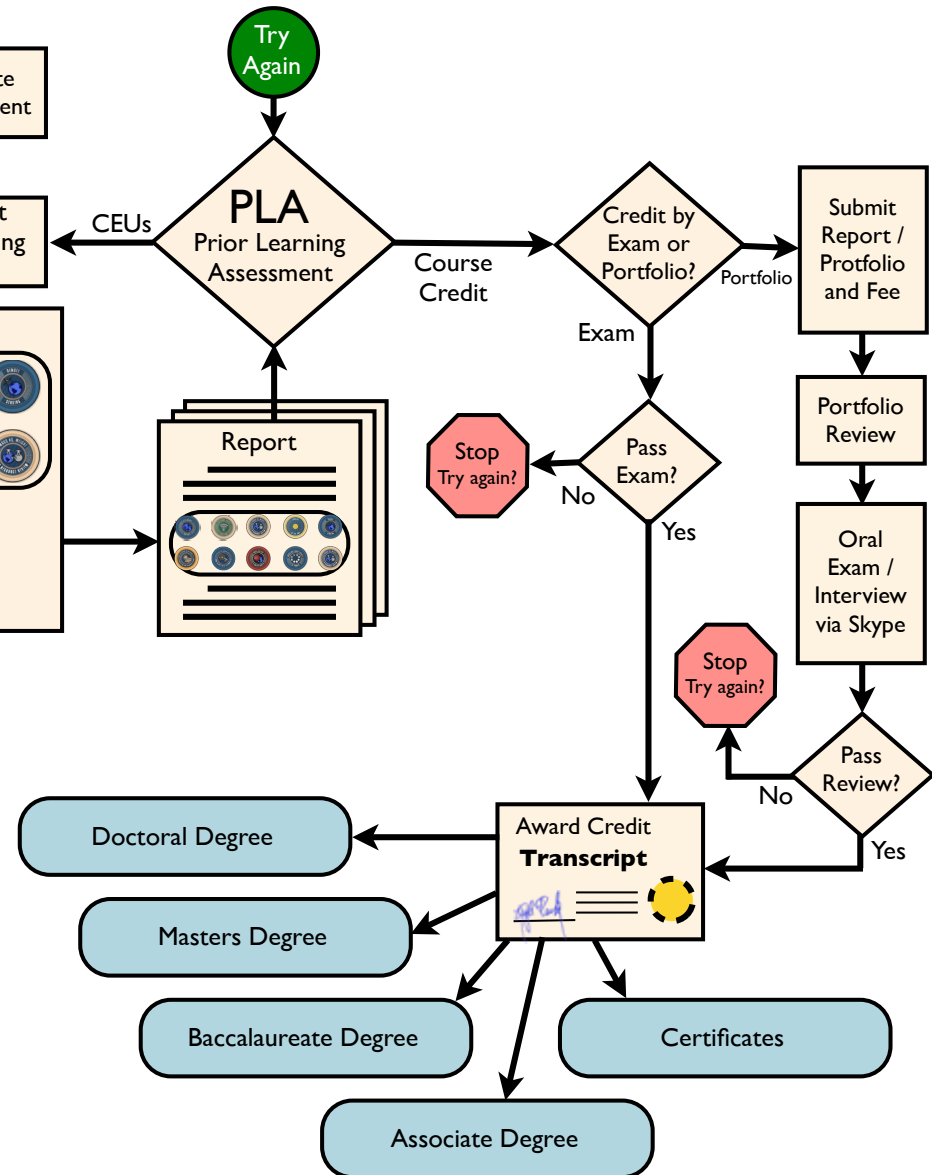
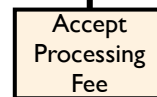
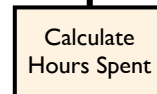
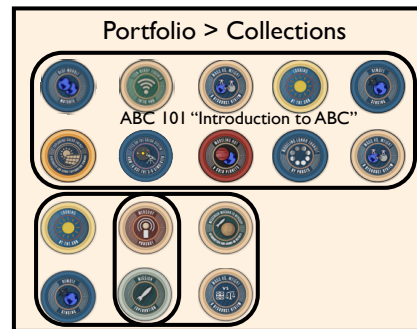
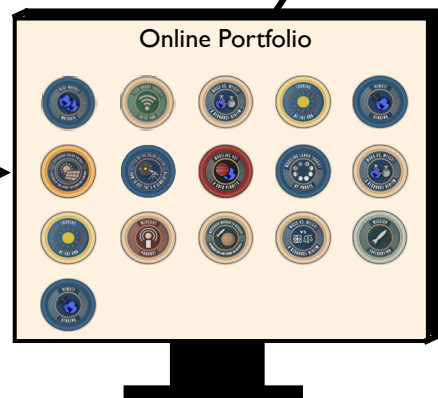
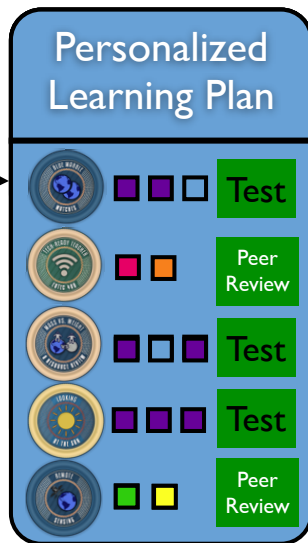
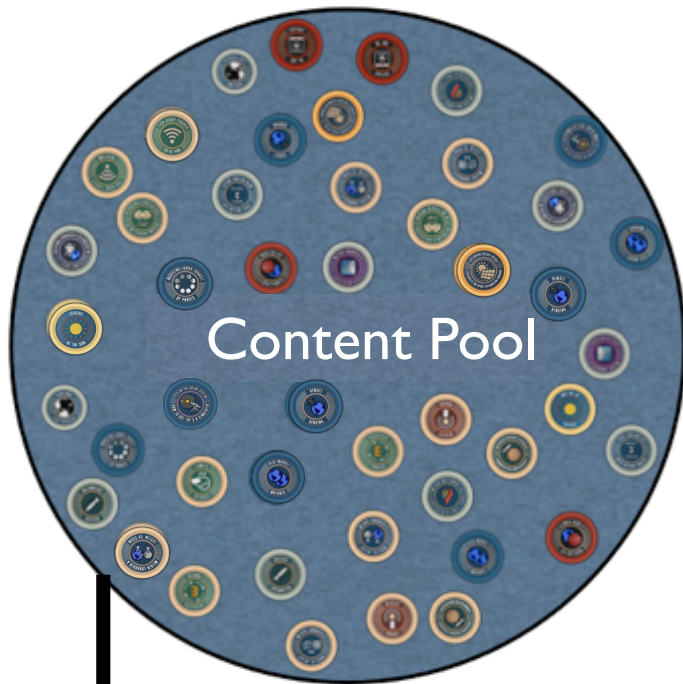
“flex MOOC”

