



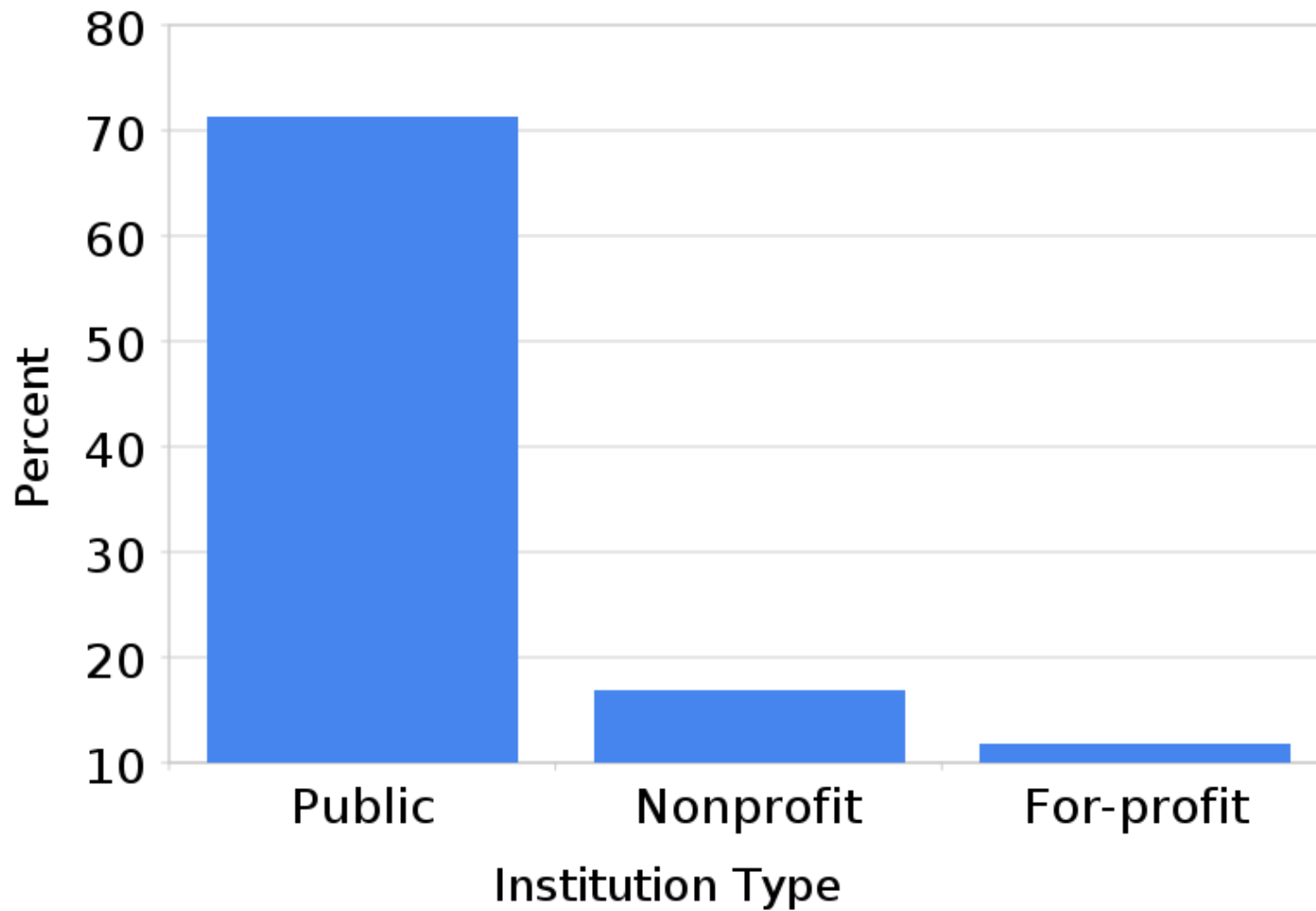
# Using Technology to Transform Higher Education

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College Savings Foundation Summit

