

MIT Online Education Report

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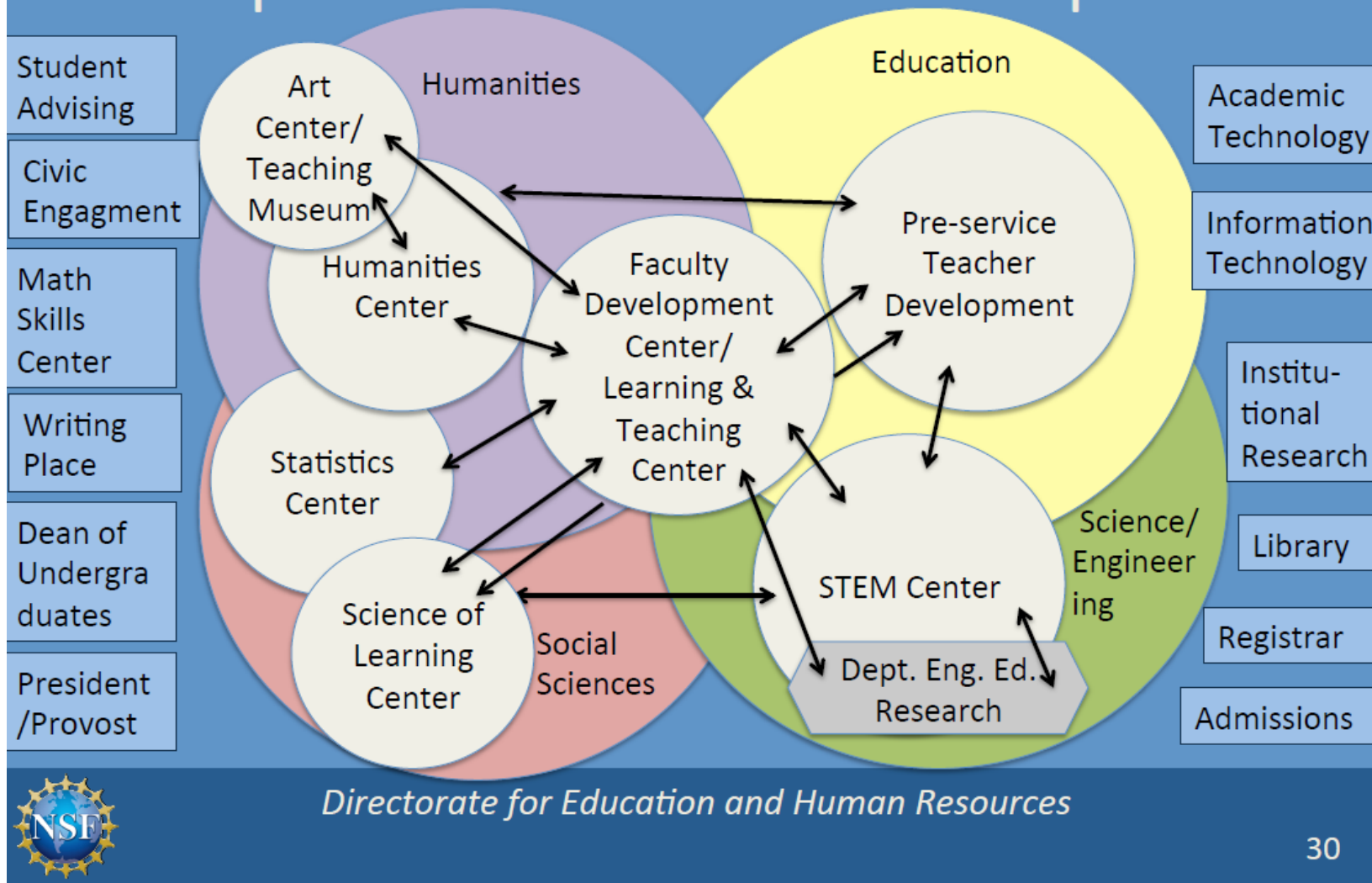
April 1, 2016



Moving the recommendations forward

- ▶ What is the context of the system?
- ▶ What are the levers and points of intervention?
- ▶ What are the barriers/challenges?
- ▶ What are the available resources to advance each recommendation?

