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

WIPRO SEF

YEAR 11
QUARTERLY REPORT
December 2022

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EXECUTIVE SUMMARY

For a decade, the Wipro Science Education Fellowship (SEF) has provided funding and support to science teachers and school districts across the country. The program has national reach with sites in California, Florida, Massachusetts, Missouri, New Jersey, New York, and Texas serving almost 750,000 students (approximately 1.5% of US pre-K – 12 students). The original phases of the program have been focused on developing a cadre of science teacher leaders who lead *from their classrooms*. As the second decade of the program begins a new layer of leadership is being added by engaging more purposefully with school formal district leadership (administration). The goal is to enable district transformation through teacher leadership. Exciting work has begun and is beginning across the network with projects ranging from individually led projects to cross-district collaborations to improve science teaching and learning for students. The goals of the projects are diverse and encompass efforts to promote the program, improve student science and engineering skills, improve standardized test scores, and engage the communities of the schools. The continued generous support of Wipro, Ltd. is enabling dedicated, caring, and talented educators across the U.S. to make a real difference in the lives of their students.

Keywords: Teacher leadership, collaboration, district transformation, learning communities

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 with support and guidance from their university partner.

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. This critical mass of teacher leaders sets the stage for district transformation.

Phase II and Phase III – Innovation Phase

After completing the two-year "foundation" program, District science coordinators work with their University partners in exploring ways in which to build on the Fellows experiences, projects and leadership skills in order to support district transformation. Through various and varied initiatives, Fellows engage with other teachers in their districts. Simultaneously, administrators are made more aware of the resources that the Wipro SEF program has seeded in their schools and districts. This phase of funding is also intended to encourage district incentives to support future work that will continue after this Wipro external funding concludes.

HOW TO READ THIS REPORT

This report captures the work of the Wipro SEF program from September 2022 thru December 2022. It is the first quarterly report of the newest phase of the program. During this time, all sites met the challenges of maintaining and adapting the Wipro SEF program as they adjust to the new "normal" following the Covid-19 pandemic. *The chart below summarizes the activities of this quarter and the activities that took place in this school year. 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 individual Fellows please refer to the vignettes in the sections entitled "Featured Fellows." Throughout the 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
2021-2022	Year 4	Year 4	Phase II & Lead Institution	Year 4	Funding ended	Phase II	Phase II
2022-2023	Phase II	Phase II	Phase III & Lead Institution	Phase II	Phase III	Phase III	Phase III

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 &III				Activities proposed by individual sites.

Key to yearly activities

BY THE NUMBERS

Foundational Phase

Site (Institution)	Districts	Total Students in Districts	Fellows	District Science Coordinators	Presentations and Publications
California (Stanford)	5	97,288	60	5	7
Florida (U of South Florida)	3	398,960	60	3	16
Massachusetts (UMass – Boston)	5	73,688	58 – Phase I 17 – Phase II	5	18
Missouri (U of Missouri)	8	34,162	52	13 (over 4 years)	8
New Jersey (Montclair State)	5	31,486	60 – Phase I 24 – Phase II	5	22
New York (Mercy College)	5	33,580	58 – Phase I 60 – Phase II	5	31
Texas (U North Texas – Dallas)	5	83,160	46	5	28

Current Phase

Site (Institution)	Projects Submitted	Projects Approved	Alumni Fellows	New Fellows	District Science Coordinators
California (Stanford)	N/A	N/A	~60	16	5
Florida (U of South Florida)	3	3	5	2	3 (plus 2 district admin)
Massachusetts (UMass – Boston)	8	pending	TBD	TBD	5
Missouri (U of Missouri)	2	2	0	9	3

New Jersey (Montclair State)	12	12	12	18	5
New York (Mercy College)	10	7	7	27	5 (plus 9 district admin)
Texas (U North Texas – Dallas)	14	14	Pending	pending	5

UPCOMING MEETINGS AND MILESTONES

Jan	Feb	Mar	Apr	May	Jun
17 – NY All teams and administrators Mandatory Virtual Meeting	FL Virtual Meeting	2 – NJ All Fellows Quarterly	1 – FL In-Person Meeting	2 – NJ All Fellow and District Admin Year-End Meeting	2 – TX Annual Wipro Meeting and Dinner
19 – MO Faculty and Fellows Presentation and HCCLS work	16 – MO Fellows and Faculty Presentation and HCCLS work	27 – TX Face to Face with Phase III	6 – MO Faculty and Fellows HCCLS Work	23 – NY All Teams and Administrators Mandatory Virtual Meeting	FL Q&A Webinar #2
21 – FL In-person Meeting	CA Fellows Begin HCCLS Groups	CA Tammy and Clover Codd Recruit for School Leaders Institute	CA School Leaders School Leaders Chosen for School Leaders Institute	FL Virtual Session New Cal for Proposals Q&A Webinar #1	MO Faculty and Fellows HCCLS Presentations
CA Fellows VCCLS Presentations				CA Wipro Fellows HCCLS Presentations	

Dates of upcoming meetings across all sites (note: dates subject to change).

This table highlights the larger and/or culminating events across sites. Additionally, sites continue monthly meetings with Fellows and DSCs as can be seen in the individual site reports.

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

Monthly Leadership meetings

October agenda

1. Updates from sites
2. Site visits -
3. Update on Leadership Conference Plans
4. Newsletter from Ratna https://www.smore.com/2uhbj-wipro-unt-dallas
5. Include in reports
6. Sharing the Annual Reports and Evaluation Reports
7. Future Evaluations
8. District transformation
9. Sweatshirts – please send number needed and for whom
10. Other

November agenda

1. Welcome Eric Weiss
2. Sweatshirts
3. DSC Conference
4. Updates
5. Quarterly reports
    a. Audiences:
        i. What will interest them?
        ii. What should they know?
        iii. How do we collect that in our reports?
    b. Past – common program which we could outline in the preface
    c. New – your program must be outlined
6. Evaluation reports – executive summary

Site visits

Site visits at all participating universities took place this past quarter.

New York – Mercy College – Oct 1. As part of their fall conference (which included a keynote by Eugenia Etkina of Rutgers U), a large session was held to introduce the opportunities for the next generation of Wipro projects and initiatives. There was a large attendance resulting in a sufficient number of proposals for funding from the participating school districts.

New Jersey – Montclair State University – Nov 17. The teams working on 2023 proposals met face-to-face. The ice breaker activity provided an opportunity for the Fellows to meet and get ready for the evening with questions about leadership. All teams created graphic organizers of their work and the people that their work would impact. I was fascinated with how the large team (2 alumni and 5 new fellows) had the new fellows at the center of

their social network map. As the alumni fellows presented, "you are the center, not us." The value of videos of the narrative will add to the understanding of all of these maps.

Florida – University of South Florida – Dec 3. The project has already committed to a few teams from Hillsborough Schools and they shared their projects and plans. Other teams that may be submitting proposals were also in attendance. It will be important to get Fellows from the other two districts to join in this phase of the Wipro SEF program.

Texas – University of North Texas Dallas – Dec 5. The evening meeting was an opportunity to showcase and celebrate the successes of past Fellows who completed their projects this past year and to hear about the new school projects and group projects. A highlight of this meeting was the number of school principals who were present to support their teachers and projects going on in their schools. Prior to the meeting, I had the opportunity for a lunch conversation with President Mong. He and I brainstormed ways in which the excellent work at UNT Dallas of the Wipro SEF program can bring public recognition in the media.

California – Stanford University – Dec 10. The meeting opened with Fellows meeting others in their cohort that were not a part of their V-CCLS. The full day meeting provided an opportunity for Fellows to participate in workshops devoted to supporting emergent bilingual students and related reading strategies. The Social Justice Framework (Personal, Instructional, Institutional and Systematic) was also introduced. Additional time allowed V-CCLS teams to catch up on their critiquing of each other's lessons.

Missouri – University of Missouria – Dec 15. The evening meeting was devoted to the two math/science teams presenting their V-CCLS work. The tuning protocol was followed and one could see how the work was improving the Fellows' teaching and leadership skills. The remaining time had the Fellows meet for the first time with their H-CCLS teams and begin work on their new courses of study for the spring.

CAST Conference – Dallas, TX – November 9-12.

The Texas Science Teachers annual conference brings together 3,000 science teachers to share lessons learned regarding how to improve science teaching. Each presentation proposal is screened and judged. This year, 22 Wipro Fellows from UNT Dallas attended CAST to present their work. This is an amazing recognition of the excellent leadership of Professor Ratna Narayan in urging her Fellows to seek a larger audience for their insights.

White House Summit on STEMM Equity and Excellence

By virtue of Arthur Eisenkraft's role as a member of the STEM Education Advisory Panel, overseen by the National Science Foundation (NSF), the U. S. Department of Education

(ED), the National Aeronautics and Space Administration (NASA), and the National Oceanic and Atmospheric Administration (NOAA), he was invited to participate in the White House Summit on STEMM Equity and Excellence on Monday, Dec 16. The event of the White House Office of Science and Technology Policy (OSTP) announced "new actions to transform the American Science, technology, engineering, mathematics, and medicine (STEMM) ecosystem by dramatically expanding areas and opportunities and bolstering America's global competitiveness." At the event, the AAAS launched the STEMM Opportunity Alliance (SOA) "a first-of-its-kind national initiative to lead and coordinate this and future cross-sector action to sustain American global leadership by achieving equity across STEMM fields." **The Wipro Science Education Fellowship was highlighted** in the "Actions to address the STEMM teacher shortage- which disproportionately harms underrepresented students – by recruiting, retaining and respecting teachers."

