Hoʻokele: Navigating from Data to Action

Hawai‘i P-20 Partnerships for Education
Data Summit 2016
April 8, 2016

Jean Osumi, EdD
Anita Huang
What is the Hawaiʻi Data eXchange Partnership?

• Partnership of five state agencies

• Statewide cross-agency, longitudinal data system
  – “Pipeline” or “cross-sector” data: individuals matched across organizations
  – Progression of individuals tracked over time

• Data used for research, evaluation, and audit purposes to improve the educational and workforce outcomes that benefit the citizens of Hawaiʻi

• Managed by Hawaiʻi P-20 Partnerships for Education
**Why did we create the Hawai‘i DXP?**

<table>
<thead>
<tr>
<th>Partners recognize</th>
<th>To improve outcomes</th>
<th>To accomplish this</th>
</tr>
</thead>
</table>
| • Each contributes to the continuum of early childhood, educational, and workforce outcomes of *shared individuals* | • Evaluate short- and long-term impacts of programs and services  
• Identify areas for improvement | • Share data to help answer questions that each Partner would not be able to answer with its own data |
Hawai‘i DXP Data Sources

CURRENT DXP DATA SOURCES

- Hawai‘i State Department of Education
- University of Hawai‘i System
- Dept of Labor & Industrial Relations

TYPES OF DATA:

PK-12
- Enrollment
- Demographics
- Courses (Gr 6-12)
- Test scores
- Graduation
- CTE participation

Postsecondary
- Enrollment
- Demographics
- Courses
- Test scores
- Degree/Certificates
- Apprenticeship
- Financial Aid

Workforce
- Unemployment insurance
  - Wage by quarter
  - Industry code
Privacy and Confidentiality

• Personally identifiable information only used for matching individuals within and across sectors

• Output:
  – Aggregate, small cell suppression
  – De-identified, appropriately masked

• Confidentiality requirements determined by federal or state statutes, or agency policies that protect individual privacy
P20W Transitions

“Vertical” alignment across sectors

Example: Are high school exit knowledge and skills aligned with college entry knowledge and skills?

RESEARCH & POLICY QUESTIONS

What content areas of high school coursework are more likely to transition a higher proportion of students from high school to college, ready for college level work?

Which schools are transitioning a greater proportion of their high school graduates to colleges and universities ready for college level work?
COLLABORATING TO IMPROVE MATHEMATICS OUTCOMES
College and Career Readiness Indicators (CCRI)

- High school feedback report
  - Introduced in 2009 for the Class of 2008
  - Created for each Hawai‘i DOE graduating class by school
- Three sections:
  - High School Outcomes
  - College Enrollment
  - High School to College Transition
CCRI remediation trend

Percent Enrolled in Remedial or Developmental Courses
Fall After High School Graduation

- **English**
  - Class of 2010: 36%
  - Class of 2011: 34%
  - Class of 2012: 31%

- **Mathematics**
  - Class of 2010: 36%
  - Class of 2011: 36%
  - Class of 2012: 36%
# First look at high school to UH mathematics

Percent distribution of UH math course enrollments in first fall after high school graduation, by highest HIDOE math course taken.

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<th>Highest HIDOE Math Course</th>
<th>Graduates 2010-2012</th>
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Of the graduates enrolled at UH in the fall after graduation:

- ~ High school math
- Basic math

Placement based on COMPASS or campus-developed placement tests.
# First look at high school to UH mathematics

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<td>College-level: 21.4% Developmental: 22.2% Remedial: 13.7%</td>
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<tr>
<td>Calculus/AP Calculus/AP Statistics</td>
<td>1,230 (9%)</td>
<td>College-level: 50.6% Developmental: 5.4% Remedial: 2.8%</td>
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<tr>
<td>Precalculus/Analytic Geometry</td>
<td>2,295 (18%)</td>
<td>College-level: 39.3% Developmental: 16.9% Remedial: 2.3%</td>
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<tr>
<td>Algebra 3/Trigonometry</td>
<td>1,434 (11%)</td>
<td>College-level: 33.1% Developmental: 16.0% Remedial: 7.5%</td>
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38% of graduates had taken an advanced math course.
## First look at high school to UH mathematics

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<tr>
<td>Probability/Statistics</td>
<td>893 (7%)</td>
<td></td>
<td>8.6%</td>
<td>29.5%</td>
<td>22.2%</td>
</tr>
<tr>
<td>Algebra 2</td>
<td>4,643 (36%)</td>
<td></td>
<td>13.2%</td>
<td>30.2%</td>
<td>15.3%</td>
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Highest math for most graduates was Algebra 2
First look at high school to UH mathematics

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</tr>
<tr>
<td>Geometry</td>
<td>1,571 (12%)</td>
<td>1.7%</td>
</tr>
<tr>
<td>Algebra 1 or Lower</td>
<td>559 (4%)</td>
<td>2.0%</td>
</tr>
<tr>
<td>Math Data Not Available</td>
<td>398 (3%)</td>
<td>15.8%</td>
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General math course pathways

