UNIVERSITY OF TEXAS ARLINGTON

LINK

Current State of Research and Practice in Digital Learning

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IHPE

November 16, 2017

SOLAR

SOCIETY for LEARNING ANALYTICS RESEARCH

Major industries with highest employment, by state 1990

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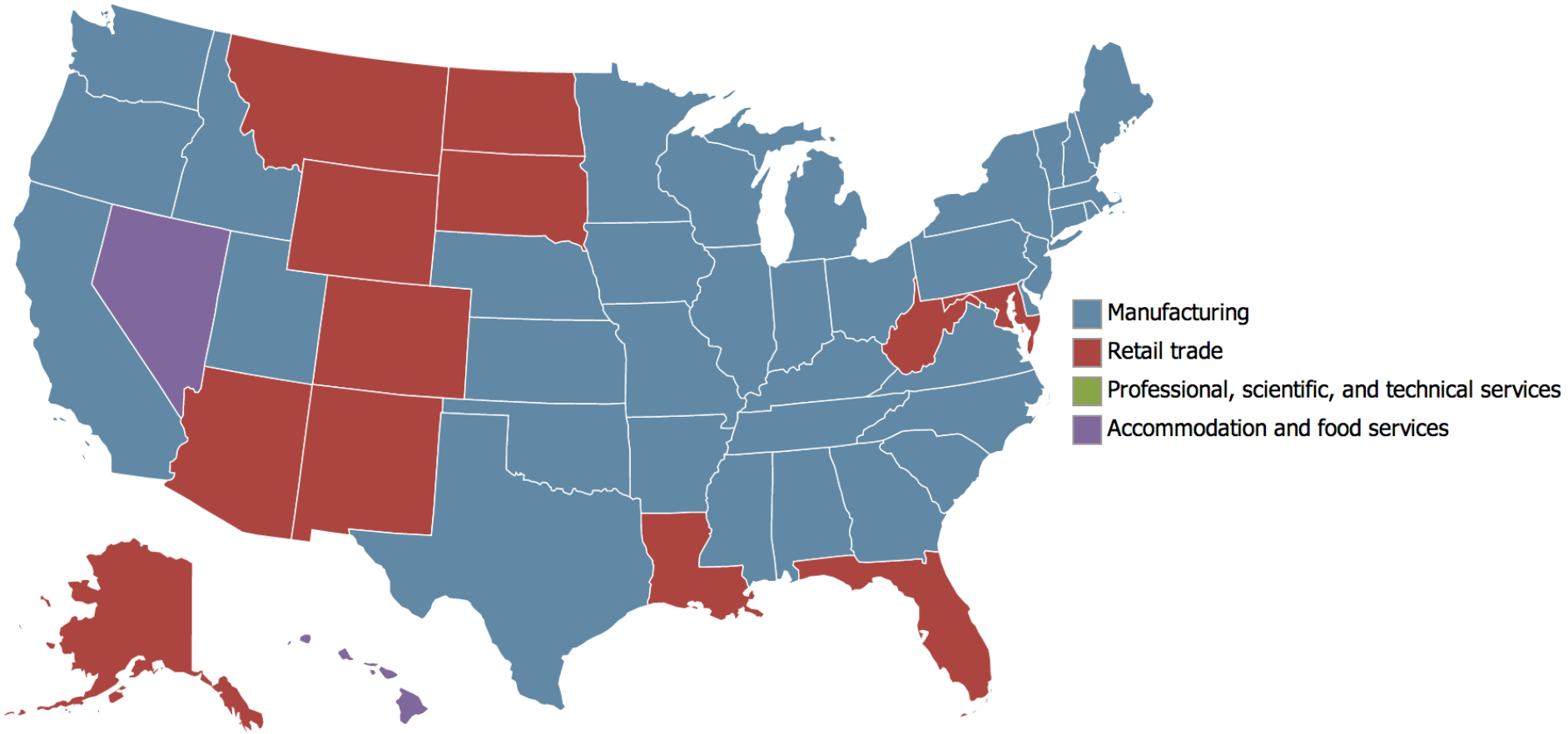
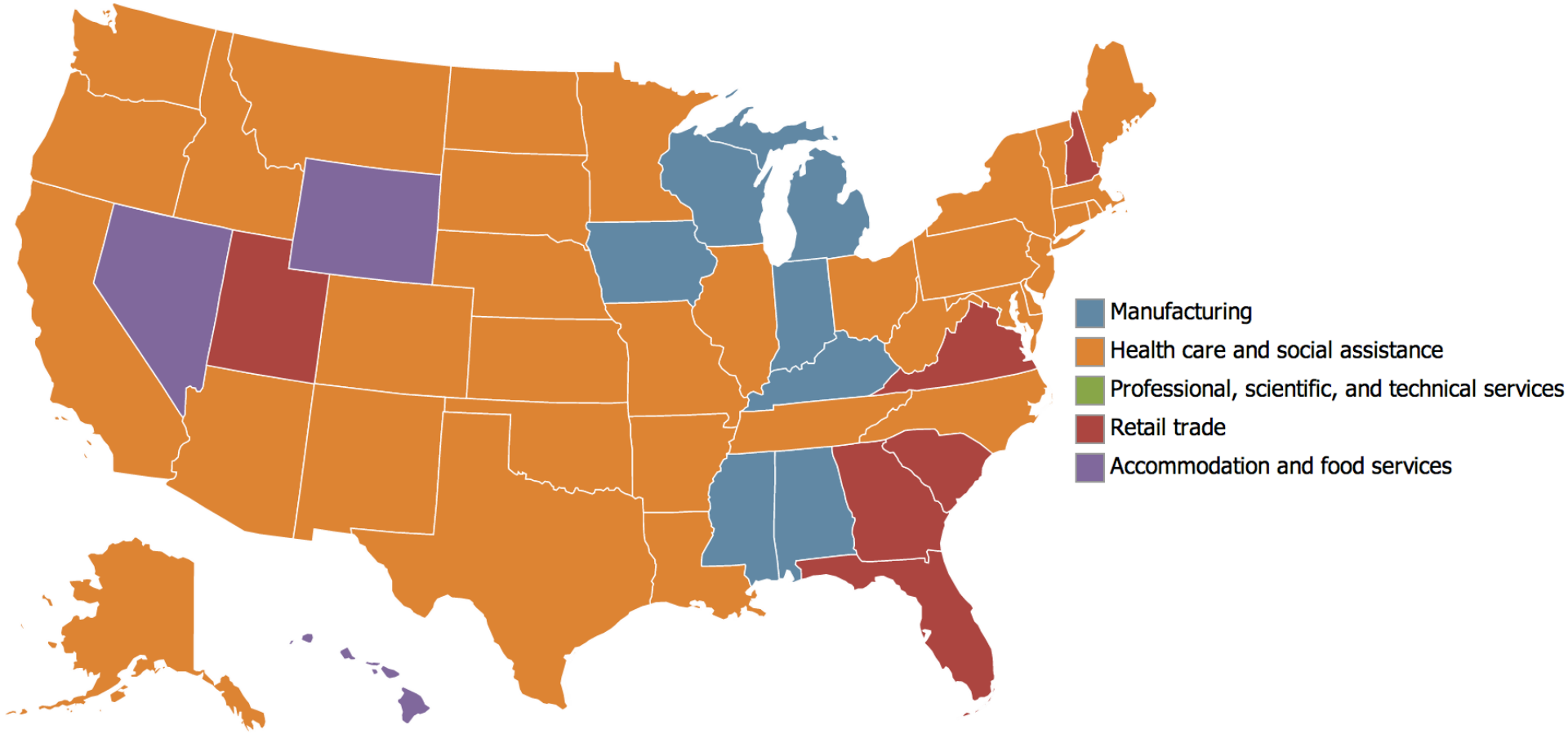


