ATE PI Conference 2017

Panel: Rural Arizona Colleges Collectively Engage K-14 Students in STEM

Caroline VanIngen-Dunn
Director Community College STEM Pathways Science
Foundation Arizona
PI DUE#1400687

Agenda

- Welcome and Introductions – 10 min
- Program Overview – 10 min
- Moderated Panelist Q&A – 25 min
- Audience Q&A to Panelists – 15 min

Welcome and Panelist Introductions

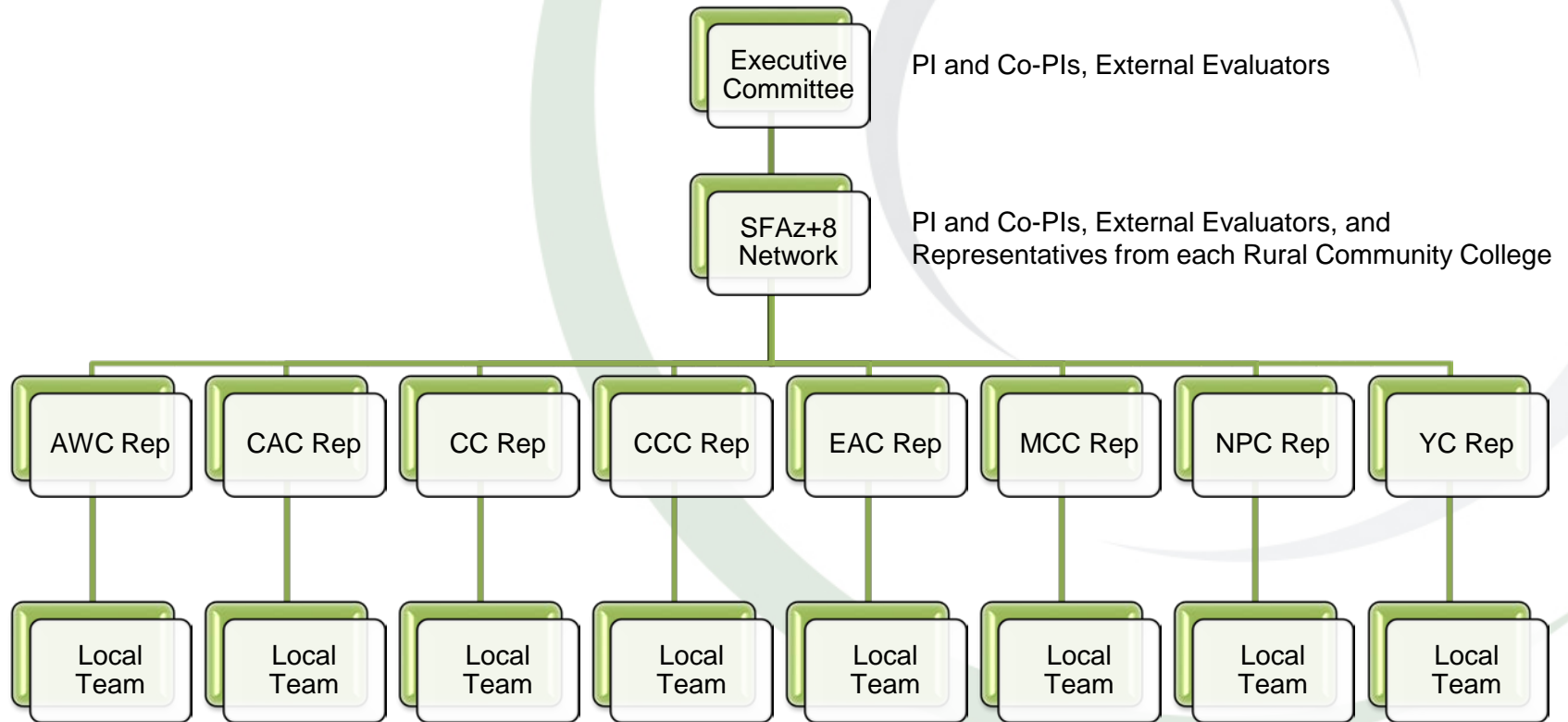| Name	Title	Institution	City
Reetika Dhawan	Dean of CTE	Arizona Western College	Yuma
Jeff Jones	Dean of CTE	Coconino Community College	Flagstaff
Phil McBride	Dean of Institutional Learning	Eastern Arizona College	Thatcher
John Morgan	Dean of CTE	Yavapai College	Prescott

