

Adapting STEM and Early College Designs to Increase College/Career Readiness in Michigan and Connecticut

(SECEP) STEM Early College Expansion Partnership

NCREST 

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National Early College Conference (Dallas, TX)
December 10, 2014

Our Time Together

- STEM Early College Expansion Partnership (SECEP)
- The work in Michigan and Bridgeport, CT
- Reflecting on our own Early College programs

Represented Early Colleges

Pair-Share (with someone from a different program)

- Geographic area
- Postsecondary institution partner
- Size and reach
- College course-taking design
- One of your best practices or program features

NCREST

- National Center for Restructuring Education, Schools and Teaching
- Focused on school change and, mainly in high schools
- Our team – High school and college partnership programs, especially Middle and Early Colleges

Related Projects

Data Support and Continuous Improvement:

- MCNC – Middle College National Consortium schools (10 states; clusters in CA, CO, MI, NY)
- MEMCA – Michigan Early Middle College Association schools (Michigan)
- SECEP – STEM Early College Expansion Partnership (Connecticut, Michigan) with MCNC and JFF

Other:

- MEMPHIS – Dual Enrollment district case study
- NEW YORK – Smart Scholars evaluation
- BARD Early College High School – Best practices

STEM Early College Expansion Partnership

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JOBS FOR THE FUTURE

- US Department of Education i3 Innovations Grant
- 5-years, SY 2013-14 – 2017-18
- Early College design + STEM + Relevant professional development
- Partnership: Educational nonprofit coaching/PD + District leadership + School-level implementation

- **Thinking about STEM differently** — not just coursework but a way of problem solving thinking, course pathways.
- **Adapting our Early College designs** — considering current college and career readiness needs, such as STEM.
- **Aligning Professional Development** — How can external PD be aligned with district and school priorities and programs?

Michigan and Bridgeport, CT



Michigan Center for Middle and Early College Partnerships,
Mott Community College



