UNIVERSITY OF MASSACHUSETTS BOSTON
CENTER OF SCIENCE AND MATH IN CONTEXT (COSMIC)

WIPRO SEF

YEAR 8
ANNUAL REPORT
September 2020

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INTRODUCTION

Wipro SEF Program Overview

The Wipro Science Education Fellowship (SEF) is a four-year STEM district transformation program. Cohorts of K-12 teachers participate in a rolling two-year professional development experience designed to improve individual teacher practice, foster teacher leadership opportunities, and create a district corps of teacher leaders. Professional development for fellows is led by a university in partnership with the local school district. The program was developed at the Center of Science and Mathematics in Context (COSMIC) at UMass Boston and is now in 7 universities and 35 partner school districts throughout the United States.

Year One: Thinking About Teaching

› Monthly Fellows Meetings

Fellows from approximately five different school districts gather once a month at the host university to engage in professional development in the areas of instruction, reflective practice, adult learning, and leadership.

› Collaborative Coaching and Learning of Science (CCLS) groups

Fellows engage in research-based, structured inquiry into their own teaching and growth. Fellows meet in CCLS teams to share videos of themselves teaching in their classroom as well as sharing student work to learn from each other, to reflect on science content and pedagogy, and to improve their teaching of science. These small professional learning communities determine their own schedules, courses of study, and the lessons they will all be videotaping and observing.

Year Two: Implementing the Individualized Growth Plan System (GPS)

Each fellow develops and carries out an individualized growth plan that has a clear vision and identifiable benchmarks. The 100-hour plan focuses on ways to improve the teacher's own instruction and leadership and is developed in collaboration with a university advisor, the district science coordinator and the fellow's principal. The yearlong project includes the fellow leading professional development for other teachers in their school district and culminates with a report and presentation of a poster session at the end of year conference.

A District Corps of Teacher Leaders

Over a rollout of three successive cohorts of fellows, each participating school district will have as many as 12 fellows who have participated in the extensive 2-year Wipro SEF program. These fellows serve as a leadership group for district science and engineering initiatives.

HOW TO READ THIS REPORT

This report captures the work of the Wipro SEF program from June 2020 through September 15, 2020 and an annual evaluation summary. During this time, all sites met the challenges of maintaining and adapting the Wipro SEF program during the Covid-19 pandemic. The chart below summarizes the activities of this quarter and the activities that will take place in this school year. If you are unfamiliar with the Wipro Science Education Fellowship, please begin by reading the Introduction and Program overview. Each site's report includes an overview of the activities that have taken place this quarter. Use the table of contents to locate a site's report. For a quick look at how the program is influencing Wipro Fellows read the sections entitled "Featured Fellows." To learn about how the Horizontal Collaboration Coaching and Learning in Science (H-CCLS) has impacted fellows look for the section titled, "Fellows Reflections on the H-CCLS teams." Throughout each site's report, you will find remarkable stories of Wipro Fellows supporting their students as teachers and supporting other teachers as teacher leaders.

Year	CA Stanford University	FL University of South Florida	MA University of Massachusetts Boston	MO University of Missouri	NJ Montclair State University	NY Mercy College	TX University of North Texas Dallas
2019-2020	Year 2	Year 2	Phase II & Lead Institution	Year 2	Phase II	Phase II	Year 3
2020-2021	Year 3	Year 3	Phase II & Lead Institution	Year 3	Phase II	Phase II	Year 4

Table of Wipro SEF sites

	Cohort 1	*Cohort 2*	*Cohort 3*	*Phase II*
Year 0	Recruitment			
Year 1	Collaborative coaching and learning in Science (CCLS)	Recruitment		
Year 2	Growth Plan System (GPS)	CCLS	Recruitment	
Year 3		GPS	CCLS	
Year 4			GPS	
Phase II				Activities proposed by individual sites.

Key to yearly activities

UMass Boston Lead Institution- Building and Supporting a Network of Wipro SEF sites

UMass as the Lead Institution plays a key role in coordinating the work of the sites and in providing opportunities for the sites to exchange information. This role has been particularly important during the Covid Pandemic. In addition to monthly Zoom calls, sites are normally visited by Dr. Eisenkraft and other university site leaders within the Wipro SEF network. With the arrival of the pandemic these site visits were cancelled, and network meetings were moved to Zoom and increased in frequency.

As the sites resumed the work of inducting a new Cohort of fellows, Dr. Eisenkraft has used Zoom to continue doing site visits. In August he virtually joined Missouri's first meeting with fellows and in September both Dr. Eisenkraft, UMass and Kapil Sharma, Wipro attended California's Induction ceremony. This ability to join meetings while sitting in your own home may be one of the few silver linings to the cloud of Covid.

In addition to changing the way sites communicate and share information. The change to on-line learning has drastically changed the way meetings and conferences are planned and conducted. Zoom or other platforms are being used and the upcoming conferences will be virtual as well. The sites CA, TX and FL learned from the June conference that was hosted by Missouri. The upcoming conferences will all be virtual. Without the time commitment of travelling to a host conference, Fellows and IHE staff will be able to attend any or all of the conferences.

One of the surprising aspects of the resumption of the Wipro SEF program for the fall semester has been the ability of each site to build community within the Wipro Fellows despite the meetings being virtual. Site leaders have gone above and beyond to support teachers both professionally and personally and the Fellows appreciate this support. Teachers are dealing with completely changing their instruction to on-line, helping their own children navigate on-line instruction all the while worrying about keeping themselves and their families healthy. For some, the Wipro SEF program is a bit of normalcy in a very unusual school year and participation is viewed as a positive experience.

Wipro Team

The Wipro personnel at the Center to Support Excellence in Teaching, Stanford Graduate School of Education (CSET) remains the same as previous years. See below for the team members.

WIPRO TEAM AT CSET
Suzanne Burrows || *CSET Executive Director*
Sylvia Cardenas || *Wipro Administrative Coordinator*
Janet Carlson || *CSET Faculty Director*, *Science PD & Research*
Tammy Moriarty // *Wipro Program Director*
Sharon Parker || *Science PD & Coach*
Danny Pimentel || *Science PD & Research*
Jenn Ray || *Graphics & Design*

Shelter in place order for CA schools went into effect in mid-March. During this time, Cohort 1 Wipro Fellows were in the middle of their GPS Projects and Cohort 2 Fellows were in the middle of their H-CCLS Work. When the realities of the COVID-19 pandemic hit, the CSET team made the decision to postpone and extend both the GPS and H-CCLS work for the fellows to alleviate any pressure or stress they felt around the completion of those responsibilities. All events were also postponed including the End of Year Conference and the recruitment and Induction Ceremony for Cohort 3 Fellows.

Additionally, all remaining professionally learning sessions for both Cohorts 1 and 2 took place virtually. These sessions were focused on keeping a strong community of science teachers who would support each other in dealing with the challenges of virtual teaching and learning. In all sessions, the CSET Team focused on supporting fellows as human beings and encouraged fellows to practice self-care. Here are links to the slide decks for those sessions:

Cohort 1	Wipro 20_04_30 Slides Cohort 1 Wipro 20_05_21_ Slides Cohort 1
Cohort 2	Wipro 20_04_23 Slides Cohort 2 Wipro 20_05_14_ Slides Cohort 2

The following Wipro Guidebooks outline the work that we will do with Cohort 2 and Cohort 3 during the 2020-2021 School Year:

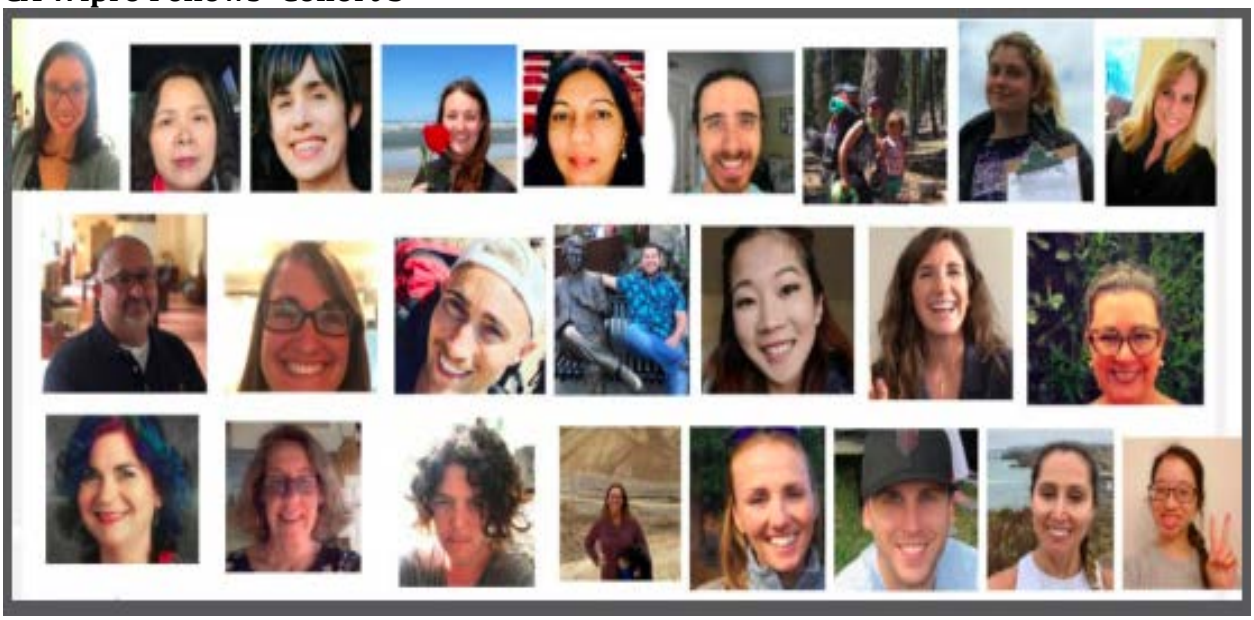
Wipro Guidebook, Cohort 2 (Year 2), 2020-2021
Wipro Guidebook, Cohort 3 (Year 1), 2020-2021

Cohort 3 Induction and First Meetings

The CA Wipro Team with the help of the five District Coordinators were able to recruit and induct 24 fellows from across the five districts. The Induction Ceremony took place virtually on September 1, 2020. The Wipro CSET Team sent a bouquet of flowers to each fellow, which they received on the day of the Induction Ceremony. Special speakers included Arthur Eisenkraft and Kapil Sharma. Please see the following links for the Induction Program, Induction Invitation, and slide deck from the evening:

- Induction Ceremony Program
- Induction Ceremony Invitation
- Slide Deck

CA Wipro Fellows- Cohort 3



Year 1 Agendas Cohort 3 fellows

Meeting Date	Goal(s) of Meeting	Meeting Facilitator (s)	Online meeting link
Saturday, Sept.12th 9:00am-12:00pm Virtual Session	Build community Begin V-CCLS Collaborative work Links to Slide Decks and important documents: Whole Group Cohort 3 Deck V-CCLS Team Tasks	Sharon Parker Tammy Moriarty	Zoom links will be provided to participants in a calendar invitation. If guests would like to attend, we would be happy to send Zoom information directly to each person.
Thursday, Oct. 8th 3:30-5:00pm Virtual Session	Continue with V-CCLS Work Equity in Science Education Discuss the importance of norms and establishing a community of learners	Sharon Parker Tammy Moriarty Danny Pimentel	
Thursday, Nov. 5th 3:30-5:00pm Virtual Session	TBD	Sharon Parker Tammy Moriarty Danny Pimentel	
Thursday, Dec. 10th 3:30-5:00pm Virtual Session	TBD	Sharon Parker Tammy Moriarty Danny Pimentel	
Saturday, Jan. 16th	TBD	Sharon Parker Tammy Moriarty Danny Pimentel	

9:00am-12:00pm Virtual Session			
Thursday, Feb. 4th TBD*	TBD	Sharon Parker Tammy Moriarty Danny Pimentel	
Thursday, Mar. 11th TBD*	TBD	Sharon Parker Tammy Moriarty Danny Pimentel	
Thursday, Apr. 22nd TBD*	TBD	Sharon Parker Tammy Moriarty Danny Pimentel	
Saturday, May 22nd TBD*	TBD	Sharon Parker Tammy Moriarty Danny Pimentel	
Thursday, June 10th TBD*	TBD	Sharon Parker Tammy Moriarty Danny Pimentel	
*For the months of February-June, we do not yet know if we will be able to meet in person or if we need to continue our professional learning in a virtual setting. Thank you for being flexible as we continue to make decisions that are responsive to the changing conditions brought on by the COVID-19 pandemic.			

Agendas

The CA Wipro SEF Program has had one professional learning session this year that took place on September 12, 2020 from 9am-12pm. During this time, they began a joint session with Cohort 2 and broke into their district teams to get to know each other better. Then the cohorts broke into their own separate rooms and came back together for the final 15 minutes. The session ended with Cohort 2 writing encouraging notes to Cohort 3. Here are the links to Slide Decks and important documents that pertain to Cohort 3:

- Whole Group
- Cohort 3 Deck
- V-CCLS Team Tasks

Attendees

All Cohort 3 fellows attended except for one fellow who had a family emergency and arrived late. Tammy has arranged to meet with her later in the week to catch her up on what she missed.

Meeting Reflections

The meeting accomplished the intended goals of the session which was to build community and start the fellows with their V-CCLS work in their groups. Because this session was virtual, it was quite challenging to introduce the V-CCLS work and planning process during our shortened 3-hour session. The CSET Wipro Team will follow-up with each Cohort with descriptive emails and will continue the work during the next session at the beginning of October.

V-CCLS Team Assignments for Cohort 3

The V-CCLS Team Assignments this year were quite well-rounded with almost an even distribution of elementary, middle, and high school teachers in each group. The CSET Wipro Team intentionally made all V-CCLS groups with 3 members each to give the groups plenty of time to video record their lessons, provide feedback, and debrief together. Based on the experiences of other groups of 3 in previous cohorts, the CSET Wipro Team thought that a group of 3 still had enough members to push each other's thinking and provide enough variation in ideas. Also, because of the number of fellows accepted from each district, we were able to mix the teachers from different districts in each group. Please see the table below for the V-CCLS Team assignments.

	Name	District	Grade	Vertical Group
Group 1: Biology	Robert Coverdell-Meneses	SFUSD	10-12	High
	Stephanie Yue	Moreland	6-8	Middle
	Brittney O'Brien	Mtn View/Whisman	TK-5th (STEAM)	Elementary
	Emily Stollmeyer	SFUSD	9-12	High

Group 2: Earth Science	Nicholas Guttadauro	Moreland	7	Middle
	Jenny DeGraaff	Mtn View/Whisman	3-5	Elementary
Group 3: Biology	Thomas Fulwiler	SFUSD	9	High
	Jaclyn Diaz	Mtn View/Whisman	3-5	Elementary
	Victoria Lanterman	SFUSD	4	Elementary
Group 4: Physics	Yichang Liu	SJUSD	10-12	High
	Adrian Tamayo	SFUSD	6-7	Middle
	Julie McKinley-Reed	Moreland	2	Elementary
Group 5: Chemistry/Physics	Alex Johnson	Campbell	11-12	High
	Laura Spanier	SFUSD	6-7	Middle
	Margaret Poor	Mtn View/Whisman	3-5	Elementary
Group 6: Biology	Stacey Rader	Campbell	9-12	High
	Amanda Lim	SFUSD	6-7	Middle
	Sierra Vance	Moreland	1	Elementary
Group 7: Biology	Jessica Paulsen	SJUSD	9-10	High
	Elizabeth Reiff	SFUSD	7	Middle
	Chelsea Alvarez	Moreland	3	Elementary
Group 8: Chemistry	Gargi Verma	Campbell	9-12	High
	Sarah Huggins	Moreland	6-8	Middle
	Mithril Cox	SFUSD	3	Elementary

Cohort 2 GPS progress

Cohort 2 will be finishing their H-CCLS work between September-October and will be presenting their H-CCLS learnings at the rescheduled Wipro Conference that will take place between October 26th through November 7th.