Hover over a state to see information.
Source: U.S. Bureau of Labor Statistics.

Major industries with highest employment, by state 2013

Play | Pause | << | < | > | >>



Hover over a state to see information.
Source: U.S. Bureau of Labor Statistics.

Favours women over men

More learners as % (up to 60%)

Average entrance age increasing

Top three countries for entering students:

China, India, USA

Traditional science courses waning in popularity

Greater international student

OECD 2013

Complexification of higher education

Learning needs are complex, ongoing

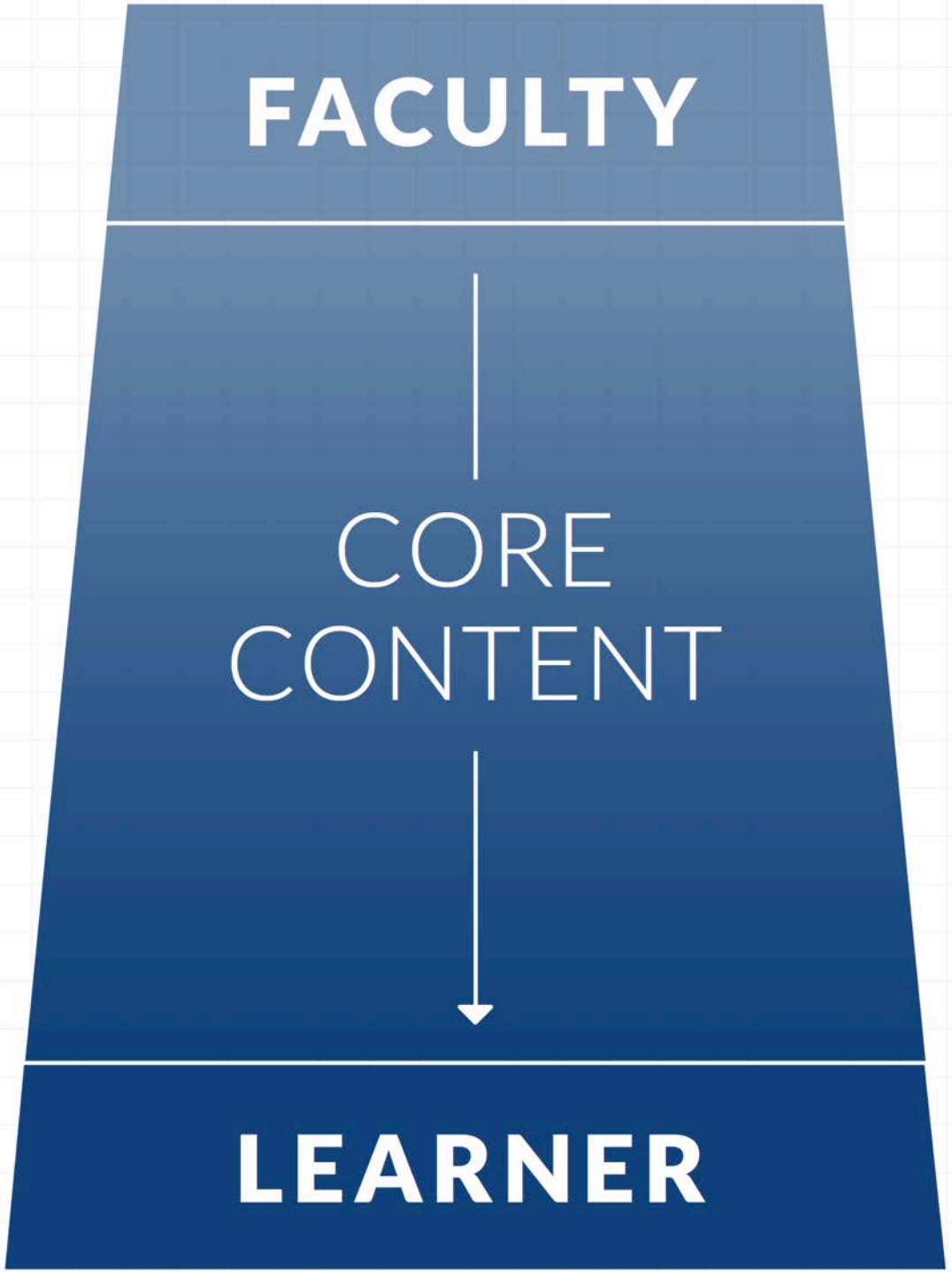
Simple singular narrative won't suffice going forward

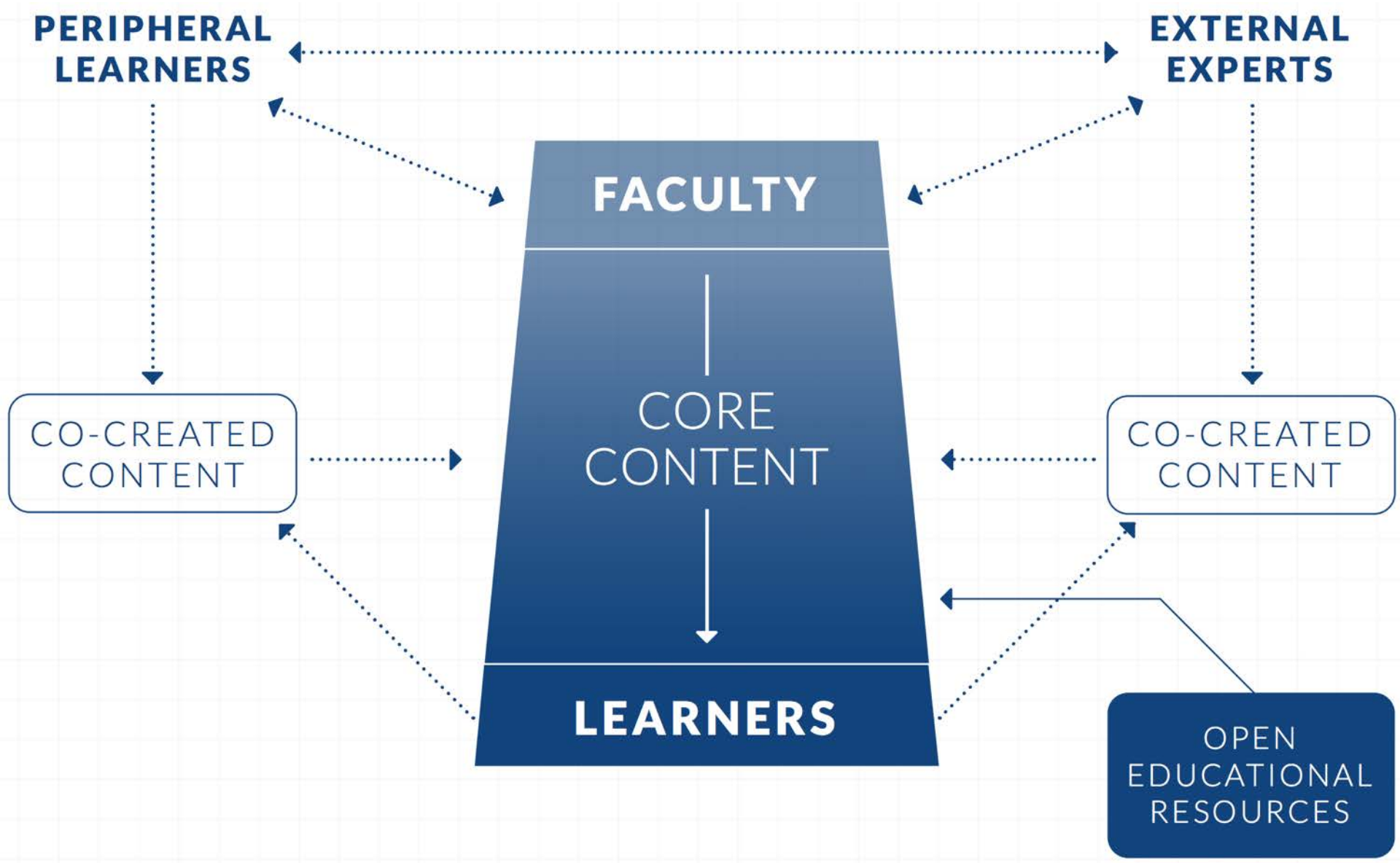
The **idea of the university (and learning)** is expanding and diversifying