LCISD Lapeer County
Intermediate School District



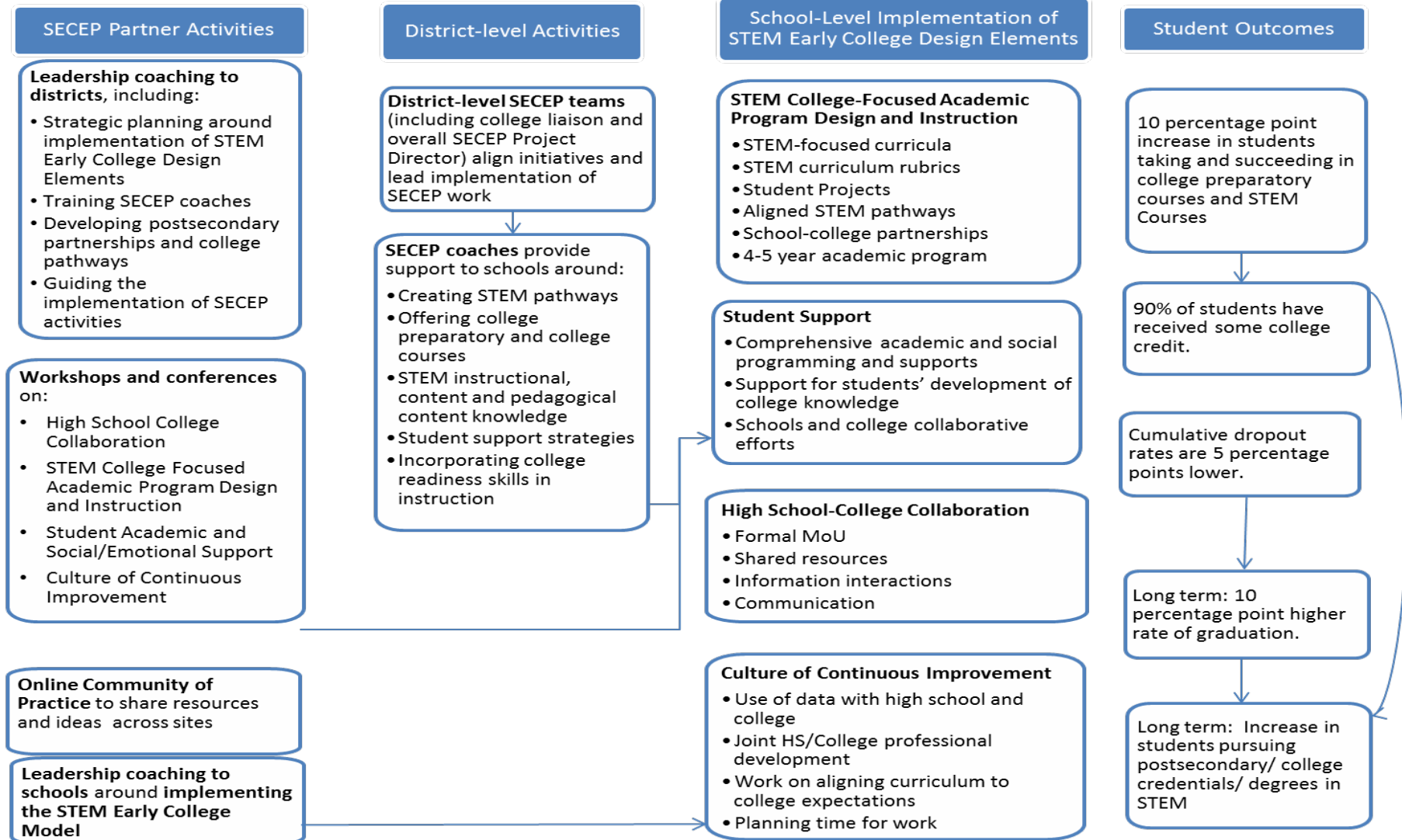
BRIDGEPORT PUBLIC SCHOOLS



SECEP Core Design Principles

1. **STEM and college-focused** academic program
2. **Student support system** that addresses academic and social-emotional learning
3. **Collaborative relationships** that are robust
4. **Culture of continuous improvement** consisting of relevant professional development and data use

SECEP Logic Model



SECEP Project Timeline

Planning Yr
(2013-14)

- Applying for the USDOE i3 grant
- Selecting districts and schools, teams
- Organizational logistics, administration

Year 1
(2014-15)

- Building relationships with districts/schools
- Integrating STEM EC with district priorities
- Implementing targeted professional development
- Developing 8th grade project (STEM modes of thinking)
- Monitoring where students started and where they're going

Year 2 (15-16)

Year 3 (16-17)

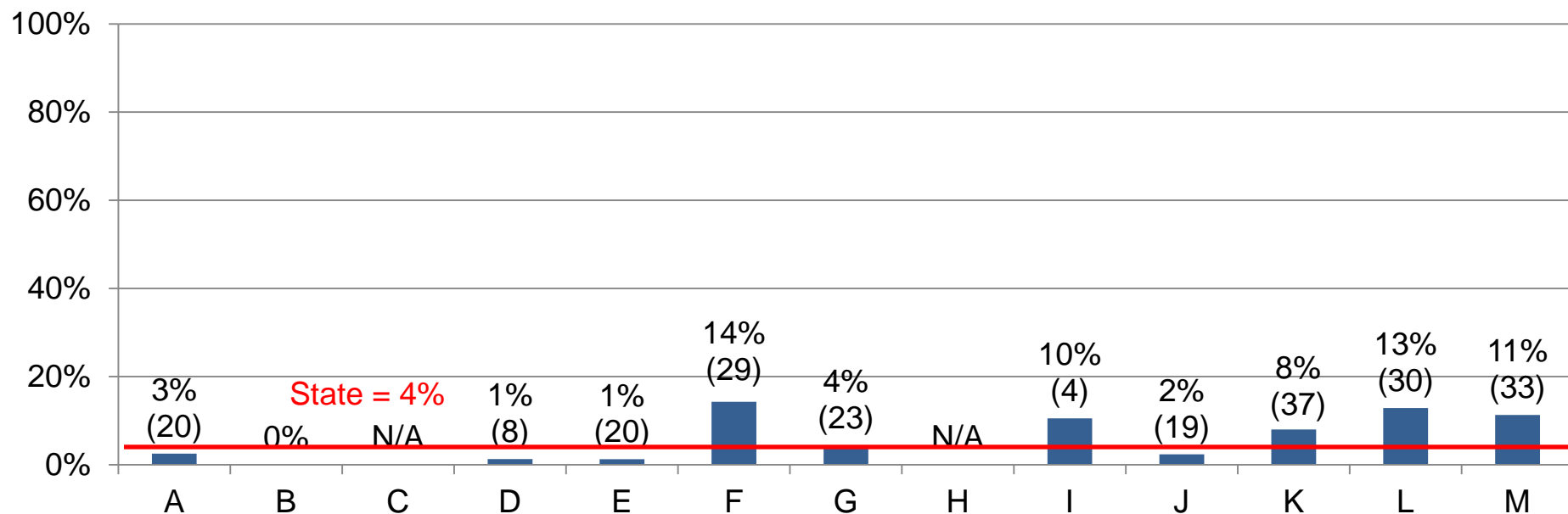
Year 4 (17-18)