The GPS Project Timeline for Cohort 2 has been shifted to November 2020 through June 2021 due to the pandemic and the need to complete H-CCLS work. Fellows will be encouraged to do a project that is meaningful and doable in this timeframe. Cohort 2 was introduced to the GPS project during their first professional learning session on September 12, 2020. A member from Cohort 1 shared her project with the group and talked through her thinking process behind how she chose her project. All Cohort 2 fellows were given the

GPS Planning Template and encouraged to begin thinking about what they would like to focus on this year. See the following links to the slide decks from their first professional learning session:

- Whole Group
- Cohort 2 Deck

Cohort 2 GPS Topics

Our fellows are in the beginning phases of picking their project. We will include their project information in the next quarterly report.

Upcoming meetings with Cohort 2 fellows **Meeting Date**	**Goal(s) of Meeting**	**Online meeting link**
Saturday, Sept.12th 9:00am-12:00pm Virtual Session	Reconnect with each other Meet Cohort 3 Re-orient to H-CCLS work Introduction to the GPS Project and Process Links: • Whole Group • Cohort 2 Deck	Zoom links will be provided to participants in a calendar invitation. If guests would like to attend, we would be happy to send Zoom information directly to each person.
Thursday, Oct. 15th 3:30-5:00pm Virtual Session	Prepare for the rescheduled Wipro Conference GPS Planning & Work	
Saturday, Nov. 7th 9:00am-12:00pm Virtual Session	Wipro H-CCLS & GPS Conference	
Thursday, Nov. 12th 3:30-5:00pm	Reflection on Conference GPS Portfolios	

Virtual Session		
Thursday, Dec. 10th 3:30-5:00pm Virtual Session	TBD	
Thursday, Jan. 21st 3:30-5:00pm Virtual Session	TBD	
Thursday, Feb. 11th TBD*	TBD	
Thursday, Mar. 18th TBD*	TBD	
Thursday, May 6th TBD*	TBD	
Saturday, May 22nd TBD*	Wipro End of Year Conference • Cohort 2 GPS Projects • Cohort 3 H-CCLS Presentations	
Thursday, June 17th TBD*	TBD	
*For the months of February-June, we do not yet know if we will be able to meet in person or if we need to continue our professional learning in a virtual setting. Thank you for being flexible as we continue to make decisions that are responsive to the changing conditions brought on by the COVID-19 pandemic.		

Cohort 2 meetings with Advisors

Each fellow was assigned a coach/mentor last year who is part of the CSET Wipro staff. Fellows will be working with the same mentor this year to continue discussion about their classroom practice as well as support their GPS Project implementation. All mentors have reached out to check-in with each fellow and will continue to meet monthly with each person throughout the school year to discuss both their classroom practice (coaching) as well as provide mentoring with their GPS projects.

Here are the coaching mentoring assignments for Cohort 2:

Cohort 2 Coach/Mentor Assignments

Coach/Mentor	Fellow	District
Sharon Parker	Krista Berry	Mtn. View
	Allison Houghton	Mtn. View
	Theresa Lester	Mtn. View
	Antony Torres	Mtn. View
	Sohum Bhatt	SFUSD
	Margaret Dominguez	SFUSD
	Jennifer Lim	SFUSD
	Carol Lima	SFUSD
	Kelsey Magaña	SFUSD
	Gina Maschio	SFUSD
	Vicente Patino	SFUSD
Tammy Moriarty	Kjartan "Eric" Armann	Moreland
	Joanne Endo	Moreland
	Satomi Fujikawa	Moreland
	Melissa Duran	SJUSD
	Andrea Martinez	SJUSD
	Anu Sarkar	SJUSD
	Roy Walton	SJUSD
	Jessica Overby	Campbell

District Science Coordinators

District Science Coordinators will be meeting regularly as a group with the Wipro CSET Team five times this school year (about every other month). During these meetings, each District Coordinator shares what has been happening with science teaching in their districts as well as how they have been supporting their fellows' work. This time is also

used to discuss how to continue to move the fellows forward in their science classroom instruction as well as how to continue to build their leadership capacity in their contexts.

Meetings with Cohort 2 Fellows

District Coordinators will be meeting with their Cohort 2 Fellows regularly to discuss and offer support for their GPS Projects. All District Coordinators will be checking in with fellows individually and some will gather them together as a group. The CSET Wipro Team does not attend these meetings but checks in regularly with District Coordinators to keep up to date on their work.

Meetings with Cohort 3 Fellows

District Coordinators check in regularly with Cohort 3 fellows individually or at the monthly professional learning sessions.

End of the year Host Conference

Site location (State)	Date of Conference	Conference Location	Online Links
CA	October 26, 2020 Synchronous Conference Launch October 26-30, 2020 (asynchronous) November 7, 2020	Virtual (Zoom)	TBD

Host Conference Description

The Stanford team plans on having our rescheduled Wipro Conference at the end of October to beginning of November. The conference will begin with a synchronous virtual launch on October 26th and followed by an asynchronous viewing and feedback throughout the week. The synchronous portion of the conference will take place on November 7, 2020 for three hours on Zoom. All Cohort 1 GPS Posters and Presentations as well as all Cohort 2 H-CCLS presentations will be the focus of the conference. Fellows from other Wipro sites will also be invited to participate. During the synchronous session on November 7th, fellows will have the opportunity to engage with each other and give each other feedback in breakout sessions. Details are still being worked out.

Reflections on the Missouri Virtual Conference

Dr. Wu attended the Missouri conference along with one CA H-CCLS group and several volunteers who acted as Talent Ambassadors. She thought the asynchronous portion was very well planned and was easy to view and provide feedback to presenters. For the synchronous session, she thought it went well overall. However, some of the breakout rooms that she was assigned had fellows who chose to hide their faces on the Zoom call, which made the call a little bit impersonal.

Participating in the Missouri Conference gave the Stanford team an idea about how to organize and assign presentations to various participants. It also gave the team a glimpse into the type of infrastructure they will need to develop for their own Conference at the end of October.

Cohort 1 Fellows

Because of the pandemic, the CSET Wipro Team extended the GPS submission deadline for Cohort 1 to September 4, 2020. This submission included both GPS Portfolios and GPS Posters. Cohort 1 fellows will be asked to participate in the Wipro Conference at the end of October.

Featured Fellows

Maggie Dominguez, Wipro CA Cohort 2, Bessie Carmichael School, SFUSD, 8th grade

When I applied to Wipro, I felt most inspired by the outline of the second year of the program. I am a leader at my school site, and I looked forward to developing this skill. Anxiously awaiting this work, I was ready to dive in and keep my eyes set on Fall 2020. Upon reflection, I can see that Year 1 of Wipro was the work that I *needed.*

When we first began our V-CCLS work, I was worried. Collaboration through the use of video and protocol was not a new learning format for me, however I am committed to Social Justice work and am very familiar with the resistance and tension that can come up in spaces of collaboration. I felt concerned about the vulnerable work that we would do in V-CCLS groups. Would my group members be willing to interrogate microaggressions? Would we feel comfortable to examine our own biases together through our work? Would we be able to bravely ask uncomfortable questions of each other?

I was surprised by how quickly my V-CCLS group began to have hard conversations together. Within our first meeting, we interrogated student work and studied why some students participated more than others in Science class. We considered how race intertwined with student participation and the strategies we were using to engage our Black and Brown students. Looking at content through the lens of Equity of Voice allowed us to have hard conversations about the participation patterns of our historically underserved students. We converted our readings and discussions together to actual strategies that we all tried out in class to better support our students in working together. We did this all while quickly building trusting relationships with each other across our differences.

After finishing our V-CCLS work, I was invigorated and looking forward to our work in H-CCLS groups. While COVID-19 cut short our work together, I was happy to be connected with teachers in other districts in the Bay Area to face uncertain times. We were able to lend resources to each other and offer support during such trying times. I look forward to continuing our work together in the Fall to finish what we started together!

Satomi Fujikawa, Wipro CA Cohort 2, Country Lane Elementary, Moreland School District
3rd Grade

When you are a teacher, it often feels like you're in a bubble. You spend most of the day alone with a room full of students with little interaction outside of the four walls. And even when you collaborate with other teachers, it is usually with teachers in the same grade or within your own site. The Wipro Fellowship has given me a chance to expand my bubble in ways I have never experienced before.

One of the many ways the Wipro Fellowship opened my bubble was through my vertical alignment group. Although I was nervous about other teachers who I had just met looking at my teaching, the enthusiasm of the other fellows and the structure of the protocols made it such a valuable experience. The time I spent in the V-CCLS group helped me to see the big picture--the concepts and the skills that I was teaching in my third grade classroom directly connected with what was happening in middle school science classes and beyond.

In the Wipro Fellowship, I am surrounded by fellow educators who are also passionate about teaching science, leadership, and equity. We all understand the challenges we face but are not afraid to do the work that's necessary to prepare our students for the future. My involvement in the fellowship has given me the courage to take an active role in developing and implementing my school district's goals for increasing student achievement in science. I also had the chance to participate in the Missouri Wipro Conference this past summer and work with educators from

around the country. I look forward to my second year as part of the Wipro Fellowship community and expanding my bubble even further.

Year 2 Reflection

This past year has been quite a whirlwind for our CA Wipro SEF Program. The CA Wipro Team has managed to create a strong community of science teacher leaders with both Cohort 1 and Cohort 2 fellows. San Francisco Unified School District Fellows were added to the group, along with their District Coordinator (SFUSD had always agreed to be a part of the CA Wipro Program but wanted to postpone their participation for one year.) The addition of SFUSD brought an important lens to our collective work. Cohort 2 fellows had powerful learning experiences in their V-CCLS work and did a nice job transitioning to H-CCLS work in the middle of a pandemic and shelter in place orders! Cohort 1 fellows followed through with their GPS Projects and still managed to do quite a bit of meaningful work focused on their personal and district goals. The Wipro CSET Team did a nice job transitioning to a virtual experience almost immediately and the feedback from fellows from both Cohorts was that they felt supported as we responded to their needs as teachers and as human beings.

During the summer, as we launched into the recruitment of Cohort 3 and planning how we would move forward and "catch up" with last spring's work in this new pandemic reality, the Wipro CSET Team remained grounded in our beliefs around equitable teaching and learning in science and supporting science teacher leaders in designing and implementing high quality learning experiences for students. To be as responsive as possible, this required additional planning, one on one meetings with fellows, and conversations with District Coordinators about how our program can provide a safe and productive learning space for all of our fellows. Their feedback allowed the CA Wipro Team to move forward in meaningful ways.

So far, the CA Wipro SEF Program is off to a smooth start. The CA Team remains hopeful about the work that the teachers will do together as a professional community during this school year.

FLORIDA- UNIVERSITY OF SOUTH FLORIDA

Introduction

Last spring all districts moved to distance-based, online instruction after spring break in mid-March. The spring 2020 conference and fall 2020 induction ceremony were postponed. We are now planning to have the conference on October 24 that will include a brief induction ceremony. We are inviting the other sites to have two of their H-CCLS groups present and will host any GPS video presentations from those sites.
There have not been any changes in personnel, although Karl Jung has been selected as an Anchin Center scholar-in-residence for this academic year, and David Rosengrant is a STEM Fellow with the Center.

Cohort 3 Induction and First Meetings

We have not yet held a formal induction ceremony for our fellows. Because recruitment of Cohort 3 was prolonged due to Covid-19 and the uncertainty surrounding the start of the academic year, there was not time between selecting Cohort 3 and beginning our work with them for a formal induction ceremony. At our first meeting we welcomed them into the program, and the district coordinators spoke to them about the importance of the program to each district, and how their work in the program is benefitting the districts. At our conference on October 24th, we plan to again recognize the new cohort of teachers Year 1 Agendas Cohort 3 fellows

Meeting Date	Goal(s) of Meeting	Meeting Facilitator(s)	Online meeting link
August 22, 2020	There were two main goals for this first meeting of cohort 3. The first was for the Fellows to meet one another, the district science coordinators, and the USF team; and to begin to develop a cohesive group. The second was to introduce them to the Wipro SEF model. The Fellows also met with their DSCs. The meeting was held via Zoom. It began at 9am and ended at 12:30pm.	Allan Feldman, Karl Jung, and David Rosengrant	https://zoom.us/j/93719101149?pwd=dDRIZGl4K0dOZUtrV2k4elBkQkFhZz09

September 12, 2020	The goals for this meeting are to introduce cohort 2 and 3 with each other and build community across these cohorts and within the districts. We will also be further clarifying the work of the VCCLS groups for cohort 3 and preparing them to launch into that work after this meeting. With cohort 2 we will be giving them opportunities to discuss the progress on their GPS projects and create affinity groups to support each other's work.		https://zoom.us/j/99203506834?pwd=MWtTMkRSUTZXL0tvVForblJvVXFHdz09
October 3, 2020	Introduction to the Framework, NGSS standards and 3D learning	TBD	TBD
November	Understanding the science and engineering practices	TBD	TBD
December	Understanding the cross-cutting concepts	TBD	TBD
January	VCCLS Presentations and launching HCCLS groups	TBD	TBD
February	Deep dive into one science and engineering practice	TBD	TBD
March	Deep dive into another science and engineering practice	TBD	TBD
April	Preparing to share our work and launching the GPS	TBD	TBD

Agendas

Agenda for August 22

9:00-9:25 Ice Breaker and introductions
9:25-9:50 Introduction to Wipro model and three pillars
Why it is important for each of the three districts
9:50-10:20 Overview of CCLS model
10:20-10:35 Break
10:35-11:00 Grounding our work in research – David, finding articles – Google scholar, if they can't find the article, we will get if for them
11:00-11:35 V-CCLS team meeting
11:35- 11:50 Meet in district groups with district coordinators
11:50 -12:00 Share Wows and Yikes
Adjourn

Agenda for September 12

I. Welcome back (5 minutes)
II. Conference – October 24th
III. County groups (2 for HCPS) (35 minutes)
- Introductions
  - Name, school, years of experience
  - How you are teaching (F2F, online) this year
  - Favorite Science Topic to teach
  - Disney or Universal? Marvel or DC?
- Cohort 2 – brief description their experiences with CCLS and answer questions from cohort 3

IV. Cohort 2 – (1 1/4 hours) - David, Allan (new Zoom meeting) (include break)
- Conference details
- What are your Burning Questions? - put in chat box as we go along
- Next Steps in GPS – prepare proposal, meet with mentor, monthly reflections, final proposal, mentors
- Developing Affinity Groups: Each cohort 2 fellow makes a 1-2-minute presentation of GPS project, others keep track of what group they would like to be in. We have a starter list of groups for them from last year.
  - Nature: Enrichment with plant focus, plants and gardens, growing plants
  - Capacity: 21st century skills and technology, science leadership, sharing of resources and grant information, equity and mentoring
  - Equity: Social emotional mentorship; feedback; access through equity; involving, informing, and connecting family and school; SEL framed by teacher feedback to students
  - Possibilities for this year [David research]
- 10 min break
  - Meet in affinity groups – David texts Karl with list of affinity groups

- Return to original Zoom meeting

V. Cohort 3 - (1 1/4 hours) - Karl, Nancy, and at least one DSC
   a. What are your Burning Questions? - put in chat box as we go along
   - Recording your V-CCLS lesson
     - Group 1: F2F teaching - Karl
     - Group 2: Online teaching – DSCs, Nancy
       - Synchronous – Zoom recordings?
       - Asynchronous?
   - V-CCLS structure – debriefing and forms
   - V-CCLS Groups – article discussion, finalize course of study, calendar for V-CCLS teaching and debriefs (at least 30 minutes)
   - Cohort 3 Burning Questions

VI. Announcements (Allan and Karl) USF Information/Agenda Items
   - Remind of upcoming meeting schedule
   - Remind about Dropbox and that all forms and files for each debrief must be uploaded there.

