



**Gender Equitable Teaching and Advising Strategies**

**Train the Trainer Workshop June 2019**

**Train the Trainer Evaluation Report**

**May 2020**

By  
Dr. Hilarie B. Davis  
Dr. Bradford T. Davey  
TLC Inc.



## Table of Contents

<b>I. Background and Purpose</b>	3
<b>II. Results</b>	
A. Needs Assessment	6
B. Workshop Daily Survey Results	8
C. Trainer reflections 11 months later	18
<b>III. Conclusions</b>	20
<b>References</b>	20

## I. Background and Purpose

For the *SciGirls Strategies* supplement, ten educators were trained to be *SciGirls Strategies* Trainers through a four-day in person workshop in June 2019. During the workshop, educators learned about the Gender Equitable Teaching and Advising Strategies (GETAS) course content, the research-based *SciGirls Strategies* framework and instructional strategies and began to develop plans for their localized professional development for STEM and CTE educators.

The goal of the Train-the-Trainer program was for each Trainer to train 10 teachers in their school and/or school district. Trainers could plan and schedule the implementation of the course to fit their school/district's needs in order to accomplish the primary course objectives of building high school teacher's confidence and skills in using gender equitable and culturally responsive teaching strategies.

After the four-day workshop, the *SciGirls Strategies* Trainers met once a month virtually and had continual access to the facilitators of their training (University of Minnesota professor Dr. Barbara Billington and St. Kate professor, Dr. Siri Anderson, the project's Co-PI Dr. Brenda Britsch and two TPT staff members, Leah Defenbaugh and Alex Dexheimer).

The external evaluation examined both the Train-the-Trainer model and the effect on the trainees' teaching practice using a mixed-methods approach (Frechtling, 2010), collecting both quantitative and qualitative data on the nature and extent of the effects. Each activity is described below.

- *Train-the-Trainer workshops*: Conduct a needs assessment of trainers, analyze Train-the-Trainer model for best practices, analyze daily trainee surveys and provide feedback to facilitators.
- *Monthly webinars*: Data on offerings and attendance (For more details, see the attached Evaluation Implementation Report).
- *School/District training*: Analyze trainer's delivery of the professional development, analyze trainer and trainee end of year surveys, interview trainers in May (noting that three sites who completed their training also had interviews of trainees). (For more details, see the attached Evaluation Implementation Report).

This evaluation report evaluates the Train-the-Trainer (TTT) 2019 June workshop using data from daily surveys and questions asked of Trainers in May 2020 reflecting on their training.

### **Description from the syllabus**

*SciGirls Strategies* Trainers participated in a four-day (36 hour) in person training Tuesday through Friday, June 25-28, 2019 at Twin Cities PBS in St. Paul. The Gender Equitable Teaching and Advising Strategies (GETAS) training workshop included information on the newly updated (in 2019) *SciGirls Strategies: How to Engage Girls in STEM* which includes gender equitable and culturally responsive teaching strategies to advise, encourage, recruit and retain girls into CTE-STEM pathways along with adult learning practices and strategies for leading professional development.

See the GETAS online course resources at: <http://genderequitableteachingstrategies.weebly.com>

### **TTT Workshop Goals**

1. Trainers are familiar with the updated *SciGirls Strategies* and the framework of an inclusive learning environment and culturally responsive teaching practices and confident about how to find online information that supports their own/teachers' understanding of gender equitable teaching strategies and the research supporting them.
2. Trainers set goals specific to their school or district setting around improving STEM and CTE teacher's efficacy in the use of gender and culturally equitable teaching strategies.
3. Trainers feel empowered to implement the course and support teacher-trainees in a manner that aligns with their school or district norms/tools/needs.
4. Trainers understand that teachers need to be confident in the framework prior to making incremental changes in their practice to use the six strategies using the rubrics to identify and document improvements to promote girls positive STEM identities.
5. Trainers demonstrate confident understanding of:
  - Where to find additional resources
  - How to solicit support if/when needed
  - What their responsibilities are in terms of the research
  - What their teacher training responsibilities entail for PD/Grad teachers
  - How teacher needs may differ in terms of the themes/strategies and what is appropriate to prioritize in those cases
  - Options for evaluating their own courses and supporting their teachers in evaluating the effects of using *SciGirls Strategies*.
6. Trainers will have self-assessed their own practices on the two rubrics; Gender Equitable Teacher Strategies and Cultural Responsiveness.
7. Trainers will have practiced, and reflected on, modeling each of the six strategies in micro-lessons and discussion activities.
8. Trainers will have brainstormed use of the rubrics and articulate specific instances of strategy implementation.
9. Trainers will review the current model (google drive folders with four assignments for teachers to work towards an incremental change on the rubrics) and decide if they will use that model, modify it, or create something totally new for their setting.
10. Trainers who are taking the course at the graduate level will understand the documentation and formative feedback opportunities available to them.
11. Trainers will understand that if their teacher trainees register for one or two graduate credits how that will facilitate their ability to receive formative feedback from Dr. Anderson, Dr. Billington or Dr. Britsch.
12. Trainers will collect evaluation data on their locally offered course, and set the expectation that their teachers will collect evaluation data on the effects of their use of *SciGirls Strategies* on their students.

