

CS4Alabama

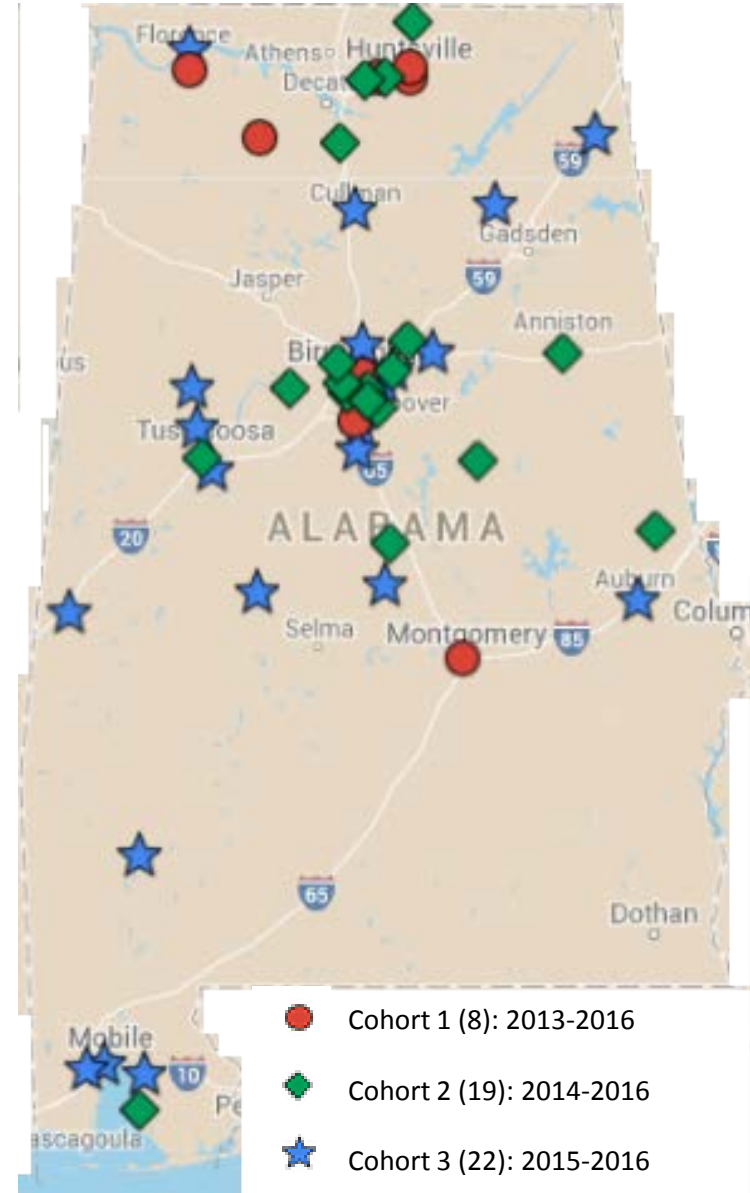
This project sponsored
by NSF CE21 1240944



Cohort 1 Master Teachers
2013-2014



Cohort 2
2014-2015





Master Teachers as Mentors

CS4Alabama CE21 Project Goals

- Provide year-long professional development and instructional support to 50 high school teachers
- Introduce 3,200 students to CS Principles Content
- Broaden participation in CS Principles through open access using the NMSI model with Master Teachers
 - Provide teacher stipends (\$3300) and equipment (\$1800)
- Disseminate curricular materials and assessment results
- Lead effort to have CS Principles officially count as a math graduate elective in Alabama (December 2013)

CS4Alabama

Every student in Alabama should have the opportunity to learn Computer Science!

Professional Development Model

- Year-round PD (140 hours per year)
- Summer training
 - Six weeks of CSP content knowledge (MOOC)
 - Overview of Big Ideas
 - PD for new teachers requires deeper skilled development in programming
 - Four days of face-to-face instruction
 - Pedagogical strategies
 - Deep discussion of Performance Tasks and Curriculum Framework
 - Customized class preparation: Pacing Guide/Syllabus
- Bi-weekly meetings throughout the year
- Face-to-face weekend sessions
- Piazza discussion forum