VII. DSC meetings with both cohorts (30 minutes)

Attendees

August 22 meeting: Dawn Avolt, Ileana Bermudez Luna, Andrea Blomeley, Nicole Caltabellotta, Gina Choate, Lora Darby, Kellie Delgado, Kimberly Fox, Nicole Holman, Laura Lacy-Carlson, Kathryn Laubach, Yasmeen Leon, Christina Macurdy, Roshaun Reno, Andrea Smoley, Chelsey Swats, Mishell Thomas-King, Charles Turner, Laurie Vaughn-Grantges, Kelleigh Weeks, Pam Pelletier, Larry Plank, Fawnia Schultz, Allan Feldman, Karl Jung, David Rosengrant, Nancy Islam.
September 12 meeting: Dawn Avolt, Ileana Bermudez Luna, Andrea Blomeley, Nicole Caltabellotta, Gina Choate, Lora Darby, Kellie Delgado, Kimberly Fox, Nicole Holman, Laura Lacy-Carlson, Kathryn Laubach, Yasmeen Leon, Christina Macurdy, Roshaun Reno, Andrea Smoley, Chelsey Swats, Mishell Thomas-King, Charles Turner, Laurie Vaughn-Grantges, Kelleigh Weeks, Sherri Alvarez, Teresa Buckman, Karen Bulino, Richard Card, Jennifer Cogan, Carrie Donatelli, Julie Fine, Jennifer Griffone, Bhagyashree Kulkarni, Tara McClintick, Cayla Repass, Daniel Rice, Ann Salazar, Latasha Seay, David Seis, Sonila Toska, Anita Ventura, Michele Wiehagen, Pam Pelletier, Larry Plank, Fawnia Schultz, Allan Feldman, Karl Jung, David Rosengrant, Nancy Islam, Daina Kelly

Meeting Reflections

Our first meeting of the year went well. We were able to introduce the fellows to the project and share with them a broad overview of the work that they will be doing within the CCLS groups this year. Once placed in their VCCLS groups, they were all successful in identifying a course of study, with each group identifying a common content idea more quickly than in previous years. We were pleased by this as there was some concern it might be difficult this

year due to districts expecting teachers to hold very tightly to their pacing calendars because of the combination of virtual and face-to-face teaching that is taking place.

The second meeting was the first with both cohorts 2 and 3. We accomplished all our goals for the meeting. The reintroductions in the county groups was useful for all. We ran out of time for the affinity group meetings and the V-CCLS group meetings during the regularly scheduled time. However, the V-CCLS groups stayed on Zoom to meet. The affinity groups will be meeting on their own.

V-CCLS Team Assignments for Cohort 3

Our recruiting activities were disrupted by the COVID-19 pandemic. It became exceedingly difficult to reach out to teachers during the spring when they were heavily burdened by the rapid switch to online teaching and learning. It continued to be difficult to recruit during the summer. As a result, Cohort 3 is skewed with nine high school teachers, two middle school, and nine elementary. Therefore, we decided to make five teams of four teachers to better distribute the high school and elementary teachers.

Biology 1	Biology 2	Chemistry	Physics Group	Environmental /earth Science
Gina Choate Elementary Hillsborough	Kellie Delgado Elementary Hillsborough	Kathryn Laubach Elementary Hillsborough	Dawn Avolt Elementary Pinellas	Christina Macurdy Elementary Pinellas
Lora Darby Elementary Pasco	Nicole Caltabellotta Elementary Pinellas	Kimberly Fox Middle School Pasco	Laura Lacy-Carlson Elementary Pasco	Andrea Blomeley Elementary Pasco
Roshaun Reno High School Pinellas	Andrea Smoley High School Pasco	Ileana Bermudez Luna High School Hillsborough	Yasmeen Leon Middle School Hillsborough	Nicole Holman High School Hillsborough
Chelsey Swats High School Hillsborough	Mishell Thomas-King High School Pasco	Laurie Vaughn-Grantges High School Pinellas	Charles Turner High School Hillsborough	Kelleigh Weeks High School Hillsborough

Cohort 2 GPS progress

We have set the following calendar for our GPS projects in Cohort 2.

Name of activity	**Description of Activity**	**Target date for completion**

Brainstorming document for GPS to USF Faculty and DSCs	Complete the GPS brainstorming document and send an electronic version to Allan, Karl, David, and your district coordinator (DSC)	June 24, 2020
GPS Feedback back to Fellows	Feedback will be provided by Wipro SEF leadership, and your DSC.	July 1, 2020
GPS Proposal Due to USF	Send completed GPS proposal to Allan and Karl, and your DSC.	July 31, 2020
Induction Ceremony	Induction ceremony of cohort 3	August 21, 2020
Discussion with principal	Review plans for the year. Have a conversation with your principal about your goals for the GPS.	September 1, 2020
Assignment of Mentor	Set-up meetings with mentor and review GPS plan with mentor.	September 1, 2020
Attend September monthly meeting	Attend September monthly meeting to share work with cohort 3 fellows.	September 12, 2020
Submission & Acceptance of any revisions of GPS plan	You and your mentor decide on any revisions of GPS plan	September 23, 2020
Submit September monthly reflection	Complete reflection prompts and submit via Qualtrics an account of work accomplished to date	September 30, 2020

	and a summary of meetings with your Mentor.	

This year the Fellows will have a possibility of two mentors. The first will be a member of the TB Wipro SEF team to help shepherd them through the GPS process and provide additional expertise. The Fellows can also to have a second mentor, who they would select for the expertise for their projects.

At the September 12th meeting, Fellows were informed of their TB Wipro SEF mentor, and were asked if they had a second one in mind. All of the fellows have turned in a GPS proposal though one was asked to resubmit the proposal. If they need any additional time on their revisions (due date of 23rd) we will address that on a case by case basis. The fellows will also learn what the monthly reflections entail. We will email the fellows to find how their conversations went with their administrators.

Cohort 2 GPS Topics

Fellows Name	**Personal Goal (1-2 sentences)**	**District Goal (1-2 sentences)**	**TB Wipro SEF Mentor**
Bhagyashree Kulkarni	To create chemistry educational videos and broadcast on you tube so it is accessible to anyone who needs help with chemistry.	To learn how to make good and effective educational video.	Allan Feldman
Daniel Rice	During the 2020-2021 school year, I will complete three projects involving the Raspberry Pi (RPi).	During the 2020-2021 school year, I will sponsor a Code Club at Middleton High School (MHS) in which students complete projects intended to learn the Python Language and fostering computer programming skills.	Allan
Sherri Alvarez	Goal 1: Foster Community Relationships that support STEAM learning. (HCPS Essential Element 3) By May of 2021 I will provide 2 opportunities for community and school to	Goal 2: By May 2021 I will expand my knowledge base by learning more about diverse individuals throughout history and currently in our area	David Rosengrant

	come together to support Diversity in STEAM Education at Folsom Elementary. This will be accomplished by having activities focusing on diverse groups of individuals involved in STEAM jobs an opportunity to present information to our students and another opportunity where students share their knowledge gained by studying about diverse people in STEAM throughout history.	involved in STEAM programs and jobs. I will create 2 webpages to be added to our school's website showcasing student work and knowledge about 10 diverse STEAM individuals throughout history.	
Carrie Donatelli	Create a platform for educators to share STEM lessons and activities	Promote STEM learning to students through a STEM Club	David
Tara McClintick	To incorporate science technology resources into my teaching routine for each student to have quality science instruction due to limited hands-on, collaborative science inquiry and investigations.	To use digital devices to integrate learning into the instructional day for content delivery, research, creativity, innovation and collaboration. This will also allow for partnership between families, students and teachers, as parents will have daily access to instruction and enrichment materials for their student.	David
Teresa Buckman	To improve my skills in the development and delivery of professional development that is meaningful and enjoyable.	To improve the overall level of confidence and knowledge basis for elementary instructors of science.	Fawnia Schultz
Latasha Seay	Differentiate my instruction using culturally responsive teaching to engage the whole child	Using culturally responsive teaching strategies, I will incorporate equitable practices for every child in my classes	Fawnia

Karen Bulino	I will move from understanding and empathy to action and activism for our marginalized students, especially our black and brown males.	I will help to dismantle the impact of systemic racism in classrooms throughout our district through the creation and presentation of equity professional development and provide resources that assist teachers/district personnel in implementing immediate changes in their classroom/schools to end the criminalizing of our students, especially our black and brown males, that leads to the educational disenfranchisement of these marginalized learners. Not only do I hope that this contributes to equitable student outcomes by eliminating the accessibility and opportunity gaps but humanizing our black and brown males is literally a life and death matter now more than ever.	Fawnia
Jennifer Cogan	Create a sustainable school garden while incorporating STEM practices through direct observations (school)	Teaching "outside the box" in an outdoor environment (personal)	Karl Jung
Sonila Toska	Support students to develop scientific literacy they need to gain a knowledge of science content and practice scientific habits of mind.	Support teachers in teaching students scientific terms, NOT just front-loading scientific terminology.	Karl
Ann Salazar	During the 2020-2021school year, I will...implement STEM and	During the 2020-2021 school year, I will...provide equitable	Karl

	creativity activities with a science emphasis for K-5 gifted students on a bi-weekly basis. At the end of the school year they will understand the engineering process and use their creativity skills in other subject areas when problem solving.	opportunities for my gifted students by using culturally relevant teaching.	
Jennifer Griffone	To create, develop, and implement computer science standards lessons to improve student achievement.	Gain a better understanding of the elementary computer science standards and integrate that understanding into creating lessons.	Larry Plank
David Seis	Develop two trainings for my site	Thoroughly integrate science and engineering practices throughout the year	Larry
Brett Goodrich	Set up a class where students will watch or read through lessons at home in various forms.		Larry
Julie Fine	To incorporate one storyline in each of the first three quarters into my biology classes and to determine whether this action increases student engagement (attitude towards science) and student achievement in biology.	To publish my work in a teacher journal at the completion of this project (Spring/Summer, 2021).	Lesley Kirkley
Michele Wiehagen	By the end of the 2020-2021 school year, 5 sets of Kindergarten-Fifth Grade content integrated Engineering Design Cycle lessons will be created. These will be grounded in real world problems that students must solve by	By the end of the 2020-2021 school year, I will have attended content specific training in ELA, Math and Science to increase my background knowledge in order to write integrated lessons.	Lesley

	creating solutions through a new invention.		
Richard Card	During the 2020-2021school year, I will make connections to the Florida curriculum with my students in an effort to learn about native Florida plants to provide a space on campus where students and staff can enjoy the natural Florida environment.	During the 2020-2021school year, I will participate in District Related Professional Development in science to continue my professional growth as a teacher of science and to use those skills to facilitate science at my grade level.	Nancy Islam
Cayla Repass	During the 2020-2021 school year, I will help to increase my and my coworker's knowledge and understanding of introducing and implementing STEM in an elementary classroom through the use of professional development and discussion groups based around how to instruct students in a STEM focused classroom. Through these professional developments, I hope myself and my coworkers will become more aware of what STEM is and continue to grow our knowledge to be skilled to educate in these subjects. As I am increasing my knowledge of this topic, I hope to learn of ways on how we could utilize STEM education in a blended learning environment in order to contribute to student engagement and success.	During the 2020-2021 school year, I would like to increase instructional engagement and student success by becoming more STEM focused through the use of implementing lessons designed to incorporate all aspects of STEM (science, technology, engineering, mathematics, problem solving, collaboration, etc.).I would like to join the district's work team focused on a STEM approach to education.	Pam Pelletier
Anita Ventura	To highlight and expose minority students to	Partner with the media specialist to create an	Pam

	literature books that are focused on Science/STEM topics that either have a minority as a main character or real-world Scientist or Engineer focus or have more minorities children/adults pictured in the pages.	ON project with library of books with Science/STEM focus that include minorities.	

Upcoming meetings with Cohort 2 fellows (meetings occur with cohort 3 meetings).

Meeting Date	Goal(s) of Meeting	Online meeting link
Sept. 12	Agenda is listed above. Key points: finalize mentor, reflect on GPS submitted, look at overall trends among all submitted GPS projects. We will also be forming affinity groups.	See above
Nov. 14	Fellows report on progress for GPS. Discussion of reflection prompts. Portfolio requirements Meet with affinity groups to discuss issues, struggles, challenges, and successes.	
Jan. 9	Fellows report on progress for GPS. Discussion of reflection prompts. Portfolio questions/progress Poster development. Meet with affinity groups to discuss issues, struggles, challenges, and successes.	
March 6	Fellows report on progress for GPS. Discussion of reflection prompts. Portfolio requirements Meet with affinity groups to discuss issues, struggles, challenges, and successes. Fellows will also work on poster development.	
May 15	Cohort 2 Fellows will create a poster of their GPS work accomplished by this date and present to an audience of invited guests and former and current fellows.	

Cohort 2 meetings with Advisors

We had decided that each fellow would have a mentor from the leadership team for the project. This does not preclude them from working with others. We decided that having this mentor process setup this way will allow us to ensure that our fellows are making adequate process on their projects. What we did was send the goals that each fellow come up with out to the entire leadership team and had the team pick fellows whose goals somewhat align with their own interests or abilities to help them accomplish their goal.

Some of the fellows have suggested personnel they would like to work with and so they will be able to work with those they suggested as well as the leadership team mentor. We will be finalizing all of this for the fellows at our September 12th meeting and they will be following the calendar above.

District Science Coordinators

Meetings with Cohort 2 Fellows

Schedule of meetings during GPS year

Sept 12
October 24 - TB Wipro Conference
Nov 14
Jan 8 (V-CCLS presentations for cohort 3)
Mar 6
May 15 - End of year conference
Most likely all the meetings will be virtual.

Shaping the GPS year

The TB Wipro SEF DSCs have been continuously involved in Cohort 3's experiences in the program. They meet with the USF leadership team at least once per month to discuss the agendas for the monthly meetings and to provide advice and insight into all other aspects of the program, including recruitment, development of GPS projects, and mentoring fellows. The DSCs have read and responded to the Fellows' brainstorming documents and will do so for their proposal drafts.

Meetings with Cohort 3 Fellows

Schedule of meetings with Cohort 3 Fellows

August 22 - Monthly Meeting
September 12 - Monthly Meeting with Cohort 2
October 3 - Monthly Meeting
October 24 - TB Wipro Conference
November 14 - Monthly Meeting with Cohort 2
December 5 - Monthly Meeting
January 9 - Monthly Meeting with Cohort 2
February 20 - Monthly Meeting
March 6 - Monthly Meeting with Cohort 2
April 17 - Monthly Meeting
May 15 - End of Year Conference with Cohort 2
Most likely all the meetings will be virtual.

Meeting focus

Date	Focus
9/12	Build community and understand coherence in science concepts and standards
10/3	Introduction to the Framework, NGSS standards and 3D learning
11/14	Understanding the science and engineering practices
12/5	Understanding the cross-cutting concepts
1/9	VCCLS Presentations and launching HCCLS groups
2/20	Deep dive into one science and engineering practice
3/6	Deep dive into another science and engineering practice
4/17	Preparing to share our work and launching the GPS
5/15	Year 3 Conference

End of the year Host Conference Upcoming

Site location (State)	Date of Conference	Conference Location	Online Links
FL	October 24th, 2020	Virtual	Registration Link - https://usf.az1.qualtrics.com/jfe/form/SV_3a4E2x0pgaIPukZ

Host Conference Description

The TB Wipro SEF conference will take place over the course of 1 week, first asynchronously and then synchronously. It will include HCCLS presentations and GPS projects from FL, CA, MO, and TX. Below is a description of how the conference will take place along with a draft schedule.

Pre-conference Preparation

- Titles and abstracts of presentations sent to USF by Saturday, October 3rd.
- Session list distributed to full, nation-wide Wipro SEF program on Wednesday, October 7th.
- Attendees register via Qualtrics for sessions they want to attend by Wednesday, October 14th.

Virtual Kickoff – Saturday, October 17th.

- Kickoff email sent to registered attendees with instructions for the conference.
    - Videos made available to watch via Box/Dropbox.
    - Welcome video included in Box/Dropbox and email.

Asynchronous Sessions – Saturday, October 17th through Friday, October 23rd.

- Attendees watch videos for sessions they registered to attend.
- Record warm/cool feedback and questions to provide during synchronous session.

Synchronous Sessions, Saturday October 24th, 1:00-4:00 EST.

- Series of synchronous sessions with registered attendees.
- Fellows provide brief (5 minutes) review of who they are and what their work was that was shared in their video presentation.
    - Who are group members and where/what do they teach?
    - Course of Study.
- Brief review of key learnings/highlights from the work.
- Attendees provide warm/cool feedback and ask questions. Facilitated by member of TB Wipro leadership team.