The six *SciGirls Strategies* are:

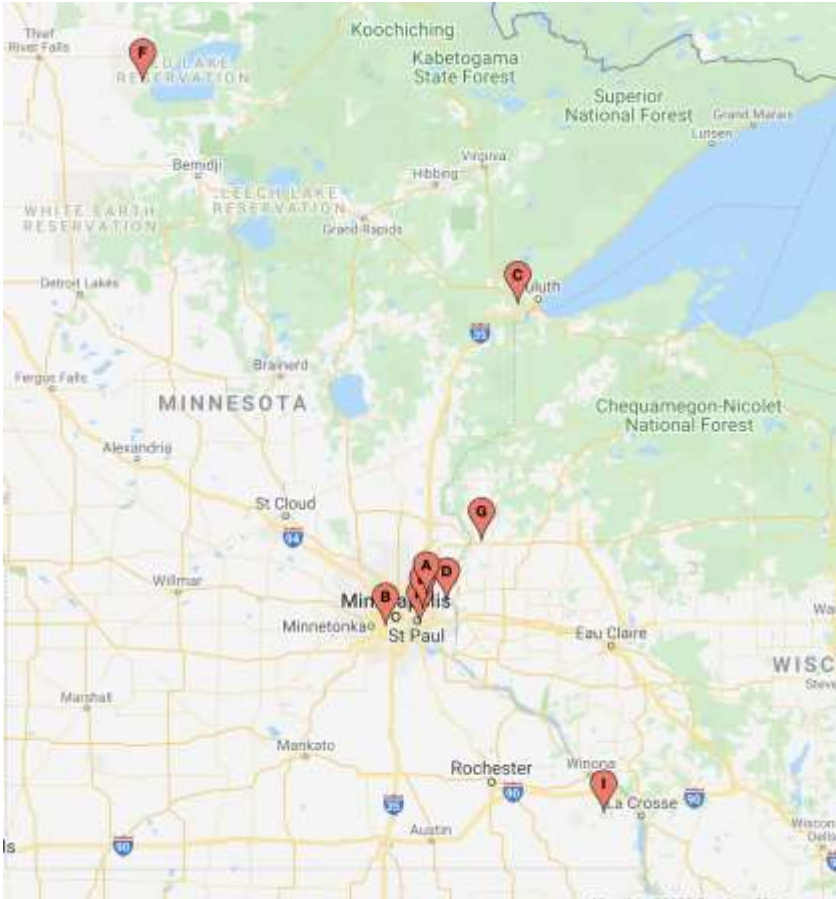
1. **Connect STEM experiences to girls’ lives.** Make STEM real and meaningful by engaging girls in activities that draw on their interests, knowledge, skills, culture, and lived experiences. This helps girls develop a STEM identity and increases their sense of belonging in STEM.
2. **Support girls as they investigate questions and solve problems using STEM practices.** Engage girls in hands-on, inquiry-based STEM experiences that incorporate practices used by STEM professionals. Let girls take ownership of their own STEM learning and engage in meaningful STEM work to positively impact their identities and re-define how they see STEM.
3. **Empower girls to embrace struggle, overcome challenges, and increase self-confidence in STEM.** Help girls focus on and value the process of learning by supporting their strategies for problem-solving and letting them know their skills can improve through practice. Support girls to develop a growth mindset—the belief that intelligence can develop with effort and learning.
4. **Encourage girls to identify and challenge STEM stereotypes.** Support girls in pushing against existing stereotypes and the need to conform to gender roles. Helping girls make connections between their unique cultural and social backgrounds and STEM disciplines will negate potential stereotype barriers.
5. **Emphasize that STEM is collaborative, social, and community-oriented.** Highlight the social nature of STEM to increase interest and motivation and change the stereotypical perception that STEM jobs require people to work alone. Girls benefit from a supportive environment that offers opportunities to build relationships and form a collective identity.
6. **Provide opportunities for girls to interact with and learn from diverse STEM role models.** Introduce girls to diverse women role models from varied STEM career pathways to help girls see potential futures and develop resilient STEM identities. Positive role models can increase girls’ interests in, positive attitudes toward and identification with STEM.

**Participating schools** were diverse in size, enrollment, and graduation rate. Except for Red Lake High School and Tartan High School, the schools serve a majority of white students. See the chart below.

School	Grades	#Students	Grad rate	Ethnicity %
Forest Lake Area Community School, MN; Independent School District 831	9-12	130	52%	87% White, 6% 2 or more, 3% Hispanic, 2% Black, 1% Asian
Level Up Academy (Charter School), White Bear Lake, MN; Minnesota Association of Charter Schools	K-8	146	NA	78% White, 11% Black, 10% Hispanic, 1% 2 or more
Minnesota Transitions Charter School District (virtual high school), Minneapolis	K-12	1539	39%	75% White, 10% Black, 5% 2 or more, 5% Hispanic
Open World Learning Community School, St. Paul, Public School District #625	7-12	470	91%	56% White, 15% Hispanic, 12% Asian, 12% Black

Proctor High School, Duluth, MN; Public School District #704	6-12	536	94%	93% White, 2% 2 or more, 2% Hispanic, 1% Native, 1% Black
Red Lake High School, Red Lake, MN; Independent School District #38	7-12	278	48%	100% Native
Saint Croix Falls School District, WI; St. Croix Falls School District	9-12	308	96%	96% White, 1% Native, 1% 2 or more, 1% Hispanic, 1% Black
South View Middle School, Edina, MN; Edina Independent School District #273	6-9	1007	NA	72% White, 9% Asian, 7% Hispanic, 7% Black, 6% 2 or more
Stillwater Area High School, MN; Stillwater Independent School District #834	9-12	2760	93%	86% White, 5% Asian, 4% Black, 4% Hispanic
Tartan High School, Oakdale, MN; Independent School District # 622	9-12	1656	87%	47% White, 18% Black, 17% Asian, 12% Hispanic, 4% 2 or more

The map below shows the locations of the schools and districts.



## II. Results

In this section, we present findings from the Trainer Needs Assessment, the daily surveys during the June 2019 workshop, and Trainer reflections on the training workshop 11 months later.

### II.A. Needs Assessment

Prior to the train the trainer workshop, nine of the ten trainers completed a needs assessment.