- Ongoing work
- Anticipating growth in relevant learning and outcomes for students, teachers, schools, districts

District/ISD	High School	Size	White	Non-White*	F/R Lunch	Spec Ed**	ELL**
Delta-Schoolcraft Michigan (rural)	Bark River-Harris Jr/Sr HS	315	88%	12%	50%	8%	<5%
	Escanaba Area Public HS	766	92%	8%	34%	10%	<5%
	Gladstone Area HS	456	89%	11%	33%	11%	<5%
	Nah Tah Wahsh, K-12	171	39%	61% (60% AMI)	91%	19%	<5%
Genesee Michigan (suburb)	Carman-Ainsworth HS	1483	31%	69% (57% B)	62%	15%	<5%
	Clio Area HS	940	94%	6%	44%	10%	<5%
Lapeer Michigan (rural)	Almont HS	517	96%	5%	21%	10%	<5%
	Dryden Jr/Sr HS	323	96%	4%	33%	10%	<5%
	Imlay City HS	635	77%	23% (19% H)	45%	8%	<5%
	North Branch HS	763	95%	5%	38%	9%	<5%
Washtenaw Michigan (suburb)	Ypsilanti New Tech HS	322	28%	72% (61% B)	46%	18%	<5%
	STEMM Academy	202	25%	75% (66% B)	34%	20%	<5%
	University High School	574	23%	77% (68% B)	36%	21%	<5%
Bridgeport, Connecticut (city)	Bassick HS	1,114	6%	94% (B, H)	>95%	15%	16%
	Central HS	1,838	11%	89% (B, H)	>95%	11%	8%
	Harding HS	1,105	6%	94% (B, H)	>95%	15%	19%

[Michigan] Dual Enrollment Data

Michigan Dual Enrollment Participation – Percent of Dual Enrollment Students out of the ENTIRE School Population, 2012-13



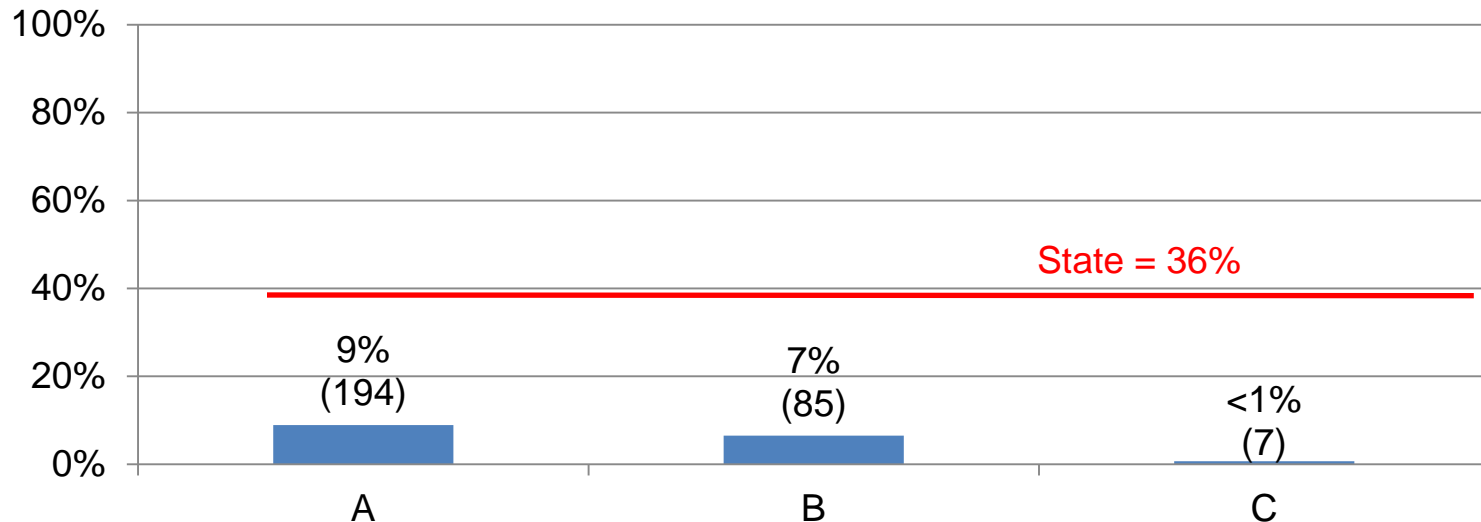
Note: Number in parentheses = All dual enrollment students in grades 9-12.