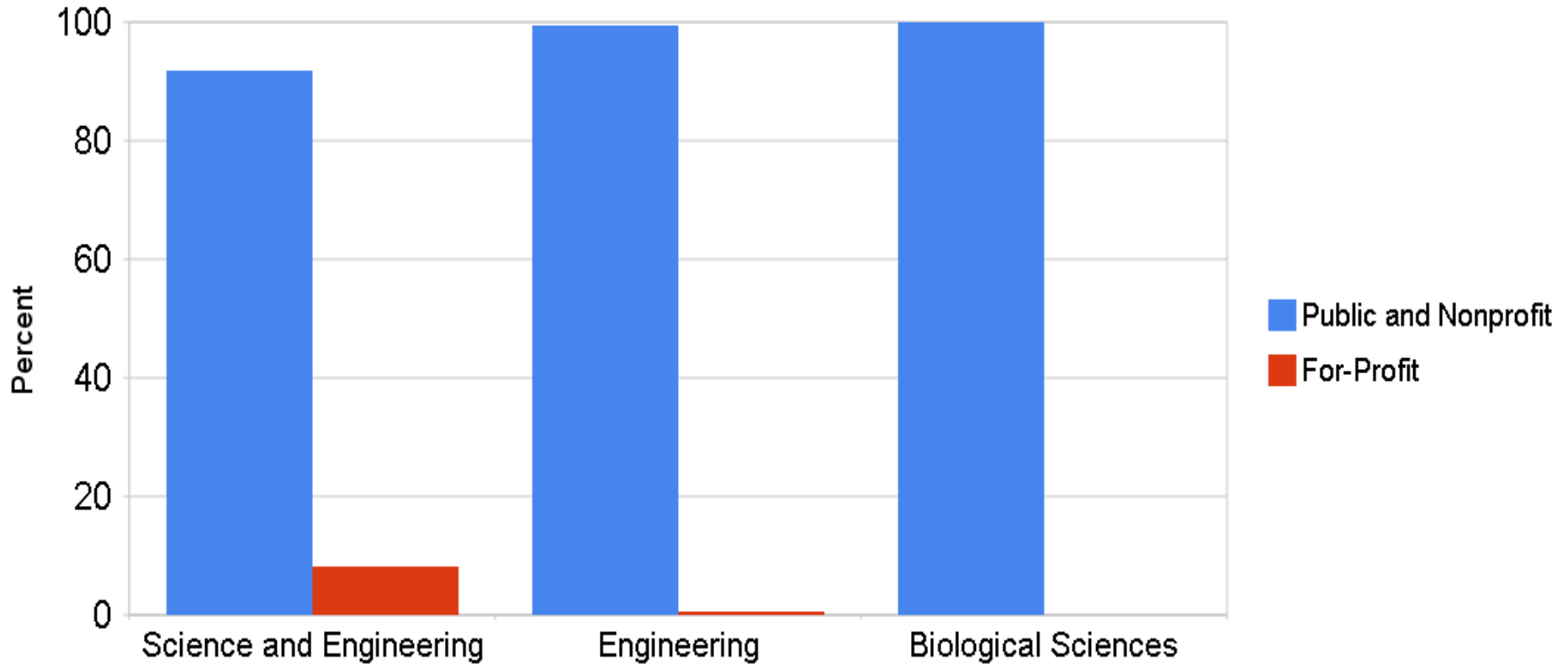
September 29, 2010

## Percent of Total Unduplicated Enrollment by Institution Type



Source: U.S. Department of Education

**Percent of STEM Degrees by Institution Type**



Source: National Science Foundation, Science and Engineering Indicators 2007

The onus for improving global competitiveness must fall on the public and nonprofit sectors