#### Executive Summary of Needs Assessment Results $N=9$

- Trainers reported wanting to be a trainer because they were passionate about helping girls stay interested in STEM, wanting to be able to support girls and all learners, and wanting to be trained in ways that would benefit girls in STEM.
- Trainers felt that, by the end of the week, it was most important for them to understand what they were being asked to do, organize the resource, get buy-in from their staff, and develop a plan.
- Trainers anticipated that the hurdles in offering the training in their local districts would be teachers finding time to participate, attracting and keeping teachers, funding, and being knowledgeable enough to support the teachers during the training.
- Teachers rated themselves on each of the *SciGirls Strategies* prior to beginning the training. They rated their understanding on a scale of 1-3, where 1=exemplary, 2=proficient. 3=novice: 2.3 empowering girls in STEM/CTE and thoughtful communication, 2.4 STEM/CTE are collaborative and learning is social and promoting students' solving problems and investigating questions, 2.7 cultural awareness and relevant learning experiences, 2.8 STEM/CTE role models, and 2.9 for challenging STEM/CTE stereotypes.

#### SciGirls TTT Needs Assessment Detailed Results:

##### In your own words, why did you want to be a trainer for GETAS?

- *To help make GETAS have a larger reach in the area and to advance my capacity as a teacher-leader.*
- *I am passionate about the girls 'middle school cliff' and helping girls remove barriers to the STEM fields - this stems from my own experiences growing up and creating my own career trajectory. I am inspired by leading professional development - so this train the trainer program was right up my strength's alley.*
- *As a woman of color I am passionate about getting girls, and specifically girls of color to believe they are scientist and engineers.*
- *Encouraging girls and women to continue their interest in STEM/CTE areas. The SciGirls strategies help all students, not just girls, learn and develop STEM skills.*
- *I want to be able to show my female students that they are able to do and be anything they would like to be.*
- *To encourage, support, and foster girls to enter the STEM fields both in school and beyond graduation.*

- *I serve an underrepresented population (Native American). Training other teachers to help students explore, enter STEM fields would help my students more than if it is just me encouraging, pushing, etc.*
- *I feel the SciGirls strategies are good teaching practices that will not only benefit all students but particularly focus on improving in areas that women are needed. I wish it was more introduced and influenced in my early schooling (K-12) and I want the next generations to see women in these fields as if it's always been that way.*
- *I feel that I do a great job organizing and delivering the science content in my classroom. However, I want to focus on social emotional learning through cultural relevance in the classroom, and how to make that a culture at my school as opposed to something that only occurs in my classroom or just the 9th grade.*

**What do you feel is most important for you this week to feel prepared for your local course?**

- *Understand what I am being asked to do and learn about flexible ways to meet those requirements.*
- *Setting goals - gathering necessary resources to reach goals - setting up a calendar so I can begin inviting others to the training.*
- *I want to gather as many resources as possible so I can provide the teachers I train with many and varied resources that will meet their individual needs for their classroom/situation.*
- *Getting a plan in place for what I'm doing, who I'm teaching.*
- *The ability to get our staff at Proctor to buy in and be part of the change to be the change.*
- *For me to be mindful and present as I develop and collaborate with others when presented with new material and strategies.*
- *Resources, resources, resources!!!!*
- *Time to plan and think about the format of what the course will look like.*
- *Having the connections to resources (speakers, websites, activities) that teachers in my district can utilize.*
- *Older teachers seem really jaded, and in my experience are not open to changing their mindset or implementing new strategies. I'm worried about how to connect with them, and not seem preachy.*

**What do you anticipate will be some hurdles in offering your local class?**

- *Time, always time.*
- *Consistency of attendance*
- *Attract and keep participants from varying areas; middle school, high school, counseling, science, engineering, math, etc.*
- *Getting buy-in from more experienced teachers and the more conservative teachers in my district.*
- *Some of the file cabinet teachers that we have in our district.*
- *Funding to be able to bring technology into the class room.*
- *I have not been able to get administrator's official approval, but anticipate getting approval.*
- *Honoring teachers time...finding a time that works for the teachers I want to work with. We are a small school and teachers wear multiple hats.*
- *Making sure the training has pieces that teachers can implement in their classrooms the next day or week.*
- *Having the background knowledge and experience using the strategies, so that I am hopefully a resource for others too.*
- *Getting more experience myself as my local cohort also gains experience in the SciGirls strategies. I am very novice according to the rubric, so hopefully, I can guide others being a novice myself.*



- *Being perceived as young and idealistic without real world understanding, pervasive views of top down implementation of strategies (administration is making us do this, just let me run my classroom the way I know is best), deficit language surrounding all aspects of school from other teachers.*

**Please rate yourself currently on each strategy using the rubric below.** You and your instructor will use this to reflect on which areas you want to pay special attention to during the Train the Trainer week. You will also use this rubric with your teachers to help them prioritize the strategies for their practice. The rubric is cumulative with all attributes of novice level being evident within the proficient column and all attributes of the proficient column evident in the exemplary level. Specific manifestations of strategies listed within the rubric are not inclusive of every manner in which that level of performance could be documented, but rather meant as examples.