Draft Schedule

Session	Room 1	Room 2	Room 3
1:00-1:15 – Welcome	Welcome to the meeting and review of process		
1:15-1:55 – Concurrent Session 1	FL Group 1 TX Group 1	FL Group 2 CA Group 1	FL Group 3 MO Group 1
1:55-2:05 – Break/Transition	Create new breakout rooms while attendees take a break		
2:05-2:45 – Concurrent Session 2	FL Group 4 TX Group 2	CA Group 2 MO Group 2	
2:45-3:45 – Keynote Presentation	Keynote speaker presentation		
3:45-4:00 - Closing	Concluding activity to gather some feedback and perspectives – Promote GPS Poster presentations via Flipgrid		

Reflections on the Missouri Virtual Conference

Allan Feldman and David Rosengrant, along with two of our DSCs and a number of Fellows from cohort 1 and 2 attended the virtual Missouri conference. The layout of the conference helped provide ideas for our own moving forward. We liked how it was laid out so that every presentation would have some feedback in that individuals were assigned to a

minimum number of presentations to view and comment on. The combination of synchronous and asynchronous helped reach a great number of participants. We are using what we learned to help with our own conference.

Cohort 1 Fellows

The TB team is planning to involve Cohort 1 Fellows, however, their thoughts about how to do this are still evolving. Minimally they will be invited to be participants in the January presentations and May conference. As Cohort 2's GPS projects become more solidified, leadership will connect them with Cohort 1 fellows who have done similar projects. We are working with the DSCs to develop ways for Cohort 1 to engage in informal leadership activities in their districts.

Featured Fellows

David Seis, Middle School Cohort 2, Hillsborough County Public School District

I love science - it inspires me, surprises me, and challenges me all the time. I love sharing and helping others learn to do and think about things, especially when it comes to the amazing things that are possible in science. This is my 5th year as a teacher and I have served in urban high-needs schools for all of them, in the same district I graduated with my Helios STEM middle grades teaching degree in - Hillsborough!

My desire is to always do better, and I have the Wipro SEF to thank for a significant portion of my growth over the past year. Through the horizontal and vertical groups, I was able to see and collaborate closely with other like-minded science educators. Meeting with the program leaders and the full group of Cohort 1 and 2 has squarely placed me in the midst of science leaders and made me believe I could be a science leader as well!

This leadership shone through during the school closures when I was asked by my principal and peers to be a learning technology support for my school! I developed and ran PD's on multiple topics for my peers and it made me feel like a million bucks to be able to help and support my colleagues both teach better and work smarter during the closures. I hope to earn this feeling again through my GPS project this upcoming year where I will develop trainings for content and planning support, as well as working on thoroughly integrating the science and engineering practices into my own teaching practice. Here are some of the trainings I've already developed:
https://sites.google.com/view/dseis-teachingtipsandtricks/home

In the end, the students are what drive me… I adore the passion and creativity that comes alongside good teaching. I crave to see the hope and joy that comes with building positive relationships. I desire to inspire and encourage them with science mysteries, discoveries, and possibilities. I look forward to starting this second chapter of my fellowship, my fifth chapter of teaching, and my 27th chapter of learning (in October:)!

Bhagyashree Kulkarni, TB Wipro SEF, Cohort 2 Middleton High School

I was a research scientist before I started my teaching career. Eventually, I decided to change my career to pursue my passion for teaching. I did the MAT program in Science Educations at USF and got an opportunity to teach in Hillsborough County. It has been 9 years since then. I teach Chemistry at Middleton High school and am also the science department chair. Teachers have been my role models and I want to lead my students by model. I want students in my class to think about science and be able to problem-solve not only in my classroom, but also implement these strategies outside the classroom. I have always strived to find a better way to teach and assess student knowledge and thinking in my classroom.

The Wipro program has become one of the avenues for me to peek into other teachers' classrooms and learn a new idea or strategy. In my V-CCLS group, I got to interact with teachers from elementary and middle schools while implementing concept maps in our lessons. It was eye-opening to see how the same strategy worked effectively for students at all levels. The best part of our V-CCLS group was debriefing; getting warm and cool feedback from other teachers in my group helped me understand what I am doing right and where I can grow. I also learnt how to give warm and cool feedback to other teachers, which I used in my coaching cycles at Middleton.

As we were starting our HCCLS groups, halfway through the Wipro program, we were hit by the Covid-19 pandemic. We adjusted to the situation and met virtually to debrief our sessions. During this time, I got to see how teachers were strong, flexible, and able to adjust to the virtual teaching world. We brainstormed ideas to effectively teach in the virtual environment. The Wipro Program has also helped me connect with other teachers and form a professional community. I am currently in my 2nd year of this program and starting a GPS project. I am working on creating short chemistry educational videos which are engaging and effective for my students to understand the concept. These videos will be available to other students and teachers to use in their classroom. My personal goal is to learn how to create good videos and learn video editing skills.

I have learned a lot from other teachers through this program on how to teach more effectively and better engage my students, and I can't wait to see how the GPS project will

improve my teaching. I would like to thank Dr. Feldman, Dr Jung and all other coordinators and our district supervisor Mr. Larry Plank for this opportunity to grow professional in teaching field.

Year 2 Reflection

The biggest challenge we have faced are the effects of the COVID-19 pandemic on our schools, the University, Fellows, students, and families. The Fellows and their students were suddenly thrust into an eLearning environment for which they were not prepared. The Fellows had little or no training, platforms for delivery varied not only be district but also by school, and many students had poor or no access to the Internet. Challenges specific to our project were 1) Fellows were not able to complete their V-CCLS recordings and debriefings as planned; 2) the induction ceremony for cohort 3 and the end of year conference did not happen in the spring; and 3) it significantly hampered our recruitment efforts. The latter was due to the difficulty in reaching out to potential fellow during the school shutdown and over the summer.

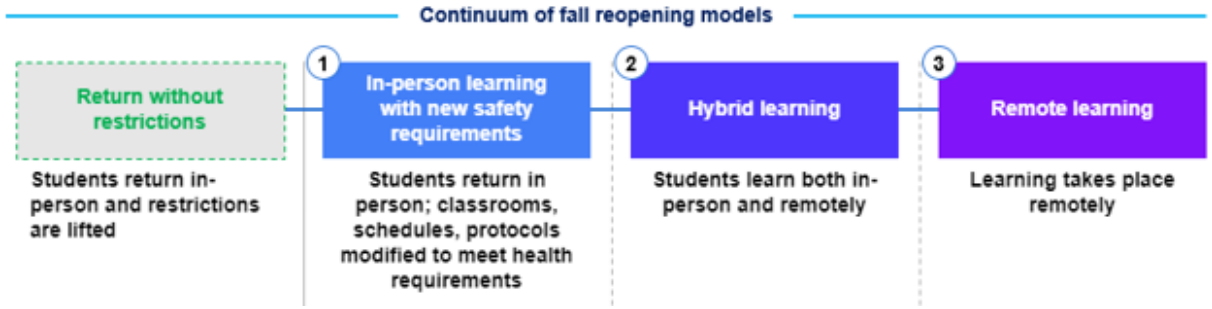
There were several successes during year 2. Perhaps the biggest success with our program during year 2 was that we better engaged our district science coordinators in the facilitating the project and guiding and leading the work to support their teachers and districts. The coordinators help develop and facilitate the monthly meetings and were much more active in the work happening with the teachers at those meetings. We also began holding more consistent and productive leadership meeting with them that have strengthened both the TB Wipro SEF project as well as our relationships with each district. Additional successes included the cohort 2 Fellows completing their H-CCLS and making videos of their presentations. Most of the Cohort 1 Fellows completed their GPS projects by August, with the rest completing them by December 1. We had all of our scheduled monthly meetings, virtually through Zoom, and we were able to maintain a supportive community within and across cohorts 1 and 2. Finally, we were able to recruit 20 new Fellows for Cohort 3.

MASSACHUSETTS- UMASS BOSTON

Introduction

Between June and September, the Greater Boston Wipro Districts were faced with a complex set of decisions to make in planning for the opening of school in September. On June 25, 2020 the Commissioner of Education released guidance and provided resources on how to open school safely. For high needs students opening schools for in person instruction is a high priority. Not only do these students have difficulty learning remotely but they often rely on the schools for their nutrition.

Each district was asked to submit plans for the upcoming school year that would be appropriate for their particular district's demographics and Covid situation. 3 Models for opening could be proposed by each district. (Graphic from MA Department of Elementary and Secondary Education.



By August the only 3 of 5 Greater Boston Wipro district had decided how they would open school as shown in the spreadsheet below.

NOTE: This information is based on plans that districts sent DESE by noon on August 18, 2020. The learning model in each district could change during the school year depending on public health conditions. For more information on a particular district's plan, please visit that district's website or contact the district.

DISTRICT	Overall	Elementary	Middle	High
Boston	N/A	Did not answer	Did not answer	Did not answer
Braintree	N/A	No submission	No submission	No submission
Cambridge	Hybrid	Hybrid	Fully remote	Fully remote
Malden	Fully remote	Fully remote	Fully remote	Fully remote
Pembroke	Hybrid	Hybrid	Hybrid	Hybrid

Some of the issues relating to school opening included access for all students to on-line learning resources, providing adequate classroom ventilation and personal protective equipment for both teachers, students, and school staff. Later in the summer additional

guidance was provided by the education department to allow districts to open schools 2 weeks late so that teachers can prepare remote and in-person instruction.

As of this writing the 5 districts have a mix of in-person, remote and hybrid learning. Our Wipro fellows are often leaders in their schools and planning for all of these modes of instruction has been incredibly stressful. Several fellows who were unable to complete their phase II projects in the spring have asked for additional time to begin planning for the fall.

Fellows' activities

After the Fellows' meeting in June the SEF fellows spent parts of the summer preparing for the upcoming school year. Several of the fellows mentioned that they were having a difficult time planning their lessons because their schools had not decided how school would look in the fall. District led professional development of necessity needed to be conducted virtually.

Braintree Public Schools had a phase II district grant for the 2019-20 school year. Dr. Betsey Clifford, the District Science Coordinator used some of the grant funds to pay for high school teachers to attend a modeling workshop. The workshops were conducted by the American Modeling Teachers Association (AMTA).

The Modeling Method has been intentionally developed to correct many weaknesses of the lecture-demonstration method of instruction typically seen in STEM classrooms. These weaknesses include the fragmentation of knowledge, student passivity, and the persistence of naive beliefs about the physical world.

- *Instruction is organized into modeling cycles which move students through all phases of model development, evaluation, and application in concrete situations — thus promoting an integrated understanding of modeling processes and acquisition of coordinated modeling skills. (AMTA website)*

According to Dr. Clifford, "*The Braintree teachers LOVED the modeling courses this summer. They are trying to implement some of the strategies but it's just totally crazy right now for them and me. "*

Reflections on the Missouri Virtual Conference

Both Dr. Arthur Eisenkraft and Marilyn Decker attended the Missouri Conference. Since this was a big departure from previous Wipro SEF end of year conferences we were surprised at how engaging and spirited the conference was. Several things made the conference a success:

- Both Dr. Eisenkraft and Ms. Decker were able to see nearly all of the conference presentations and to provide feedback to the fellows. In a typical end of the year conference only a handful of presentations can be observed.
- The presentations were extraordinarily well done considering that recording a virtual presentation among multiple people was something new to most fellows.
- The last day's synchronous meeting allowed for formal and informal conversations that were surprisingly upbeat.
- Lessons learned from the Missouri conference have informed the other Wipro SEF sites that are planning virtual conferences this fall.

Featured Fellow

Kim Gibbs, Math Coach, Linden STEAM Academy, Malden, MA

Since completing my fellowship with Wipro, I have left the classroom to work with teachers as the Math Coach at the Linden STEAM Academy which is an innovation school in Malden, MA. I have had numerous opportunities in and out of my district to speak and to provide professional development for teachers. I had the honor of sharing my poster and GPS work with Wipro fellows at Mercy College the Spring after I finished my fellowship. I had the privilege to present last year at the Wipro conference held at Stanford University with my colleague and Wipro fellow at Linden. We also had our proposal accepted to present at the NSTA conference that was scheduled for this past March in Boston, but unfortunately it was cancelled due to the pandemic. I am currently supporting my teachers in curriculum and training for remote learning. Professionally I enjoy every opportunity to collaborate with Wipro fellows in and around the Boston area, along with fellows in Missouri.

Reflection September 2019 to September 2020

Thinking back on the year one of the biggest successes has been the strengthening of the Wipro SEF Community. This was accomplished by the leadership team meeting held in Texas and the monthly Zoom calls. IHE leaders and fellows voluntarily attended the Missouri conference and IHE leaders reached out to the Missouri team to help them put on a successful conference. Everyone has gotten to know one another, and the community is willing to share good ideas with each other.

Covid presented the greatest challenge. With the abrupt closing of schools and the university we were unable to meet as a team and some of our phase II awardees were not able to complete their planned projects.

MISSOURI- UNIVERSITY OF MISSOURI

Introduction

With the Covid pandemic in the spring the Missouri leadership team moved several events to the fall.

- Induction Ceremony postponed – format and date will be decided in conjunction with DCs.
- Cohort 1 GPS deadlines extended. All submissions other than PD video to be completed by September 15. PD video to be completed over the academic year, as per individual feasibility.

One cohort 2 Fellow (Rachel Nichols) has taken the position of assistant principal and has dropped out.

There is a new district coordinator at Gulton Public Schools. Chris Hubbuch, Assistant Superintendent, chubbuch@fulton58.org will be replacing Ty Crain (who has now become the Superintendent).

Cohort 3 Induction and First Meetings

Year 1 Agendas Cohort 3 fellows

Meeting Date	Goal(s) of Meeting	Meeting Facilitator (s)	Online meeting link
Aug 5 (9-12 noon) and Aug 11 (3:30-5:30 pm)	Build relationships and connections within the Wipro Cohort. Become familiar with V-CCLS protocols.	Chandrasekhar, Kosztin, Siegel, Kelley	https://umsystem.zoom.us/j/2433710837?pwd=dXlwaVV5STM1cmZwUjUzZnhEdmEvdz09
September 17, 2020, 5-8 pm	Discuss teacher leadership. Lecture: *Pitfalls of PowerPoint presentations*. Continue building in-cohort relationships.	Chandrasekhar, Kosztin, Siegel, Kelley	https://umsystem.zoom.us/j/2433710837?pwd=dXlwaVV5STM1cmZwUjUzZnhEdmEvdz09

October 8, 2020, 5-8 pm	Present research articles Lecture: *Physics in movies.*	Chandrasekhar, Kosztin, Siegel, Kelley	https://umsystem.zoom.us/j/2433710837?pwd=dXlwaVV5STM1cmZwUjUzZnhEdmEvdz09
Nov 19, 2020, 5-8 pm	Observe Cohort 2 H/VCCLS presentation. Assessment Workshop by Kristen McKinney, MO-DESE	Chandrasekhar, Kosztin, Siegel, Kelley	https://umsystem.zoom.us/j/2433710837?pwd=dXlwaVV5STM1cmZwUjUzZnhEdmEvdz09
Dec 10 or 17, 2020	Make VCCLS presentations	Chandrasekhar, Kosztin, Siegel, Kelley	https://umsystem.zoom.us/j/2433710837?pwd=dXlwaVV5STM1cmZwUjUzZnhEdmEvdz09
Jan 14, 2021, 5-8 pm	Invited lecture, set up in HCCLS groups	Chandrasekhar, Kosztin, Siegel, Kelley	https://umsystem.zoom.us/j/2433710837?pwd=dXlwaVV5STM1cmZwUjUzZnhEdmEvdz09
February 18, 2021, 5-8 pm	Make research article presentations. Lecture: *Elements of Modeling*	Chandrasekhar, Kosztin, Siegel, Kelley	https://umsystem.zoom.us/j/2433710837?pwd=dXlwaVV5STM1cmZwUjUzZnhEdmEvdz09
April 1, 2021, 5-8 pm	Intro to GPS Work on HCCLS presentations	Chandrasekhar, Kosztin, Siegel, Kelley	https://umsystem.zoom.us/j/2433710837?pwd=dXlwaVV5STM1cmZwUjUzZnhEdmEvdz09
May	Wipro Conference		

Agendas

August meeting agenda added on Trello.