University of Massachusetts Boston, Center for Science and Math in Context (COSMIC)	COSMIC within the University of Massachusetts Boston will support seven universities that participate in the Wipro Science Education Fellowship, a two-year teaching fellowship aimed at helping transform school districts by supporting and advancing K-12 STEMM teacher leaders. The Fellowship is active in 35 high need school districts across the US, and Wipro Ltd, an IT company, has provided $18 million over ten years toward this initiative. By 2026, the fellowship aims to have provided training for 1,200 teachers who will serve 250,000 students.

2022 District Science Coordinators Retreat

One outcome of the Leaders' retreat in June 2022 was the agreement that the goal of District Transformation through Teacher Leadership will require communities of the Fellows, the District Science Coordinators (DSCs) and the administrators of the school districts. Building on the success of the District Leadership remote conferences of the past two years, we agreed to hold an in-person meeting of some DSCs in late October.

The conference was held Oct 28 – Oct 30 in Dallas, TX. The agenda was prepared by Tammy Moriarity (Stanford) and Arthur Eisenkraft (UMass).

Wipro District Coordinator Leadership Meeting
October 28-30, 2022
Agenda

Date/Time	Activity	Facilitator
Friday, 10/28		
Arrivals until	Check- In	—

5pm	Fairfield Inn & Suites by Marriott Dallas Love Field 10175 Technology Boulevard East, Dallas, Texas 75220, United States +1 972-525-5700	
5:30pm	Meet in hotel lobby & travel to dinner (walking or Uber) (0.6 miles from hotel)	Arthur
6:00pm	Dinner at Pappasito's Cantina **Northwest Hwy at I-35** 10433 Lombardy Ln., Dallas, TX 75220 **(214) 350-1970**	__
Saturday, 10/29		
7:00-9:00am	Breakfast (hotel lobby)	—-
9:00-10:30am	Welcome & Purpose Get to know each other Inclusion of the fellows Build community and safety? ■ What are the unique features of your position (in comparison to other admin positions)?	Tammy
10:30am-12:00pm	Case Study	Pam
12:00pm-1:00pm	Lunch- catered from Beyond the Box	—----
1:00pm- 2:15pm	● How do you work alongside administrators towards district science goals? How might this change if you leverage teacher fellows? What could this look like? (DC <-> Administrators <-> teachers)	Mary and Regina (NJ)
2:15-2:30pm	Break	

2:30-4:00pm	District Transformation through Teacher Leadership Let's define terms Use of Infographics for further reflection (one card vs multiple cards in our three groups)	Arthur, Danielle
4:00-5:15pm	Leadership Content (Tammy) Successful strategies for working with principals and administrators	Tammy
5:15-5:30pm	Reflection time at end of Day 1 and sharing out (complete a google doc)	Arthur
5:30-6:00pm	Break/Clean-Up for dinner	—-----
6:00pm	Meet in hotel lobby & travel to dinner (walking or Uber) (0.5 miles from hotel) King Buffet (Mongolian BBQ and more!) 10250 TECHNOLOGY BLVD W DALLAS, TX 75220 (2218 HIGH TECH DR.) TEL: (214) 904-0000	—-----
Sunday, 10/30		
7:00-8:00am	Breakfast (hotel lobby)	—-----
8:00-9:30am	Review of past Leadership Meetings - Forecast what should spring remote meetings focus on How do we build DSC community? Set up a Google Doc the keep track of what DCs are doing and how they are doing it ○ District, Name, Role ○ Positive that have occurred ○ Challenges that have occurred ○ Feedback to each other (either about	Arthur, Eric

	the positives or the challenges)	
9:30 - 10:30am	Feedback from Participants- What do we share? ● Quarterly Reports & Vignettes ● Evaluation Reports	Arthur
10:30am- 11:00am	Break/Check-Out	—--
11:00-11:15am	Reflection time	Arthur
11:15-11:30am	Meeting feedback and evaluation	Anne
11:30am- 12:00pm	Closing	Arthur

District Coordinators and IHE representatives from various Wipro sites across the country met in Dallas, Texas from October 28-30 for an in-person District Coordinator Leadership Conference. The purpose of this convening was to do the following:

- Leverage the collective knowledge and expertise of District Coordinators across Wipro sites
- Strengthen District Coordinator leadership capacity
- Build a professional community that supports each other with common problems of practice

Throughout the two-day session, various district coordinators and IHE leaders facilitated different portions of the conference, providing a variety of voices and perspectives. Participants learned more about leadership and what it means to practice leadership in their settings. They also had in depth discussions about what it could look like to meaningfully collaborate with school and district leaders. Participants also brainstormed how to continue to build the Wipro District Coordinator community in ways that would support and sustain their work. Finally, the conference ended with participants stating their needs and writing what they could offer. Please see the following LINK to the slide deck for the Wipro District Coordinator Leadership Conference.

Future plans include virtual professional learning sessions for District Coordinators that will allow for continued learning and connection. This will be followed with a remote conference in February and another in-person meeting at the end of the school year.

Associate Project Director Announced

We are very pleased that Eric R. Weiss has joined the Wipro SEF team this past month. Eric has a BS degree in biochemistry, an MBA, an MEd in secondary education and a recent EdD from Northeastern University. He has worked in the pharmaceutical industry as a scientist, financial analyst and manager for 12 years. He has taught high school science in the public schools for the past 12 years. We are fortunate that Eric will be sharing his skills and talents with us. Welcome, Eric!!!

CALIFORNIA- STANFORD UNIVERSITY

The CA Wipro Team's vision for developing teacher leadership in the Wipro SEF Program focuses on developing science teachers' leadership identities and broadening their perspectives on their school and district contexts. To meet these goals, the CA Team has created a clear leadership learning arc that includes the following:

- Examine definitions of teacher leadership from the research literature and provide opportunities for fellows to internalize what teacher leadership means for themselves.
- Learn the distinction between adaptive and technical challenges within the context of their district and how this distinction changes how fellows would go about addressing these challenges at their schools and districts.
- Understand the affordances and challenges of formal and informal authority and what it means to take-up leadership and self-authorize in their context.
- Learn about different leadership practices and what it means to put these practices into action.

Further, the CA site has begun investing in district teams from the five partner school districts by creating individualized plans that meet the needs of each district. These plans have been co-constructed with District Coordinators with input from past Wipro fellows. The goal of this work is to develop each team's collective capacity to advance high quality science teaching and learning in their districts that align with NGSS and reduce the persistent inequities that pervade science education.

The CA Team is also planning a Wipro School Leaders Institute which will bring together school leaders from across the five districts and build their capacity to support high quality teaching and learning at their school sites and support the goals of the Wipro Program.

Summary of Current Project(s) and Goals

Wipro Fellowship Program- Cohort 4

The CA site has recruited 16 new fellows from across the five partner school districts this past fall. The goals and pillars of the program will remain fundamentally the same as the past. We hope to continue to build the capacity of science teacher leaders within and across districts to further excellent science teaching and learning.

Wipro District Teams & School Leaders Program

The CA site has begun work with district teams from the five partner districts. The CA site is currently working more closely with each district team to develop their collective capacity to advance effective science teaching and learning in their districts that highlight NGSS and reduce the persistent inequities that pervade science education. This will not only require working with District Coordinators and Fellows, but will also require more direct involvement from principals who have remained mostly in the periphery of the Wipro SEF Program. Thus, the CA site is currently developing a program specifically for school leaders with the aim of creating strong district teams that can make transformational changes at the site and district level.

Progress and Highlights

Professional Learning Sessions

To date, the CA site continues to facilitate monthly professional learning sessions for Cohort 4 Wipro fellows. Following the Induction ceremony in September, there have been a total of three professional learning sessions (one virtual and two in-person). These sessions focused on the following:

a) Next Generation Science Standards- what does this look like in practice?
b) Equity & Social Justice- who are we serving?
c) Leadership - What does it mean to be a teacher leader?

Since most of the districts serve a large population of multilingual learners, our professional learning sessions have honed in on how to support the integration of science and language learning. Teachers were introduced to CSET's Social Justice Framework and have begun reflecting on their own educational journeys.

V-CCLS Work

V-CCLS groups have been established and fellows have chosen their content area and a course of study for their V-CCLS group work. The CA Team decided to focus fellows' Course of Study choices to investigate the Nature of Science (NOS) as described in the NGSS dimensions.

Fellows are in the middle of their V-CCLS cycles and will be presenting their learnings in January 2023.