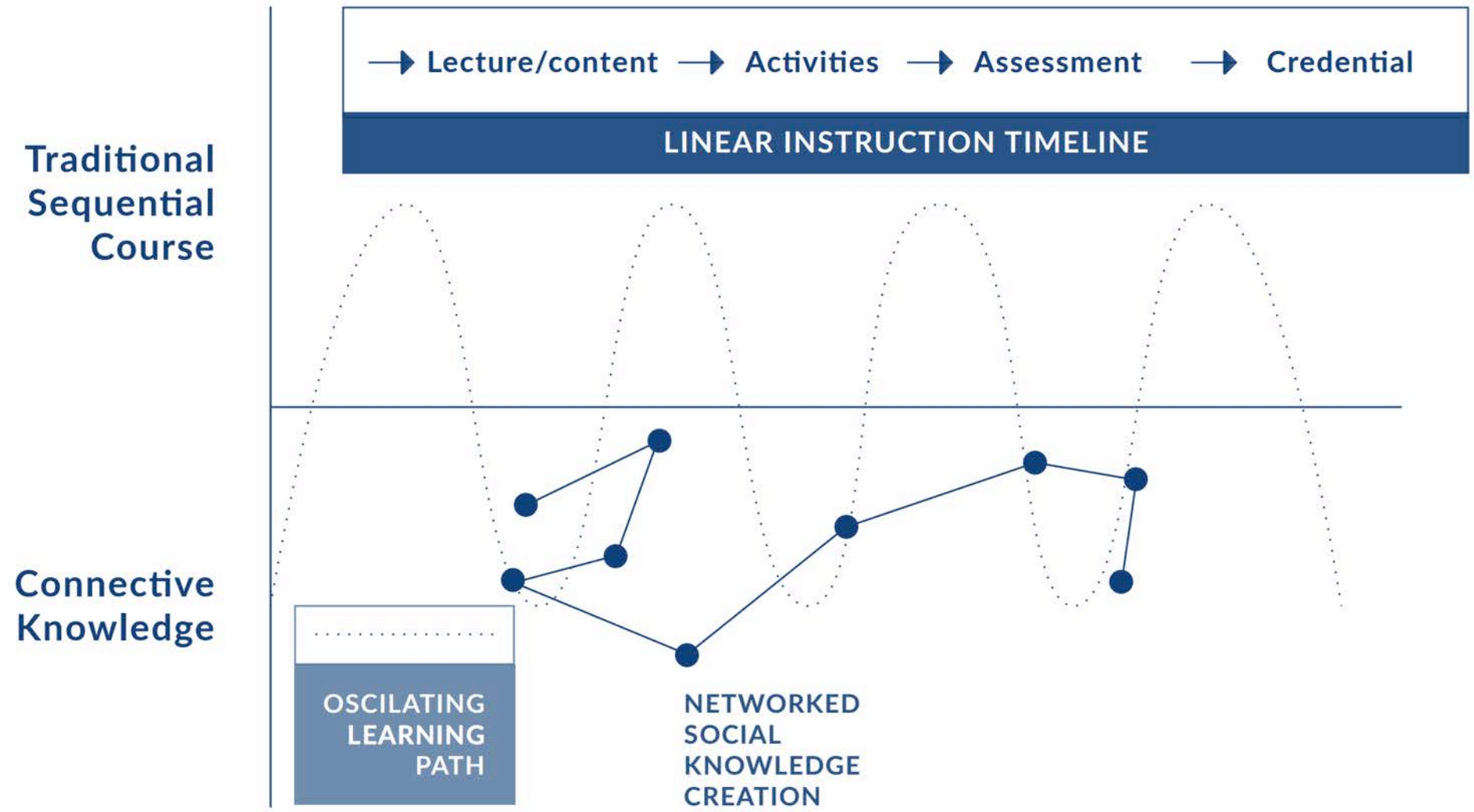
Enter digital learning…

Self-regulated, self-selected, self-directed learning