8th Grade
Math Grade 8

9th Grade
Algebra I

10th Grade
Geometry

11th Grade
Algebra II
Prob/Stats

12th Grade
Alg3/Trig
Precalculus

(Advanced Sequence)

TRADITIONAL SEQUENCE

8th Grade
Math Grade 8

9th Grade
Algebra I

10th Grade
Geometry

11th Grade
Algebra II
Prob/Stats

12th Grade
Alg3/Trig
Precalculus

~35% no math
## Initiatives to get more students into college mathematics

### HIDOE

<table>
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<th>Year</th>
<th>Initiative</th>
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<tr>
<td>2012-13</td>
<td>Examine CCRI college math enrollment trends, relationship to high school math</td>
</tr>
<tr>
<td>2013-14</td>
<td>HIDOE/UH collaboration 12th grade transition math course</td>
</tr>
<tr>
<td>2014-15</td>
<td>Introduction to College Math piloted at 4 high schools</td>
</tr>
<tr>
<td>2015-16</td>
<td>Introduction to College Math scale up to 14 schools</td>
</tr>
</tbody>
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### UH

<table>
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<tr>
<th>Community College</th>
<th>Pilot placement</th>
<th>Requirements</th>
</tr>
</thead>
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<tr>
<td>Kauai Community College</td>
<td>Fall 2013</td>
<td>Algebra 2 C or better &amp; 2.6+ GPA, SAT Math 510+, ACT Math 22+</td>
</tr>
<tr>
<td>Kauai Community College</td>
<td>UH Maui College Fall 2014</td>
<td>Windward Community College Pilot placement</td>
</tr>
<tr>
<td>Kauai Community College</td>
<td>Pilot placement Fall 2015</td>
<td></td>
</tr>
</tbody>
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Smarter Balanced placement policy approved for Class of 2016 to 2018

UHCC revamp of math curriculum to accelerate completion of college math in one year

UHCC new placement policy based on multiple measures
More graduates ready for college mathematics

UH MATHEMATICS ENROLLMENT
Fall After High School Graduation

<table>
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<th>Class of 2013</th>
<th>Class of 2011</th>
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<tr>
<td>College-Level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remedial or Developmental</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Enrolled in Math</td>
<td></td>
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<td></td>
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</table>

- More graduates taking college math
- Fewer needing math remediation
- Still need to get more students to enroll in math right away
College enrollment not aligned to aspirations

Class of 2015 College Aspiration & College Access
By ACT Math score

ACT MATH SCORE

- % Expected Highest Ed Lvl: Associate or Higher
- % Enrolled in College Fall 2015

≤15: 62% (N=2,781) vs. 39% (-23%)
16-17: 71% (N=2,566) vs. 54% (-17%)
18-19: 76% (N=1,365) vs. 67%
20-21: 79% (N=675) vs. 74%
22+: 82% (N=2,006) vs. 83%
WHO IS (ISN’T) GOING TO COLLEGE?
More of Hawai‘i’s graduates are going to college

<table>
<thead>
<tr>
<th>Class of 2009</th>
<th>Class of 2010</th>
<th>Class of 2011</th>
<th>Class of 2012</th>
<th>Class of 2013</th>
<th>Class of 2014</th>
<th>Class of 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>50%</td>
<td>50%</td>
<td>53%</td>
<td>54%</td>
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College Access Nationwide, Fall
To improve, we need to identify where gaps exist

Percent of Class of 2015 Graduates Enrolled in College Fall 2015
Disaggregated by Gender, Race/Ethnicity, Economic Disadvantaged Status

- Female: 62%
- Non-NHPI: 62%
- Not Economically Disadvantaged: 63%
- Male: 49%
- Native Hawaiian/Pacific Islander: 44%
- Economically Disadvantaged: 44%

13% Gap
22% Gap
19% Gap

49% Male
40% Native Hawaiian/Pacific Islander
44% Economically Disadvantaged

Native Hawaiian: 43%
Pacific Islander: 31%
Gender gaps vary widely across schools

Percent of Class of 2015 Graduates Enrolled in College Fall 2015

Statewide 56%

- Female 62%
  - 13% Gap
- Male 49%
  - 33% Gap

School A
- N = 230
  - Rural
  - 55% Female

School B
- N = 460
  - Urban
  - 49% Female

Female and Male 70%

Female 64%

31% Gap

30%
Gaps by economic disadvantaged status also vary.