District Teams

Each district has been assigned a CSET Coach to co-construct a plan on how to support their district teamwork that includes past and current Wipro fellows. The following list shows the coaching assignment and a description of the overall district plan:

District	CSET Coach(es) Assigned	Description
Campbell Union HS District	Tammy Moriarty	Science teachers are in different places across the school district, with different needs and challenges. Wipro fellows are clustered at three of the schools across the district. The District Coordinator thought the best use of CSET support was to have CSET involved with Science Department Chair meetings to determine their collective needs (note: two of the Department Heads are Wipro Fellows). Additionally, Tammy will conduct school site visits with the District Coordinator to have a better understanding of what science teaching and learning currently looks like at each school site and to help the Department Chairs determine next steps.
Moreland School District	Tammy Moriarty & Preetha Menon	Elementary Wipro Fellows across the district have been empowered by the school district to lead and conduct science professional learning for other K-5 teachers. These fellows meet regularly with district leaders to plan this work. The District Coordinator thought the best use of CSET support would then be with the middle school teachers across the district, starting with Moreland Middle School. Preetha and Tammy will be starting a "CCLS" type of collaboration with teachers at the middle school starting in January focused on multilingual learner support.
Mtn. View Whisman School	Preetha Menon	Preetha has started conducting classroom observations with the District Coordinator to determine the best use of CSET support

District		moving forward. Most Wipro fellows at this district have been STEAM teachers. Preetha is working with the District Coordinator to determine how to leverage the strengths of the Wipro fellows to improve science instruction across the district.
San Francisco Unified School District	Tammy Moriarty & Janet Carlson	Janet and Tammy have met with the District Coordinator to determine the best way for their district team to move forward. SFUSD has been in a constant state of turmoil, with teachers being stretched thin. Eric, the District Coordinator, thought it would be best to leverage the strengths of Wipro fellows to create asynchronous professional learning experiences for other science teachers. This is currently a need that Wipro fellows would be able to fill and would provide fellows with the opportunity to showcase their expertise.
San Jose Unified School District	Tammy Moriarty	The District Coordinator, with the help of the CSET team, has established a district science leadership team consisting of department heads and Wipro fellows. The work of this group has been to communicate and work together on science related issues. Because this group has already been established, The District Coordinator thought the best use of CSET support was to be her thought partner and work side by side with her to move science initiatives forward in her district.

Plan for the Next Two Quarters

Date	**People**	**Activity**
Jan 2023	Wipro Fellows	VCCLS presentations
Feb 2023	Wipro Fellows	Begin HCCLS groups
March 2023	Tammy + Clover Codd	Recruit for School Leaders Institute
Jan, Feb, March, April and May	All	Monthly PD meetings (virtual and in person)

Jan - March 2023	Tammy + Campbell Curriculum director	Site visits with Campbell District along with Dir. of Curriculum
November 2022-ongoing	Tammy & Clover Codd	Planning School Leaders Institute with Superintendent of Moreland School District, Clover Codd
Ongoing till May 2023	Tammy + Preetha	District Coordinator meetings
Monthly meetings with all Fellows till June 2023	Wipro Fellows + Stanford Coaches	Ongoing coaching with Stanford Wipro Team
April 2023	School Leaders will be chosen for School Leaders Institute	Launch program and prep for summer intensive institute.
May 2023	Wipro Fellows	HCCLS presentations

Featured Fellows

Julie McKinley-Reed – Moreland School District

Thinking back to my high school days, I gained a great love of Science by having a passionate and encouraging teacher Mrs. Baldwin. As I finished my 8th year of teaching 2nd grade in 2019, I found myself searching for something to continue my learning as a teacher and challenge myself. I was encouraged by my administrators to apply and was accepted to cohort 3 of the Wipro Program at Stanford University. I was beyond excited to begin this amazing professional development opportunity. Being part of a group of other like-minded teachers to refine and enhance our craft was just the opportunity I was looking for.

During the fall semester of the Wipro program, I was part of a V-CCLS group that included a High School Chemistry teacher, a Middle School Science teacher and myself, a 2nd grade self-contained general education teacher. We met on a bi-weekly basis to discuss our teaching practices, lesson ideas and our area of focus which was using modeling strategies to reach all students across many subject areas in science. With academic research articles to support our teaching strategies, we planned, taught, and evaluated our teaching with use of a reflective protocol to enhance our teaching practice. The fellows in my V-CCLS helped me to pare down my lessons into shorter increments to aid in understanding and retention for my students. My big takeaway from the V-CCLS group was seeing how student's academic skills build year over year with the NGSS areas of study.

In the spring semester we were partnered up in a H-CCLS group. The fellows in my group consisted of a 3rd grade teacher, a STEAM K-5 teacher and myself. During this semester we choose a Science and Engineering Practice (SEP) from the NGSS to focus on during our lesson studies. This built on the fall semester's V-CCLS work and continued the use of modeling, designing, and explaining solutions and obtaining and evaluating information from a variety of sources. Students in each of our classrooms were encouraged to observe, evaluate, and share their findings as it related to the areas of study. As this semester progressed, I realized that the strategies that I was using were not reaching all my students, specifically my English Language Learners (ELLs). With the in-depth content, academic language and vocabulary, my emerging readers and beginning English language learners were having trouble understanding the content and demonstrating their thinking/learning. This observation led to my GPS project which was to reach and support all learners but specifically my ELLs.

In year two, my focus was ensuring my ELLs were gaining the content area knowledge with support of Thinking Maps and strategies to reach students in different learning modalities (words, pictures, scenarios, Claim Evidence Reasoning (CER), and hands on challenges/explorations). With the support of my mentor, I was able to develop lessons and strategies to ensure students were able to make valuable connections across all the curriculum (ELA, writing, Social Studies and Science). As a result, they were able to demonstrate their learning in different ways which led to greater retention and understanding of the content areas.

I am so grateful to Wipro for funding this amazing program. Over the two years, I was able to work with teachers who want the best for their students, the incredibly supportive and knowledgeable staff in the Graduate School of Education at Stanford and of course my hard-working 2nd grade scientists. This year I am working with district leaders, other Stanford fellows and site administrators to make Science a priority for all students in our district.

Diane Aronson - San Jose Unified School District

Description of how Wipro Fellows from Cohorts 1, 2, & 3 have continued to practice leadership in the San Jose Unified School District:

Our Middle School Wipro Fellows, Ron Hamby, Delyna Tanzi, and Melissa Duran were involved in developing an action plan to support new teachers (and veteran teachers) with planning using our adopted curriculum Inspire Science. This led to the creation of a list of procedures teachers can follow to plan a lesson sequence using Inspire Science activities as well as external resources. The next step in the action plan is to bring Middle School Science teachers together to plan using the procedures in course-alike teams. The team is currently brainstorming how to get more Middle School Science teachers to attend collaborations. Ron, along with the department chair at his site will help plan and present at the next Middle School Science Collaboration in February of 2023. The goal will be to have different sites share best practices at each collaboration. Delyna Tanzi is now a site coach at a high school and middle school supporting teachers in all content areas with instructional practices. She also continues to be a thought partner on planning trainings and next steps on the Science Teachers Leadership Team. Galaxy Wainstock has been involved in several projects through her partnership with CSET such as the Stanford SEED Collaboration and the creation of professional development materials related to understanding language and the assets of multilingual learners in the classroom for the NTC.

Our High School Wipro Fellows have been involved in the High School NGSS Pilot for the district. Roy Walton was involved in working on an action plan to recruit teachers to join the High School NGSS pilot team. This led to the formation of District NGSS Focus Groups. The purpose of these groups was to discuss and create the District Lens to prepare the group to evaluate instructional materials based on the district's unique needs. Yichang Liu, Physics teacher, Anu Sarkar, Biology teacher, and Ken Pringle, Chemistry teacher were part of these focus groups. All three teachers took a strong leadership role in their groups. They began the year attending the TIME training at the Santa Clara County Office of Education to select NGSS aligned curricula to pilot. Yichang, Roy, and Ken are currently piloting NGSS aligned curriculum with the intent to adopt for the 23-24 school year.

Our goal in this project is to continue our empowerment of the Wipro Fellows. It is unusual for educators to choose their professional development path much less spearhead a project with it. In this phase, fellows are able to further enhance what they have learned from Phase 1 to increase the district wide impact. The continued personal vested interested in their Phase 2 projects make them the champion for it, as well as involving other individuals (administrators and additional teachers) to help them work towards the overarching goal of district transformation.

Summary of Current Project(s) and Goals

We have three projects that were accepted and we have two more that could possibly be accepted for our first group in Phase 2. For this summary we are only focusing on the accepted projects.

Nicole Holman - BSCS 5E Instructional Model at Jule Sumner High School

This professional learning experience aims to deepen participants' understanding of the BSCS 5E Instructional Model to support planning for instruction and assessment aligned with the Next Generation Sunshine State Standards (NGSSS) and A Framework for K-12 Science Education. The project's goal is for participants to learn how to develop phenomena-based 5E instructional sequences to support coherent storylines and conceptual flow aligned with the NGSSS and A Framework for K-12 Science Education. The goal is to develop lessons that can be shared with the District and increase engagement in science learning through the 3-Dimensional learning experience. In the immersion of the 3-Dimensional learning experience, students explore the biology content standards by practicing science and engineering and applying the crossing-cutting concepts. The team will develop instructional sequences for each unit in the biology curriculum, implement them, and refine the lessons after teaching them. The team will share their results with the district to expand the practice of utilizing the BSCS 5E Instructional Model in other areas.