Attendees

Cohort 3 Wipro Fellows, and MU Wipro staff were in attendance at the August meeting.

Meeting Reflections

The August meeting went well. The leadership team was unsure of whether the groups would "gel" online. However, by splitting the meeting to two days, and giving the Fellows an assignment (to watch a classroom video and provide warm cool feedback online) and to have them meet via zoom between the two meetings helped make the VCCLS teams comfortable with each other. Fellows have liked being placed in breakout rooms in random and in VCCLS groupings. The MU team will continue this jigsaw mode for other activities.

V-CCLS Team Assignments for Cohort 3

Grade Band /Subject	Biology	Chemistry	Earth/ Env. Sci	Physics
K-2	Christie Zoeller - G	Brandy Albrecht - F	Katy Canote - H	Robin Bishop - G
		Melissa Baker - G		Natalie Dixon - G
3-5	Kayla Eads - A	Josie Hess - B	Rachel Walk - G	Nicole Golden - C
6-8	Chelsea Simon - H	Jennifer Bacon - C	Melanie Manning - D	Amanda Sauerwein - C
9-12	Erin Snelling - A		David Ganey - E	Steve McMillin - A
	Tyler Helton - H		Rex Beltz - D	

School district key:	
Hallsville	A
Comm. R-VI	B
Maries R-2	C
Columbia	D
Jeff City	E
Eldon	F
Boonville	G
Fulton	H

Cohort 2 GPS progress

Cohort 2 Fellows have submitted their goals documents (18 of 19 submissions). The last Fellow has asked for extra time because she has been assigned to a new middle school and is also dealing with a death in the family. Several Fellows are choosing projects related to online teaching. Reviews of their goals document have been returned to the Fellows, and advisors have been assigned. The next bimonthly meeting is scheduled for Sep 15, 2020 when they will also meet with their advisors.

Cohort 2 GPS Topics

Fellows Name	Personal Goal (1-2 sentences)	District Goal (1-2 sentences)	Advisor (s)
Stacey Bishop	Create positive, meaningful, loving relationships with students through the use of Conscious Discipline and the Zones of Regulation.	Implement FlipGrid in kindergarten classroom to enhance reading and science comprehension within curriculum to prepare for virtual learning.	Marcelle Siegel
Becky Eckerle	Implement Conscious Discipline into classroom to help create a positive environment and reduce negative behaviors.	Incorporate Screencastify into teaching to prepare for virtual teaching.	Heather Hunt
Candace Campbell (Smith)	Align first grade science standards with fun STEM activities and create STEM challenges for each standard. Read *Teaching Science for Understanding in Elementary and Middle School for professional development* and present it to my co-workers on PD Days.	Set up an elementary science night where students come in and go activities related to science.	Doug Steinhoff
Kelsey Strubel	Assist colleagues with the planning and facilitation of science concepts and curriculum, though virtual learning.	Improve authentic learning by supporting teachers by offering various science resources to implement in classrooms.	Doug Steinhoff
Maggie Hunter	Develop and support my wellbeing and mental health through research-based self-care strategies	Develop science integrated writing projects for each of the 10 units in our new Benchmarks Literacy curriculum.	Marcelle Siegel
Melissa Milius	Create a self-care plan that includes times each week for reflection (journaling),	Create a STEAM cart to be used as morning choice time when students arrive in the classroom. The cart will	Meera Chandrasekhar

	exercise, reading, and meditation.	include individual boxes to be checked out and cleaned after each use.	
Jessica Johnson	Build strong relationships with parents and establish technology support at home	Prepare and conduct a series of professional development workshops at the Intermediate School on the proficiency of virtual learning tools.	Heather Hunt
Amy Bartlett	Improve authentic learning by engaging students in argument for evidence	I will take on the role of organizing and facilitating the science vertical team efforts by encouraging discussions about essential curriculum and best practices. I also plan to research to find new virtual platforms and resources that are conducive to virtual learning, for science.	Heather Hunt
Jennipher Adams	I will write, have illustrated, and print a children's book [with 6 science experiments children may perform at home with the parents.]	I will create unit assessments for 5th grade science aligned with Missouri Learning Standards for Standards Based Grading.	Dorina Kosztin
Beth Newton	I will develop a snippet science website to excite and engage young minds, to develop science knowledge, and to integrate high impact instructional technology tools that empower students at John Warner Middle School or anywhere that uses a virtual classroom.	I will learn about new technologies to help create the science snippet website and a podcast.	Meera Chandrasekhar
Gable Nichols	To learn how to better serve my students using the outdoor spaces available to me.	Using outdoor spaces and Place Based Learning to teach Science Content.	Doug Steinhoff

Lucy Shrout	Integrate more technology into my teaching and use a blended learning approach with my science classes.	Introduce and have students use Claim, Evidence, Reasoning (CER) to explain science concepts/laws along with having students use argumentation concepts in their CER's.	Meera Chandrasekhar
Teresa Edwards	I will create and lead a committee to improve school building culture.	I will learn and use a variety of Google apps in the classroom for student instruction and assessment and become Level 1 certified.	Dorina Kosztin
Stephanie Harman	I will plan and implement the 5e method in the honors chemistry course.	I plan to implement standards referenced grading in the honors chemistry course.	Doug Steinhoff
Seth Willenberg	Using the technology pieces learned to develop common curriculum in the classroom and determine how it is working with student learning.	Develop a strong common Physics curriculum around technology. The outcome will be 4 meaningful lessons built around technology.	Dorina Kosztin
Rachel Tinsley	Apply relationship building strategies and practices in my classroom to help students during the pandemic.	Develop relationships with all students. I would like to especially focus on developing relationships during the pandemic with online students and while wearing a mask for in seat learning.	Marcelle Siegel
Liz Schwab	1) Create a PD Facebook group for Missouri Science teacher support and expand it to a Facebook group for all WIPRO alums to connect on.	My goal is to help all my science classes be engaged through the use of technology and advancements in scientific learning both in-person and through distance learning.	Amy Lannin
Kristen Thurman Harris	Implement Powerful Teaching strategies to boost students critical	Develop a strong virtual and non-virtual classroom environment through	Amy Lannin

	thinking and learning in science.	building relationships with students and parents.	
Susan Saracini-Cram	I want to implement the use of concept or mind mapping in my classroom to facilitate critical thinking and for use as novel assessment pieces.	I will develop three novel scenario or phenomena-based Performance Tasks that integrate biology unit topics, crosscutting concepts, and science and engineering practices to promote critical thinking skills, problem solving, and bolster performance skills for End of Course assessments.	Heather Hunt

Upcoming meetings with Cohort 2 fellows

Meeting Date	Goal(s) of Meeting	Online meeting link
September 15, 2020	Discuss Teacher Leadership. Meet with Advisors. Discuss questions about Wix.	https://umsystem.zoom.us/j/2433710837?pwd=dXlwaVV5STM1cmZwUjUzZnhEdmEvdz09
November 17, 2020	Meet with Advisors. Assessment Workshop by Kristen McKinney, MO-DESE	https://umsystem.zoom.us/j/2433710837?pwd=dXlwaVV5STM1cmZwUjUzZnhEdmEvdz09
February 16, 2021	Meet with Advisors. Invited Lecture.	https://umsystem.zoom.us/j/2433710837?pwd=dXlwaVV5STM1cmZwUjUzZnhEdmEvdz09
April 6, 2021	Meet with Advisors. Invited Lecture. Work on Poster presentation	

Cohort 2 meetings with Advisors

Advisors were selected based on the match between the interests / specialty of the advisor and the advisee. Since our external advisors (Heather Hunt (an engineering prof), Amy Lannin (an education faculty member) and Doug Steinhoff (a former teacher)) are known to us, we were able to make these assignments with a good degree of confidence.

Advisors will meet with their advisees during each of the four bimonthly meetings. They will also meet once between meetings. This schedule will provide a structure that will allow for 8 regularly spaced meetings – which was somewhat problematic last year.

District Science Coordinators

Meetings with Cohort 2 Fellows

Schedule of meetings during GPS year

Districts arrange these meetings individually. During our meeting with district coordinators on Sep 11, we discussed how they plan to meet. All districts have a PD day, either once a month or once a week during the year. They set aside time during those meetings to have a separate meeting with Wipro fellows.

The focus this year will be on virtual learning. They plan to use Cohort 1, 2 and 3 Fellows to conduct PD for others. These plans are currently fluid, since school has just begun (Columbia is in its first week of fully virtual learning. Fulton, Community R6 and Boonville are further along, and are primarily meeting students face-to-face, with an option of virtual, which has been taken up by about 10% of their students). The DCs all expressed plans to use Wipro Fellows for planning and PD activities.

Shaping the GPS year

DCs discussed and helped plan GPS projects with Cohort 2 fellows over the summer. Several fellows plan to work on aspects of virtual learning, which is front and center this year as schools face the prospect of moving back to fully virtual learning if they see higher levels of outbreaks. At present Columbia has a high rate of infection (and consequently fully virtual learning in the schools, following a 2-week delay in starting the year). The smaller districts seem to be doing better, with a few teachers and students in quarantine.

Meetings with Cohort 3 Fellows

These meetings will also occur during district PD days. Wipro project centered discussions are just starting at this time.

End of the year Host Conference

Site location (State)	Date of Conference	Conference Location	Online Links
Missouri	June 2020	Online - on Torsh	https://tinyurl.com/20MoWiproConf This link includes HCCLS and GPs movies, GPS posters, weekly movies, Wrap-up Zoom meeting movies, breakout room responses, and other operational information.

Host Conference Description

The structure of the virtual Missouri conference was described in considerable detail in our June 2020 report, and will not be repeated here.

Attendance: About 100 of the 127 registrants actually participated in the asynchronous part of the conference. Fellows, a few DCs and faculty from California, Florida, Missouri, Texas, Massachusetts, New York, and New Jersey registered for the conference.

Highlights:

By and large, participants spent a considerable amount of time engaging with the conference by watching videos of presentations and providing feedback. Four Missouri, two Texas, one California and one Florida team made HCCLS presentations; and 18 Missouri fellows made GPS presentations. At the top end were three participants who watched 3 hours of videos and spent additional time providing feedback. On average, HCCLS videos garnered 52 views each with 43 warm/cool feedback entries; GPS videos garnered 26 views and 20 warm/cool feedbacks entries. Almost all Fellows completed the assignments they were given.

The two wrap-up Zoom sessions were also well attended (41 participants in session 1, 40 in session 2, with about 10 people who attended both sessions – mostly site faculty but also two participants from India who will be graduate students at MU this academic year).

Planning Successes:

- The Torsh platform held up admirably.
- The Missouri team came together to provide essential support in putting the event together. The other sites were extremely helpful in recruitment, timely feedback, and advice.

Planning Challenges:

- Planning took a lot more time than anticipated.
- Since the event was planned and executed within about 8 weeks, there was a time crunch. The site leader said, “We felt like we were building a car that was already in motion. This created a few changes and circle-arounds that could have been avoided if we had more experience and/or time.”
- Using google drive as our document and information gathering platform was not ideal. A database-linked website would have made the process smoother.
- A single platform that included instructions, data gathering, movie and poster uploads and feedback gathering would have been ideal (if such a platform exists).

Reflections on the Conference

The Missouri team thought that there was a high level of engagement in the conference, both in the asynchronous segments (watching videos, providing warm and cool feedback, participating in the forums) and in the synchronous Zoom wrap-up sessions.
Successes:

Fellows' feedback about the conference is documented in the conference shared folder https://tinyurl.com/20MoWiproConf . The most frequently mentioned comments were:

- The virtual mode allowed wider participation, and inclusion from several sites.
- Fellows liked the time-flexibility and the ability to view more presentations than a face-to-face conference does. Some participants mentioned having viewed every video and poster (though they were required to view only 4 HCCLS and 4 GPS presentations).
- They liked having videos and posters for GPS.
- They liked the combination of asynchronous and synchronous modes. They would like us to add a synchronous pre-meeting, with the opportunity to meet synchronously during the meeting for more person-to-person contact.
- They liked the availability of the library of videos.

Challenges:

- There were a lot of instructions.
- They would have liked the opportunity to ask questions face-to-face.
- There was a technology learning curve.
- It was hard to replicate in-person interactions.
- While making the videos, it was not possible to feed off the energy from the audience.

Suggestions for improvement:

- Blend face-to-face and virtual – allows for more participation.
- Invite previous cohorts, alums of Wipro project.
- Provide guidance with technology (rather, highlight availability).
- Add a synchronous meeting at beginning of conference.
- Add a keynote presentation.
- Provide HCCLS zoom "office hours" to allow live question-answer sessions.
- Zoom parties to encourage informal engagement.

Reflections on the End of the Year Conference

Yes, the conference was helpful to our team. Apart from allowing us to bring together and celebrate the Fellows' accomplishments, it allowed them to show it off to a wide audience. Possibly the biggest take-away was the high level of interest in meeting fellows from other sites via a hybrid f2f-virtual mode. If /when we return to live conferences, it will be valuable to explore including a virtual component.

H-CCLS presentations, and poster session

The list of presentations was provided in the June 2020 report.

Visitors from other Wipro Sites (Did you have in-person or virtual visitors to your conference)

Participant summary by site/role							
MO participants	54	FL participants	23	TX participants	28	CA participants	6
MA participants	7	NY participants	3	NJ participants	5	Evaluator	1
Total	127						

Please list the visitors from another site and their roles

Full name	Wipro Site	Role (Fellow, IHE, DC, etc.)
Sarah Galaxy Smith	CA	Fellow – Torsh Ambassador
Shane McDonough	CA	Fellow– Torsh Ambassador
Tammy Wu Moriarty	CA	IHE
Allan Feldman	FL	IHE
David Rosengrant	FL	IHE
Sarah Swoch	FL	Fellow
Tabatha Whaley	FL	Fellow
Ann Salazar	FL	
Fawnia Schultz	FL	DC
Dianna Mills	FL	fellow
Jessica Strauss	FL	Fellow
Cayla Repass	FL	Fellow
Arthur Eisenkraft	MA	IHE

Full name	Wipro Site	Role (Fellow, IHE, DC, etc.)
Marilyn Decker	MA	IHE
Heather K. Hunt	MO	GPS Advisor
Cynthia Dwyer	MO	DC
Bethany Morris	MO	DC
Ty Crain	MO	DC
Amy Lannin	MO	GPS Advisor
Johannes Strobel	MO	GPS Advisor
Doug Steinhoff	MO	GPS Advisor
Jill Ostrow	MO	GPS Advisor
Mike Szydlowski	MO	DC
Mahapatra Swarna	MO	Grad student/teacher
Sharma Ritesh	MO	Grad student/teacher
Dr. Ratna Narayan	TX	IHE
Kendra Brown	TX	IHE
Danielle Moore	TX	DC
Tamesha Brown	TX	C3 Fellow
Marquita Muhammad	TX	C3 Fellow
Brittney Preston	TX	C2 Fellow GPS
Candace Edmerson	TX	C2 Fellow GPS
Linda OBryan	TX	C3 Fellow
Tatayanda Younger	TX	C3 Fellow
Rocio Avila	TX	C2 Fellow GPS
Tabitha Moreno	TX	C2 Fellow GPS
Ana Belmonte	TX	C2 Fellow GPS
Tracey Craft	TX	C2 Fellow GPS
Anne Gurnee		Wipro SEF Evaluator
Adam Smith	MA	Former Fellow
Daina Kelly	FL	Grad student
Markus Burkhalter	TX	C3 Fellow
Raisha Allen	TX	C2 Fellow GPS
Billy Johnson	TX	C2 Fellow GPS

