Measuring Student Access and Success

Julie Hartley, USHE
David Ma, USHE
Session Overview

- Regents’ access and success strategic plan
- USHE’s access and success metrics
- Next steps
AFFORDABLE PARTICIPATION

• SBR Goal: Increase the number of Utahns who decide to access, are prepared for, and succeed in higher education.

• Regents’ Metric: Increase the percentage of Utah high school graduates enrolling in college within five years to 75% by 2024-2025
Timely Completion

Regents’ Goal for 2025 is 28 awards per 100 FTE.

- 2015: 25 awards per 100 FTE
- 2016: 26 awards per 100 FTE
Missing Metrics

• Completion Goals specific for different groups of students, particularly those with attainment gaps

• Assessments/measures of the maneuverability of institutions and degree pathways
Increase the educational attainment of Utahns to enhance their overall quality of life, and to meet Utah’s current and future workforce needs.

**Regent Work Groups**

- **Utah College Acceptance Letter**
- **Student Aid and Tuition Policy**
- **StepUp Schools**
- **Statewide Data /Tech. Strategy**
- **Mental Health Recommendations**
- **Student Transfer**
- **High demand, undersupplied occupations**
- **Improve Information to Students on Workforce Options**

**Strategic Communications Plan**
Affordable Participation
Strategic Plan Goal

• 75% of high school graduates enrolled in college within five of high school graduation
Cohorts 2007-2012:

- 5<sup>th</sup> year: 69%
- 10<sup>th</sup> year: 71%
College Enrollment by Gender

![Graph showing college enrollment by gender across different years.](image-url)
College Readiness

“Implement specific K-16 partnership initiatives that encourage college readiness with the goal that every Utah high school graduate is prepared for college.”
USHE Recommended High School Curriculum
1. Substantial research indicating certain courses increased students’ likelihood of earning grades of C or higher in related college courses
2. Demonstrated correlation between the courses and increases in the ACT benchmark scores used to place students into college classes
3. Alignment with the more demanding admissions requirements of highly selective institutions.

(U of U, USU, Westminster, BYU, Harvard, Yale, Columbia, Berkeley, Princeton, Stanford)
Transcript Studies

- Math course higher than Algebra 2 (Utah Secondary Math III) doubled odds of completing a bachelor’s degree.

- Students who completed Algebra 2 or beyond in high school were two- to almost three-times more likely to become “well paid” or “highly paid” professionals.
• Utah students who
• Completed Math III: 16% met ACT math benchmark
• Completed 4th credit of Math: 62% hit benchmark
## H.S. Graduation Requirements

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Required Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language Arts</td>
<td>4.0</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3.0</td>
</tr>
<tr>
<td>Science</td>
<td>3.0</td>
</tr>
<tr>
<td>Social Studies</td>
<td>2.5</td>
</tr>
<tr>
<td>Information Technology</td>
<td>0.5</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>1.5</td>
</tr>
<tr>
<td>Physical Education</td>
<td>1.5</td>
</tr>
<tr>
<td>Health Education</td>
<td>0.5</td>
</tr>
<tr>
<td>Financial Literacy</td>
<td>0.5</td>
</tr>
<tr>
<td>Career &amp; Tech Ed.</td>
<td>1.0</td>
</tr>
<tr>
<td>Elective</td>
<td>8.0</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>26</strong></td>
</tr>
</tbody>
</table>
Recommended Curriculum

4 credits of English
2 credits of world language
(other than English, taken during grades 9-12)

4 credits of math
(at least 1 credit beyond Math 3)

3 credits of social science
(such as history, government, psychology, geography—
check Regents' Scholarship list for approved courses)

3 credits of lab-based science
(one each of biology, chemistry, physics)
ISSUE BRIEF

The Utah State Board of Regents’ Recommended High School Curriculum
A Foundation for College Success

No. 2018-3 | February 2018
Julie Hardy, Ph.D.

Find Out More:
HigherEdUtah.org
High School Feedback Reports

Students Taking Math
- College Level: 46%
- Prior College Credit: 5%
- Remedial: 26%
- No Enrollment: 23%

Students Taking English
- College Level: 35%
- Prior College Credit: 34%
- Remedial: 5%
- No Enrollment: 26%
Access & Completion
Completion

Regents’ Goal for 2025 is 28 awards per 100 FTE.