Wiehagen and Triebwasser – They are working on two proposals together.

Proposal 1 Teaching Standards via Small Group Instruction

This proposal will support a new district initiative of bundling standards for the purpose of small groups instruction in science. As this is a district wide initiative, the impact from this

work will truly impact the entire district as the two focus on curriculum across Hillsborough School District.

Proposal 2 - Using LEGO Spike Prime to Teach NGSSS Standards

This curriculum integration would allow the continuation of the GPS project completed as a WIPRO fellow, creating Engineering Design Cycles (EDCs) that require the students to apply the science content knowledge of the grade level NGSSS. This curriculum writing of EDC's would integrate the technology tool of the LEGO Spike Prime allowing teachers and students to see that tools such as these are not extra but can replace tools in the classroom with current STEM tools. This proposal would allow for curriculum writing of these EDCs to occur, strategically within the instructional calendars, training of the philosophy, targeted PLCs, coaching with individual teachers and classes to edit the lessons, provide feedback, and make revisions. The end goal would be to have EDC lessons using the LEGO Spike Prime tool that could be embedded within the HCPS curriculum instructional tools that all teachers in grades 4-5 can choose to utilize.

Progress and Highlights

We started the project a little bit later than we had hoped. However we have hit the ground running and are excited for what Phase 2 will bring us. In the beginning of the semester, we sent out the finalized grant application and rubric to all fellows. We also held a Q&A workshop to any interested fellows. We recorded that and shared the video link to all fellows in case they could not attend. Due to a low number of initial proposals, we cancelled our November meeting and instead extended the time to work for the fellows to submit their proposal.

We held our December meeting at the Florida Aquarium in Tampa. All of the proposals are from Hillsborough so we chose a location in Tampa that is convenient to them. The meeting went a little bit longer than anticipated but there was a great deal of fruitful discussions among the leadership team and fellows/project leaders. We have our next meeting slated for January 21st and are working on the entire spring calendar.

Reflection

One thing we will change for next time is having two workshops. We held the first Q&A workshop at the beginning of the proposal period but did not hold a second one. Though the first answered all initial questions, we feel that the bulk of the questions will really come once they started writing a proposal. Thus, for the next time we do it, we will hold a second Q&A specific for that purpose. We will also alter the time of when the proposals are

open for submissions to include late spring early summer so that the fellows could start in the fall if needed and they have time to work on it. This fall, between hurricanes and other events, teachers have been overworked and are burnt out, so we want to make sure we help them as much as possible. We also have all of our proposals from Hillsborough School District so we will need to reach out to our other districts and focus our efforts there a little bit more.

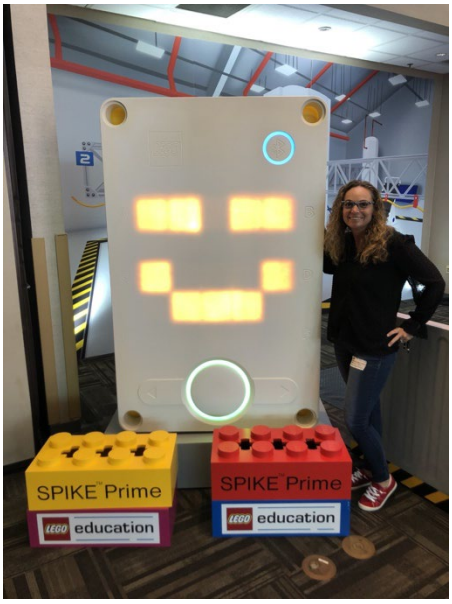
Plan for the Next Two Quarters

Date	People	Activity
Jan. 21	All	In – person session.
Feb. (TBD)	All	Virtual session
April 1st.	All	In – person session.
May (TBD)	All	Virtual Session
May	Phase 1	New call for Proposals
May	Phase 1	1st of 2 Q n A Webinars
June	Phase 2	2nd of 2 Q n A Webinars In – person session.

Featured Fellows

Melissa Triebwasser - Hillsborough

Melissa is a Hillsborough County District Science Academic Coach, participated in the Tampa Bay Wipro program Cohort 1 with a project focusing on literature and engineering design challenges at the elementary level. Melissa has spent 25 years in elementary education as a classroom teacher, site-based science coach and a district science coach. She is the current President of the Hillsborough Association of Elementary Science Teachers and an award recipient of Teacher of the Year from Florida Association of Science Teachers. Melissa is a curriculum writer and professional development trainer for Hillsborough County. Melissa has a master's degree in Education Leadership and has applied to the doctoral program at the University of Florida.



Michele Wiehagen - Hillsborough

Michele is the Hillsborough County District Science Resource Teacher, responsible for the K-5 science and STEM curricula was accepted for the Tampa Bay Wipro Cohort 2. Michele has spent 19 years in Hillsborough Schools in elementary science as a classroom teacher, site based science coach, and district science coach, before stepping into the curriculum role of the district resource teacher. Michele has traveled the nation gaining understanding of elementary science practices from other districts, leaders, businesses, and non-profit entities. Michele has had the opportunity to write curricula for national publishers, train as a Master Trainer for LEGO Education, and serve as a teacher fellow with 100K in 10. Michele's passion for developing curriculum to allow for student experiences in science while teaching the Florida Standards is the driving force for the continuous education. With a master's degree in both leadership and curriculum Michele was most fulfilled in the

dialogue gained from the Wipro cohort and the practices of engaging with the VCCLS group and the HCCLS group from other districts.

Melissa and Michele – As a Team

The experiences from the Wipro cohorts are what started the conversation with Melissa and Michele. The underlying common challenge articulated from other districts, teachers, and grade level bands was that elementary students were lacking experiences in science. Michele and Melissa both completed independent GPS projects to provide real world experiences to all elementary students while supporting teachers in grades K-5. While they both found great success from these projects, the teachers wanted more, the students wanted more, and Michele and Melissa knew they had the foundation of a core group of teachers, leaders, and students that were willing to make changes, try something new, and allow for experiences while providing the content. Through the Wipro Fellowship experience, Melissa and Michele found commonalities among their GPS projects and applied for a Phase 2 Grant Project. The proposals were accepted and will provide them with the opportunity to have an impact on elementary science education on a much larger scale.

MASSACHUSETTS- UNIVERSITY OF MASSACHUSETTS BOSTON

The Boston area partner sites are at the early stages of engaging in the Phase III program. The sites will be pursuing a mixture of district-wide initiatives and smaller projects. We are excited to help the sites begin this work as the begin to leverage the cadre of leaders they have developed in the earlier phases of the program.

Summary of Current Project(s) and Goals

Projects from multiple sites are about to begin across the Boston sites.

Progress and Highlights

The Boston Public Schools are looking to leverage the efforts of Alumni Fellows working with the District Science Coordinator as an advisory board for district initiatives.

Early Childhood K-2	Help with updating scope and sequence Provide feedback on FOSS and Focus units Support collaboration between specialists and classroom teachers (monthly PLCs) Facilitate Professional Learning to support science and engineering curricula.
Upper Elementary 3-5	Curriculum pilots Scope & sequence developers and critiquers Support collaboration between specialists and classroom teachers (monthly PLCs) FOSS Implementation Science pilot Facilitate professional learning to support science and engineering curricula

Middle School 6-8	Support OSE Implementation by differentiating the curriculum with subgroups in mind (ELL, EI, LD, etc…) Professional learning for inclusion and SEI science classrooms Support collaboration amongst classroom teachers (monthly PLCs)
High School 9-12	Draft guidance for HS course requirements for MassCore and course catalog Advise on curricula for adoption for introductory high school courses Support collaboration amongst classroom teachers (monthly PLCs)
All Grades K-12	Science safety training and maintenance Who: Science Safety Leader Science Safety Coordinators (one at each school)

The Braintree Public Schools are looking to implement the Vertical Collaborative Coaching and Learning in Science (VCCLS) approach more broadly within the district.

The Cambridge Public Schools are planning to integrate their work on NGSS with Fellow support.

Team Proposals

Individual Fellows will be contacted in January regarding the availability of funding to pursue projects for their classrooms and schools. All proposals must involve other teachers and have the support of school principals.

Reunion Dinner for Wipro SEF Fellows

A dinner was held on Monday, Dec 12 for past Fellows and District Science Coordinators. We used the time together to reconnect (post-Covid), to reminisce regarding their initial involvement in Wipro SEF (e.g. where recording a class lesson required a special camera, took 7 hours to upload and was difficult to share with one another), and to be brought up to date on the Wipro SEF programs across the country. It was also a chance to share with the attendees the anticipated work with districts and teams in the coming years. Fourteen people were able to attend with many more expressing interest in future gatherings.