- **EXEMPLARY (1)** - Blind student feedback on course/instructor qualities shows that all students--regardless of background or gender--find the instructor to be encouraging and supportive of their developing competencies in the discipline. In recorded small group dialogues, it is easy to hear that the students know how to: talk to one another in academically meaningful ways; ask and answer furthering questions of one another; treat one another with respect and demonstrate epistemological curiosity; use dialogue to facilitate their shared growth in the discipline. Instructor has a positive attitude towards the potential of all students to succeed with the right learning environment and curriculum. When a student isn't succeeding, the instructor reconsiders how s/he can differently approach the content or pedagogy to afford success.
- **PROFICIENT (2)** - Instructor uses blind review of formative and summative assessments to self-assess on the ways in which he provides feedback to learners to further their understanding--and then analyzes the findings for disparities in tone or content that align with the students' gender, race, sexuality, language background, etc. Having identified an area that was previously subject to a fixed mindset in her practice, the instructor redesigned the assignment to afford all learners ample opportunities to receive formative feedback from the instructor on learning and improve outcomes with further effort. Instructor tone is respectful and demeanor is encouraging of high standards for all students.
- **NOVICE (3)** - Instructor can articulate the difference between a growth and fixed mindset within her discipline, and provide examples of where previously she has/hasn't facilitated a growth mindset. Instructor begins using a strategy to make feedback to learners less gender-biased (such as asking furthering questions equally often to male and female students, provides similar amount of wait-time to students regardless of background etc.)

	Mean Rating
Empowering Girls in STEM/CTE and Thoughtful Communication	2.3
Promoting Students' Solving Problems and Investigating Questions	2.4
STEM/CTE are Collaborative and Learning is Social	2.4
Cultural Awareness and Relevant Learning Experiences	2.7
STEM/CTE Role Models	2.8
Challenging STEM/CTE Stereotypes	2.9

## II.B. Workshop Daily Survey Results, Tuesday-Friday

Trainers completed daily evaluations. The results were reported the next morning by the evaluator and concerns and questions addressed by the facilitator.

### Executive Summary of Daily Surveys during TTT Workshop $N=10$

- The Train the Trainer workshop was held at TPT in St. Paul -Tuesday June 25 to Friday June 28, 2019.
- A total of 10 teachers attended the GETAS Train the Trainer workshop.
- At the end of each day, trainers were asked to complete an end of day survey.
- The results from the survey summaries prepared by the external evaluator were reviewed each evening by the team and issues and questions addressed the following morning.
- On the first day, the most valuable things to the teachers were developing relationships and having conversations around *SciGirls*. On the second day, the most valuable things were having work time to create their personal goals and plan their course and ask questions. Again on Thursday, time to work was the most valuable along with getting additional information. On Friday, teachers valued the growth they experienced during the week, being able to review their plans, and learning about what each other was planning.
- After the first day, teachers wanted more resources, discussions, and time to work on their plans. At the end of Wednesday, teachers continued to want more work time, discussions, and some review of their work so far. After Thursday, teachers wanted more time to work on refining their lessons and some additional time with the resources.
- At the end of each day (Tuesday – Thursday) teachers were asked what questions they had and answers to these questions were reviewed the following morning with the entire group.
- At the end of each day, teachers were asked to rate the different components of the day's workshop. Most days, the teachers rated the elements highly and any low scores were addressed with the group the following morning. In particular, teachers rated learning about STEM/CTE Role Models highly (9.2/10), Work Time with scaffolding and support (9.5), Role Models (9.3), Lunch Guest Speaker: Marie Domingo, SciGirls Producer– (9.4), and Work Time on your PD plans (9.4) the highest from the week mirroring what they most valued each day and asked to have more of during the week.
- Friday's end of day survey had additional items addressing teachers' needs going forward. To feel ready to teach their course, teachers wanted more time to refine their plans, the ability to check-in with the team, and someone from the team to review their plans prior to implementation.
- At the end of the workshop, teachers felt most confident about being about to deliver their plans and the SciGirls curriculum and philosophy, working with their groups, and the support they will receive from their districts. They felt least confident about impacting actual change, recruiting, working with school administration, and diversity within their schools.

## TUESDAY

### Agenda - Culturally Responsive Practices and Role Models

- STEM/CTE Role Models
- Introductions
- Evaluator Brad Davey Introduces Assessment/Evaluation
- Look at class/school data on demographics regarding Race, Gender etc... related to their CTE/STEM classes
- Introduction to SG6 and LOs for Teacher-Participants in GETS
  - Theme 1 - Create a STEM For All Learning Environment
  - Theme 2 - Adopt Culturally Responsive Practices
- Needs Assessment
- LUNCH - Guest Speaker: Maribeth Romslo, Spark series
- Brief introduction to Module 1 and 2
  - Emphasize LOs
  - Using small groups & share outs AND other strategies to promote equity
- Re-Introduction to GETS rubric and Introduction to Weebly
- Role Models
- Survey at end... Goals for next year

### Assignments for tomorrow

1. Setting Goals for your School/Team
2. Spend some time on Weebly site
  - a. Be prepared to share one thing you found tomorrow.
3. Needs Assessment
4. End of Day Survey

## Survey Results

### What was most valuable for you today? Why?

- *Discussion, sharing of resources, and SciGirls Binder*
- *Conversation with peers.*
- *Talking about how to use the role models with other teachers.*
- *Discussion about our interpretation of data regarding gender and race in our classroom. Interesting to hear about other's insights about the role of race and gender in different classrooms.*
- *Having the group discussions. Processing the information.*
- *Discussion around strategies 1 and 6 provided helpful insight into my class data, as well as strategies to incorporate bringing in guest speakers/role models.*
- *Developing relationships with teachers! Looking for others with common interests and trials.*
- *I feel like I gained many resources today. The guest speaker was excellent and the discussions with the other participants were super meaningful.*
- *Resources - from books to websites to networking*
- *SciGirls strategy discussions*
- *Having a role-model speaker - so inspiring! Very much sealed the deal for me that our school*

- *Will be investing in role models this year!*
- *Love the role-model guide - so important to keep speakers effective and relevant.*

