



CompuGirls Scale-Up

Arizona State University
Kimberly Scott, PI



Education Design, INC
David Reider, Evaluator

what: program design

grade 7-12 girls only, underserved populations

technology emergent learning programs

- digital storytelling
- website creation
- programming games, e.g. Scratch, etc.
- virtual worlds
- app design

what: program design

Phoenix & Denver, scaling elsewhere

- summer (5 days/6 weeks: 240 hrs)
- after school (3 hrs/week min/3-8 weeks: 72 hrs)
- semester break (5 days/1 week: 40 hrs)

why

to provide **access and knowledge** of technology to girls, specifically those who would not ordinarily have this access

Q1: What specific programmatic aspects have the greatest impact on youth motivation, achievement and persistence in STEM beyond ITEST?



What specific programmatic aspects have the greatest impact on **youth motivation**, achievement and persistence in STEM beyond ITEST?

girls have **other girls**, no boys

girls have **personal stories**

girls have **awareness** of what they're missing

girls like **creating**

Q2: What do these STEM learning experiences teach young people about **STEM educational and career** paths?



What do these STEM learning experiences teach young people about **STEM educational and career** paths? *

challenge of learning and mastering technology

manipulating technology as a means of self expression (**producer** vs. consumer)

Q3: What are the **systemic barriers** that impeded student persistence in STEM education and career pathways and how can they be addressed?



What are the **systemic barriers** that impeded student persistence in STEM education and career pathways and how can they be addressed?

schools do not support technology learning

many girls **have limited access** to technology

many girls have **left the grid**

What are the **systemic barriers** that impeded student persistence in STEM education and career pathways and how can they be addressed?

many **girls** have **left the grid**; e.g. Jennifer



What do these STEM learning experiences teach young people
about **STEM educational and career paths?** *

poorly conceived connections between STEM learning and what they think they're doing.

(actual)

Do you like multi-media and making movies, learning to edit, making a good presentation of your topic?

Yeah, it's cool

Do you do well in science and math in school?

No, that's not for me, I'm so bad at that stuff

What about computers and learning to make things on them?

No way, that's too hard, I can't do that stuff

What do you want to be when you grow up?

I don't know, a doctor, a neurobiologist I guess

Wow. That's great. What does a neurobiologist do exactly?

I'm not sure, something... biology I guess, make people feel better

What do these STEM learning experiences teach young people about **STEM educational and career paths?** *

Need to **redefine** & broaden STEM learning, but not dilute it

Motivation for many may lie outside traditional instructional channels and conventional values



CompuGirls
ITEST Scale-Up, Arizona State University

Education Design, INC
David Reider, Evaluator