“flex MOOC”



“flex MOOC”





Key Components:

- Competency-based Learning
 - Well-defined Learning Outcomes
 - Assessments (Tests or Rubrics)
- Digital Badging
 - Peer-Assessed (Bronze)
 - PSU-Assessed (Gold)
- ~~Prior~~ Learning Assessment
- MOOC-style Peer Review and Peer Support Tools

Knowledge! ~~Knowledge~~

- People gathering credentials from several sources and combining them in personally meaningful and/or job-relevant ways.
- More students for us, but for shorter periods of time, and focused on higher-order work.



“Carnegie Units”

- The “unit” was developed in 1906 as a measure of the amount of time a student has studied a subject.
- For example, a total of 120 hours in one subject—meeting 4 or 5 times a week for 40 to 60 minutes, for 36 to 40 weeks each year—earns the student one “unit” of high school credit.
- This decision, made when we knew little about learning, confines what we do today, more than a century later.
- Will we, or will others, drop that antique decision and develop a more efficient system?



On October 2, 1906, Alberto Santos-Dumont flew an aircraft a distance of 60 metres (197 ft) at a height of about five meters or less (15 ft).



April 18, 1906 - Following the San Francisco Earthquake, fires ravaged the city. Many were started when firefighters, untrained in the use of dynamite, attempted to demolish buildings to create firebreaks.

Tradition and Innovation

Walk Into A Bar

- ✱ Offered co-presenters four titles, including this one, as a joke.
- ✱ They chose this one (perhaps to challenge me?)
- ✱ These “into a bar” jokes often put conflicting characters together
- ✱ Fun things happen
- ✱ But I did find a good metaphor in one of my favorites.



Questions?