**What would you like more of?**

- *Resources, ideas for training lessons and scope and sequence*
- *Reading actual research papers.*
- *Group discussions, individual processing time before turn and share*
- *More information on what we will be working on with the teachers we will be training.*
- *I know that this is SciGirls and is heavy on the science, but getting more CS things would be great.*
- *Barb mentioned lesson plans detailing the training module I would use to train, so I would love those at some point.*
- *Time to work on what I will be doing with my teachers.*
- *I felt the pace was really good and breaks were at the right times for me. I really look forward to more of what today was like, for the rest of the week. The time I felt flew by because I was intrigued all day.*
- *Time to plan (I know it's coming)*
- *Continue the speakers*
- *Honestly - it was a great mix of discussions, resources, speakers, breaks. Mixing it up is helpful!*
- *Staying on time and covering the agenda was impressive - so many times that doesn't happen - that tells me this was thoughtfully planned*

**What questions do you have?**

- *Can you post your PowerPoints for us?*
- *I guess I'm not totally sure what Brad's role is, just evaluating the program as a whole?*
- *I am wondering how others are using the \$1000 that is going to the district.*
- *I also would like more reassurances that it's ok I'm going to be a trainer, when I was a novice in many areas according to the rubric.*

**Please rate the value of each activity for you today on a scale of 1-10, 1=not valuable, 10=extremely valuable STEM/CTE Role Models**

	Mean
STEM/CTE Role Models	9.2
Introductions	8.5
Look at class/school data on demographics regarding Race, Gender etc.... related to their CTE/ STEM classes	8.5
Introduction to SG6 and LOs for Teacher-Participants (STEM for all, culturally responsive practices)	8.9
Lunch Guest Speaker: Maribeth Romslo, Spark series	9.5
Brief introduction to Module 1 and 2 (strategies for promoting equity)	8.6
Re-Introduction to GETS rubric	7.7
Introduction to Weebly online resources	7.9
Role Models	8.8

**Comments/Suggestions:**

- *I loved hearing from Guest Speaker: Maribeth Romslo, Spark series*
- *Lunch guest Maribeth Romslo*
- *Thank you for conversation time for us to get to know each other.*

- *Will we have access to the slides you presented in class? Can we reuse them when we bring it back to the district?*
- *This has inspired me and renewed my journey - after a very difficult year with our school board. I am RAVING about my opportunity to others already. So, thankful for the opportunity. And the food and parking/mileage reimbursement - that is just a wow. I don't ever personally receive those benefits from my current school, so that is absolutely appreciated!*
- *I think we need a Twitter Hashtag! Perhaps there is one - I will look tonight!*

## WEDNESDAY

<p><b>Agenda - Collaboration and Self-Confidence (Growth Mindset)</b></p> <ul style="list-style-type: none"> <li>• Summary of Day 1 Feedback - External Evaluator</li> <li>• Role Models</li> <li>• Provide feedback on goals</li> <li>• Introduction of Modules 3 &amp; 4 <ul style="list-style-type: none"> <li>○ Weebly Resources</li> <li>○ Facebook - our collaboration tool</li> <li>○ Google folder system of documenting teacher work</li> </ul> </li> <li>• Lunch Guest Speaker: Brad Davey, Evaluation</li> <li>• How will you reach your goals? <ul style="list-style-type: none"> <li>○ What specifically do you plan to do - what's your training going to look like?</li> <li>○ Are teachers meeting 2x a month? In the summer? All year?</li> <li>○ How many teachers are on board? How many more do you want?</li> <li>○ What support will you provide as a trainer/teacher? Begin to map out the year</li> </ul> </li> </ul>
<p><b>Assignments for tomorrow</b></p> <ol style="list-style-type: none"> <li>1. Add a Resource to Facebook to share with the group.</li> <li>2. Begin the Outline for your PD</li> <li>3. End of Day Survey</li> </ol>

## Survey Results

### What was most valuable for you today? Why?

- *Work time to create my personal goal for the coming school year to implement GETAS in my classes.*
- *Work time, got to flesh out my goal and get a view of the forest from the trees*
- *Planning time for District Specific Implementation of the SciGirls Strategies*
- *Specific one-on-one time with Barb looking at my goals/plans*
- *Time to plan my course.*
- *The Seeing White discussions that we had today. Since I grow up here in the Twin Cities living in a very diverse area, then moving to Northern MN and going to an area that has very little diversity it was truly re-eye opening to that we really do have issues in our world. Issues that we really shouldn't still be having.*
- *Start working on the lesson plans.*
- *Able to ask questions.*
- *Constructing and peer to peer review of our goal draft was beneficial.*

- *Discuss Strategies 2 and 3 had great personal anecdotes and I walked away with a few more insights of how to view our learners.*
- *Time to plan - filling in the Template and having conversations around planning/sharing resources*
- *Opening up the conversation around race*
- *Role Model Videos are always impactful*
- *Time to work on my training plan. I still have questions, but it has been useful to have thinking time.*
- *The time to start planning out our own training that we will be facilitating.*
- *The discussions on the podcasts.*

**What would you like more of?**

- *Supported work time*
- *The templates are fabulous, I don't know if you can do more of them, but I did like them*
- *Discussion time*
- *Looking at Research papers (but I think I am the only one).*
- *Sorry to continue saying this I really want this to work in my classroom, so I really need more CS resources.*
- *For the room to be coolers as it is truly warm.*
- *Continue to work on lesson plans.*
- *Please look at my draft goal - I realized I hadn't specifically answered the first question but tried to bullet it below.*
- *More staying on topic - I 100% agree with allowing the conversation to be organic, however some attendees can go way off topic and hold the floor longer than necessary.*
- *Productive work time. It is on me to make it productive!!!!*
- *Having seen all the modules before we start planning might be a little more helpful for spacing out the timing.*

**What questions do you have?**

- *Webinars? Dates, times, etc.*
- *What would it look like to have a Role Model come in during the Training's to talk with those being trained?*
- *Do we have a rigid timeline to follow? I anticipated starting the training in October.*
- *I don't know what my administration has planned on when or where we will meet. Our school district is small and people wear multiple hats, hard to find a day and time that will work for all. Planning to contact my administration tonight and hope to have an answer tomorrow.*
- *Clarification between modules and strategies and the correlation between the two.*