Plan for the Next Two Quarters

Date	People	Activity
January 2023	All Sites	Plan for remainder of year
Feb 2023	All Sites	Brainstorming session
March 2023	All Sites	Mini-projects kick-offs
April 2023	All Sites	Applications for 23-24 Projects due
May 2023	UMB	Project Approval and Communication
June 2023	All	Showcase Meeting at UMB

The current project is an expansion of the teacher network, provides opportunities for collaborations and leadership, and focuses on collaboration between science and math teachers in middle and high school. The project will address the challenges of teaching science and math in a harmonious manner at the middle and high school grade levels. Students often think of math as a set of rules used to manipulate abstract concepts. Several factors contribute to this thinking. For example, terminology used in math vs science, the sequencing of math units with relation to science, the infrequency of discussion about the relevance of specific math units on science topics, the differences in graphing methods used in math and science classes, and so on. The collaboration between math and science teachers is essential to the implementation of a successful science curriculum. This project will focus on the Science and Engineering Practices of Using Math and Computational Thinking.

Summary of Current Project(s) and Goals

The goals of our Phase II project are:

1. Math and science teachers will collaborate to choose mathematical practices and determine methods to harmonize the practices in math vs science courses in middle and high school.
2. Fellows will create lessons/units that include the harmonized mathematical practices for use in math and science courses.
3. The project will disseminate these lessons via a repository that is available to all Wipro fellows and teachers outside the Wipro project. This repository may be in the form of a website.

Progress and Highlights

Our cohort consists of 9 fellows, of whom four are science teachers and 5 are math teachers. The teachers are from three school districts (Columbia, Hallsville, and Boonville). The V-CCLS teams are organized as follows:

Subject Taught	Team 1 (Name, District, HS/MS)	Team 2 (Name, District, HS/MS)
Science	Karen King, Columbia, HS (Phys)	Brea James, Boonville, HS (Chem, Phys)
	Matt Wightman, Columbia, MS (Chem)	Erin Snelling, Hallsville, HS (Bio, Other)
Math	Melissa Hundley, Boonville, HS	Susan Elliot, Columbia, MS
	Mary Melissa Hough, Hallsville, HS	Vera Reichlin, Columbia, HS
	Nicole Campbell, Columbia, MS	

The first cohort of phase II (we call it cohort 4) first met on August 3, 2022. Fellows, faculty and Math coordinator Lisa Nieder were in attendance. Attendees used an icebreaker to get to know each other. They then set expectations for attendance and behavior and discussed what would make Wipro SEF the best PD practice they ever had. This was followed by an introduction to V- CCLS. Two V-CCLS teams of teachers were created: Team 1 with 5 teachers and Team 2 with 4 teachers, as listed in the table above. The teams were constructed to maximize the diversity of grade bands, districts, and math and science teachers. Each V-CCLS team identified two mathematical practices and two science and engineering practices that they were interested in (so that teams could address different practices). After the teams shared out their interests, each team chose one science and one mathematics practice for in-depth study. Fellows then started the process of choosing a research article related to their chosen mathematics practice, were asked to complete the process before the September meeting. A list of possible articles had been prepared by our consulting science education faculty member, Marcelle Siegel. The meeting was concluded with a presentation and discussion with a fellow who graduated from the Wipro Phase I program.

Before the meeting in September, each Fellow was asked to select and read two articles and share them with their V-CCLS group along with a brief summary of why they thought each article might be a good fit for their course of study. All Fellows in the team read the summaries and collaboratively decided on one article. Their selection had to be approved by Wipro project faculty.

Team 1 selected the article “Effectiveness of Mayer’s Problem-Solving Model with Visual Representation Teaching Strategy in Enhancing Year Four Pupils’ Mathematical Problem Solving Ability. Author(s): Sharmilla Palanisamy, Norjoharuddeen Bin Mohd Nor, Source: Malaysian Online Journal of Educational Sciences April 2021.” The mathematical practice chosen by the team is “Make sense of problems and persevere in solving them,” which corresponds to the science and engineering practice “Using Mathematics and Computational Thinking.”

Team 2 selected the article “Mathematical Modeling: Issues and Challenges in Mathematics, Education and Teaching, Reuben S. Asempapa & Derek J. Sturgill, Journal of Mathematics Research; Vol. 11, No. 5; October 2019, ISSN 1916-9795 E-ISSN 1916-9809, Published by Canadian Center of Science and Education.” The mathematical practice chosen by the team is “Model with Mathematics,” which corresponds to the science and engineering practice “Analyzing & Interpreting Data.”

Meeting Highlights

September meeting: Fellows working in groups discussed their research article in depth, and how the research topic and mathematical/science practice selected will be integrated in their lessons. After a presentation made by Meera Chandrasekhar on “PowerPoint can kill your presentation”, fellows were given time to discuss the guidelines and plan their research article presentations.

October meeting: Each V-CCLS team presented their research article. Fellows answered questions related to their article and their vision for implementing it in their lessons. Then in V-CCLS groups they discussed the article "A Systemic Approach to Elevating Teacher Leadership". Each team discussed 5 assumptions (in the article) and then was asked to list 3-4 key points that relate each assumption in the context of the Wipro SEF program and provide examples from their own site.

November meeting: Fellows listened to a presentation made by Amanda Peel, Research Assistant Professor at Northwestern University, on "Computational Thinking in Science and Math". After that, working in teams, fellows reviewed the guidelines and prepared for their V-CCLS presentations in December.

Plan for Next Two Quarters

Date	People	Activity
Jan 19, 2023	Fellows and Faculty	Presentation by outside faculty member Work on HCCLS
Feb 16, 2023	Fellows and Faculty	Presentation by outside faculty member Work on HCCLS
April 16, 2023	Fellows and Faculty	Work on HCCLS presentation
May 2023	Fellows and Faculty	VCCLS presentation, keynote speaker, visitors.

Note: Dates not finalizes/subject to change.

Featured Fellows

Karen King – Rock Bridge High School (Columbia)

Karen King is a physics teacher at Rock Bridge High School in Columbia, MO. With over 19 years teaching experience, including both high school and university settings, King brings extensive training to the program. She joined the Wipro Science Education Fellowship program to expand her leadership skills and take her teaching in new directions.

In particular, her vertical collaborative learning team (including middle and high school math and science teachers), was interested in helping students persist when they get stuck on problem-solving. The team of educators landed on a research study that demonstrated the effectiveness of using visualization throughout the problem solving technique. King introduced the idea of energy bar charts to her team of teachers. Furthermore, she sparked an idea for the team that led to a collaborative problem solving acronym that worked across all five of their classes – "M.ore is L.E.S.S." – Model, List knowns/unknowns, choose Equation, Substitute, and Solve. Working with the other teachers this fall helped remind King of the importance of using visualizations throughout challenging problems, and she saw great improvements (over previous years) in her students' ability to solve problems with new context (see Figure below).

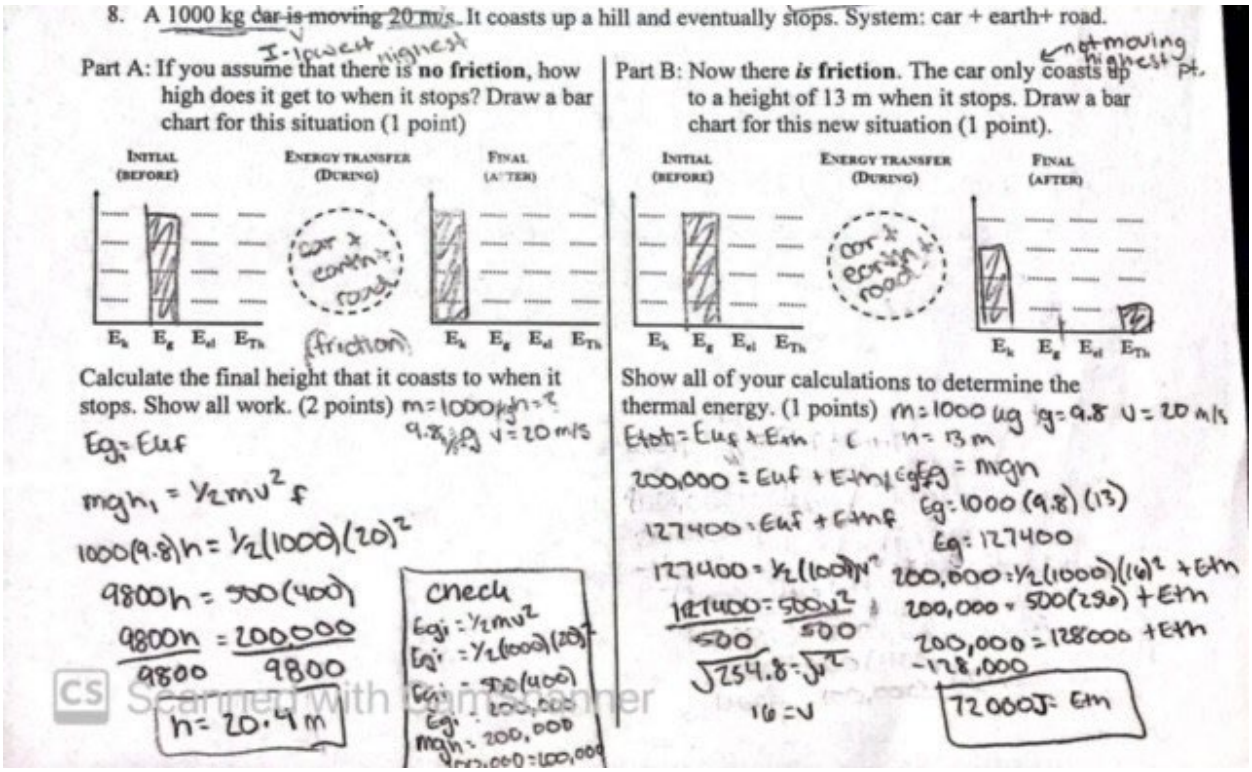


Fig 1: Student work on an exam showing use of energy bar charts. The second problem (asking about friction) was different than practice problems they had been given, yet visualization through bar charts helped students determine the correct answer.