Full name	Wipro Site	Role (Fellow, IHE, DC, etc.)
LaQuesha Williams	TX	C2 Fellow GPS
Matthew Gaines	TX	C2 Fellow GPS
Amanda Cortez	TX	C3 Fellow
Bhagyashree Kulkarni	FL	Fellow
Glowacki Julia	TX	C2 Fellow GPS
Fine Julie	FL	Fellow
Michele Wiehagen	FL	Fellow
Myesia Morrison	TX	C2 Fellow GPS
Richard Card	FL	Fellow
Carrie Donatelli	FL	Fellow
Sharfun Islam Nancy	FL	Grad Student
Anita Ventura	FL	Fellow
Meghan Marrero	NY	IHE
Scott Hubeny	MA	Wipro Alumnus
Carmen King	NY	Fellow
Richard Kelly	MA	C-2 Fellow
Monique Dituri	NJ	Wipro Fellow '15-'18
Cheryl McDonough	MA	C2 Fellow
Patricia Hester-Fearon	NJ	Wipro Fellow '15-'18
Jessica McMasters	NJ	Fellow
Elizabeth Barrett-Zahn	NY	Wipro Alum/DC
Tal SebellShavit	MA	Wipro Alum
Mary Goffredo	NJ	District Coordinator
Stephanie Langner	NJ	MSU Wipro Fellow
Stacey Bishop	MO	Fellow - HCCLS presenter
Candance Campbell	MO	Fellow - HCCLS presenter
Becky Eckerle	MO	Fellow - HCCLS presenter
Rachael Nichols	MO	Fellow - HCCLS presenter
Kelsey Strubel	MO	Fellow - HCCLS presenter
Jennipher Adams	MO	Fellow - HCCLS presenter

Full name	Wipro Site	Role (Fellow, IHE, DC, etc.)
Amy Bartlett	MO	Fellow - HCCLS presenter
Maggie Hunter	MO	Fellow - HCCLS presenter
Jessica Johnson	MO	Fellow - HCCLS presenter
Melissa Milius	MO	Fellow - HCCLS presenter
Teresa Edwards	MO	Fellow - HCCLS presenter
Beth Newton	MO	Fellow - HCCLS presenter
Gable Nichols	MO	Fellow - HCCLS presenter
Lucy Shrout	MO	Fellow - HCCLS presenter
Stephanie Harman	MO	Fellow - HCCLS presenter
Kristen Harris	MO	Fellow - HCCLS presenter
Rachel Tinsley	MO	Fellow - HCCLS presenter
Susan Saracini-Cram	MO	Fellow - HCCLS presenter
Liz Schwab	MO	Fellow - HCCLS presenter
Seth Willenberg	MO	Fellow - HCCLS presenter
Shelby Allen	TX	Fellow - HCCLS presenter
Sherry Thompson	TX	Fellow - HCCLS presenter
Olaide Ajakaye	TX	Fellow - HCCLS presenter
Tiffanie Johnson	TX	Fellow - HCCLS presenter
Julien Yacho	TX	Fellow - HCCLS presenter
Yesenia Vasquez	TX	Fellow - HCCLS presenter
Marsha Bolden	TX	Fellow - HCCLS presenter
Kelsey Magana	CA	Fellow - HCCLS presenter
Gina Maschio	CA	Fellow - HCCLS presenter
Satomi Fujikawa	CA	Fellow - HCCLS presenter
Karen Bulino	FL	Fellow - HCCLS presenter
Jennifer Griffone	FL	Fellow - HCCLS presenter
Latasha Seay	FL	Fellow - HCCLS presenter
David Seis	FL	Fellow - HCCLS presenter
Lesley Kirkley	FL	Fellow - HCCLS presenter
Jamie Blackburn	MO	Fellow - GPS presenter
Quincy Carver	MO	Fellow - GPS presenter

Full name	Wipro Site	Role (Fellow, IHE, DC, etc.)
Caitlynn Cunningham	MO	Fellow - GPS presenter
Susan German	MO	Fellow - GPS presenter
Jennifer Hoecker	MO	Fellow - GPS presenter
Brea James	MO	Fellow - GPS presenter
Taylor Mislevich	MO	Fellow - GPS presenter
Lynn (Nail) Salzman	MO	Fellow - GPS presenter
Caitlin Nichols	MO	Fellow - GPS presenter
Betsy O'Day	MO	Fellow - GPS presenter
Jacqueline O'Donnell	MO	Fellow - GPS presenter
Kerry Poage	MO	Fellow - GPS presenter
Amy Rapp	MO	Fellow - GPS presenter
Lindsey Schwarzer	MO	Fellow - GPS presenter
Jennifer Szydlowski	MO	Fellow - GPS presenter
Rebecca Turner	MO	Fellow - GPS presenter
Marsha Tyson	MO	Fellow - GPS presenter
Melanie Utterback	MO	Fellow - GPS presenter

Did fellows from the visiting site present their H-CCLS?

Yes- Fellows expressed appreciation for being able to view HCCLS presentations from other sites. They liked the wider participation, and the sense of being part of a large network. It was a lot of work to prepare the presentation virtually, and then record it virtually as well. Seeing different ways in which others had managed the situation gave them ideas for how they could do things in the future. Some Fellows said that it now gave them a feeling of what their students were experiencing with virtual learning.

The virtual format provided a lot more time to view presentations, and to view many more. The ability to stop, rewind and visit videos was remarked upon. The power of the virtual format led many to request that future conferences be a combination of f2f and virtual, so many more fellows could participate without having to travel. Furthermore, they liked that a library of videos is now available for future reference.

As a site leader, was there value in having fellows from another site present?

As site leaders we often feel that we do not get across to fellows that they are part of a large group effort. Fellows are immersed in the work being done by their small group, and at best, the work of other groups in-site. Asking them to step back and see the power of a 7-

site approach is theoretical, at best, until we get to the conferences. When we took 8 fellows to California, or they saw 8 fellows from Florida visit us here, those individuals felt their horizons broaden. A virtual mode with contributions from many more sites provided a broadening for all fellows – and at minimal cost.

Did fellows from another site share their GPS posters?

We did not have fellows from other sites present GPS posters. Part of the reason was the time and management crunch of organizing the conference in 8 weeks. In the future, virtual conferences can easily have other sites present their GPS projects.

Cohort 1 Fellows

Three Cohort 1 Fellows were invited to talk to cohort 2 Fellows about their GPS projects during the Cohort 2 July meeting. They talked about how they approached the GPS project, planned, and executed it and how they used their advisors. We have given Cohort 2 Fellows the option of picking a Cohort 1 "buddy" to help bounce ideas off them as they proceed with their GPS projects. We intent to invite Cohort 1 to the annual conference as well.

Year 2 Reflection

The 2019-20 meetings went more smoothly than the previous year's meetings did. Cohort 2 also seemed more forgiving of our stumbles – as there inevitably will be in the course of a year's worth of meetings. Cohort 2 was proactive in suggesting the virtual structure of the annual conference. The conference went more smoothly than we expected, given the short time frame and the virtual format that was new to us.

The shutdown in March has been hard on the teachers. Apart from having to invent new ways of teaching, they also had to invent new ways of staying active in the Wipro project. We have worked on being supportive and flexible in terms of deadlines and expectations.

Luckily, most of our recruitment for Cohort 3 had been completed before the shutdown occurred. We extended out recruitment deadlines and picked up a couple of additional fellows after mid-March. Cohort 3 seems to be gelling well despite their online-only meetings. Perhaps they have become used to the process, and do not worry too much about getting to know people on Zoom. Our challenge is to get the whole group to get to know each other, not just the CCLS groupings.

Fellows' activities

The MSU Fellows used the summer to prepare for an uncertain school year ahead. As with many teachers around the country, the MSU Fellows used the summer to learn new technologies and instructional practices related to online teaching.

Presentations and Publications

The MSU research team submitted two proposals for presentation at national conferences in 2021:

- *Teacher noticing and leveraging of student thinking in science lessons and debriefs of classroom videos*. Submitted July 15 to American Educational Research Association (AERA). Alfred M. Limbere (doctoral student), Mika Munakata, Emily Klein, Monica Taylor.

- *Exploring Experienced Science Teachers' Vision for Science Teaching*. Submitted August 31 to National Association of Research in Science Teaching (NARST). Alfred M. Limbere, Mika Munakata, Emily Klein, Monica Taylor.

Professional Development

PRISM offered the following resources FREE: Pop-up PD sessions and Engineering teaching materials on the PRISM webpage (Engineering & Invention); and classroom suggestions from engineer Harry Roman.

Outreach through these free workshops resulted in attendance by 22 teachers from the five NJ Wipro districts and one each from Boston and New York, not all of them Fellows. An additional 24 attendees in an August virtual Climate Change CLEAN Network event were from several non-Wipro districts and states, including partners at the Montessori school in Madagascar.

End of the year or Fall conferences

MSU will host a culminating event on Friday, **December 11th** from 3:30-4:30 via Zoom. All Wipro alumni will be invited to this event.

Plans for the upcoming academic year for the SEF program

The leadership team met on Friday, September 4th to set schedules and expectations for the academic year. The following are some key upcoming dates:

- Fellows will send an update on their progress on Phase II Year 3 projects to their mentors by **September 15th.**
- Fellows will attend a "catch-up" meeting on **Friday, October 9th** from 3:30-4:30 via Zoom. The meeting will be an opportunity for them to share their progress on their projects and to seek feedback.
- Fellows will complete their projects by **Monday, November 23**rd.
- MSU will host a culminating event on Friday, **December 11th** from 3:30-4:30 via Zoom. All Wipro SEF alumni will be invited to this event.

Featured Fellows

Regina Borriello

While saying "This experience changed my life," sounds like hyperbole, the Wipro SEF program truly has brought me unique experiences and grew my skill set in a way I simply did not think was possible. The support provided by the Wipro SEF grant and the faculty at Montclair State University was essential to the success of the projects I completed at Clifton High School. I created a professional learning group of science content area and special education inclusion teachers to work through the specific problems of practice that come with co-teaching in a large district. The next year, I was able to apply the information I learned to a half day professional development session for high school inclusion teachers in multiple content areas. In cooperation with another Wipro colleague, we facilitated HCCLS groups at the elementary and high school levels. I also travelled to several NSTA conferences and presented the work I accomplished with the support of the Wipro SEF program.

This past school year, I recruited ninth grade biology and algebra I teachers to work on a multidisciplinary STEM project to complete in our classes. Unfortunately, Covid-19 prevented us from executing the project with our classes. However, I was provided with a different opportunity to lead in my district instead. After last spring, my frustration with my lack of understanding about best practices in online learning led me to attend many webinars and classes in July to increase my knowledge. I noticed that my district did not seem to be providing any professional development opportunities for teachers about integrating technology into their teaching. I reached out to our district Technology Facilitator/Trainer, and she provided me with the platform to create "Blended Learning 101" as a summer technology class. I presented twice during August to over 50 teachers, grades 3 through 12. Additionally, I had the presentation document uploaded to the Clifton High School's digital resources page. Currently, I am working on creating short videos to complement the presentation and answer common

questions that have come up while preparing with my colleagues for the 2020-2021 school year. Without the experiences and support provided by my Wipro fellows and the Montclair faculty, I don't know that I would have had the opportunity or confidence to initiate and follow through on this project.

Megan Graziano

Being a member of the WIPRO fellowship program at Montclair State University for the past six years has been one of the most fulfilling, inspiring, and empowering experiences of my professional career. This program provided me with the unique opportunity to collaborate with a broad network of science educators from various districts and the support necessary to pursue personal passion projects within science education. Everything we did in this program has helped me to improve as an educator and develop into a true teacher-leader within my district. Some of my favorite experiences from this program include reflecting on classroom practices through participation in the VCCLS and HCCLS groups, designing and carrying out action research projects, presenting to other educators at our end of year conferences, and leading the development of a summer STEM program for my district! What I will miss most, however, is our regular WIPRO group meetings. No matter how tired or overwhelmed I felt walking into those events, I would always leave feeling energized and inspired to do something great! I am incredibly grateful to have had the opportunity to be a part of the WIPRO fellowship program and for the lessons I learned, the relationships I developed, and the confidence I gained throughout. I will carry them with me throughout my career.

Reflection

Biggest success: The MSU program continues to draw past participants back to the program. This year, 21 past participants had proposals for Phase II projects accepted. All Phase II, Year 3 Fellows showcased their dedication to science teacher leadership through their participation in the program and their work on their independent projects. The biggest challenge, of course, was the sudden closing of schools caused by the pandemic. The ensuing shift to online learning resulted in some Fellows adapting their projects to be responsive to current needs. The MSU team will be meeting with the Fellows on October 9th to help them plan their activities for the rest of the semester.

NEW YORK -MERCY COLLEGE

Introduction

The NY site was pleased to announce that their former researcher Dr. Latanya Brandon has gone on to accept a faculty position at SUNY New Paltz, and they are welcoming their new postdoctoral researcher, Dr. Kristen Larson. She is an expert in pre-service teacher education and qualitative research. The leadership team is happy to have her as part of the team and working with Fellows.

Fellows' activities

All schools were closed this quarter. New York State Department of Education spent the summer months working on a reopening plan for a safe return to school. Schools across the area have varying reopening plans that range from fully remote teaching and learning to hybrid models that involve a mix of in-person and online engagement.

Fellows have shared anecdotally that they have been helping to support their colleagues during this unprecedented time in education, while teachers are learning new skills under duress and at a startling rate. Site leaders are happy that Fellows are an asset to their districts and colleagues. While they are saddened that some districts are struggling to support teachers during this time, site leaders are trying to encourage them as best as possible. They have sent supportive emails and invited Fellows to contact them for help or a friendly ear.

As the Fellows have worked towards planning for remote or hybrid teaching, they have continued to place their leadership mini-grant projects on hold and are considering ways to implement their projects in this new and changing context. Staff from Mercy College have reached out and will continue to support the Fellows as they plan to implement their mini-grant projects this Fall and Winter.

Research Activities

The NY team continues to focus on research and sharing the great work done through Wipro SEF. They continue to work on analyzing existing data and thinking about ways to extend their related studies.

Publications

Drs. Amanda Gunning, Meghan Marrero, Peter Hillman, and Latanya Brandon's article "How K-12 Teachers of Science Experience a Vertically Articulated Professional Learning

Community" was published in the May 2020 *Journal of Science Teacher Education.* The article examined the ways that Wipro Vertical Collaborative Coaching and Learning in Science supported teacher development (at all grade levels) in teaching science through vertical Professional Learning Communities in partner schools.

> Gunning, A. M., Marrero, M. E., Hillman, P. C., & Brandon, L. T. (2020). How K-12 teachers of science experience a vertically articulated professional learning community. *Journal of Science Teacher Education, 31*(6), 705-718. https://doi.org/10.1080/1046560X.2020.1758419

Fall conference

The Mercy College Center for STEM Education (MCCSE) has been working this quarter on planning for a fully virtual K-12 STEM Teacher Conference on October 3rd. This planning has brought to light new formats for engaging in conference activities in an online context. The team has worked to find novel ways to plan the conference to integrate face-to-face interaction through the Zoom platform. The MCCSE K-12 STEM Teacher Conference will include a welcome by the Drs. Amanda Gunning and Meghan Marrero, a keynote titled "Classrooms Without Walls: Connecting Students with Scientists, Rainforests, and Ocelots" delivered by Drs. Willis and Macht of Montclair State University's PRISM (a local Wipro SEF partner!), two sessions of three concurrent presentations (featuring presentations by Wipro Fellows: Aimee Ferguson and Marcia Manzueta), and one session which will feature seven roundtables. The conference will cover topics around classroom culture in virtual environments, equity, and diversity in the classroom, and incorporating STEM into the elementary classroom.

In addition to the MCCSE conference, GNY Wipro fellows have been invited to present Phase 2 posters at the virtual Wipro SEF Conference at UNT Dallas in the last two weeks of October 2020. MCCSE is coordinating with Fellows to support their poster and presentation design process.

Reflections on the Missouri Virtual Conference

MCCSE's faculty, Dr. Meghan Marrero, and Wipro Fellow, Carmen King, attended the Missouri Virtual Conference this year. The conference was innovative in its design and set the stage for virtual conferences to come. Mercy College kept much of the Missouri conference in mind when planning for their own virtual conference scheduled for October 3rd.

Plans for the upcoming academic year for the SEF program

Looking ahead, MCCSE Staff are interested in looking more closely at the ways that Fellows navigate Phase II in the online or hybrid environment. The Center is particularly interested in the ways that requests and implementation for mini-grant projects differ or shift in this new context and among the different grade levels (elementary through secondary school).