**Please rate the value of each activity for you today on a scale of 1-10, 1=not valuable, 10=extremely valuable STEM/CTE Role Models**

	Mean
Role Models - morning	8.7
Provide feedback on support needed	8.8
Introduction of Modules 3 & 4	8.4
Lunch Guest Speaker: Brad Davey, Evaluation	7.2
How will you reach your goals?	8.1
Work Time with scaffolding and support	9.5
Role Models - afternoon	9.3

## Comments/Suggestions

- *TPT always provides a varied and delicious lunch and snacks!*
- *Awesome day, again. Thank you!*

## THURSDAY

<b>Agenda - Solving Problems Creatively and Challenging STEM/CTE Stereotypes</b>
<ul style="list-style-type: none"><li>• Summary of Day 2 Feedback - External Evaluator</li><li>• Role Models</li><li>• Provide feedback on support needed</li><li>• Introduction of Module 5 &amp; 6<ul style="list-style-type: none"><li>○ What can it look like? Previous “products” and teachers work samples.</li></ul></li><li>• Review contributions to FB from previous night</li><li>• Lunch Guest Speaker: Marie Domingo, <i>SciGirls</i> Producer– <i>SciGirls Role Model Videos</i></li><li>• Work Time on your PD plans<ul style="list-style-type: none"><li>○ Weebly resources</li><li>○ Facebook etc...</li></ul></li><li>• Mapping the year, goals, supports, plans</li></ul>
<b>Assignments for tomorrow</b>
<ol style="list-style-type: none"><li>1. Continue to work on your PD plans for the year ahead.</li><li>2. Add resources to Facebook as needed.</li></ol>

## Survey Results

### What was most valuable for you today? Why?

- *I had two, one was the work time and being able to bounce ideas off of one another. Also, loved our lunch time speaker as she truly was a joy to listen and learn from.*
- *SciGirls Role Models - Marie Domingo*
- *More work time to plan the local training*
- *Looking through research and finding a gem.*
- *Time to talk with Barb about my cohort goal.*
- *Working on implementing.*
- *Getting new information.*
- *Conferencing with Barb on the progress of my plans. It felt good to get feedback and know I was on the right track.*
- *The time to work was priceless!!*
- *There are so many great resources that have been introduced and shared and just exploring them is rich in ideas.*
- *Feedback on my work from yesterday, let me know if I was going in the right direction*

### What would you like more of?

- *Great Food, j/k well not really. More one on one time to continue to learn from one another.*

- Resources and processing times
- Time to really flesh out my lessons more.
- Time to work on creating the outline for the year-long PD.
- Books for working on equity.
- Time to survey the resources so I can pick the best ones for my group.
- Some of the books I want to order first and preview myself before bringing them to my cohort. Is this a possibility to do not out of pocket??
- Work time

**What questions do you have?**

- If I need surveys made who am I contacting?
- Time to talk to the decision makers at the district level
- I am working on processing the information.
- Tell us about the upcoming webinars.
- What data do I need to collect?
- I am relieved that the support for bringing this material to my district doesn't stop after this week. By the end of the day tomorrow, I know I will still be exploring resources but when I have everything finalized I'm glad that Barb will look over our plans, the evaluations will be reviewed first, and Leah and Alex can also provide more resources as we know we need them. I feel like right now, I don't know what I don't know yet.

**Please rate the value of each activity for you today on a scale of 1-10, 1=not valuable, 10=extremely valuable STEM/CTE Role Models**

	Mean
Role Models - morning	7.8
Provide feedback on support needed	8.4
Introduction of Modules 5 & 6	8.3
Lunch Guest Speaker: Marie Domingo – SciGirls Women in STEM role model videos	9.4
Work Time on your PD plans	9.4
Mapping the year, goals, supports, plans	9.1
Checking for inclusion of counselors, administrators, parents, community stakeholders in expanded vision of STEM/CTE participants	7.6
Share ideas at end of Day 3... what will your training look like?	9.0
Role Models – afternoon	9.4
Data you will be collecting	7.6

**Do you have any questions about the evaluation data you will be getting the teachers in your PD to collect? or your reflection at the end of facilitating that PD?**

- Just how I get surveys made for my teachers?
- I don't think so, but I reserve the right to change my mind.
- I still need to write my goal and develop the PD plan for the year. I know I'll collect the GETAS & CRP self-assess rubrics at the start of the training and the end of the training.
- How? How much?

**Comments/Suggestions:**

- Thank you to Brad, Barb & Siri for all of your help getting all of the CS info I have gotten over the last 24hrs.
- Too much amazing food! Sorry, not sorry.



- *Ignore my Role-Models rating, I was late. Checking for Inclusion was missing. I gave both a 1 to mark them.*
- *Refresh me about the data collection*
- *I wish I had access to the modules as we went through them.*
- *I was not feeling well, and left after lunch, ignore my scores from the lunch guest speaker onwards*