Fig 2: Karen King checking in with students as they work collaboratively on energy problems. The image is taken from the video she shared with her Wipro V-CCLS team.

Nicole Campbell – Smithton Middle School (Columbia)

Hello! My name is Nicole Campbell, and I teach 6th and 7th grade Mathematics at Smithton Middle School in Columbia, Missouri. My district uses Ready Mathematics as our resource to guide our lessons. Ready Mathematics focuses on students developing mathematical

thinking and problem solving skills, while engaging in discourse through the teacher-led lessons. This is the second year I have used this resource to teach my lessons, and I do believe my students are becoming more confident and persistent problem solvers.

As part of the WIPRO project, my team chose to study "Effectiveness of Mayer's Problem Solving Model with Visual Representation to Enhance Students Problem Solving Abilities." It became evident to me that the use of visual representations throughout the problem solving process was an important and effective tool for my students. Students were more likely to persevere and come up with solutions when they were provided with or created visualization to represent or enhance the problems. While conducting our research, I realized that I was very fortunate to use the resource, Ready Mathematics, because it often has "Picture It" and "Model It" parts of the lessons to help students visualize the problem multiple ways. These visuals help many of my students make connections and understand the problems in a variety of ways. As a result of my team's research, I now try to make sure all of my lessons incorporate some use of visualization, whether it be in my students' books, or something I add myself, because I know how important it is for their learning.

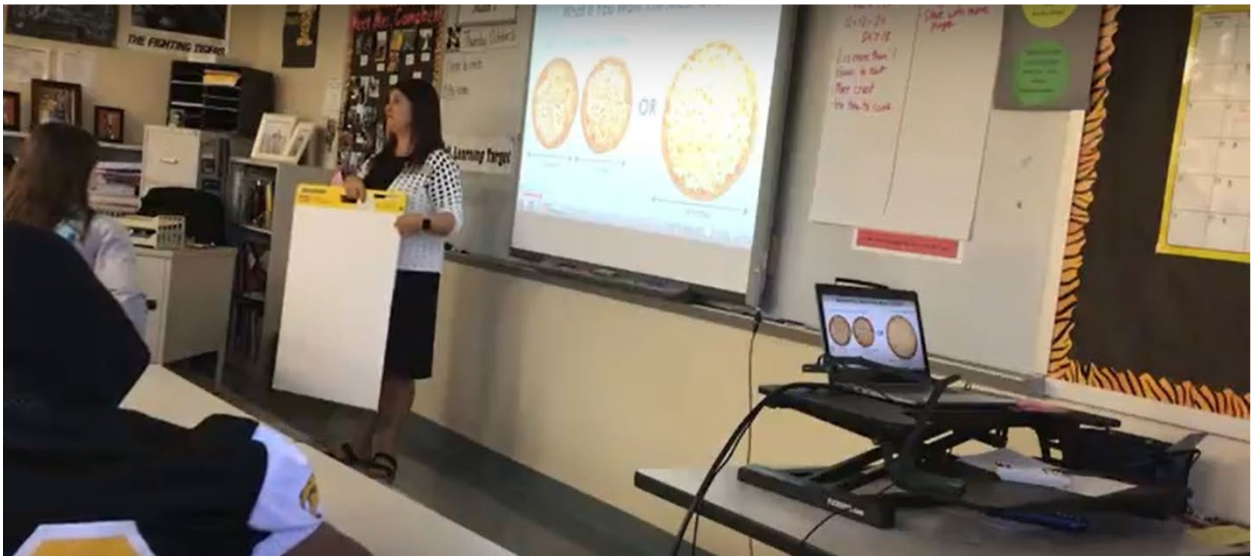


Fig 1: This was an introductory lesson on circumference of circles. Students were presented with two 12-inch pizzas and one 16-inch pizza. Students were asked the question, "What if you want the most crust?"

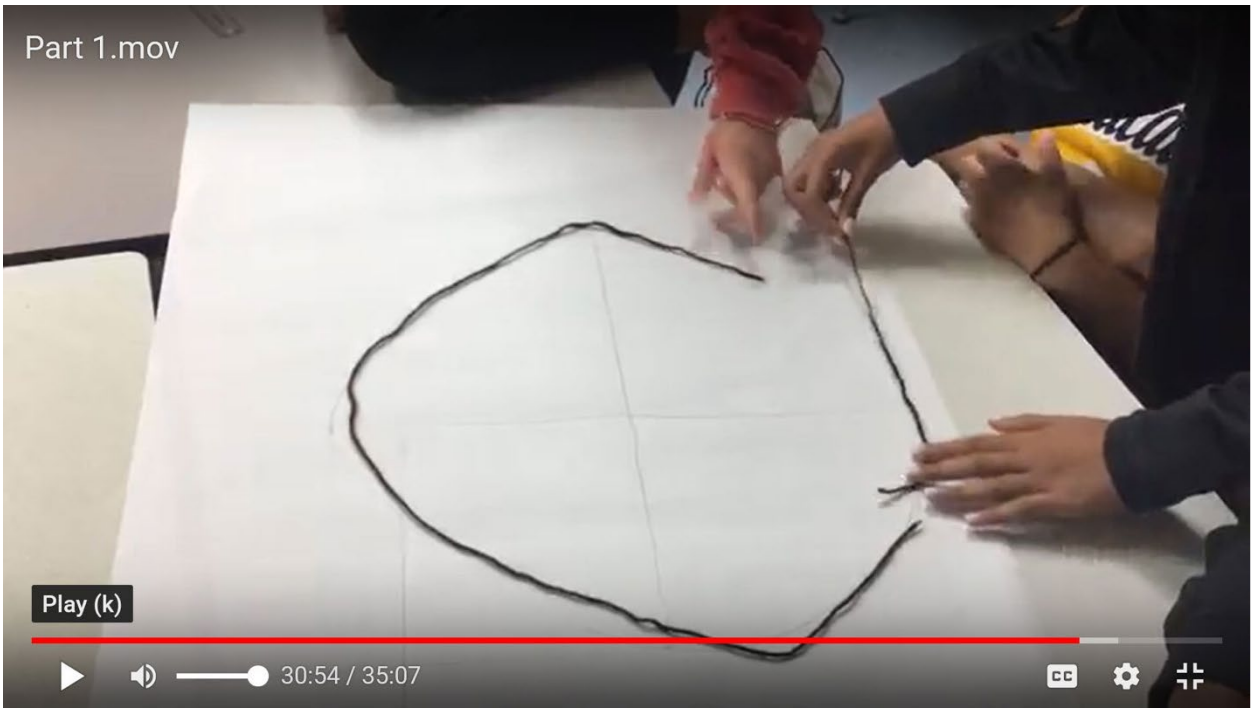


Fig 2: Without being given the formula for circumference, students investigated which of the two options would provide the most crust. Using inch grid paper, the students drew 12-inch and 16- inch circles, and then used string and rulers to estimate the distances around the circles and answer the question “Which option would provide the most crust?”

NEW JERSEY MONTCLAIR STATE UNIVERSITY

The Montclair State University site has made progress through the initial stages of its Phase III project. As stated in the previous report, the project looks to extend and enhance the previous work through GPS-like projects between Alumni Fellows and new Fellows. The project involves 12 Alumni Fellow working on district-related initiatives and one Fellow working on publicizing the program. Each of the alumni Fellows has recruited a team of district teachers. Together, these teams will work towards their respective goals as a new cadre of teacher leaders are nurtured. We believe that our proposed model builds on the foundation set in Phase I/II and expands and disseminates the model in a way that is both manageable and sustainable. Our overarching goal is to support our experienced Wipro SEFs as they continue to deepen their leadership capabilities and branch out to new teachers and districts.

Summary of Current Project(s) and Goals

The Wipro SEF project at Montclair State University is entering the second half of Year 1 of the program. Below is a report on the progress towards the two project goals.