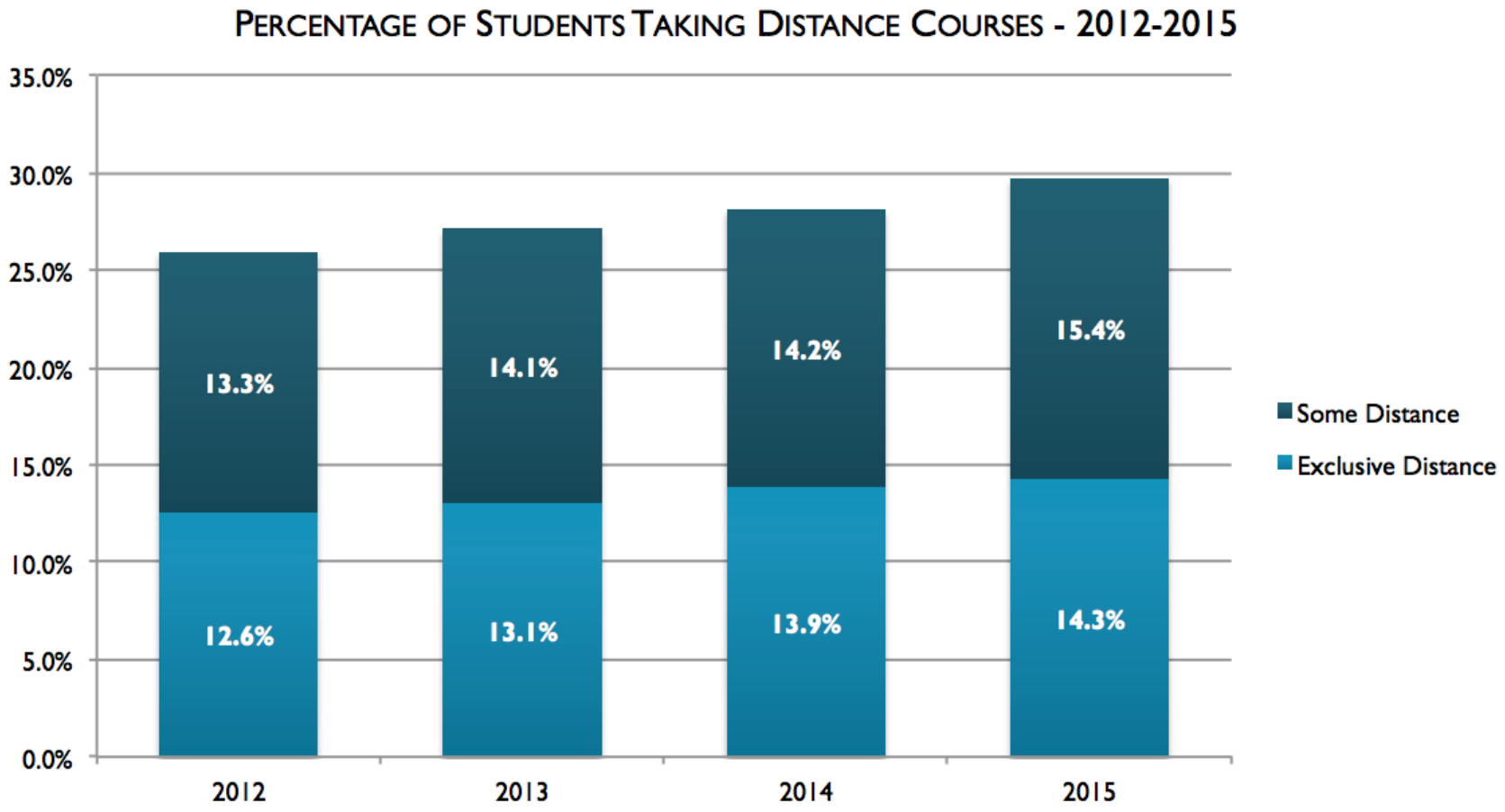
Social media, MOOCs, community knowledge spaces