## FRIDAY

<p><b>Agenda - Science/STEM/CTE for ALL</b></p> <ul style="list-style-type: none"> <li>• Summary of Day 3 Feedback - External Evaluator</li> <li>• Role models</li> <li>• Final Day Kick Off</li> <li>• Feedback/Reflections on what data you plan to collect <ul style="list-style-type: none"> <li>○ Sharing that data with us</li> </ul> </li> <li>• Work Time <ul style="list-style-type: none"> <li>○ Resource Review</li> </ul> </li> <li>• Your Main Deliverable is your Professional Development Plan for next year. <ul style="list-style-type: none"> <li>○ How ready do you feel to implement this training in the fall?</li> <li>○ What data will you collect? What tech tools will you use?</li> </ul> </li> <li>• Lunch Guest Speaker: Gina Reis, SciGirls Producer – Near peer role model videos</li> <li>• Big Share out... <ul style="list-style-type: none"> <li>○ Each person writes a First-Person narrative - I statements.... <ul style="list-style-type: none"> <li>■ I will do ___ and it will impact ___ in this way.</li> </ul> </li> </ul> </li> <li>• How can we support you in the Monthly Webinars this year? <ul style="list-style-type: none"> <li>○ We want this to be what you need.</li> <li>○ What do you anticipate being challenges you will face?</li> </ul> </li> <li>• Examples of previous participants identified needs</li> <li>• Final Survey for Evaluator .</li> <li>• FINAL Role Models!</li> </ul>
<p><b>Assignments for tomorrow</b></p> <ol style="list-style-type: none"> <li>1. Share your Final PD workshop outline/agenda and year in review document.</li> <li>2. Schedule webinars in your calendars.</li> </ol>

## Survey Results

What was most valuable for you today? Why?

- *The continued growth of my ability to be able to look outside myself to make best practices to make sure that I am able to train my staff on the SciGirls strategies.*
- *Going through the share of what we are going to be doing with our trainings. I received great ideas for both personal goals and district goals, and not just my training goal.*
- *Work time, direct consultation with Barb, Alex, and Leah. Good feedback.*
- *Review of plan for training with the group.*
- *Work time.*

- *Sharing information on your plan.*
- *Time to plan and discussions/Feedback/Resources from SciGirls Leaders*
- *Planning time*
- *Discussion and one-on-one time with Barb*
- *Sharing of what each person's plan is for their school. I got ideas and was able to share my plan with the group.*
- *The sharing of the plans, I added and wrote notes of things I want to try or add to my plan.*

**Please rate the value of each activity for you today on a scale of 1-10, 1=not valuable, 10=extremely valuable**

	Mean
Role models - morning	8.3
Final Day Kick Off	7.6
Feedback/Reflections on what data you plan to collect and share with us	7.5
Work Time (Resource Review)	8.7
Your Professional Development Plan for next year.	8.4
Lunch Guest Speaker: Gina Reis – Near Peer role model series	8.5
Big Share out...	8.4
How can we support you in the Monthly Webinars this year?	6.7
Examples of previous participants identified needs	6.1
FINAL Role Models!	8.1

**Comments/Suggestions:**

- *Lunch speaker: Gina R.*
- *Awesome experience, thank you*
- *We didn't share previous participants identified needs*
- *Thank you for the opportunity to be a part of this group. I am looking forward to sharing what have learned with my school district.*
- *The offer to come to our districts for various reasons or as needed is invaluable. The one I marked 1, I'm not sure we did.*

**On a scale of 1-10, rate your:**

	Mean Rating
Preparedness	6.7
Confidence	7.4
Knowledge of GETS	7.3
PD Plan	7.0

**What do you need or want to feel ready to teach your course?**

- *Just time to make sure that I have it put together to deliver it in a smooth understanding of the program*
- *To keep in constant communication/correspondence for ideas questions, readings, book ordering, etc.*
- *Ability to check in as I am going along. I will also likely need some support on all of the data we will need to have.*
- *I need to discuss and plan with my principal to finalize my plans for the training I'll be presenting to my school.*
- *No problem, time it is.*

- *I need to spend the time putting the information in an accessible place for my group.*
- *Time to get details hammered out*
- *More time to review literature and videos.*
- *I will want someone to look over my plans again after I have more time to add details.*
- *Just more time to plan and explore resources. My summer reading list has grown exponentially.*

### **What are you feeling most confident about? Least confident?**

#### Most confident

- *Being able to deliver the info to my district*
- *I feel confident that SciGirls and especially Barb have and will support me 110%*
- *My PD seems very straightforward and easy to implement*
- *I know the stuff, but I need to finish my planning. There are several steps left for me, but I am excited.*
- *Working with my group.*
- *Adult PD is a part of my job*
- *Support from my school district*
- *I will be able to help teachers grow*
- *I am confident in speaking in front of my peers, I just need to become more confident in the material.*

#### Least confident

- *Being able to know if I'll be able to change the minds of those in the district can or will happen.*
- *I feel least confident in training other teachers, but I will get in my growth mindset.`*
- *Recruiting the right people to participate, people with a positive mindset*
- *Choosing a book that will be best for my group.*
- *Balancing admin. position and this course among other PD for my specific school*
- *Getting a diverse staff to commit to the process*
- *Getting enough teachers to commit for the whole year.*
- *Confident in very little, I need more time to absorb the information before I would say I feel confident.*

## **II.C. Trainer Reflections on Workshop 11 Months Later**

Trainers were surveyed and interviewed in May 2020. Most of those results are presented in the May 2020 Evaluation Implementation Report.