- Recruit 2 cohorts of Wipro SEF Fellows over four years. Each cohort will participate for 2 years and will include 15 Wipro SEF alumni and 15 new Wipro SEF Fellows.
    - Recruitment for Year 1 was successfully completed over Summer 2022.
    - Year 1 involves a total of 13 alumni Fellows who have each recruited a group of new Fellows.
    - 18 new Fellows have been recruited by the Alumni Fellows. The new Fellows attended the second meeting of the year on November 17 with their "mentor" Fellows. The new fellows are from 4 of our 5 original districts plus three additional districts: Bloomfield, Hawthorne, and Teaneck.
- Supporting the alumni Fellows to undertake their projects
    - Each MSU faculty mentor has met with both the Alumni and new Fellows.
    - Alumni Fellows submitted their quarterly reports on November 5th, 2022. Each has received written feedback from their MSU mentors.
- Conduct research on project
    - The MSU research team consists of the three project directors and two Teaching and Teaching Education (TETD) PhD students and two mathematics education PhD students.
    - The research group is using social network theory to guide the work on the collaborative networks of the Fellows and to inform the research on the

project. The research entails using social network theory to describe changes to each Fellow's social capital throughout their projects.

New Jersey Fellows discussing their projects at the November 17, 2022 meeting.

Progress and Highlights

To date, the MSU site has gathered the Fellows together for two quarterly meetings: September 13, 2022 and November 17, 2022.

The September 13th meeting focused on ensuring that our Alumni Fellows were clear about the feedback they received on their proposal ideas. It was a chance for the Fellows to gather feedback from one another on their projects. As a way to frame their future work in the collaborations and support that they will enlist, each Fellow was asked to create a network map of all resources they anticipated being central to their projects. These network maps will be revisited throughout the project to characterize the dynamic nature of collaborations and to identify the different types of support the Fellows come to rely on.

The November 17 meeting included both Alumni Fellows and the new Fellows they recruited. A total of 13 Alumni Fellows and 14 New Fellows attended the meeting. After an

ice breaker focusing the Fellows' attention on teacher leadership and a brief overview of the program for the New Fellows, each Alumni Fellow explained their vision for the project to their New Fellows by describing their projects using the social network maps they created in September. The lens of social networks aimed to have Fellows explore how their projects and their collaborations might interact.

Leadership Crest created by Alumni and New Fellows at NJ Wipro SEF teacher leadership meeting on November 17, 2022

Plan for the Next Two Quarters

Date	People	Activity
March 2, 2023 4:30–6:30	All Fellows	Quarterly meeting
May 2, 2023 4:30-6:30	All Fellows, invited district/school administrators.	Culminating event for the year.

Featured Fellows

David Kleiner - Clifton School 13

I started the school year with a new colleague in School 13 Basic Skills Math Instruction (Intervention), Michele King. It took some time and salesmanship, but she has agreed to be a new Wipro fellow, working with me.

My role, formerly Math BSI K-5, is now limited to Math BSI grades 3-5. Michele is focused on Math BSI grades K-2. Michele brings extensive experience in School 4, where she taught second grade and was a leader in regularly using Math Stations, so she is a valuable asset to

our team. With her permission, I shared her station schedule from last year with the classroom teachers of our building.

At a kickoff meeting in September, Erin Zmuda, K-8 Math Supervisor, informed the staff that Math Stations should be in place five days each week. As I expected, there has been considerable pushback (some subtle) to setting up stations. One fifth-grade teacher seemed surprised that I was coming into her room with only one station, and she had to develop the others.

Michele and I prepared many stations in advance. Our Google drive has many stations for each grade level and each topic that were prepared over the summer. In addition, there are technology stations (Imagine Math, Prodigy, and others), and each student now has their own Chromebook provided by the district.
Because I now service only three grades, I am scheduled to visit each classroom three or more times each week. Unfortunately, there is still a severe shortage of substitute teachers, and a lot of staff absences, so we are frequently pulled to cover classes. Even so, I am visiting each classroom more often this year, and getting to know my students better because of that.

I come to classes with my "bag of tricks." Another benefit of only serving three grade levels is that I am more familiar with the topics and lessons they are working on. Due to several factors, including losses due to Covid and the addition of many new English Language Learners, many children are way behind in Math. I have quite a few children in all three grades who don't know their multiplication facts, and several fifth-graders struggling to add and subtract. I feel this makes the role of the BSI teacher even more important than before.

I have also begun my new role as DonorsChoose Ambassador for School 13. I spoke about this briefly to the staff at our first faculty meeting. I have successfully helped teachers fund three projects already. Our superintendent is not a fan of DonorsChoose. All projects must not request things that the district should provide (books, art materials, etc.), and all projects must be approved by the building principal. I offered to be the gatekeeper for our principal, so all projects will go through me before the principal sees them.

I began reading Making Sense of Mathematics for Teaching the Small Group by Juli Dixon, Lisa Brooks, and Melissa Carli. This book is very helpful, and I plan on referring to it regularly as I develop the skill set for small group Math instruction.

All four third-grade classes are regularly breaking into small groups, even when I'm not pushing into their classes. It a joy to enter a room with a small group happily waiting for me to work with them. I get to do what very few elementary teachers do: refine a lesson by teaching it repeatedly throughout the day. Yesterday, I taught a lesson based on a tweet I saw Tuesday morning: have students make multiplication charts on grid paper, using filled-in squares to represent the products rather than numbers. It's a simple but very powerful project. I refined the lesson throughout the day, as I discovered pitfalls and misconceptions. It's a good precursor to teaching other topics, including area, perimeter, and square numbers. I feel this generation has missed out on a lot of hands-on work. They have been learning mostly on a screen.

Looking ahead, Michele and I are struggling with how to approach the teachers who are not regularly setting up rotating stations. Most are giving us an area to work with our students, while the rest of the class does a worksheet or works on their Chromebooks. We are not permitted to pull our students out of the classroom, so our students are often distracted by what else is happening in the room. I will say most of the time, the students are eager to work with me, and sometimes get unhappy when they can't. Since we are fellow teachers, we are uncomfortable telling teachers how to teach, but are also uncomfortable going to their superiors about this. The only possible way around this may be to ask the Math Coaches to intervene. They are not administrators either, but their role is to coach teachers in Math instruction, so that may work. Unfortunately, one of our two elementary Math coaches is filling a maternity leave as a vice-principal. She would have been my first choice, since she was a teacher in our building for many years, and has a good relationship with the veteran staff members. Most of the teachers who are resisting setting up stations are long-time employees, and two are retiring at the end of this school year.

Kristen Trabona - Hawthorne School District

In Hawthorne, four new participants were invited to join the WIPRO SEF phase three project. The new participants are middle and high school science teachers with varied experience all with less than 10 years teaching experience. Three are between 5-10 years, while one of the high school participants is a novice alternate route physics teacher in her second year. After completing a google form to gauge interest in topics and content around their science teaching, we as a group decided to focus on phenomenon-based teaching as the district has currently rewritten all science curricula to follow a phenomenon-based approach for the 2022-2023 school year. Additionally, we are going to follow the structure of a VCCLS and analyze our teaching practice around phenomenon-based instruction while learning how to provide warm and cold feedback to push our practice further.

The group first met in September where we discussed overarching group norms and goals and just a little about the expectations of the program. I had brought four research-based articles to the group, all dealing with phenomenon-based instruction in the middle or high school classroom. The new participants were instructed to read and analyze the articles for discussion at our next meeting in early October. At this meeting, we as a group discussed all four articles, pros and cons, and what strategies we felt may work with our students and those that wouldn't. The group unanimously decided to work on using natural phenomena as a way to introduce an overarching topic. They felt this was completely out of the comfort zone from the traditional type teaching that had been occurring within the department. The

group was instructed to pick any lesson between now and winter break and video themselves. I have planned for video equipment to be used from our broadcasting rooms for the teachers. Our technology department will then upload all videos to a shared google folder for the group to view and analyze together. We also picked a date for the next full group meeting to discuss the process of analyzing videos using warm and cool feedback strategies. The two middle school teachers and the two high school teachers meet weekly on their own to discuss the curriculum and the phenomenon that is now a part of it. They have already sat in on each other's classes and began to video lessons with each other as part of this process.

NEW YORK -MERCY COLLEGE

The GNY Wipro SEF team worked throughout the fall to foster continuing and renewed interest in teacher leadership opportunities across their five partner districts. Mercy College's Center for STEM Education (MCCSE) hosted the kickoff event for this new phase of Wipro, that the MCCSE calls "Wipro Reimagined" as part of their regional K-12 STEM Teacher Conference. During this time, over 20 participating teachers (some Fellows, some newly participating teachers) attended the event to brainstorm for district change. At the follow-up virtual meeting for Wipro Reimagined, over 40 teachers were in attendance. MCCSE received 10 proposals for district change from 44 teacher leaders and 11 administrators representing all 5 partner districts. Of these, MCCSE awarded funding for seven projects. This has been a strong start to the program and MCCSE anticipates that these seven projects will drive district transformation.