Percent of Class of 2015 Graduates Enrolled in College Fall 2015

- **Statewide**: 56%
  - Not Economically Disadvantaged: 63%
  - Economically Disadvantaged: 70%
  - 35% Gap

- **Not Economically Disadvantaged**: 64%
- **Economically Disadvantaged**: 65%
- **Negative Gap**

- **19% Gap**

_N ≈ 340 Urban EconDis_
Combined variables show larger college access gaps

Percent of Class of 2015 Graduates Enrolled in College Fall 2015
By Gender, Race/Ethnicity, and Economic Disadvantaged Status

Asian: excluding Filipino
All Other: African American, American Indian, Alaska Native, Hispanic, Multiple

Statewide 56%
Similar achievement gap patterns found early on

Percent Proficient in Math, 3rd Grade HSA SY0607-SY1314
By Gender, Race/Ethnicity, and Economic Disadvantaged Status

- Statewide 59%
- Asian: excluding Filipino
- All Other: African American, American Indian, Alaska Native, Hispanic, Multiple

Percentages for different demographics are shown, with a focus on achievement gaps by gender, race/ethnicity, and economic disadvantage.
FOCUS FOR THE NEXT FOUR YEARS
SLDS Grant Priority Areas

• College and Career (Hawai‘i P-20)
  – Use data to assess students’ college and career readiness
  – In order to improve education and workforce outcomes
  – Particularly for at-risk students

• Instructional Support (HIDOE)
  – Train educators to use data more effectively to support students and improve instruction
College and Career Research Questions

What are the educational experiences of young children served by EIS Part C who transition to HIDOE?

What are the K-3 outcomes of early childhood learning programs?

What do kindergarten standards-based report card data tell Hawaii about “kindergarten readiness”?

What are the outcomes for at-risk students at key benchmarks and transition points along the education-to-workforce pipeline?

What are the outcomes for at-risk students at key benchmarks and transition points along the education-to-workforce pipeline?

Transition to Kindergarten

Kindergarten

Grade 1-3

Grade 4-5

Grade 6-8

Grade 9-12

Elementary to Middle

Middle to High School

High School to Workforce

High School to Postsecondary

Postsecondary to Workforce

Postsecondary

What are the high school outcomes of middle school cohorts?

What are the economic impacts of workforce development programs?
Hawai‘i DXP Data Sources

Early Childhood Programs

Birth to Age 5

Hawai‘i State Department of Education

PK-12

University of Hawai‘i System

Postsecondary

Dept of Labor & Industrial Relations

Workforce (Unemployment Insurance)

POTENTIAL NEW DATA SOURCES OR LINKAGES TO BE MADE:

Dept of Health

Private K-12

GED

Dept of Human Services

Private Early Childhood Providers

Workforce training programs

WICHE Multistate Longitudinal Data Exchange (MLDE)
Current data limitations

Early Childhood Programs
Birth to Age 5

PK-12
Hawai'i State Department of Education

Postsecondary
University of Hawai'i System

Workforce
Dept of Labor & Industrial Relations
(Unemployment Insurance)

No single data system
No statewide organizing entity to manage and sustain a centralized data system

Unemployment Insurance does not include:
• Standard Occupational Codes
• Hours worked

Lose track of high school graduates who don’t enter UH

QUALITATIVE: Administrative data may not answer questions about what happened or why
What is working and can it be scaled up?

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<th>CCRI METRICS</th>
<th>FARRINGTON</th>
<th>STATEWIDE</th>
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<tr>
<td></td>
<td>2011</td>
<td>2015</td>
</tr>
<tr>
<td>On-time Graduation</td>
<td>70%</td>
<td>77%</td>
</tr>
<tr>
<td>AP Exam Taken</td>
<td>1%</td>
<td>18%</td>
</tr>
<tr>
<td>Dual Credit Participation</td>
<td>3%</td>
<td>15%</td>
</tr>
<tr>
<td>College Access, Nationwide</td>
<td>38%</td>
<td>48%</td>
</tr>
<tr>
<td>UH English, College</td>
<td>25%</td>
<td>41%</td>
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What is the impact of leadership on changing performance outcomes of students?

What factors contribute to scaling up a successful program or change?
Today’s objectives

• Provide an overview of data use within and across agencies

• Keep in mind the following questions:
  – What educational and workforce outcomes matter the most for your program or agency?
  – What data are needed to help you identify who needs help and what supports are needed to improve those outcomes?
  – What partnerships within and across agencies can help us to align efforts to achieve shared goals?
  – How do we drive action based on what we’ve learned?
Today’s sessions

- Early Childhood
- Kindergarten Entry Assessment
- Utah’s Early Childhood
  1) Data System
  2) Data Governance

- Grade 1-3
- Kindergarten

- Grade 4-5
- Joint BOE and DOE Strategic Plan

- Grade 6-8
- At-Risk Students in Middle School

- Grade 9-12
- Smarter Balanced, Intro to College Math, UH Placement Policy

- Postsecondary
- Early College High School
- Educator Data Use Standards

- Workforce
- UH to Workforce
- Honolulu CC CTE Workforce Outcomes
- Bridge-to-Hope Outcomes and Program Goals

- Using Labor Market Data to Align Education with Industry Demand
Thank You

QUESTIONS?