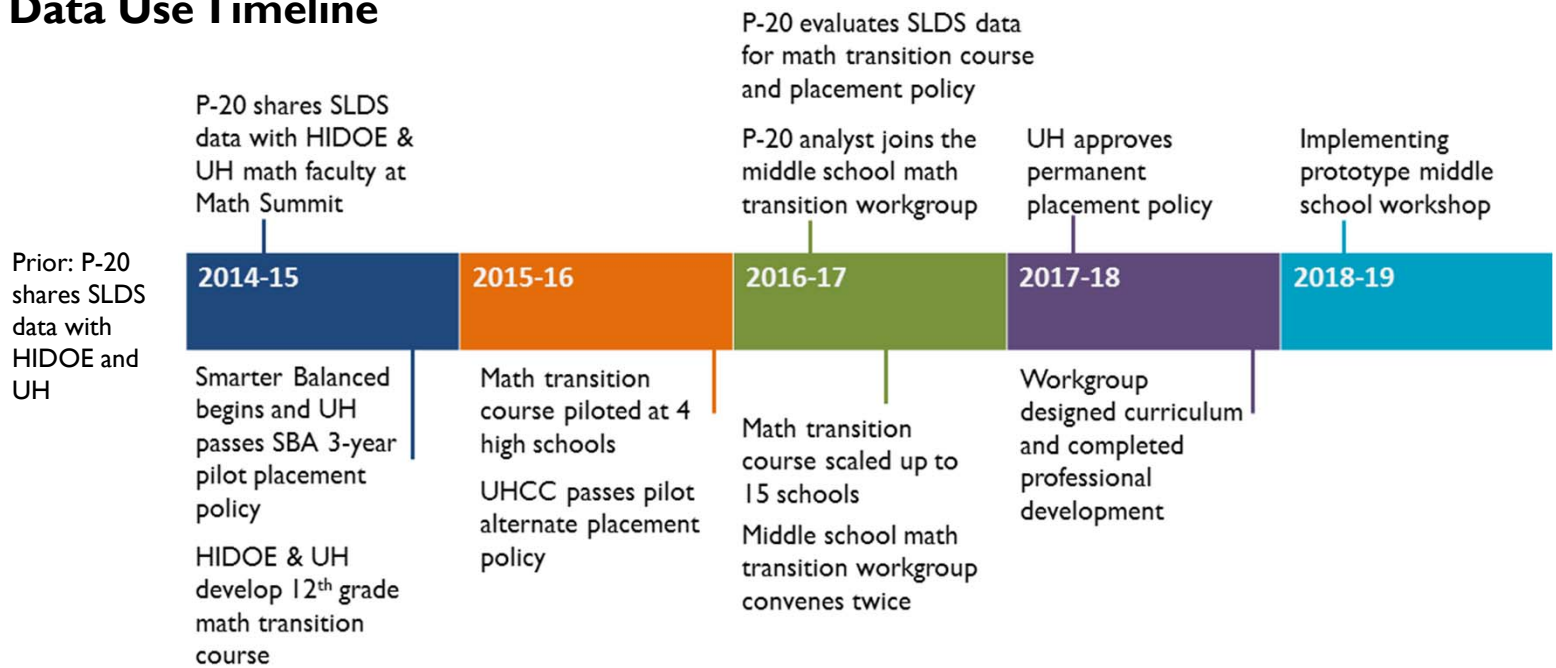


Designing Middle School Math Interventions to Open Doors to STEM Careers

2018 Data Summit
 May 18, 2018
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Data Use Timeline



Data Use Process

	High School Intervention	Middle School Intervention
Inspiration	UH policy-driven with goal to reduce college math remediation	HIDOE teacher-driven with goal to identify and help struggling students before high school
Workgroup	UH faculty, HIDOE specialist (eventually, HIDOE teachers)	HIDOE teachers and specialist, UH faculty, P-20 analyst
Process	Workgroup used published SLDS data to propose and implement a placement policy and transition course	Workgroup reviewed initial SLDS data and curriculum models; Questions posed in meetings addressed by analyst
Result	12 th grade math transition course based on an existing community college developmental course	7 th grade math workshop based on YouCubed curriculum with a low-floor/high-ceiling approach
P-20 Analyst	Provided initial SLDS data and evaluated pilot outcomes	Involved as a member of the Workgroup

Resources

Chen, X. (2016). *Remedial Coursetaking at U.S. Public 2- and 4-Year Institutions: Scope, Experiences, and Outcomes. Statistical Analysis Report. NCES 2016-405.* National Center for Education Statistics. <https://nces.ed.gov/pubs2016/2016405.pdf>

Zachry Rutschow, E., Diamond, J., & Serna-Wallender, E. (2017). *Math in the Real World: Early Findings from a Study of the Dana Center Mathematics Pathways* (Text) (p. 12). MRDC. Retrieved from https://www.mrdc.org/sites/default/files/2017_MathRealWorld.pdf

