



VANDERBILT
PEABODY COLLEGE

College of Education & Human
Development

Transformation of the Classical University



worldskills

I've managed professional research shops for 25 years and I still can't beat an assistant professor and two grad students.

What is it about the graduate students and the assistant professors working late at night that has produced virtually every significant technological innovation? Whereas I, with all my resources and all my background and computer scientists, can't compete with that?

– Eric Schmidt, Former CEO of Google

THE FOURTH INDUSTRIAL REVOLUTION

DIGITAL

Virtual & Augmented Reality Robotics Blockchain
Sensors Internet of Things Photonics
Smart Grid Quantum Computing Data Analytics
Cybersecurity Drones Artificial Intelligence
Mobile & Wireless High Performance Computing

ENERGY & ENVIRONMENT

Wind Turbines Bio-Fuel Advanced Energy Storage
Carbon Capture & Storage Marine & Tidal Power
Electric Vehicles Fuel Cells Precision Agriculture
Autonomous & Connected Vehicles Fusion Reactors
Reusable Rockets Asteroid Mining Micro Satellites

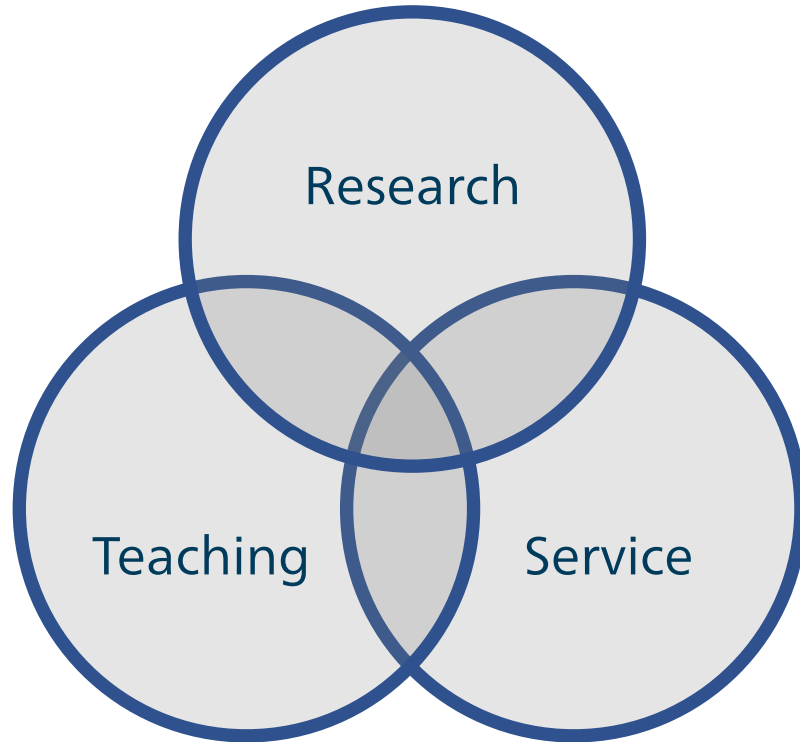
BIOTECHNOLOGY

Bioinformatics Personalized Medicine Biocatalysis
Regenerative Medicine Automated Drug Discovery
Synthetic Biology Bio-Imaging Lab on a Chip
Neuro-Technologies Health Monitoring Technology
Robotic Surgery Genomics Biochips & Sensors

ADVANCED MATERIALS

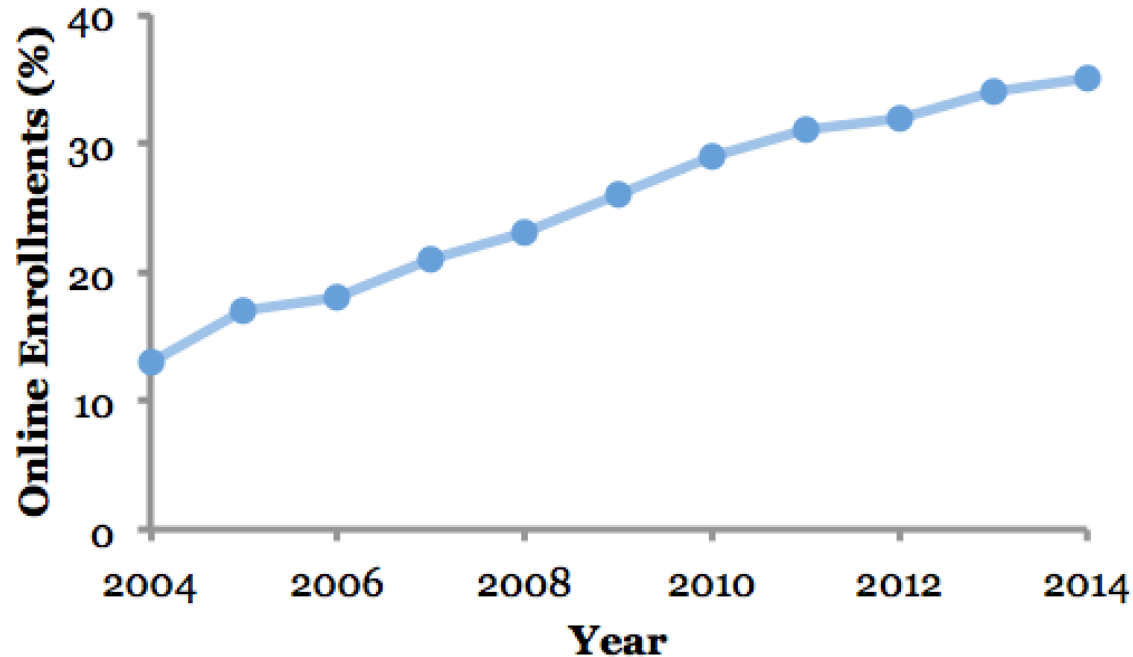
Additive Manufacturing Graphene Nanomaterials
Nano-Robots Claytronics Flexible Electronics
Carbon Nanotubes Super Alloys Functional Materials
High-Temperature Superconductivity Metamaterials
Conductive Polymers Graphene Quantum Dots