FACULTY
CORE
CONTENT
LEARNER


PERIPHERAL LEARNERS
EXTERNAL EXPERTS
FACULTY
CORE CONTENT
LEARNERS
CO-CREATED CONTENT
CO-CREATED CONTENT
OPEN EDUCATIONAL RESOURCES


Traditional Sequential Course
Lecture/content
Activities
Assessment
Credential
LINEAR INSTRUCTION TIMELINE
Connective Knowledge
OSCILATING LEARNING PATH
NETWORKED SOCIAL KNOWLEDGE CREATION

In: Siemens, Gasevic, & Dawson (eds), 2015

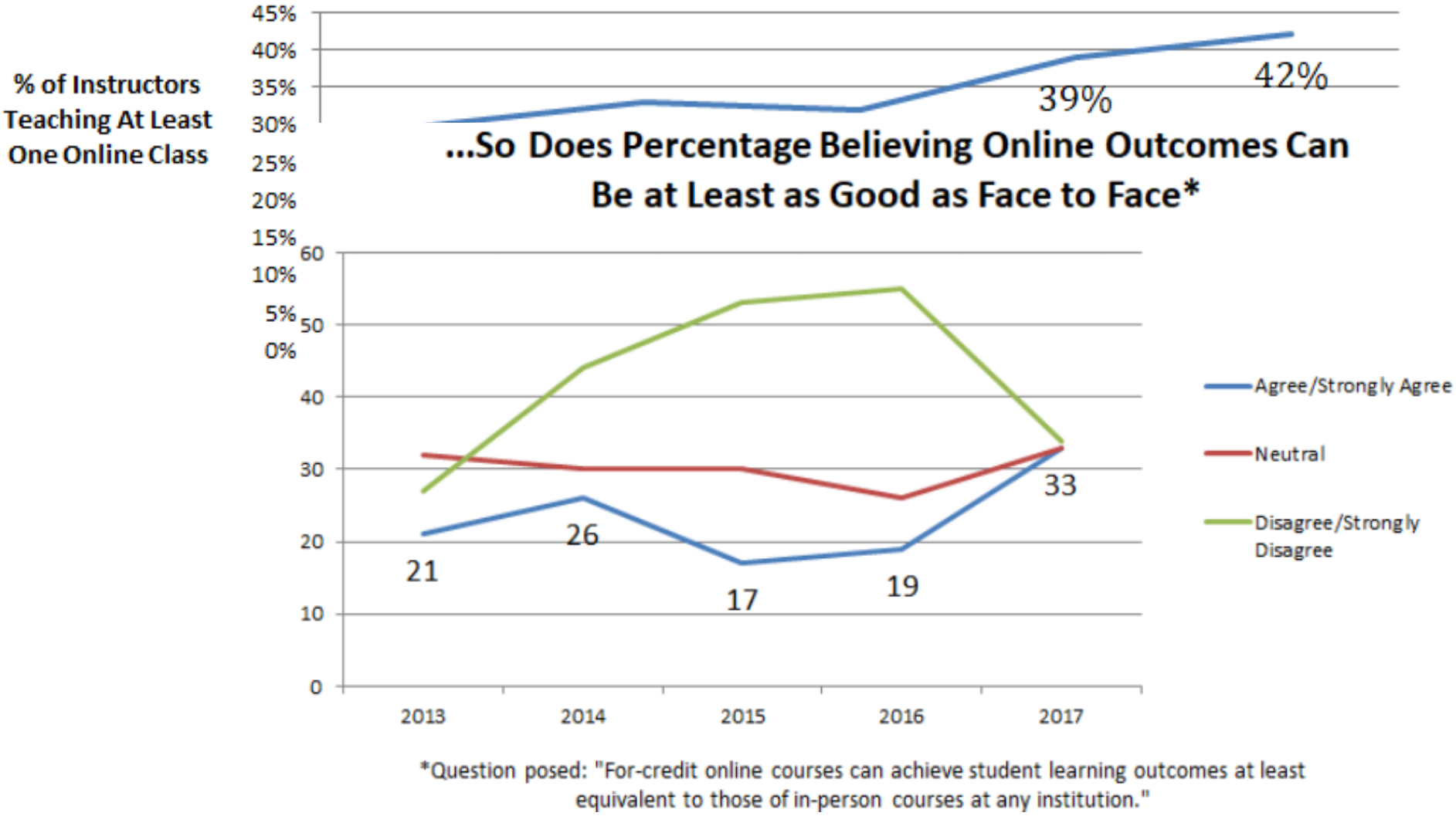


Digital Learning Compass: Distance Education Enrolment Report 2017

“Forty-two percent of professors say they have taught an online course, and 36 percent have taught a blended or hybrid course. The proportion of faculty members who have taught an online course has increased from 30 percent to 42 percent since 2013.“