Program Overview

SFAz+8 Building Capacity for STEM Pathways in Rural Arizona

JOIN THE GROUP:
Community College STEM Pathways
stem.sfaz.org

Structure and Purpose of SFAz+8 Rural Community College Network

Executive Committee — PI and Co-PIs, External Evaluators

SFAz+8 Network — PI and Co-PIs, External Evaluators, and Representatives from each Rural Community College

AWC Rep — CAC Rep — CC Rep — CCC Rep — EAC Rep — MCC Rep — NPC Rep — YC Rep

Local Team — Local Team — Local Team — Local Team — Local Team — Local Team — Local Team — Local Team

Local Project Teams: College and Project Dependent

Student Engagement Goals and scope of Colleges funded programs

Increase the number of

1. Students engaged in college outreach initiatives
2. High school students graduating with credits toward STEM degrees/credentials
3. Students enrolled in STEM programs at community colleges
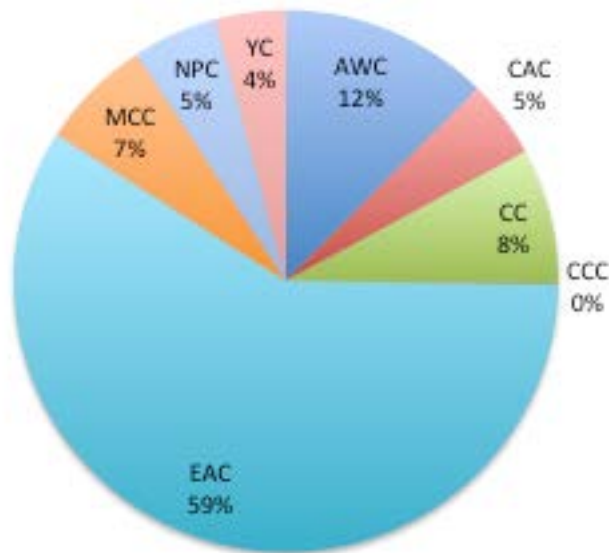4. Students earning college credentials

Aggregated Results for K-14 STEM Student Engagement

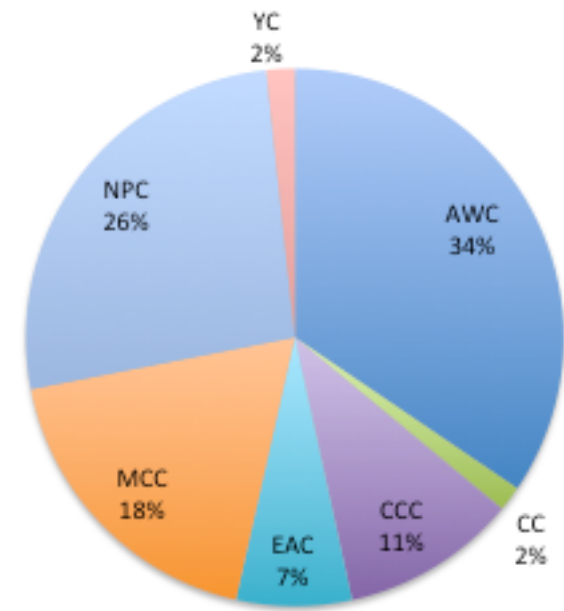| Metric	Baseline data 2014	Year 1: (2014-15)	Year 2: (2015-16)	Year 3: (2016-17)	% increase Yr2 to Yr3
Students in K-12 STEM Outreach Programs	9,887	7,857	8,752	8,856	1.19%
Dual Enrollment; Early College STEM Programs Enrolled	2,861	2,723	1,542	2,061	33.66%
Early College STEM Programs Completed		404	1,438	1,895	31.78%
Students in STEM Internship Programs	42	125	147	188	27.89%
Associates Degrees in Engineering Completed (AS, AAS)	257	231	223	304	36.32%
Engineering Certificate Programs Completed	249	222	254	407	60.24%