- 2015: 25 awards per 100 FTE
- 2016: 26 awards per 100 FTE
Underrepresented populations

“Increase the participation of first-generation, economically disadvantaged, and returning adults with targeted outreach efforts and partnerships with organizations focused on improving college access for these communities.”
Immediate College Enrollment Rate

Utah: 47.0%
National: 69.0%
College Enrollment & Graduation by Ethnicity

Hispanic
- Enrollment: 51.1%
- Graduation: 33.4%

Am. Indian
- Enrollment: 54.6%
- Graduation: 25.5%

Pac. Islander
- Enrollment: 64.6%
- Graduation: 30.9%

Black
- Enrollment: 66.7%
- Graduation: 32.7%

White
- Enrollment: 72.6%
- Graduation: 55.9%

Asian
- Enrollment: 76.0%
- Graduation: 61.7%
College Enrollment & Graduation by Income Level

- Enrollment:
  - Non-Low Income: 73.9%
  - Low Income: 55.3%

- Graduation:
  - Non-Low Income: 56.4%
  - Low Income: 38.9%
College Enrollment & Graduation by English Proficiency

<table>
<thead>
<tr>
<th></th>
<th>Non-Limited English</th>
<th>Limited English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrollment</td>
<td>71.3%</td>
<td>39.5%</td>
</tr>
<tr>
<td>Graduation</td>
<td>54.3%</td>
<td>24.9%</td>
</tr>
</tbody>
</table>
Interaction Effects

Being a student of color, from a low-income family and having no ACT score
Ease of participation
Maneuverability

“Improve ease of access among K-12 students through on-campus experiences, concurrent enrollment, and access among all students through transferability and streamlined transitions to college through the admissions and onboarding processes at USHE institutions.”
Gateway vs. Gatekeeper Courses
DFWI Rates for 10 Gateway Courses

- BIOL 1610
- CHEM 1210
- ENGL 1010/WRTG 1010
- ENGL 1010/WRTG 1010
- ENGL 1010/WRTG 1010
- ENGL 1010/WRTG 1010
- POLS 1100
- PSY 1010
- MATH 1010/MAT 1010
- MATH 1030
- MATH 1040/STAT
- MATH 1040/STAT
- MATH 1050
- MATH 1050
- MATH 1060
- MATH 1060
High or Low?

- 10 Gateway Courses: 25.9%
- All the Other 1000 & 2000 Level Courses: 16.5%
DFWI Rates By Course

<table>
<thead>
<tr>
<th>Course</th>
<th>DFWI Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS1100</td>
<td>19.9%</td>
</tr>
<tr>
<td>ENGL1010</td>
<td>20.7%</td>
</tr>
<tr>
<td>PSY1010</td>
<td>22.9%</td>
</tr>
<tr>
<td>MATH1030</td>
<td>23.9%</td>
</tr>
<tr>
<td>CHEM1210</td>
<td>24.1%</td>
</tr>
<tr>
<td>MATH1060</td>
<td>27.1%</td>
</tr>
<tr>
<td>MATH1040</td>
<td>27.1%</td>
</tr>
<tr>
<td>BIOL1610</td>
<td>28.0%</td>
</tr>
<tr>
<td>MATH1050</td>
<td>29.6%</td>
</tr>
<tr>
<td>MATH1010</td>
<td>35.5%</td>
</tr>
</tbody>
</table>
DFWI Rates By Institutions

- USU: 18.5%
- UU: 22.6%
- SUU: 24.2%
- WSU: 25.0%
- SNOW: 25.3%
- UVU: 25.3%
- DSU: 26.5%
- SLCC: 33.2%
DFWI Rates by Ethnicity

- Unspecified: 22.3%
- White: 23.8%
- Non Res. Alien: 27.3%
- Asian: 28.3%
- Multiple: 31.5%
- Hispanic: 34.5%
- Ame. Ind.: 34.5%
- Pac. Isl.: 42.3%
- Black: 42.5%
## DFWI Rates by Course and by Ethnicity

