Reengineering Education

For the 21st Century

Steven Mintz
The Challenges
Access, affordability, success

• Financial pressures are mounting
• Student demographics are shifting
• Public doubts about whether higher education is worth the cost are increasing
• Too many students fail to graduate and those who do take too long
The Challenges
Access, affordability, success

• **Cost:**
  Over the past 30 years, tuition and fees have jumped more than 1,120 percent.

• **Completion:**
  In Texas, just 20 percent of 8th graders will receive an Associate’s or Bachelor’s degree.

• **Inequality:**
  At Columbia, the student faculty ratio is 6 to 1; at UT Austin, 18 to 1.

• **Expenses:**
  A university must have its own police force, health services, technology infrastructure, and an array of student support services: Career services, counseling services, disability services, tutoring services, writing center.
The Challenges
Access, affordability, success
Yesterday’s Nontraditional Student is Today’s Traditional Student

Today’s typical college student is no longer an 18-year-old recent high-school graduate who enrolls full-time and has limited work and family obligations. Students today are older, more diverse and have more work and family obligations to balance.

The percentage of undergraduates who are:

<table>
<thead>
<tr>
<th>Adults Age 25 or Older (2008)</th>
<th>36%</th>
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</thead>
<tbody>
<tr>
<td>Independent Students (2008)²</td>
<td>47%</td>
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<tr>
<td>Enrolled in a Public Two-Year College (2009)</td>
<td>40%</td>
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<td>Enrolled Part-time (2008)³</td>
<td>46%</td>
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<tr>
<td>Minority Students (2009)⁷</td>
<td>36%</td>
</tr>
<tr>
<td>Low-income (2008)</td>
<td>40%</td>
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<tr>
<td>Employed Part-time (2008)¹¹</td>
<td>43%</td>
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<tr>
<td>Employed Full-time (2008)¹³</td>
<td>32%</td>
</tr>
<tr>
<td>Parents (2008)¹⁴</td>
<td>23%</td>
</tr>
<tr>
<td>Single Parents (2008)¹⁶</td>
<td>13%</td>
</tr>
</tbody>
</table>

More than a third of undergraduate students are over age 25.¹ Over the next 10 years the adult student enrollment in college is projected to grow faster than for traditional age students.²

Independent students are:
- 24 years or older
- Married
- Responsible for legal dependents other than a spouse
- Orphans or wards of the court (or were wards of the court until age 18) or
- Veterans of the U.S. armed services

Enrollment at community colleges increased by an estimated 15 percent from fall 2008 to fall 2010.⁴ Fifty-nine percent of community college students attended part-time; whereas, only 22 percent of undergraduate students attending public four-year institutions attended part-time.⁵

Undergraduate part-time enrollment has remained relatively steady since 1980, but with growing gaps between the price of tuition and the availability of grant aid, more students may enroll part-time and combine work and school.

Black and Hispanic students are 14.8 and 13.5 percent of the undergraduate student population respectively. According to projections these groups will make up 42 percent of the student population in 2019. This projected increase is mainly attributed to the expected 30 and 45 percent in expected overall growth in black and Hispanic populations compared to 7 percent growth for white students.⁸

The Institute for Women’s Policy Research (IWPR) calculated that the total family income was less than 200 percent of the Federal Poverty Line for 40 percent of undergraduate students.⁹ Without income to cover basic living expenses, these students will most likely have to work more to cover direct and indirect college costs which could undermine academic success.¹⁰

Demos reported that working while in school to finance one’s education is necessary for the majority of young college students. For young community college students specifically, 63 percent would be unable to attend college if they did not work.¹¹

Working full-time can be a challenge for students who are balancing their course loads, school work and family responsibilities, yet almost a third of all undergraduates work 35 hours or more per week.

Nearly a quarter of students are parents. Workforce investments and education may produce benefits for adult participants as well as their children. For example, encouraging evidence shows that when mothers with low-education complete additional education, their children appear to have improved language and reading skills.¹⁵

More than one in eight students are single parents. Compared to married parents, single parents are more likely to have low-incomes. To pay tuition and arrange child care, they need more assistance (institutional, government and personal).¹⁷

Non-Traditional Students

The new student majority
• A degree program that **can** begin in high school to accelerate time to graduation

• A **structured pathway** that eliminates redundancies and wasted credit hours

• A **coherent curriculum** with a careful sequence of aligned courses, rather than a series of disconnected classes

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**The Degree Vertical**

Eliminating the divide between high school and college
• Credit for mastery rather than seat time
• Career-focused degrees with industry-defined competencies
• Credit for skills and knowledge acquired outside the classroom
In addition to providing readings, courseware offers:

- Simulations, animations, interactives
- Content tailored to students’ interests and needs
- Practice Problems
- Diagnostics and embedded remediation and corrective feedback
- Chatrooms, whiteboarding sessions, peer mentoring, and space for collaborative projects

Courseware
The textbook on steroids
Advanced data analytics will allow campuses to:

- Flag students at-risk of failure
- Help faculty personalize instruction
- Alert students to “toxic” course combinations
- Let institutions assess the effectiveness of advising programs and student support services.

Learning Analytics
Harnessing the power of numbers
• Too many students are unserved or poorly served by our current approach to higher education

• Too many students fail due to inadequate advising and tutoring

• A cafeteria-style curriculum does not serve many non-traditional students well

• Student pathways need to be redesigned to eliminate roadblocks and detours

• Many students need an education with a clear value proposition