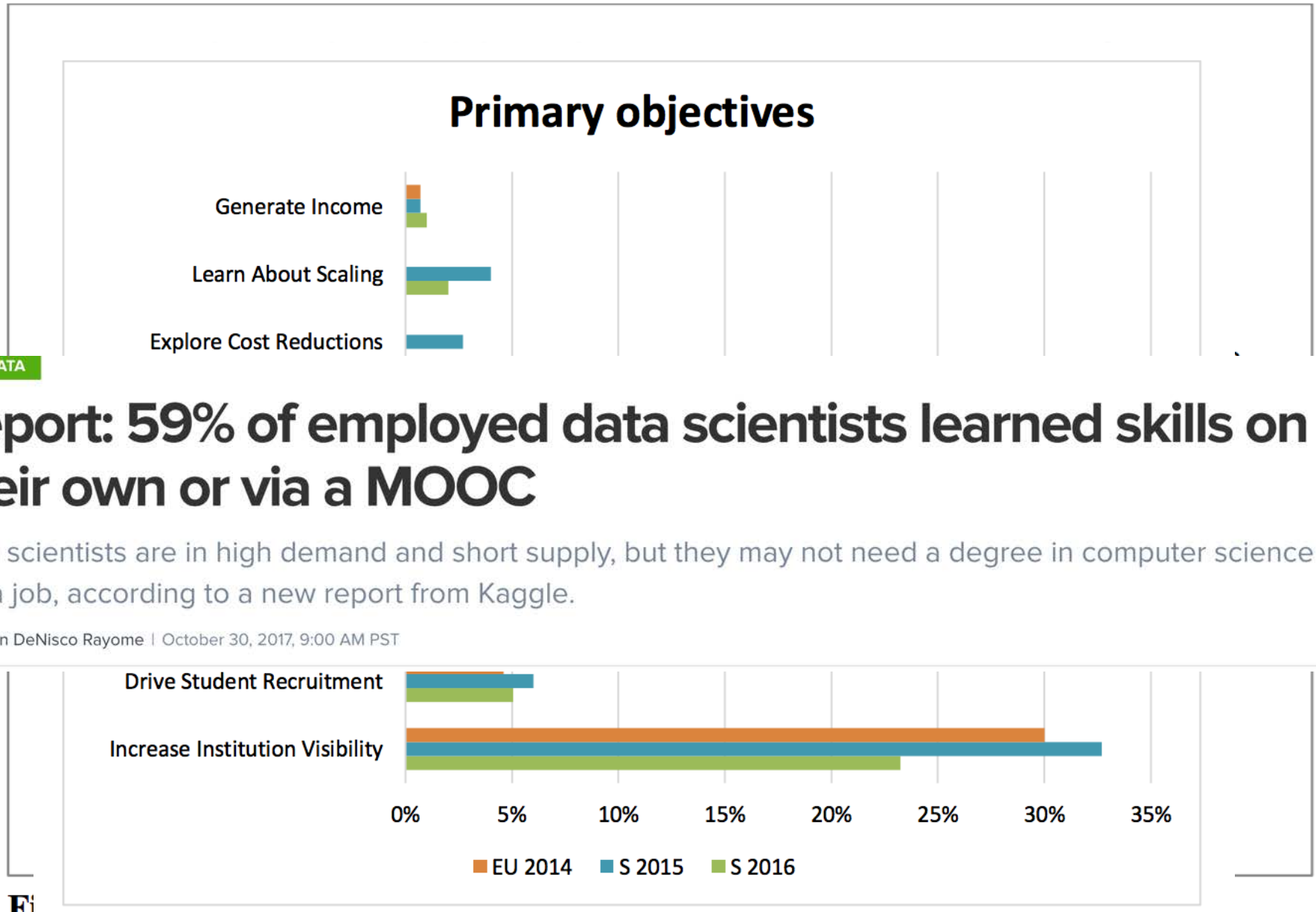
2017 Survey of Faculty Attitudes on Technology

As Proportion of Professors Teaching Online Rises...



*Question posed: "For-credit online courses can achieve student learning outcomes at least equivalent to those of in-person courses at any institution."

Inside Higher Education, Oct 30, 2017



BIG DATA

Report: 59% of employed data scientists learned skills on their own or via a MOOC

Data scientists are in high demand and short supply, but they may not need a degree in computer science to get a job, according to a new report from Kaggle.

By Alison DeNisco Rayome | October 30, 2017, 9:00 AM PST

Figure 11: *Primary objectives to offer a MOOC (S016) in comparison with responses from previous surveys (EU 2014, S2015)*

MOOC Strategies of European Institutions, 2017

Human and machine intelligence

How do these interact in the future of higher education?