UH Smarter Balanced Placement Policy: <http://p20hawaii.org/coretocollege/>

UH Placement Policies: www.uhcc.hawaii.edu/success/

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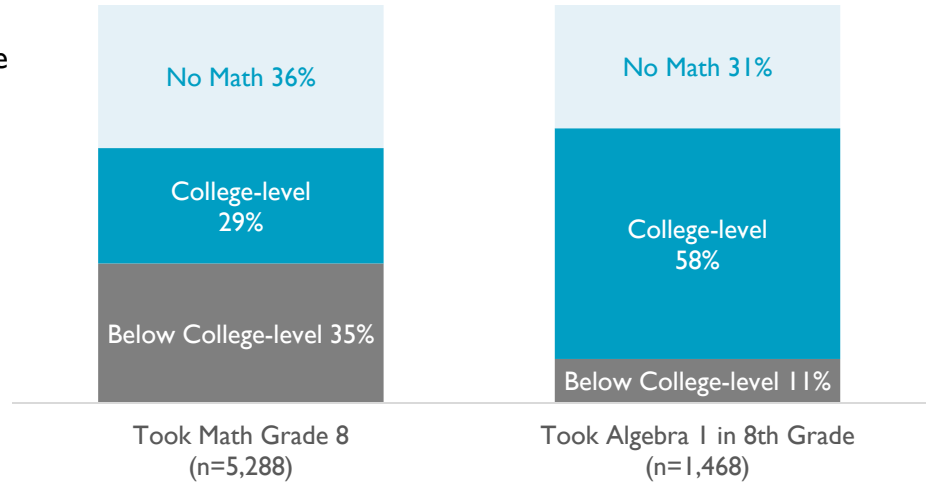


Middle School Data Review

Q: How do middle school math indicators relate to college aspiration, readiness, and enrollment?

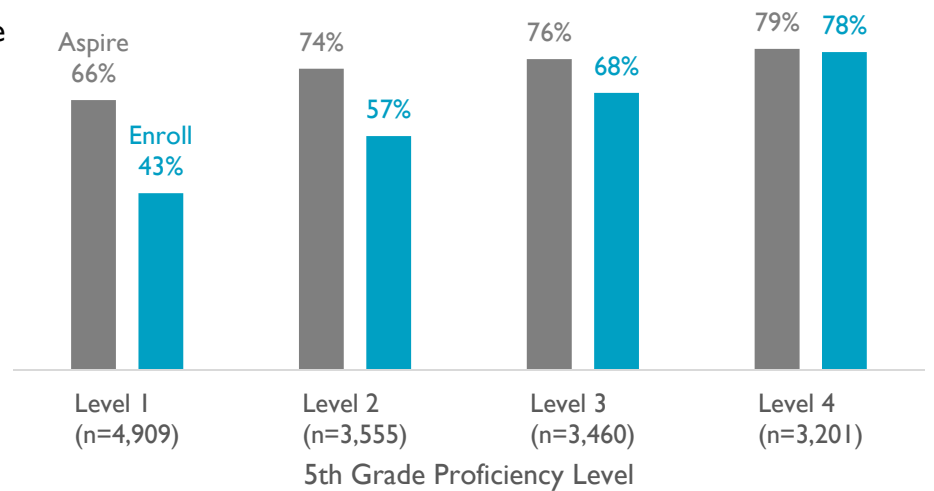
A: Graduates with 8th grade Algebra I were more likely to enroll in college-level math at the University of Hawai'i (UH).

Population: Class of 2014 & 2015 enrolled at UH who had 8th grade and high school math courses (N=6,756)



A: Most graduates report on the ACT they aspire for a college education. Those who were proficient at 5th grade are more likely to enroll in the first fall semester.

Population: Class of 2014 & 2015 with ACT scores and 5th grade state assessment scores (N=15,125)

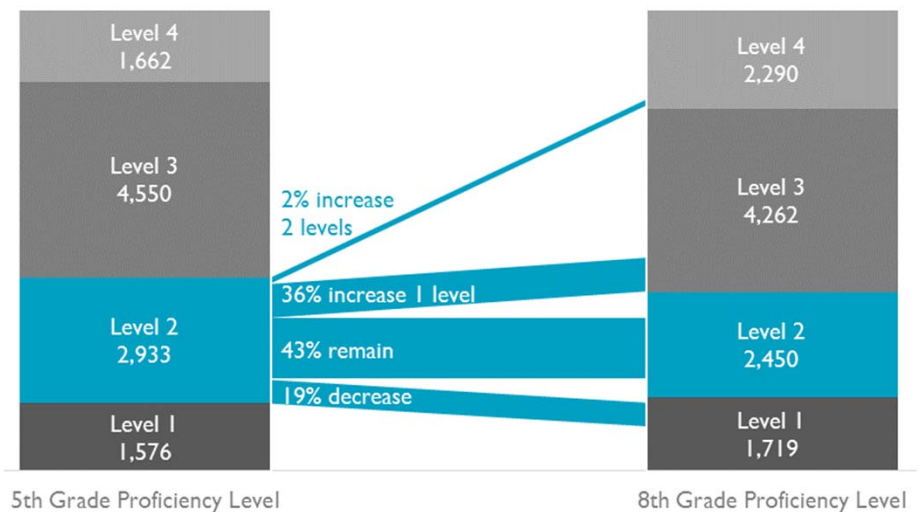


Q: Does math proficiency change during middle school?

A: Yes. Looking at the same students tested in 5th and 8th grade, 38% of those at level 2 moved to proficient at 8th grade.

Most of those at level 1 were still not proficient, and most of those at level 3 or 4 were still proficient at 8th grade.

Population: SY1011 5th grade students with 5th, 6th, 7th, and 8th grade state assessment math scores (N=10,721)



Evaluation Plan for Prototype Intervention

- Short term: 8th and 9th grade course enrollment and grades
- Longer term: high school math courses, college enrollment, college remediation rates
- With teachers: course content and curriculum implementation