Challenge of disaggregated improvement efforts on campuses



Slide from a presentation by Susan Singer, Division Director, Undergraduate Education, NSF. Presented at the APLU SMTI and STEM Education Centers Meeting - June 4, 2015 -

<https://drive.google.com/file/d/0ByGfi4XyGr5gUWNwcnDUak1icnM/view?usp=sharing>

Resources for Recommendation 1+4: Interdisciplinary collaboration + Institutional and organizational change

- ▶ Levers:
 - ▶ VP of Research, Provosts, and VP of Undergraduate Education; disciplines; funding agencies; undergraduate/graduate students/postdoc
- ▶ **Barriers: Who owns the problem of spanning these boundaries?**
- ▶ Resources: Networks/conferences/platforms
 - ▶ [APLU's Network of STEM Education Centers](#)
 - ▶ Accelerating Systemic Change in STEM Education network
 - ▶ AAU Undergraduate STEM Education Initiative
 - ▶ AAC&U's PKaI
 - ▶ [Transforming Institutions Conferences](#)
 - ▶ [Trellis/ STEM Central/ SERC](#)
 - ▶ Disciplinary education research/
Scholarship of teaching / [Issues](#)



Resources for Recommendation 1+4: Interdisciplinary collaboration + Institutional and organizational change

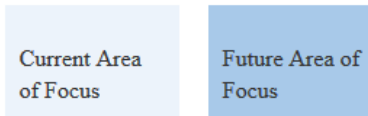
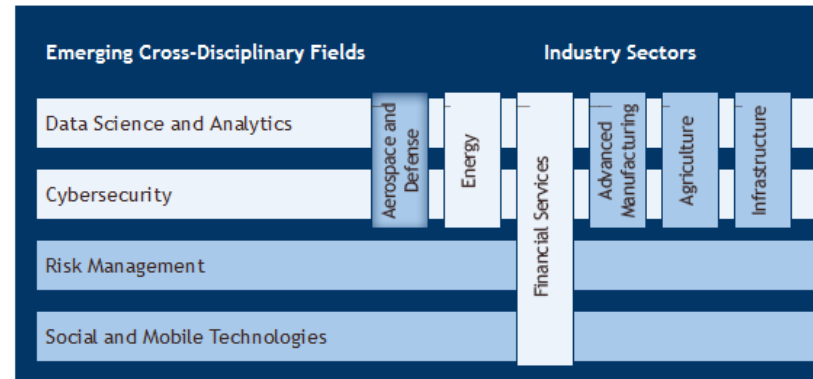
- ▶ For cross-disciplinary teams, see Team Science literature
- ▶ Gaps: diversity/inclusion conversations, neuroscience, learning engineers/use of technology
- ▶ Possible next steps:
 - ▶ Make connections with these emerging networks.
 - ▶ Create or partner with an existing organization to be the voice for this movement.



Networks focused on Workforce Readiness (4 year degrees)

- ▶ BHEF's Workforce Initiative are business-higher education partnerships that focus on regional workforce needs.
- ▶ USU's Improving the Health of a Diverse Population - collaboration between USU, APLU, AAMC, and NIH to address the severe shortage of qualified and diverse health professionals in underserved areas.

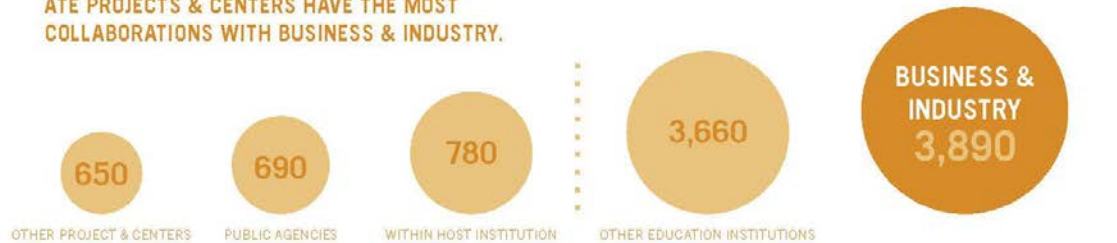
HEWI PROGRAM FRAMEWORK



Networks focused on Career and Technical Education



ATE PROJECTS & CENTERS HAVE THE MOST COLLABORATIONS WITH BUSINESS & INDUSTRY.



COLLABORATORS PROVIDED MORE THAN \$20 MILLION IN MONETARY AND IN-KIND SUPPORT.



IN 2014, 90 ATE PROJECTS AND CENTERS OFFERED **2,190** PROFESSIONAL DEVELOPMENT ACTIVITIES ATTENDED BY **45,830** EDUCATORS.



WOMEN HAVE SIGNIFIGANT LEADERSHIP ROLES IN ATE.
24 OF THE 42 ATE CENTERS HAVE FEMALE PRINCIPAL INVESTIGATORS.

- ▶ National Science Foundation's [Advanced Technological Education \(ATE\)](#) Centers of Excellence which endeavors to strengthen the skills of technicians.
- ▶ [Bio-Link](#) is an ATE Center of Excellence dedicated to educating the biotechnology workforce. The website is a rich resource.