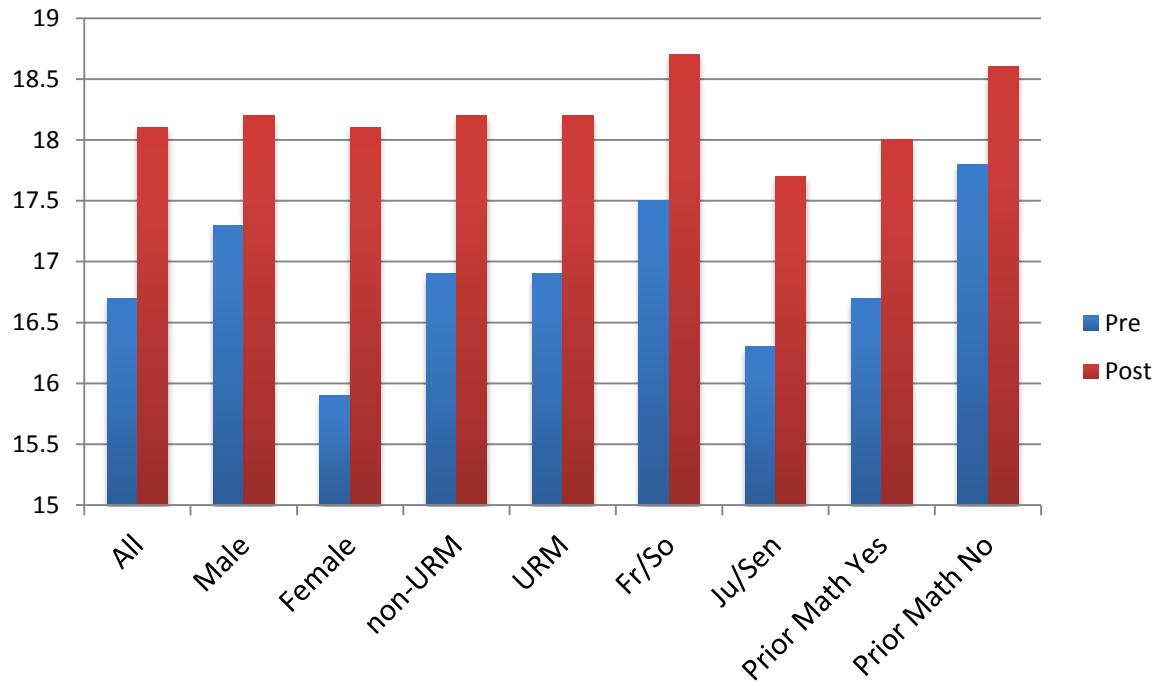
Cohort 1 Enrollment

- 8 teachers across 12 different course offerings
- Far exceeds state-level CS A percentages

Course	#	% of Total	% Female	% Male	% URM	% non-URM
Course 1	57	16%	5%	95%	6%	94%
Course 2	40	11%	8%	93%	8%	92%
Course 3	20	6%	15%	85%	50%	50%
Course 4	20	6%	20%	80%	10%	90%
Course 5	27	8%	26%	74%	15%	85%
Course 6	15	4%	33%	67%	29%	71%
Course 7	9	3%	44%	56%	44%	56%
Course 8	35	10%	45%	55%	24%	76%
Course 9	20	6%	50%	50%	50%	50%
Course 10	33	9%	55%	45%	21%	79%
Course 11	20	6%	65%	35%	15%	85%
Course 12	55	16%	74%	26%	50%	50%

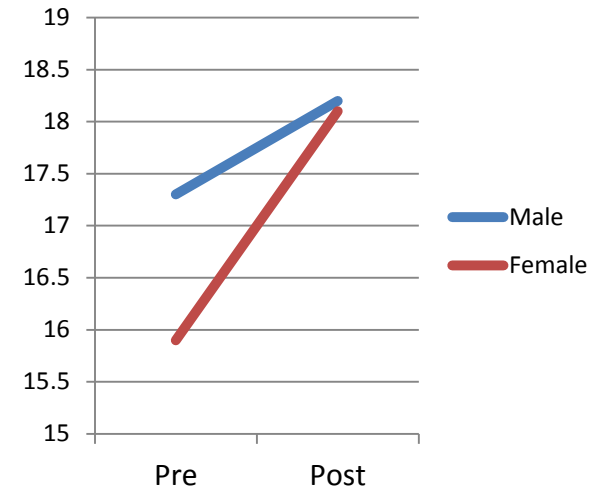
Student Learning: Students' Gain Knowledge of Big Ideas

Gains by Student Group



+2.4 points overall,
p<.01

Gains By Gender



Females gain relative to Males,
p<.01

Where to learn more...

At SIGCSE

- **Poster on Math graduation elective for CS Principles**
 - Tomorrow (Friday) at 10:00am in Lobby 2500
- **Paper on our mid-project report with deep evaluation**
 - Tomorrow (Friday) at 2:35pm in Room 3501C

Project Sites

- **Project web page (under revision):**
 - <http://cs4alabama.org>
- **CSP4HS MOOC (over 1,150 participants registered):**
 - <http://csp-cs4hs.appspot.com>
- **YouTube Channel (over 100 CSP videos available):**
 - <http://tinyurl.com/CS4Alabama-YouTube>
- **Google Drive Resources (slides, exams/quizzes, pacing guide):**
 - <http://tinyurl.com/CS4Alabama-SharedResources>