Data source:

Michigan Center for Educational Performance and Information (CEPI) www.michigan.gov

[Bridgeport] Dual Enrollment Data

Connecticut Dual Enrollment Participation – Percent of Juniors and Seniors Enrolled in Courses for College Credit, 2011-12



Note: Number in parentheses = All dual enrollment students in grades 9-12.

Data source:

Connecticut State Department of Education - Connecticut Education Data and Research www.ct.gov

SECEP Status and Needs

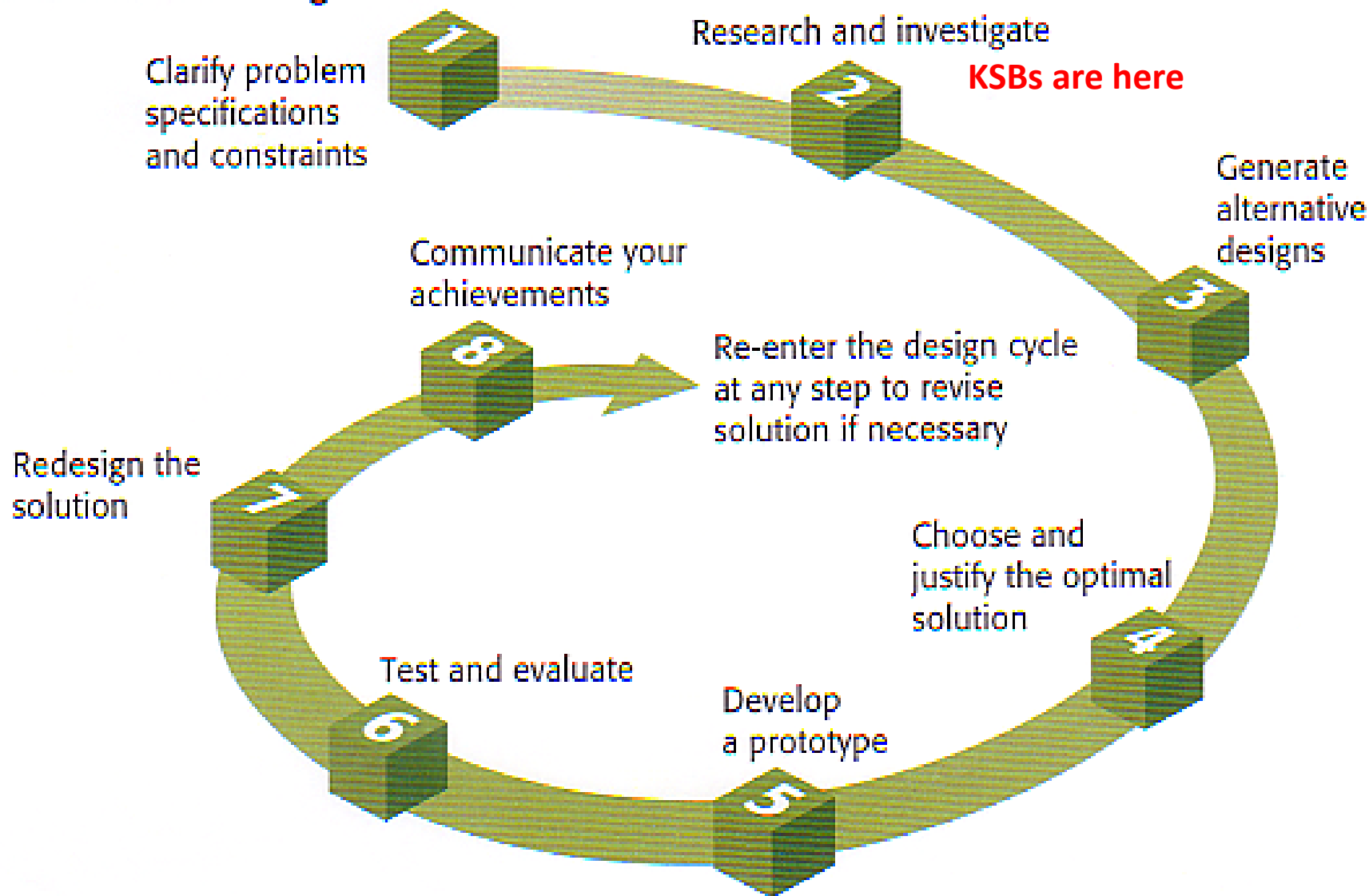
- Alignment of SECEP work with existing district initiatives.
- Building cohesive district teams in support of the schools.
- Working with school superintendents and school board so they can provide consistency and support.
- Capacity-building with district and school leadership, teachers through professional development and coaching.
- Developing STEM and Early College components.
- Continuous relationship development with colleges and universities, and local community based organizations.