FUNCTIONS OF A UNIVERSITY

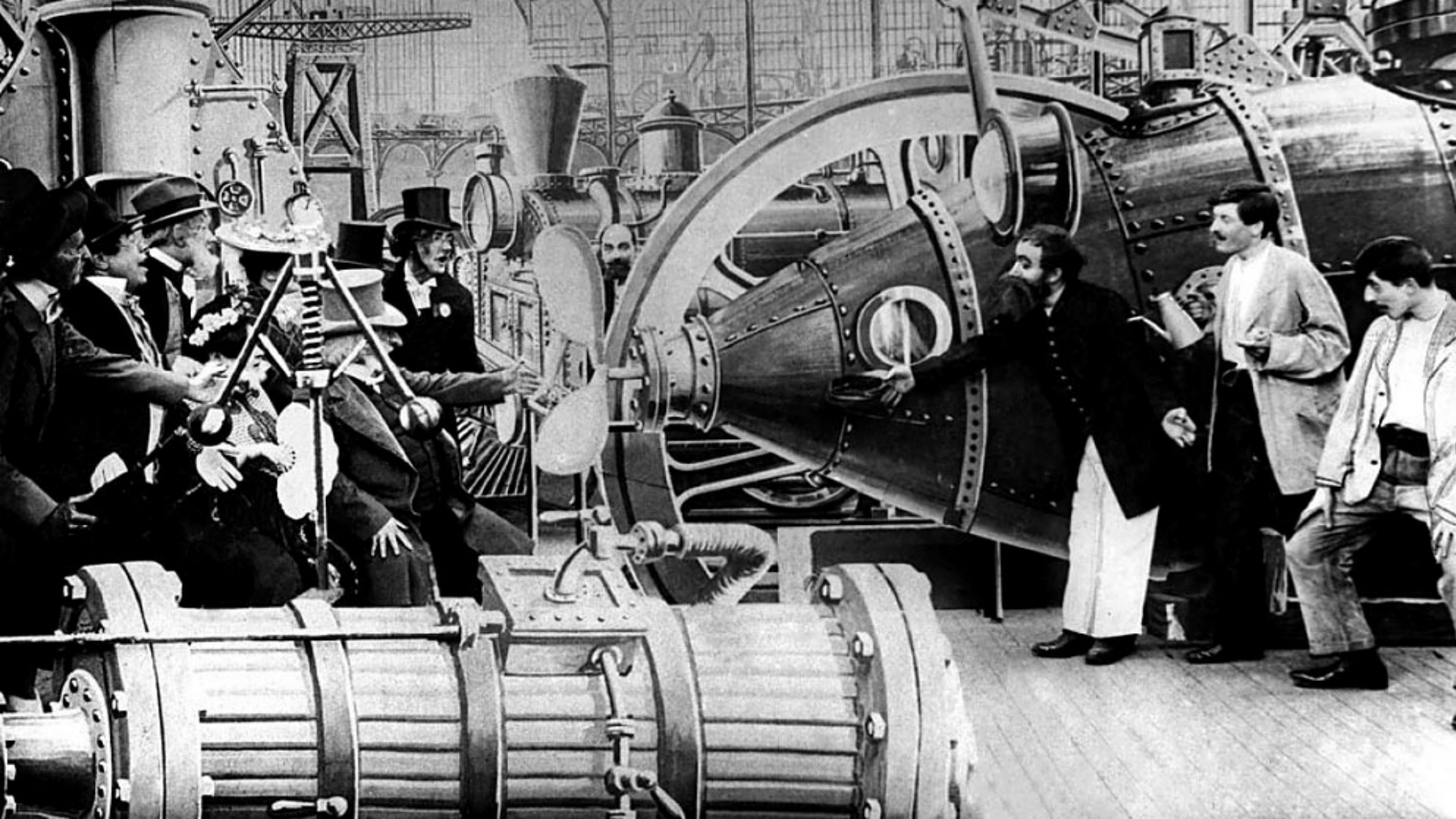




ONLINE ENROLLMENT IN U.S. HIGHER ED



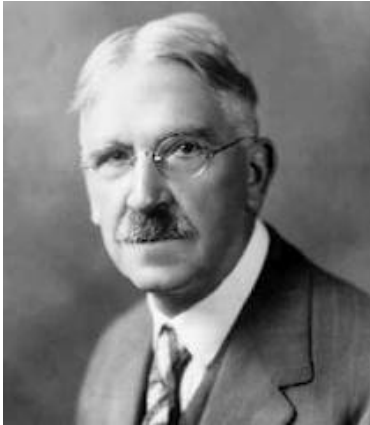
Allen, E. I., Seaman, J., & Straut, T. T. (2016). *Online report card: Tracking online education in the United States*. Babson Park, MA: Babson Survey Research Group.



21ST CENTURY SURVIVAL SKILLS

1. Critical thinking and problem solving skills
2. Collaboration across networks and leading by influence
3. Agility and adaptability
4. Initiative and entrepreneurialism
5. Effective oral and written communication
6. Accessing and analyzing information
7. Curiosity and imagination

Wagner, T. (2008). Global Achievement Gap. New York: Basic Books.



If we teach today's students as we taught yesterday's, we rob them of tomorrow.

– John Dewey, Educational Reformer
1858 – 1952

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