Important to know what works where

Ineffective to

- Scale through humans what should be scaled through technology
  - Inferring and detecting knowledge and other key aspects of learner
- Trying to scale through technology what should be scaled by humans
  - Intervening on deep misconceptions or in the face of disengagement

Move to “modern” learning models/needs

in order for us to truly create and contribute to the world, we have to be able to connect countless dots, to cross-pollinate ideas from a wealth of disciplines, to **combine and recombine** these pieces and build new castles.

Maria Popova

Knowledge development, learning, is (should be) concerned with **learners understanding relationships**, not simply memorizing facts.

i.e. naming nodes is “low level” knowledge activity, understanding node connectivity, and implications of changes in network structure, consists of deeper, coherent, learning

Exploration

Learning is the exploration of the unknown…

… not just mastery of what is already known.

Compelling Questions

Habitable Worlds:

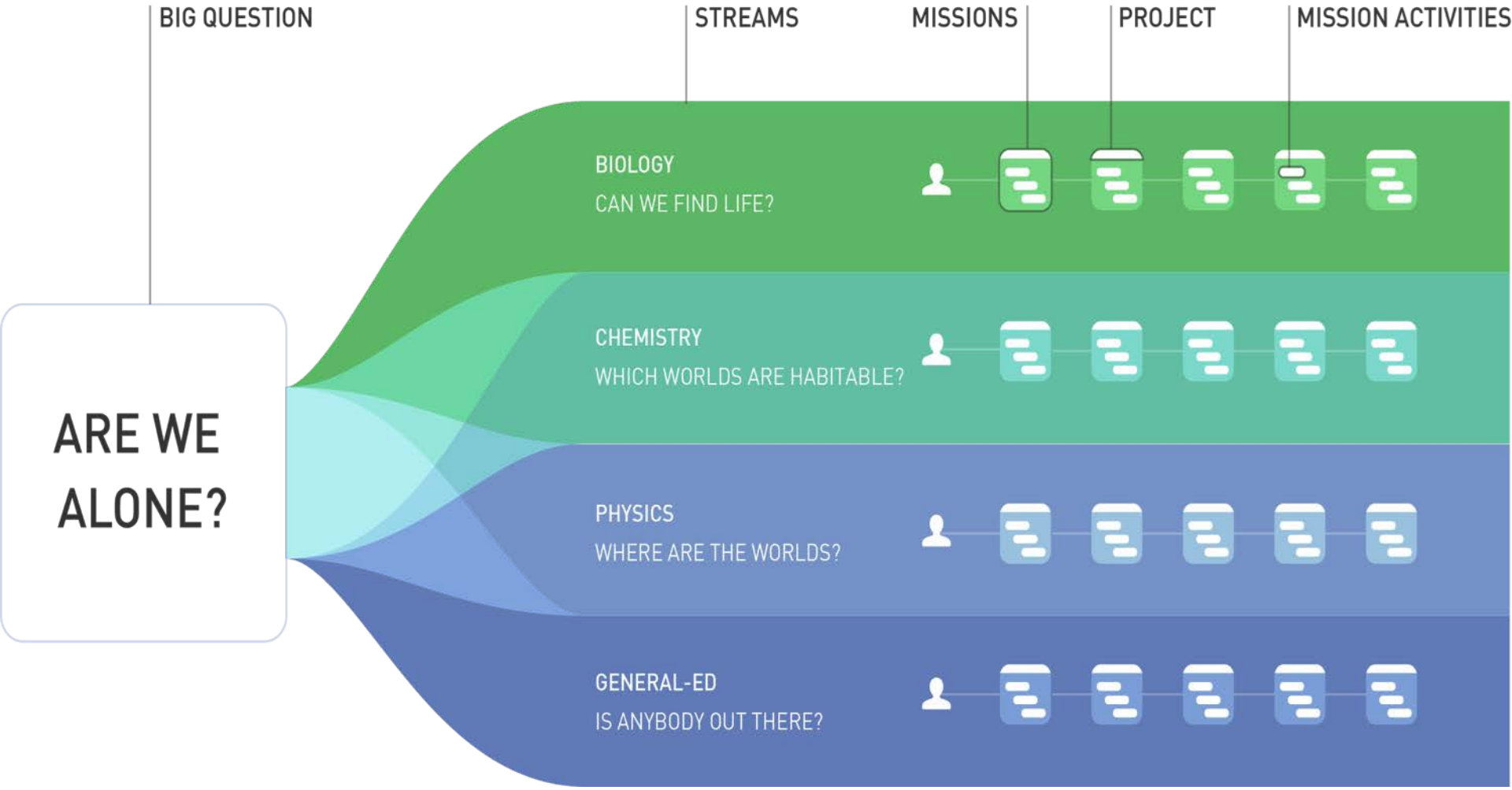
Are We Alone?

Contagion:
Can We Survive?

Transdisciplinary

The questions we care about don't fit in silos

Smart Courses



Challenges for online learning

Systemic integration
Incorporation of scaffolded support
Learner profile management