Year 3 STEM Student Engagement

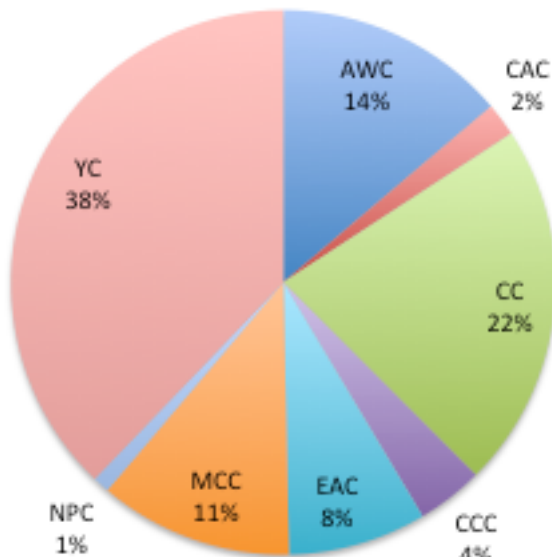| Metric	AWC	CAC	CC	CCC	EAC	MCC	NPC	YC	Total
Students in K-12 STEM Outreach Programs	1,100	413	716	7	5,211	591	448	370	8,856
Dual Enrollment; Early College STEM Programs Enrolled	711		31	218	143	379	544	35	2,061
Early College STEM Programs Completed	711		5	179	133	322	512	33	1,895
Students in STEM Internship Programs	56		78	22	13	8		11	188
Associates Degrees in Engineering Completed (AS, AAS)	42	6	66	12	25	35	3	115	304
Engineering Certificate Programs Completed	213	1	3	3	3	11	4	169	407

Students in K-12 STEM Outreach Programs
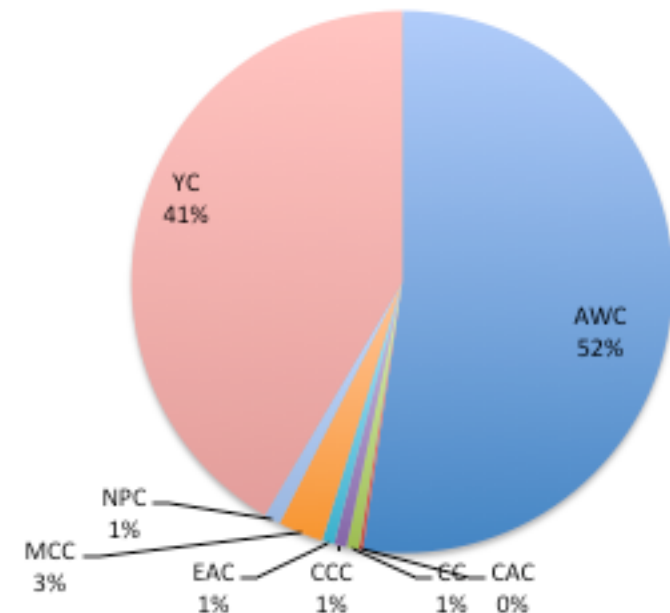

Dual Enrollment; Early College STEM Programs Enrolled

Year 3 STEM Student Engagement

Metric	AWC	CAC	CC	CCC	EAC	MCC	NPC	YC	Total
Students in K-12 STEM Outreach Programs	1,100	413	716	7	5,211	591	448	370	8,856
Dual Enrollment; Early College STEM Programs Enrolled	711		31	218	143	379	544	35	2,061
Early College STEM Programs Completed	711		5	179	133	322	512	33	1,895
Students in STEM Internship Programs	56		78	22	13	8		11	188
Associates Degrees in Engineering Completed (AS, AAS)	42	6	66	12	25	35	3	115	304
Engineering Certificate Programs Completed	213	1	3	3	3	11	4	169	407

Associates Degrees in Engineering Completed (AS, AAS)

AWC 14%
CAC 2%
CC 22%
CCC 4%
EAC 8%
MCC 11%
NPC 1%
YC 38%

Engineering Certificate Programs Completed

YC 41%
AWC 52%
NPC 1%
MCC 3%
EAC 1%
CCC 1%
CC 1%
CAC 0%

Aggregated Number of Hispanic Students Participating in SFAz+8 Colleges STEM Programs

Program	Year 2 (2015-16)	Year 3 (2016-17)
Outreach programs	375	777 (107% increase)
Enrolled in Secondary programs	508	772 (52% increase)
Enrolled in Associate and Certificate degree programs	1,356	1,016 (25% decrease)

Moderated Q&A

Sample Questions

Filling the Student Pipeline:
1. It looks like each college had a different emphasis on which approach they went with in filling the STEM Pipeline. Could you please comment on why?
2. (For example, EAC did the most STEM outreach, AWC and YC had more certificate completions than the other colleges)
3. At what point did you know you needed to redirect your program and what did you do to get it back on track?
4. EAC, AWC - In what way, if any, were you able to increase the representation of underrepresented students in your respective activities?
5. EAC, AWC - How will your program be sustained?
6. All - How has this benefitted your students and community

College-to-college Collaborations:
1. Describe any specific collaborations that occurred as a result of the network.
2. EAC - For what purpose did a partnership with another college occur and how did it develop?

Community Engagement:
1. What kind of strategies do you use to involve the K-12 community?

The Network:
1. What did you learn from this collaborative that stands out the most for you and your team?
2. YC - How will the network continue?

Audience Q&A