Personalizing Learning to Improve Student Outcomes
Education is going through a one-time shift from print to digital.
Online learning continues to rise.
Education tech has focused first on distribution and increasing access.

Now we must look ahead to the next phase: *personalization*. 
Knewton’s mission is to bring personalized learning to the world.

Knewton improves learning by:

• Helping **students** learn more efficiently and **effectively**—quantitatively determining what a student knows, how s/he learns best, then recommending **what to study next** so no student is left behind or bored.

• **Empowering teachers** by helping them to define student goals and providing them **actionable information** on what each student needs to work on and why.
It’s Working

<table>
<thead>
<tr>
<th>ASU MATH READINESS</th>
<th>FALL ‘09-SPRING ‘11</th>
<th>FALL ‘11-SPRING ‘12 WITH KNEWTON</th>
</tr>
</thead>
<tbody>
<tr>
<td>PASS RATES</td>
<td>64%</td>
<td>75%</td>
</tr>
<tr>
<td>WITHDRAWAL RATES</td>
<td>16%</td>
<td>7%</td>
</tr>
<tr>
<td>STUDENTS FINISHING EARLY</td>
<td>N/A</td>
<td>45%</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>UNIVERSITY OF ALABAMA MATH READINESS</th>
<th>TRADITIONALLY</th>
<th>FALL ‘12 WITH KNEWTON</th>
</tr>
</thead>
<tbody>
<tr>
<td>PASS RATES</td>
<td>70%</td>
<td>87%</td>
</tr>
</tbody>
</table>

UNLV MATH READINESS

82% of students who placed into developmental math at the onset of the Knewton-powered Summer Bridge program passed into college-level credit-bearing courses.
Personal learning profile

Over time, as more students use Knewton-powered learning materials and apps, every student will be able to have a personal learning profile that stores concept-level strengths, weaknesses, background, preferences, and more; this profile can be carried by the student from course to course, school to school, to make each learning experience more effective and tailored to their needs. From preschool through college graduation, workforce training through decades of life-long learning, profiles becomes more robust and ultra-personalized.
How is Big Data Affecting Higher Ed?

- The most important role of the university is employability, both immediate and long-term.
- Big data will begin to reveal which schools, and even instructors or courses, best prepare students for certain careers.
- Learning profiles will reveal the best matches for employers.
Challenges for Higher Ed

• “Jobs” of Institutions: facilitating learning, increasing employability, and providing a coming of age experience.

• Making graduates employable will soon be disrupted as learning outcomes become more transparent.
Actions for Higher Ed

- Start measuring.
- You can’t improve your processes around driving higher outcomes if you don’t measure those outcomes.
- Get ahead of the curve and get control of your data.
Thank you

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