### **How would you improve the train the trainer model?**

Suggestions from those who offered the training in 2020 N=3

- *I thought the model worked well for myself, my district, and my teachers*
- *While I appreciated how customizable the training program was, you should have some more base models to build from. You shared the presentations you did for Train the Trainers, but they were kind of tough to follow. I'm guessing they were made by Barb or someone on the team for their own presentations, and so the notes were not approachable to outsiders. That being said, I know that those presentations were not necessarily created to be used by trainers, but having a set of presentations that were directly made for trainers would be very helpful. This is personal preference, but I really disliked the intensive weeklong training.*

- *I would have some examples of different ways to implement the lessons.*

Suggestions from those who do not end up offering a workshop due to COVID and other challenges in 2020 N=7

- *I think it would be valuable to have an actual training template with Day 1, Day 2, etc. Teachers can shift and pivot as needed for their particular school/setting. My biggest barrier was having the time to create the training. Had the materials scaffolded in a ready to go training kit I might have been able to get this done earlier in the year. I have the unique job as an administrator and a teacher - so my training commitment was pushed back while I handled unexpected personnel issues and facility needs in the beginning of the year. I wish this hadn't been the case. I look forward to implementing in the fall!*
- *I am not sure how to improve the program until after I get through the program next year.*
- *Have the train the trainer session closer to the beginning of the school year, sometime in August.*
- *I really think that the trainer model exceeds what I've seen in other realms to try and bridge multiple sorts of gaps. Of course, I unfortunately have not been able to execute the training, but I'm sure I would have provided feedback.*
- *Some parts of the expectations of the trainer, versus the trainees, gets confusing.*

### **What other comments or suggestions do you have for future trainers?**

Suggestions from those who **offered the course** N=3

- *Make sure to plan stuff to keep teachers engaged between training sessions, leave lots of time for authentic conversation, use select Scene on Radio 'Seeing White' and 'Men' episodes to help spark conversations, get at least one in-person role model to come to your training to modeling.*
- *Make sure you have a growth mindset going into this program. Before doing this you should have some basic equity training, understand what equity is, and agree that equity of all kinds (gender, cultural, racial, etc.) are real and important. This should be a more advanced study of equity where we all have a baseline that we are trying to grow from.*
- *It would have helped me to identify what was my end goal and possible ways to get there. More concrete with the understanding along the way things may change to meet the needs of the student.*

Suggestions from those who **do not end up offering a workshop** N=7

- *Really get a sense of who you are and who you teach - be able to check your prejudices and privileges - and build a strong community with your cohort before expanding on asking them to participate.*
- *A more appealing flyer and information to attract attention is recommended.*
- *I would almost like do one introductory day and show us the materials. By the end of the week we were developing, but I still needed to explore it all... was still new to all. I was not ready to make that plan yet. Give us a couple of days and come back. There are so many great resources. I was reading a ton of great stuff. It was almost too broad. I needed some basis to start. The structure of the six strategies.*
- *Need to get teachers recruited for the course before the summer workshop.*
- *Need more follow up with practical examples and feedback on plans after the summer workshop.*
- *Provide a toolkit of slide shows and model agenda.*

### III. Conclusions

Prior research on Train the Trainer (TTT) model shows it to be more effective than lecture (Levine, Brett, Robinson, Stratos, Lascher, & Granville, 2007; Orfaly, Frances, Campbell, Whittemore, Joly, & Koh, 2005). Some important attributes are that it:

- Equips the trainers with the knowledge and skills to be effective (Tobias, Downes, Eddens, & Ruiz, 2011)
- Encourages feedback, models key concepts/techniques, provides financial support, and faculty support (Tobias, et al., 2011)
- Is flexible and responsive to the individuals in the group (Orfaly et al., 2005)
- Gives trainers time for assimilation of essential knowledge, skills, philosophies, and concepts (Pancucci, 2007)
- Provides a toolkit with templates, models, and resources (Levine, et al. 2007)
- Has a supportive colleague at their location to share recruiting and training (Yarber, Brownson, Jacob, Baker, Jones, Baumann, Deshpande, Gillespie, Scharff & Brownson, 2015)

A review of the SciGirls Strategies GETAS TTT plan shows that it is using best practices, including preparation (reading, needs assessment, and rubric self-analysis), summer workshop agenda, and plan for monthly webinars.

The needs assessment helped trainers to reflect on what they knew and could do, preparing them for the workshop. They began to learn about equitable teaching and learning through resources such as *Seeing Whiteness* (<http://www.sceneonradio.org/seeing-white/>).

They felt the workshop was interesting, modeled responsive teaching, and provided a good balance of information, discussion, and planning time. At the end of the workshop, all had drafts of plans but felt they needed more time and guidance.

A check with the facilitator showed that six webinars were offered; the three trainers who offered courses attended most of the webinars; the seven trainers who did not offer courses attended half or fewer. Four of the trainers (two who offered courses; two who did not) requested help, information, other resources and it was provided.

In the May 2020 Evaluation Implementation Report, we discuss in more detail options for improving the TTT model.

## References

- Frechtling, J. (2010). User-Friendly Handbook for Mixed Method Evaluations. NSF.  
<https://www.purdue.edu/research/docs/pdf/2010NSFuser-friendlyhandbookforprojectevaluation.pdf>
- Levine, S., Brett, B., Robinson, B.E., Stratos, G.A., Lascher, S. and Granville, L. (2007). Practicing physician education in geriatrics: lessons learned from a train-the-trainer model. *Journal of the American Geriatrics Society*, 55(8), 1281-1286.
- Orfaly, R.A., Frances, J.C., Campbell, P., Whittemore, B., Joly, B., and & Koh, H. (2005). Train-the-trainer as an educational model in public health preparedness. *Journal of Health Management and Practice*, 11(6), 123-127.
- Pancucci, S. (2007). Train the trainer: the bricks in the learning community scaffold or professional development. *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, 1(11), 597-604.
- Tobias, C., Downes, A., Eddens, S. and Ruiz, J. (2011). Building blocks for peer success: lessons learned from a train-the trainer program. *Aids Patient Care and STDs*, 26(1). Online from <https://doi.org/10.1089/apc.2011.0224>
- Yarber, L., Brownson, C.A., Jacob, R.K., Baker, E.A., Jones, E., Baumann, C., Deshpande, A.D., Gillespie, K.N., Scharff, D.P., and Brownson, R.C. (2015). Evaluating a train-the-trainer approach for improving capacity for evidence-based decision making in public health. *BMC Health Services Research*, 15, 547. Online from <https://link.springer.com/article/10.1186/s12913-015-1224-2>