[Common conceptualization] “What do we mean by STEM? What does STEM mean in the classroom?” - Principal

Context: Michigan and Bridgeport

- Community profile
- District structure
- School culture

The Informed Design Process



Source: Hacker, Hofstra University

STEM and College/Career Focused Program

- Starting early in 8th grade
- College knowledge curriculum in grades 7-12
- STEM pedagogy PD
- Focus on literacy across subjects
- Organizing and structuring student academic and social support
- Developing instructional capacity for school faculty and leadership

STEM and College/Career Focused Program

Michigan – MCNC

- Managing across 12 diverse districts
- Starting in middle school - organizing for student academic/social support
- 8th grade project.

Bridgeport – JFF

- Developing a high school schedule to eliminate tracking and developing college and career pathways.
- Aligning exiting program and initiatives in support of early college.
- Working with coaches across the curriculum to support STEM.
- Instructional and leadership coaching
- Common Instructional Framework (CIF) – jff.org
- Motivation, engagement, data, universal design for learning modules – studentatthecenter.org

College Course-taking in High School

- Starting in January – Development of 4-year academic plan that includes college course taking for all and a range of college credit accumulation in STEM Careers
- Articulated college and career pathways
- ‘Some College Credit’ Target: 12 College Credits for all students

College Course-taking in High School

Michigan – MCNC

- Working with many types of higher eds
- Working out different range of course sequence plans for schools
- Working toward the MOU, getting at the details
- Washtenaw CC, Mott CC, Bay D’Noc CC, Baker College – we’re doing audits

Challenges

- Are the colleges offering STEM career programs that are current? (Audit)
- Distance between schools in regularly convening, and distance between schools and colleges

Bridgeport – JFF

- Parallel to Michigan. Working with many types of higher eds
- Existing MOUs with University of Connecticut and Housatonic CC
- Continuing to redesign the partnership
- Beginning concrete course pathways within each high schools

Challenges

- Working with one district, having them push one another; changing the culture
- Developing community plan that provides hope/belief in greater community

Tools and Resources

- 4-Year Academic Plan template
- College program offerings audit process
- Common Instructional Framework (CIF)
- Student-centered modules
- Community of Practice platform

Takeaway – Reflecting on Our Programs

Thinking about your own Early College program...

How can you maximize STEM college course-taking and STEM readiness support components of your Early College design?

How can you incorporate targeted STEM features and course-taking into your EC design?

Takeaway – Sharing Our Knowledge

Thinking about the SECEP (STEM Early College Expansion Partnership) project shared today...

Based on your knowledge and experience in doing Early College work...

- 1 Opportunity
- 1 Challenge

that the SECEP project may want to consider?

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