Additionally, MCCSE looks forward to getting feedback regarding their Proposal for Continued Wipro support which outlined four proposed initiatives to support existing Fellows. These four proposed initiatives include:
1) a new Wipro STEM Education Fellowship with existing partner districts which would recruit eight new fellows to join two Mercy College graduate courses in STEM pedagogy and leadership- which features a VPLC, based on the VCCLS model.
2) a new Wipro STEM Education Fellowship that expands into new partner districts that would recruit two cohorts of 11 Fellows.
3) implement District Coordinator GPS projects that would partner with up to four Fellows or other teachers and
4) initiate a Social Justice GPS that would invite Fellows to engage in a GPS that focuses on anti-racism and social justice movements in schools.

As MCCSE seeks these four initiatives, they look to continue to contribute to the Wipro Fellowship and work towards new goals.

Featured Fellows

Over the summer, two GNY Wipro fellows, Aimee Ferguson and Marcia Manzueta, submitted conference workshop proposals for the Fall K-12 STEM Teacher Conference.

Aimee Ferguson proposed a workshop called "Using Technology to Teach Science" in which participants will learn about: using the Socratic seminar method/variations with their current work; explore science internet resources and; learn how to effectively display digital work assignments online. This workshop is intended for upper elementary teachers but can be used in middle school and beyond.
Marcia Manzueta proposed a roundtable called "Family Learning and Outreach for Research and Education in STEM (FLORES): Family Science Outreach Nights (K-12)". This bilingual program will aim engage parents in STEM discovery with their children while learning how to promote questioning and investigation. Marcia implemented these 3-session evenings in her Port Chester school district and will discuss what it looks like.

Reflection

All of the GNY Fellows stepped up to the challenges presented in the context of Covid-19. They all took novel and innovative approaches to their teaching, planning, and leadership. For example, this September as students were pushed into a remote/hybrid learning model, Diane Delgado arranged for all of her students to receive a STEAM Education kit that provided them with many of the resources and tools they will need this year in their science classes. Additionally, GNY Fellows reported continued involvement in professional development and support for their colleagues and other teachers. These STEAM education kits and professional development opportunities exemplify the commitment GNY Fellows have for their practice and community.

TEXAS- UNIVERSITY OF NORTH TEXAS DALLAS

Introduction

Personnel Changes

There are no personnel changes at the University.

The DSC of GPISD, Ms. Eileen Little retired and Ms. Tamara Majors will be replacing her as DSC. For Cohort 3 does not include any GPISD Fellows and so the leadership team will have to create a revised contract for her so that GPISD will still be able to participate in Wipro SEF

Covid and furloughs has pretty much decimated the Informal Science Educators either because they have lost all their education or office staff. Several informal sites are closed due to Covid.

- Colin Johnson from the Dallas Zoo has left, and UNT is working with Marti Copeland at the zoo.
- Anne Marie Fayen from the Dallas Arboretum has left, and her place has been taken by Jackie Hood.
- Ranger Rick Torres and Ranger Dani Hatch have left. Danielle Bradley now oversees the Cedar Hill and Ray Roberts state parks.
- Katie Christman oversees both the Dogwood Canyon and Trinity River Audubon centers.
- Erin Shields was let go of from Texas Discovery Garden, and a new contact has not been named.
- Mary Morgan was let go from the Perot Museum of Nature and Science and UNT leadership is now working with Karin Foronda at the Museum.
- Linda Dunn at the Wetland center, Mark Broughton at the DISD STEM Environmental Education center, Rosalie Wade at the Flight Museum and Zoeanne Stichcomb at Texas Freshwater Fisheries are still at their sites with reduced personnel.

There is ongoing drama with the DeSoto Superintendent being fired and protests of racism against the acting superintendent. TEA has appointed a conservator for the district, and on Sunday Sept 6th after a huge public outcry and protests, the DeSoto ISD board voted to rescind the Superintendent's resignation and accept the acting superintendent's resignation.

Disruptions to Wipro Cohorts

Due to Covid, all Cohort 2 Fellows who were due to complete their GPS by August 2020 will now have until December 2020 to complete their GPS projects and submit their Wix portfolio. Cohort 2 Fellows are in different stages of completion of their projects and Dr. Narayan is working with them on a one to one basis to make sure they complete their projects. At this stage there are two C2 Fellows who have not communicated with UNT leadership or their DSCs.

Day and date	Time	Name of Fellow
Thursday, Aug 6th 2020	6-7 pm	Candace Edmerson
	8-9 pm	Rocio Avila
Friday, Aug 7th 2020	2-3pm	Billy Johnson
	4-5pm	Raisha Allen
Friday, Aug 8th 2020	12:30-1pm	LaQuaesha Williams
	1-2 pm	Ana Belmonte
	2-2:29pm	Brittney Preston
	2:30-3:30pm	Juan Morel
	5-6 pm	Tabitha Moreno
Tuesday, Aug 11th 2020	5:06 -6 pm	Myesia Morrison
Friday, Aug 14th 2020	6-7 pm	Candace Edmerson
Sunday, Aug 16th 2020	5-6 pm	Ana Belmonte

Monday, Aug 17th 2020	5-6 pm	Rocio Avila
Tuesday, Aug 18th 2020	1-2pm	Billy Johnson
Wednesday, Aug 19th 2020	2:30-3:30 pm	LaQuaesha Williams
Friday, Aug 21st 2020	2:30-3:30 pm	Juan Morel
Saturday, Aug 22nd 2020	4:30-5:30 pm	Ana Belmonte
	5:32-6 pm	Tabitha Moreno
Monday, Aug 24th 2020	4-5 pm	Rocio Avila
Saturday, Aug 29th 2020	12-1 pm	Rocio Avila
Wednesday, Sept 9th 2020	6:30-7:30 pm	Ana Belmonte

All Cohort 3 Fellows have completed their Year 1 work, nothing is pending. All HCCLS project work and portfolios were completed, submitted and grades assigned. Cohort 3 Fellows will be working on the district and personal goals first. Dr. Narayan is monitoring the situation with the informal educators and meet with them every month (they met in August and September.) The informal task of the GPS project is currently on hiatus till the situation improves.

Informal Science Educator Zoom Meeting Links:

Aug 5th 2020: https://untdallas.zoom.us/rec/share/hepBblL-no_B7UPQJ0hhcqKfpFfVYpKlZZjqSNXJ9amFwhrPMpxTcwc7YOch3A3S.rUmBSVNUm7MECL3b?startTime=1596650420000

Sept 3rd, 2020: recording not available

Individual meetings with Cohort 3 Fellows:

Day and date	Time	Name of Fellow
Friday, Aug 28th 2020	4-5 pm	Maria Soto
	5-6 pm	Julien Yacho
Saturday, Aug 29th 2020	1-2 pm	Julien Yacho
	4-5 pm	Maria Soto
	7-8 pm	Tiffanie Johnson
Sunday, Aug 30th 2020	4 - 5:11 pm	Marquita Muhammad
Tuesday, Sept 1st 2020	4 -5 pm	Sherry Thompson
Wednesday, Sept 2nd 2020	12 - 1 pm	Olaide Ajakaye
	3- 4 pm	Linda O'Bryan
	5:30 pm -6:30 pm	Tamesha Brown
	7 -8 pm	Amanda Cortez
Friday, Sept 4th 2020	3 - 3:30 pm	Marsha Bolden
	6:30 - 7:09 pm	Linda O'Bryan
Monday, Sept 7th 2020	4:30 - 5 pm	Markus Burkhalter
	5 - 6 pm	Shelby Allen
Wednesday, Sept 9th 2020	4:30 – 5:30 pm	Tracey Craft

Disruptions to events

The Wipro annual conference scheduled to be held in person on June 13th has now been rescheduled to be held online.

The Medal Ceremony for Cohort 2 to be held on September 2nd, 2020 is postponed till the spring 2021 semester.

Dates for Partnering ISDS to start with instruction

Grand Prairie ISD: Instruction for students online started August 17th. On Sept 21st, the district is scheduled to move to online/face to face instruction based on what the students have selected.

Irving ISD: Instruction for students online started August 17th. On Sept 28th, the district is scheduled to move to online/face to face instruction based on what the students have selected.

Lancaster ISD, Cedar Hill ISD, DeSoto ISD: Instruction for students online will start Sept 8th. On October 5th, the districts are scheduled to move to online/face to face instruction based on what the students have selected.

The dates to move to online/face to face instruction are tentative and will change with the situation here in Dallas and with changing Centers for Disease Control (CDC)/ Texas Education Agency (TEA) guidelines.

Cohort 3 GPS progress

Cohort 3 completed their HCCLS projects in May, attended and presented at the Missouri conference, and then attended the Southwest Dallas Collaborative conference. They had a remarkably busy summer and Dr. Narayan decided to give them a break of at least a month to rejuvenate and prepare for their GPS year. The first day of class for the 2020-2021 year was August 24th, they met on Zoom. Dr. Narayan introduced the components of the GPS portfolio and gave them examples. She asked each Fellow to think about what they wanted to do for their personal and district goals. First, she set up individual phone meetings with them to discuss their goals, then gave them a few days to mull over their ideas and to share them with their principals and DSCs before confirming they really wanted to pursue those ideas for their GPS.

Cohort 3 GPS Topics

The personal goal is designed to help develop the Fellow professionally. It necessarily has 2 components- learn and apply.

Fellows Name	**Personal Goal (1-2 sentences)**	**District Goal (1-2 sentences)**
Julien Yacho	To take the lead on writing an article for Science and Children based on his group's HCCLS project on Constructing Explanations and Designing Solutions	To use Total Physical Response based lessons to aid in bridging students from Spanish to English. This will focus on using scripted hand motion videos in English and Spanish using vocabulary from the Science TEKS in k-5. (Poster and PD)
Shelby Allen	To get google certified levels 1 and 2 and develop a PD for K-6 science teachers with grade wise examples (PD)	To set up an afterschool STEM/ Science club for all K-5 students (Poster)
Olaide Ajakaye	To learn about Hands-on Minds-on learning on a cross-curricular level and develop a PD for K-6 regarding the cross curricular implementation of Hands-on, Minds-on learning (PD)	To determine the impact of hands-on minds-on activities on the science learning of grade students (Poster)
Tiffanie Johnson	Learn how to use non-traditional forms or writing in a 5th grade science class.	Use questioning to activate prior knowledge to build science content knowledge through Collins Writing. (poster) (PD for math and science)
Tamesha Brown	To learn about and develop a walk STEM walk at her campus	To determine how differentiation supports individual student needs cross curricular (PD)
Linda O'Bryan Switch goals	To learn how to implement technology in the K-6 science classroom (PD)	Test how effective educational platforms are for Elem students and teachers (poster)
Sherry Thompson	To learn about STEAM and how to implement it in an elementary classroom (PD)	To determine the impact of student created word walls on the retention of science content during online learning (Poster)

Markus Burkhalter	To learn more about motivation of young males of color and apply those strategies district wide to the Lancaster ISD My Brother's Keeper Club.	To determine the impact teaching integrated thematic units has on 1st grade student's content knowledge (poster)
Amanda Cortex	To learn how to use an outdoor space to teach science and develop a list of K-6 science topics and materials required to be taught in the outdoor space (PD)	Impact of learning science in outdoor spaces (Poster)
Marsha Bolden	To learn how to effectively integrate technology in an ICP class. (Poster and PD)	To incorporate examples of STEM in the high school biology curriculum
Maria Soto	To learn about and implement PBLs in my elementary science classroom (PD)	Close reading in science -Poster already done
Marquita Muhammed	To learn about Mixed reality (AR & VR) digital gaming and apply it to your 6th grade classroom (PD)	What impact does coding have on 6th grade student's science contention retention (poster)
Yesenia Vasquez	To learn how to implement QSSSA in a virtual setting in my high school biology class. QSSSA stands for Question, Signal, Stem, Share, Assess. QSSSA is an ESL strategy used to help EL learners to write and speak using academic vocabulary. (Irving is 72% Hispanic)	How to effectively implement WICOR strategies in Life Science at the high school level. WICOR stands for Writing, Inquiry, Collaboration, Organization, and Reading. WICOR is an AVID strategy used in the secondary level.

Upcoming meetings with Cohort 3 Fellows

Dr. Narayan has meetings scheduled for every month; these might be shorter meetings while she continues to work one on one with each Fellow on their goals

Meeting Date	**Goal(s) of Meeting**	**Online meeting link**

08/24/20	To introduce C3 to the GPS tasks	https://untdallas.zoom.us/rec/play/6MUucen5-zk3G9WQswSDAPR5W9W5Lfms03ce8vVfxRvjWiZQOlb0YrIaNrZnPofV8sOqLSs7KkcGsPTG?continueMode=true
09/21/20	More GPS work	
10/19/20		
11/09/20	Grants	
12/07/20		
01/18/21		
02/15/21		
03/15/21		
04/12/21		
05/10/21		
06/12/21	Tentative Wipro Conference for 2021	
TBA	SW Dallas Collaborative PD Conference	

Wipro Cohort 3 Meeting, Monday August 24th, 2020, 5:30-8:20 pm via zoom

Agenda

1. Welcome, Share out

2. Dates we are meeting this year
   August 24th, Sept 21st, October 19th, Nov 8th, Dec 7th, Jan 18th, Feb 15th, Mar 15th, Apr 12th, May 10th, June 12th Tentative Wipro Conference for 2021, Southwest collaborative conference (TBA)
   ALL WORK MUST BE COMPLETED BY AUG 20, 2021

3. Stipend Payment for year 2
   Total stipend of 3000$, payment in 3 installments, Dec 1st, 2020, 750$, May 1st, 2021, 750$ and Sept 1 2021, 1500$

4. Wipro 2020 Conference at UNT Dallas
   Pre zoom meetings on Fri Oct 23rd / Sat oct 24th and have the conference between for 2 weeks and the post zoom meetings on Fri Nov 6th and sat Nov 7th.

   Wipro conferences at other Wipro locations: CA, FL attendance and participation

5. CAST 2020
   Nov 4-7th online, submitted proposals 4 HCCLS and 4 VCCLS presentations, awaiting acceptance, expectations for attendance, subs? Conversation with DSCs
   CAST 2021 I encourage you to attend and submit proposals

6. Update on Informal task for GPS

7. GPS Wix Portfolio, Wix assistance

8. Mentors(C2) what will this look like

9. GPS Tasks materials: 400$ for materials for the Personal and District goals, 700$ for materials for the Informal goal

Cohort 3 meetings with Advisors

The Cohort 3 Fellows will meet with Dr. Narayan and their DSCs, when the Fellows are ready for their informal component, they will be assigned an informal educator as an advisor

District Science Coordinators

Meetings with Cohort 3 Fellows

These meetings will be virtual, right now specific dates are not available.

Shaping the GPS year

The Cohort 3 Fellows are required to talk to their DSCs regarding their District and personal goals and must get their approval prior to talking to Dr. Narayan. After her first conversation with the fellow, they are required to update their DSC and principal as to what they are doing for those projects. Dr. Narayan will also meet with each DSC and talk about their Fellows' projects.

End of the year Host Conference Upcoming

Site location (State)	Date of Conference	Conference Location	Online Links
TX	Oct 17th - Oct 29th	online	

There will be 2 pre-conference Zoom sessions offered to all participants before the conference starts, attendees can attend any one of those. The pre-conference Zoom sessions will be 2 hours long on Friday, Oct 16th evening (maybe 5-7 pm CST) / Saturday, the 17th am (10-12 am CST). The actual online conference will be over a period of 2 weeks (from Oct 17th - Oct 29th) to give attendees enough time to view the HCCLS and GPS videos and poster presentations and provide feedback. There will be 2 post-conference Zoom sessions offered to all and attendees can attend any one of those. The post-conference Zoom sessions will be 2 hours long on Fri Oct 30th evening (maybe 5-7 pm CST) / Sat Oct 31st am (10 - 12 am CST)

Host Conference Description

Dr. Narayan will invite Wipro SEF Cohort 1, all district personnel, Informal Science Educators, Fellows and IHEs from other Wipro sites. Dr. Narayan would like to include all four Cohort 3 HCCLS presentations, Cohort 2 posters from UNTD, and 1-2 HCCLS presentations from CA, FL and MO (the ones that did not present at MO from CA / FL). She

would also like 2-3 posters from CA, FL and MO and some Phase 2 posters from UMass, Mercy and Montclair.