<table>
<thead>
<tr>
<th>Course</th>
<th>Asian</th>
<th>Black</th>
<th>Hispanic</th>
<th>American Indian</th>
<th>Multiple</th>
<th>Non Resident Alien</th>
<th>Pacific Islander</th>
<th>Unspecified</th>
<th>White</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL1610</td>
<td>33.6%</td>
<td>49.3%</td>
<td>40.0%</td>
<td>41.5%</td>
<td>29.2%</td>
<td>33.3%</td>
<td>42.1%</td>
<td>24.6%</td>
<td>25.2%</td>
<td>28.0%</td>
</tr>
<tr>
<td>CHEM1210</td>
<td>27.1%</td>
<td>45.7%</td>
<td>34.1%</td>
<td>44.7%</td>
<td>22.9%</td>
<td>27.3%</td>
<td>34.8%</td>
<td>15.6%</td>
<td>22.6%</td>
<td>24.1%</td>
</tr>
<tr>
<td>ENGL1010</td>
<td>22.5%</td>
<td>34.6%</td>
<td>29.4%</td>
<td>28.7%</td>
<td>27.0%</td>
<td>23.0%</td>
<td>41.0%</td>
<td>14.3%</td>
<td>18.5%</td>
<td>20.7%</td>
</tr>
<tr>
<td>MATH1010</td>
<td>39.0%</td>
<td>47.5%</td>
<td>42.4%</td>
<td>43.6%</td>
<td>41.0%</td>
<td>25.5%</td>
<td>44.1%</td>
<td>40.4%</td>
<td>33.4%</td>
<td>35.5%</td>
</tr>
<tr>
<td>MATH1030</td>
<td>19.0%</td>
<td>42.4%</td>
<td>29.0%</td>
<td>40.0%</td>
<td>27.7%</td>
<td>25.5%</td>
<td>38.9%</td>
<td>27.8%</td>
<td>21.5%</td>
<td>23.9%</td>
</tr>
<tr>
<td>MATH1040</td>
<td>22.0%</td>
<td>49.4%</td>
<td>35.4%</td>
<td>34.5%</td>
<td>33.1%</td>
<td>23.1%</td>
<td>40.0%</td>
<td>29.7%</td>
<td>25.4%</td>
<td>27.1%</td>
</tr>
<tr>
<td>MATH1050</td>
<td>36.4%</td>
<td>47.7%</td>
<td>38.8%</td>
<td>32.2%</td>
<td>36.7%</td>
<td>31.4%</td>
<td>53.3%</td>
<td>23.9%</td>
<td>27.5%</td>
<td>29.6%</td>
</tr>
<tr>
<td>MATH1060</td>
<td>30.4%</td>
<td>47.4%</td>
<td>32.3%</td>
<td>35.0%</td>
<td>32.4%</td>
<td>26.3%</td>
<td>25.0%</td>
<td>30.5%</td>
<td>25.7%</td>
<td>27.1%</td>
</tr>
<tr>
<td>POLS1100</td>
<td>20.0%</td>
<td>37.6%</td>
<td>28.2%</td>
<td>27.6%</td>
<td>22.4%</td>
<td>33.0%</td>
<td>39.0%</td>
<td>17.8%</td>
<td>17.5%</td>
<td>19.9%</td>
</tr>
<tr>
<td>PSY1010</td>
<td>21.9%</td>
<td>41.5%</td>
<td>32.4%</td>
<td>33.0%</td>
<td>31.0%</td>
<td>28.2%</td>
<td>37.7%</td>
<td>20.7%</td>
<td>20.5%</td>
<td>22.9%</td>
</tr>
<tr>
<td>All</td>
<td>28.3%</td>
<td>42.5%</td>
<td>34.5%</td>
<td>34.5%</td>
<td>31.5%</td>
<td>27.3%</td>
<td>42.3%</td>
<td>22.3%</td>
<td>23.8%</td>
<td>25.9%</td>
</tr>
</tbody>
</table>
Freshmen 8-Yr Graduation Rates by DFWI Status

<table>
<thead>
<tr>
<th>Status</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No DFWI</td>
<td>52.1%</td>
</tr>
<tr>
<td>One DFWI</td>
<td>33.7%</td>
</tr>
<tr>
<td>Two DFWI</td>
<td>24.0%</td>
</tr>
<tr>
<td>&gt;=3 DFWI</td>
<td>17.9%</td>
</tr>
</tbody>
</table>
Gateway Courses: Math

22.2% of first-year Freshmen enter our system with QL requirements already completed

• 17.1% through ACT score

• 7.6% through Concurrent Enrollment
Gateway Courses: Math

64% of first-year students enroll in a math pathway

• 40.8% are taking remedial
• 35.7% are taking a QL= Math 1030 or greater
USHE Gateway Courses: Math

Pass rates:

- 54% who took a remedial course failed
- 49% of students who took Quantitative Literacy courses failed
Problem: Wrong Math Pathway
DFWI Study

• Students who are advised into Math 1050 are at greater risk for failure, especially if calculus is not needed for their major.

• Putting students in the wrong math class = setting them up to drop out.
35% of students complete gateway math courses in their first year.

Only 10% of students who take College Algebra ever enroll in a Calculus course.

The Mathematical Association of America, American Math Association for Two-Year Colleges, and other national math associations agree that College Algebra is not an appropriate gateway math course for students not pursuing Calculus.
Most STEM degrees kept MATH 1050 (or higher) as QL and/or prerequisite option (when calculus is a degree requirement).