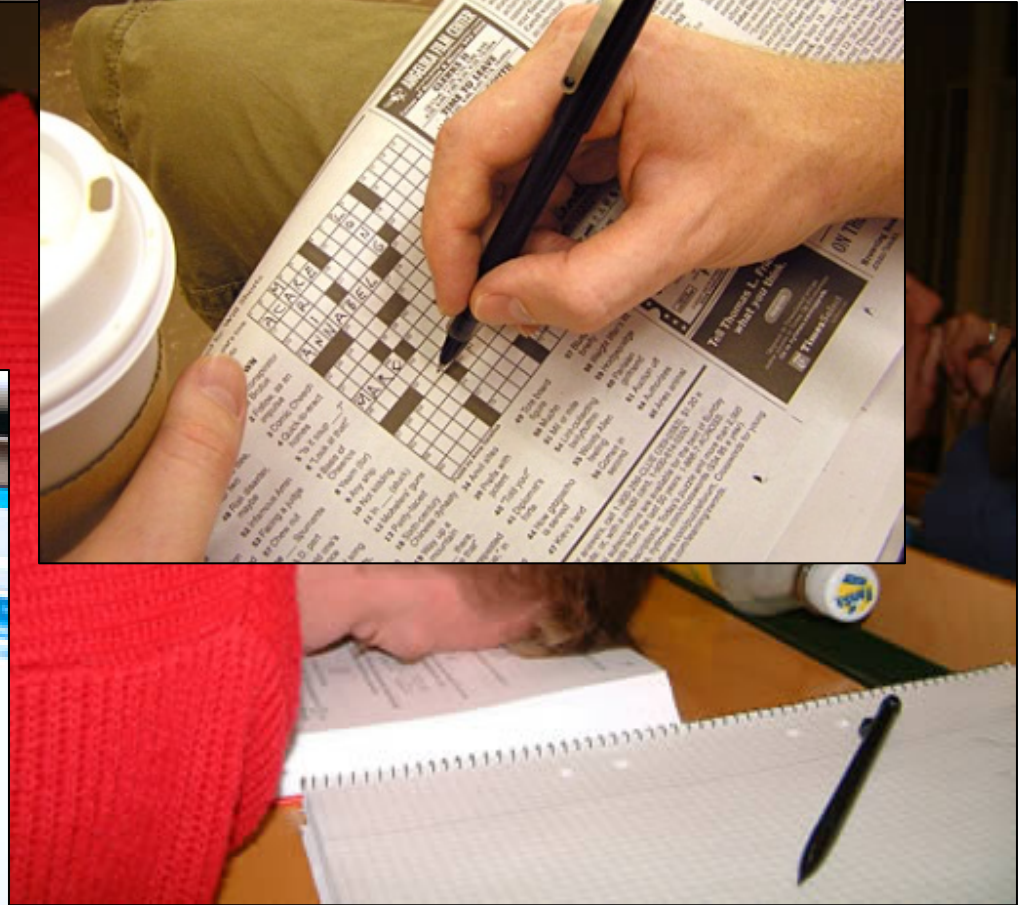


# What Are These Sectors Doing?

- NCAT
- Remediation
- Data and support



# The Dreaded 101 Course



# This Model Doesn't Work

- Low success rates
- Students master less than 30% of lecture material
- Students don't study



# NCAT

Transforming large introductory courses  
using technology to improve student  
learning and reduce costs



# All Types of Courses

- Math
- Spanish
- Composition
- Psychology
- Remediation
- Public Speaking
- Geology
- Biology
- Statistics
- Chemistry



# Example: Math Emporium

- Started at Virginia Tech
- Learn math by doing math
- Attend a large computer lab instead of lectures
- Flexible



# Selected Results

- **University of Idaho:** Passage rates in introductory math course increased from 62% to 70%, while failure/withdrawal rates declined 20%.
- **Tallahassee CC:** Student essay scores improved when judged with traditional sections on a common rubric.
- **Fairfield University:** Students in follow up classes demonstrated better mastery of biology content.



# Remediation

- Assessment
- Modules
- Eliminate entirely



# Remediation Results

- **Austin Peay:** The percentage of remedial-level students passing a for-credit math course increased from 30% to 67%
- **Cleveland State:** Pre-college math passage rates increased from 54% to 72%.



# Data and Support

- Early warning systems
- Judge program effectiveness
- Drive decision making



# Common Themes

- Not technology for the sake of technology
- Targeted application and careful design
- Frequent assessment
- Greater immediate support
- Cost is important, but not the bottom line



# How Do We Get There?

- Technology  $\neq$  just online
- Care about student success
- Change incentives
- Low-hanging fruit



For more information, visit the Education Sector website at:

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