Reflections on the Missouri Virtual Conference

Did you attend the Missouri Conference?
Dr. Narayan shared, "Yes, I attended the Missouri conference. I was very impressed with the way it was conducted."

Did you learn anything about virtual conferences that may help you this year with any virtual conferences you may hold?

Dr. Narayan's reflection, "Forethought, Preparation, and a Great dedicated IT Team are the three things needed for a virtual conference to succeed. I also believe it works well if everyone is on the same page with regards to expectations for the conference."

Cohort 1& 2 Fellows

The UNT leadership team plans to use selected C2 and C1 Fellows as mentors for C3 Fellows to talk to regarding their projects.

Featured Fellows

Raisha Allen, Cohort 2 Fellow

Being a fellow has been one of the most rewarding things I have done. I have learned a lot from fellow science teachers and been able to present my educational research at many conferences. I have been able to present at CAST and have people learn from my research, but also, I have made long lasting connections that I will never forget. I have been able to connect with science teachers across the nation and learn from them. The encouragement Dr. Narayan and her team has given me has caused me to step out of my comfort zone and reach my full potential. They have given me the opportunity to work with informal science companies that I did not know even existed in Dallas. Through WIPRO, I have become a better teacher, leader, and student and have been able to give my students memorable classroom moments.

Tiffanie Johnson, Cohort 3 Fellow

My name is Tiffanie Johnson and I am in my 2nd year of WIPRO Science Fellowship. I currently teach 5th grade math and science at Bray Elementary. This is my 12th year in education and my 4th year teaching science. Education has been a part of my life. I started school at the age of 2, because my grandmother was a teacher at a Head Start Program. This is why I have great love for learning and growing in whatever, I do.

Wipro Science Fellowship has provided opportunities for me as an educator to learn and grow. Collaboration was one thing that helped me to grow as an educator. During my vertical and horizontal aligned project, I had the opportunity to learn and share information with other educators in the program. Now I have developed relationships with educators that I am able to use as a resource. It has also helped us to understand the research behind different strategies that are used and how to effectively implement them in my class. The WIPRO Science Fellowship has provided me with strategies and resources that have improved the way I teach and has allowed me to help my students thrive.

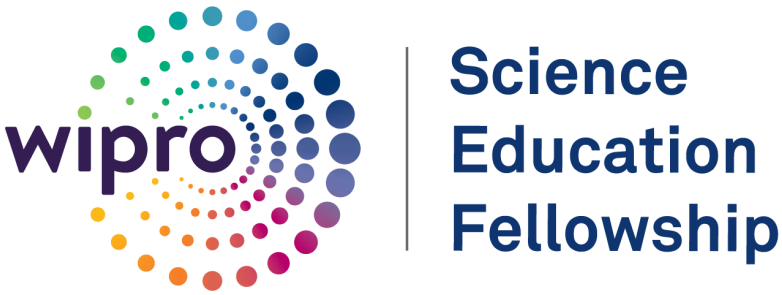
Year 3 Reflection

Our Biggest Challenge has been Covid and its effects on the Fellows, the ISDs and the Informal Science Educators. Every individual within and associated with the Wipro SEF program have been affected by it one way or another. There is a lot of fear and confusion within the ISDS, who are leaning on the teachers very hard. Technology and how to teach effectively online is a huge issue that several Fellows are struggling with. Time management is a huge issue and Fellows are struggling with managing their school

schedules, Wipro work and their families, **they are just overwhelmed.** I am really concerned with 2 of my best Cohort 2 Fellows who I have not been able to get in contact with and I am worried if they do not complete they will fail the course and get an F on their transcript. The informal science education sites have all been affected by Covid. Sites are closed or just now opening with reduced capacity and staff at these sites have been furloughed. The DSCs are overwhelmed, and it is not a good situation.

PROGRAM EVALUATION AND RESEARCH GROUP (DHA)

A summary of the evaluation report follows.



2019-2020 Evaluation Report

September 14, 2020

Prepared by:
Anne Gurnee, M.Ed., Senior Associate
& Brian Garrison, M.A., Research Assistant
David Heil & Associates, Inc.

Submitted to:
Center of Science and Mathematics in Context (COSMIC) at the
University of Massachusetts Boston

DAVID HEIL & ASSOCIATES, INC.
Innovations in Science Learning

Executive Summary

With financial support from Wipro, the University of Massachusetts Boston's Center of Science and Mathematics in Context (COSMIC) launched an initiative to prepare teacher leaders in partnering school districts. This initiative, the Wipro Science Education Fellowship (Wipro SEF), was built on the success of the Boston Science Partnership's Science Education Fellowship, a project funded by the National Science Foundation from 2009-2012. Since 2012, the Wipro Science Education Fellowship program expanded to include partnering school districts from New Jersey and New York, in collaboration with Montclair State University and Mercy College. In 2017, the program added a new state, Texas, with a new university partner, the University of North Texas at Dallas (UNT), and in 2018, three more universities, Stanford University, University of South Florida and the University of Missouri, joined Wipro SEF.

A major goal of the Wipro Science Education Fellowship is to develop a cadre of teacher leaders in each partnering district who deepen their practice and lead from their classrooms. Wipro SEF focuses on three specific areas including: thinking about teaching, leadership to peers, and individual growth opportunities. Other key elements of the program include encouraging the use of current research to improve science teaching, reflective teaching and improving districts through teaching leadership. Each year, Wipro SEF supports cohorts of teachers from approximately five school districts in each of the regions who participate in the program over two years. Key tenets of the program in year one include vertical and horizontal professional learning communities, lesson observations and debriefings as well as action research. In year two, Fellows develop a growth plan system (GPS) that includes opportunities for individual growth that also demonstrate their leadership skills while advancing a district-wide initiative.

This year (2019-2020) marked the third year of additional funding that supported continuing work in Northeast states and the continuation of the program in Texas, California, Florida and Missouri. Texas completed the second year with their second cohort of Fellows and welcomed their third cohort. California, Florida and Missouri continued with their first cohort of Fellows and welcomed their second cohort. Massachusetts, New Jersey and New York received additional funds from Wipro to continue support of some former Fellows' initiatives.

The Wipro Science Education Fellowship program leadership contracted with David Heil & Associates, Inc. (DHA) to serve as a research and evaluation consultant beginning in 2014. DHA's work this year focused on formative and long-term data gathering, analysis, and reporting. For California, Florida, Missouri and Texas, the focus of the evaluation work is formative. In the Northeast, DHA is tracking longer-term impacts of the Wipro Science Education Fellowship program for the teachers involved.

This report summarizes findings from the formative and long-term data collected to date for the 2019-2020 academic year. Elements of the evaluation study included surveys, focus group discussions with Fellows and District Coordinators, interviews with Year 2 Fellows, local district administrators and program leadership (higher education faculty and staff), observations of meetings, Fellows' classrooms, and year-end conferences, and review of program artifacts and Fellows' work. This year, the program in all states was significantly disrupted by a global pandemic and related school closures in the spring. DHA's goal was to continue to assess the extent to which the Wipro SEF model was implemented with fidelity in each region while also measuring the achievement of identified aims and goals and to chronicle the effect of the school closures on the program and its participants. In addition, DHA documented outcomes and strategic impacts of the program, providing the program leadership with data-driven recommendations for the iterative improvement and continued implementation of the program. DHA also participated in several leadership planning meetings to set the stage for the future evaluation work in all regions.

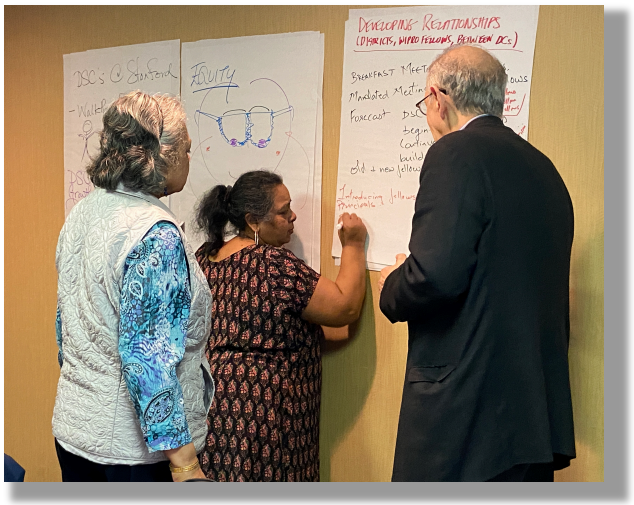
Key Findings – 2019-2020

This year, there continued to be broad agreement among the key stakeholders (e.g., Fellows, District Coordinators, higher education faculty and staff) involved with the program that the Wipro Science Education Fellowship was successfully implemented in California, Florida, Missouri and Texas. The data from this evaluation study indicated that the program was positively received by participants and resulted in numerous outcomes and impacts for Fellows, District Coordinators and their associated schools and districts. Data collected from the three Northeast sites indicated that the Wipro Science Education Fellowship continues to have positive impacts on the Fellows years after their initial participation. The onset of a worldwide pandemic (COVID-19) also had significant impacts on the program this year as all sites experienced school closures in spring 2020.

Key findings from the evaluation study indicated that:

- A large majority of Year 1 Fellows (95%), Year 2 Fellows (73%) and District Coordinators (95%) reported that they were satisfied or very satisfied with the Wipro Science Education Fellowship.
- A large majority of Year 1 Fellows (95%), Year 2 Fellows (82%) and District Coordinators (90%) felt their expectations of the Wipro SEF program were mostly met or exceeded.
- Nearly three-quarters of Fellows (72%) agreed or strongly agreed that staying involved with the Wipro SEF program had made a positive impact on their classroom since the onset of COVID-19.
- Well over half of Fellows (64%) agreed or strongly agreed that the skills that they had gained through Wipro SEF had helped make this challenging, post-pandemic teaching landscape easier to manage.
- Most of the Fellows (86%) see themselves as teacher leaders in their schools, and a quarter (26%) see themselves as teacher leaders in their districts.
- A third of Fellows (33%) cited specific examples of how they had demonstrated teacher leadership after the advent of COVID-19. A fifth (19%) specifically mentioned that the technology skills gained through Wipro SEF had been an asset to their colleagues.
- The majority of Year 2 Fellows (80%) experienced changes to their initial plans for their GPS due to COVID-19.
- Stress was a notable new theme for Fellows as the pandemic-related closures posed multiple challenges.
- Former Fellows in Massachusetts, New Jersey and New York continued to demonstrate numerous impacts from their participation in the Wipro Science Education Fellowship including:
    - Using reflection to improve their professional practice
    - Giving, receiving and actively soliciting feedback from colleagues
    - Using research to guide their professional practice
    - Regular communication with other former Fellows in their school/district
    - Continued improvement of teaching skills and leadership
    - The value of a professional community of like-minded and similarly trained science educators
- A third of former Fellows (36%) also noted the importance of their technical experience as a valuable asset to colleagues post-pandemic.

- District Coordinators noted several key impacts of the Wipro SEF program on their Fellows:
  - A growth in teacher leadership and confidence
  - Improvement in science teaching skills
  - Continued growth of a collaborative network of science educators
- District Coordinators also noted a significant drop in their own confidence to encourage Wipro SEF-related behaviors post-COVID-19.
- Three-quarters (78%) of Informal Science Education Partners in Texas were satisfied or very satisfied with the Wipro Science Education Fellowship in spite of the pandemic's highly negative impact on their institutions.
- Texas Fellows reported an increase in use of several ISE resources after the pandemic indicating a recognition of their value.
- District Coordinators and district administrators in California, Florida, Missouri and Texas and former Fellows in the Northeast noted a number of impacts on districts involved with Wipro SEF including:
  - The value of a supportive and collaborative network of science teachers
  - A growing awareness of the importance of science at the district level
  - A broadening of the group of teachers with whom District Coordinators interact regularly
  - An improvement of the relationships between District Coordinators
  - An energizing of teachers, including veterans
  - The creation of teacher leaders
  - The value of opportunities for vertical collaboration
  - An improvement of science teaching & access to science for students
- A large majority of participants in the Missouri Virtual Conference (88%) were satisfied or very satisfied with the conference and all participants (100%) felt most to all of their expectations were met.
- Wipro SEF higher education leaders were pleased with the program overall, and all made modifications to the program this year to accommodate Fellows' needs during the pandemic. Several expressed concerns with recruiting Fellows for future cohorts during this crisis and building community amongst Fellows virtually in the coming months.



Recommendations

While the Wipro Science Education Fellowship on the whole continues to be successful, input collected from participants (e.g., Fellows, District Coordinators, ISE partners and program leadership) indicated potential areas for continued refinement of the model. As the program continues to evolve and grow, these insights help to inform the future phases of program growth and expansion. Based on analysis of this evaluation data, DHA offers the following recommendations:

1. **As online meetings are likely the norm for the near future, work together to share information about best practices for online instruction and virtual community building.**

As the Wipro SEF districts begin school this year, there is a mix of online and in-person instruction. However, with the virus still very much present in our country, even those districts providing in-person instruction are minimizing contact, and there is no guarantee that instruction will remain in-person throughout the 2020-2021 school year. Identifying best practices for online instruction and how to build community virtually is a problem currently being faced by the entire education field. The collection of wisdom and experience within the leadership team and the broader Wipro SEF community is vast and could provide timely, powerful answers for those involved in the Wipro SEF community and beyond.

2. **Identify the stress points for program participants during this current crisis and address those needs directly.**

Not surprisingly, the Fellows communicated that stress was a large part of their personal landscape when COVID-19 began this spring. The District Coordinators, while not specifically using the word "stress," were also clearly affected similarly as evidenced by their inability to attend to some Wipro SEF-related tasks. The four active sites appropriately responded with flexibility around program deliverables for the Fellows. That stress has not likely dissipated since spring, but instead has changed in nuanced ways for the Fellows involved in the program.

To build a strong community this year, it is important for the sites to spend time learning what the current areas of stress are and how the program can address those areas of concern. By doing so, the leadership will continue to build the community, will help carry the current burdens shoulders by teachers, and will also model the important skills of listening and problem solving for program participants.

3. **Two key lessons emerged from the Missouri Virtual Conference: Mix synchronous and asynchronous delivery for any future virtual conferences and provide clear instructions for the conference overall and for delivering feedback specifically.**

Missouri provided an excellent model of a virtual conference for the other states. Participants clearly valued both the synchronous and asynchronous elements of the conference. The asynchronous elements allowed for flexibility in when and how much of the content to view. The synchronous elements provided a chance to connect with other participants personally and with deeper meaning. If anything, participants wanted a bit more time to meet synchronously. A few even suggested that some, if not all, of the presentations be viewed live to more closely recreate the in-person experience of the usual year-end conferences.

For future conferences, it will be important to offer participants clear instructions on navigating the conference and both its synchronous and asynchronous components. In particular, participants need specific guidance on how to provide warm and cool feedback. Consider creating instructions for the conference and for feedback multi-modally (e.g. in writing *and* through video) to meet the needs of all participants.

4. Provide information for all Wipro SEF sites on the possibilities for and structure of future funding.

As the program continues to grow and program leadership prepares to approach Wipro SEF for additional funding, the participating sites need clarity as to what a future phase of the program involves and requires of them. As of spring, several of the sites felt uninformed about this important next step of the program's development. To ensure that these program partners can fully participate, it is critical to have open conversations about the plans for securing funding and how these partners can fully participate and assist.

5. Continue to explore ways to tell the story of Wipro SEF to a broader audience in order to inform and inspire others to improve science education through comprehensive professional development.

As has been mentioned in previous reports, the wealth of stories contained within the Wipro SEF community is rich and deep. This year, with the additional challenge of a global pandemic overlaid on the last part of the program year, there are even more stories to tell about the value of a program that creates collaborative networks of science teachers, improves science instruction, creates reflective educators, and builds teacher leaders (with improved technical skills!). Although it has been difficult to marshal the resources to broadcast broadly the impacts of the Wipro SEF program, DHA would encourage program leadership to persevere. The benefits of doing so will recognize the hard work done by all the current program participants but also will inform and inspire others in the broader education community that intensive professional development of science educators can create real change in schools and districts.