Sixty-six programs in arts, humanities, social science, and teaching eliminated MATH 1050 as QL. They will substitute STAT 1040, STAT 1045 or another new program-specific QL course.
# USHE’s Meta-majors

<table>
<thead>
<tr>
<th>Concurrent Enrollment</th>
<th>USU</th>
<th>WSU</th>
<th>ISU</th>
<th>UVU</th>
<th>EOU</th>
<th>Snow</th>
<th>UU</th>
<th>USHE Pathways</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Administration</td>
<td>Business Administration</td>
<td>Business Administration</td>
<td>Business Administration</td>
<td>Business Administration</td>
<td>Business Administration</td>
<td>Business Administration</td>
<td>Business Administration</td>
<td>Business Administration</td>
</tr>
<tr>
<td>Education &amp; Social Services</td>
<td>Education &amp; Social Services</td>
<td>Education &amp; Social Services</td>
<td>Education &amp; Social Services</td>
<td>Education &amp; Social Services</td>
<td>Education &amp; Social Services</td>
<td>Education &amp; Social Services</td>
<td>Education &amp; Social Services</td>
<td>Education &amp; Social Services</td>
</tr>
<tr>
<td>Engineering &amp; Technology</td>
<td>Engineering &amp; Technology</td>
<td>Engineering &amp; Technology</td>
<td>Engineering &amp; Technology</td>
<td>Engineering &amp; Technology</td>
<td>Engineering &amp; Technology</td>
<td>Engineering &amp; Technology</td>
<td>Engineering &amp; Technology</td>
<td>Engineering &amp; Technology</td>
</tr>
<tr>
<td>Agriculture &amp; Natural Resources</td>
<td>Agriculture &amp; Natural Resources</td>
<td>Agriculture &amp; Natural Resources</td>
<td>Agriculture &amp; Natural Resources</td>
<td>Agriculture &amp; Natural Resources</td>
<td>Agriculture &amp; Natural Resources</td>
<td>Agriculture &amp; Natural Resources</td>
<td>Agriculture &amp; Natural Resources</td>
<td>Agriculture &amp; Natural Resources</td>
</tr>
<tr>
<td>Information Technology</td>
<td>Information Technology</td>
<td>Information Technology</td>
<td>Information Technology</td>
<td>Information Technology</td>
<td>Information Technology</td>
<td>Information Technology</td>
<td>Information Technology</td>
<td>Information Technology</td>
</tr>
<tr>
<td>Interdisciplinary Studies</td>
<td>Interdisciplinary Studies</td>
<td>Interdisciplinary Studies</td>
<td>Interdisciplinary Studies</td>
<td>Interdisciplinary Studies</td>
<td>Interdisciplinary Studies</td>
<td>Interdisciplinary Studies</td>
<td>Interdisciplinary Studies</td>
<td>Interdisciplinary Studies</td>
</tr>
</tbody>
</table>

*Note: This is a draft of USHE’s Meta-majors as of November 2017.*
RESULTS
Very early results from SLCC

Getting students into appropriate QL:

- 22% increase in math enrollments.
- 25% increase in the number students passing a QL course in a given semester (460 more students than in Fall 2015)
Increase the educational attainment of Utahns to enhance their overall quality of life, and to meet Utah’s current and future workforce needs.

Affordable Access
Timely Completion
Research & Workforce
Capacity & Growth

Regent Work Groups

Utah College Acceptance Letter
Statewide Data/Tech. Strategy
High demand, undersupplied occupations

Student Aid and Tuition Policy
Mental Health Recommendations
Improve Information to Students on Workforce Options

StepUp Schools
Student Transfer

Strategic Communications Plan
Data Strategy

- Predictive Analytics
  - Institutional level: quality, real-time analytics that can personalize the student experience in advising, degree pathways, course registration, financial need, and just-in-time intervention.
  - System level: Predictive analytics task force; sharing of best practices; system pattern tracking and interventions (i.e., are particular transfer pathways causing problems)
- Data management and reporting that provides clear performance and value tracking for key stakeholders (legislators, Board of Regents, Boards of Trustees, business advisory boards, etc.)
- Increase and scale the availability and flexibility of courses for students, leverage the ecosystem for nontraditional teaching excellence, and address new and rapidly evolving curriculum needs to better serve students (i.e., PLA, CBE, computer adapted assessment).
- Improved articulation and transfer of students among USHE and UTech institutions and between USHE institutions.
- IT infrastructure with the requisite security and usability.
- Cost savings efforts through common IT strategies, coordinated licensing, and effective IT investment in enterprise applications, standards, security, and infrastructure.
Transfer Initiative

- **Goal of this priority is to increase the # of students that successfully* transfer from two-year program to four-year program through the:**

- Examination of Program Articulation in top transfer majors

- *Purchase and implementation of a statewide data transfer platform that strengthens course-to-course articulations and includes program-to-program articulations*

- Implementation of a systemwide student identifier

- Development of a completion metric that tracks transfer paths as part of on-time graduation

- Report of how PLA is recorded and transfers across the system (e.g. does AP count as course equivalent & if not, does the course it waives transfer across institutions?)
Questions