Summary of Current Project(s) and Goals

The Mercy College Center for STEM Education, GNY's leadership site, was able to leverage their contacts and esteem from their prior work with Wipro and NSF programming, as well as their external funding streams, to serve the community through programs for children, families, and teachers. This includes supporting a new branch of Wipro, that MCCSE calls, "Wipro Reimagined." This innovation phase of Wipro involves teacher led, collaborative projects that are designed to enact district change. These projects, created by Wipro Fellows and newly participating teachers, receive buy-in from administrators as associate group members, as well as in-district support from DSCs. Over the course of 4 years, MCCSE aims to establish a norm of collaborative action towards district change in the five existing Wipro districts. Example Wipro Reimagined projects include designing STEM instructional materials and resources for elementary school teachers, creating outdoor learning units focused on increasing student access and participation in community green spaces, and providing professional development to teachers on integrating engineering into their STEM curriculum.

Five of the seven Port Chester Edison Elementary teachers brainstorming together at the Wipro Reimagined session at MCCSE's K-12 STEM Teacher Conference in October 2022. From left to right, Diana Santiago, Marcia Manzueta, Colleen Cahill, Georgina Diaz-Luz, and Carrie Poulos.

With their eyes set on sustainable change, MCCSE plans to equip participating teachers with the tools and practices necessary to carry on transformative efforts even when Wipro funding is gone. Furthermore, administrator buy-in is a prerequisite of funding. This project will require steps at each level of the district to ensure sustainability.

Progress and Highlights

The seven approved projects will all be holding their first mentor meetings in Dec 2022/Jan 2023. In these meetings, the teams and their mentors will be reviewing budgets, discussing and answering questions, addressing concerns, and setting reasonable goals. Additional details for each project will be available in the next quarterly report.

Plan for Next Two Quarters

Date	People	Activity
December 2022 –	All teams	First mentor meeting – reviewing budgets, answering questions, addressing concerns, setting reasonable goals

January 2023		
January 17, 2023	All teams and administrators	Mandatory, virtual, group meeting to discuss project progress, goal setting, common themes among districts. Admin is required at this meeting.
February - May	All teams	Monthly mentor meetings – answering questions, addressing concerns, tracking progress
May 23, 2023	All teams and administrators	Mandatory, virtual, group meeting to discuss project completion, successes, challenges, next steps for sustainability, deliverables for October. Admin is required at this meeting.

Featured Fellows

There are two teams, a total of seven teachers, from Port Chester's Edison Elementary School. Both are focusing on their school green space to create meaningful outdoor learning experiences with their students. Each group is taking their own unique approach to this endeavor.

Poulos, Diaz-Luz, Cahill – Port Chester Edison Elementary

Carrie Poulos (a foundation Wipro Fellow), Georgina Diaz-Luz, and Colleen Cahill are working together to engage students in engineering in the green space. Over the course of the Spring, this team plans to create a unit on building bridges that coincides with a community bridge building project that is on-going in their school garden. Students will work together to test building materials, design and construct bridges, and offer their input to the community adults who are working on building the bridge in the school garden early this summer. The project will end with a community event. This project aims to promote district change by integrating STEM education into the regularly planned curriculum. The teachers on this team will regularly carve out in-school time each month to ensure that students are gaining STEM instruction – this is a new approach for the teachers in this school.

Manzueta, Grant, Budde, Santiago – Port Chester Edison Elementary

Marcia Manzueta (a foundation Wipro Fellow), Lovely Grant, Kelly Budde, and Diana Santiago are working together to create a instructional unit on horticulture and ecology. Through hands-on STEM lessons, students will work with seeds and indoor growing systems to study how plants grow and contribute to cycles of matter and energy. Additionally, students will be introduced to topics in ecology, such as pollination, sustainability, and community interactions. Students will have an opportunity to plant their mature plants in the Spring and/or eat any vegetables that they grow indoors. This project aims for district change by promoting student engagement with gardening and community science that they otherwise would not have access to in the regular STEM curriculum.

I look at District transformation as a stepwise process that takes trust, nurturing and intention. Step 1 was achieved through the original Wipro SEF program, and Phase 1 and 2 with the creation of a cadre of fellows, developing as science teacher leaders. Phase 3, year 1 lays the foundation for Step 2 as we move from the individual fellows to school projects and Principals. In my opinion, the key to desired district transformation is to get the principals involved with developing school projects that look beyond just a single fellow, to address a bigger school issue. The immediate problem many schools face are the poor science Starr (Texas standardized test) test results at the 5th/8th grade level. The problem is further exacerbated by the restructuring of the test that includes short constructed responses instead of multiple choice.

However, we/Wipro/I do not intend that these projects are ONLY test prep projects. Presenting before the principals and other fellows was a good thing because it got the wheels turning in both principals and Fellows heads as to the kinds of projects they can pursue. Step 3 will start in spring 2023 when I request Principals of the School projects to start looking at the data their teachers have collected and become more aware of and involved in the process. That in turn will help them look at the efficacy of the projects their fellows are participating in and what needs to be done for Phase 3, year 2.

Summary of Current Project(s) and Goals

The Wipro @ UNT Dallas Phase 3 Proposals are of three types: a) School Projects, b) Collaborative Projects and c) Individual Projects.

	School Projects				
	District	Title and focus of project	Grade level	New Fellows	DSC/Alums involved
a	Lancaster ISD	5th Grade Science Teacher PLC	5	1	1 DSC participant 2 Alums

b	Cedar Hill ISD	Effects of Collins Writing in 8th grade Science	8	4	1 DSC participant
c	Irving ISD	STEMing to Staar	5	0	2 Alums 1 DSC advisor
d	Grand Prairie ISD	Which Properties Matter?	2-3	3	1 DSC advisor
e	Grand Prairie ISD	GFAA ST*Arts* Club! students	3-5	3	1DSC advisor
f	Desoto ISD	They will start their school project in Jan 2023 after it goes through the approval process			
	Collaborative Projects				
a	Grand Prairie ISD	NSEC Enrichment for middle school	8	2	2 Alums advisors
b	Irving ISD Lancaster ISD	Exploring Science concepts using social studies in a cross curricular research study	9	1	1 alum
c	Advantage Academy Lancaster ISD	All Hands on Deck: Importance of Hands-on activities for Science Instruction	5	1	2 Alums
d	Grand Prairie ISD	STEMtastic Morning	6 - 8	4	

e	Grand Prairie ISD	Edible gardening	K - 5	2	1 Alum
	Individual Projects				
a	Lancaster ISD	Science Staar Bootcamp 2.0	5		1 alum
b	Denton ISD	Classroom Educational Website for Science content	5		1 alum
c	Duncanville ISD	I CER You	Honors biology		1 alum

Progress and Highlights

The schools at the University have had a successful start to this next phase of the program. All of the first stipend installments (except one) have been submitted and approved to be paid. Most groups have submitted and received their materials requests for the new projects. Julien Yacho is a Wipro Fellow from Irving who is also a digital learning coach at Irving ISD. He has used Google sites to create a website for each project to upload their project material on. All the sites will be hosted on a Wipro Phase 3 year 1 @ UNT Dallas site which will be shared in the next quarterly report. All approved projects will be research based and participants will be encouraged to read at least 4 research articles relevant to their topic, As they are not enrolled at UNT Dallas, they will not have access to the electronic databases at the university. Ms. Danielle Moore, who was the DSC at Desoto ISD and now is a doctoral student will help participants access any research articles they will need. She will work with me as a Research Associate to the Wipro@UNT Dallas program.

School Projects

One project per year per participating ISD = 5 School projects per year, 20 School projects over the four-year period of the grant.

Focus: The focus of this project will be to improve science learning for the students at that site and enhance science teaching and science teacher leadership for the teacher participants. With the Wipro Science Education Fellowship and our Wipro Phase 2 proposal, the onus had been on individual Wipro Fellows. With the new Phase 3 Proposal, the responsibility to improve science learning and teaching in the district now rests both

with the District /School as well as the Wipro Fellows. The project will focus on a school initiative/problem

Mentor/ Advisor: The ISD will select a mentor (DSC or Wipro Fellow from the ISD) to mentor the School Project participants through the process starting from crafting the proposal to presenting at the required conferences. The Mentor will link the school project participants and myself. The mentor will be given a stipend for their efforts.

1	**5th Grade Science Teacher PLC** **Lancaster ISD school** Faith Milika, DSC, Lancaster ISD, faithmilika@lancasterisd.org Markus Burkhalter. Lancaster ISD, Markusburkhalter@Lancasterisd.org Jennifer Mosley, Lancaster ISD, Jennifermosley@Lancasterisd.org Brittney Preston, Lancaster ISD brittneypreston@lancasterisd.org Brief Description of the collaborative proposal - This collaborative project will focus on developing a Professional Learning Community (PLC among 5th grade science teachers from Lancaster ISD). This PLC process is intended to create the conditions (improve their own content knowledge and pedagogical content knowledge) that help educators become more skillful in facilitating student learning of science to a greater degree.
2	**Effects of Collins Writing in 8th grade Science** **CHISD school** Jeremy Hesse, DSC, CHISD, jeremy.hesse@chisd.net Judge Solomon, CHISD. judge.solomon@chisd.net Carlece Jackson, CHISD, carlece.jackson@chisd.net Shiesha Mcgue, CHISD, shiesha.mcgue@cedarhillisd.net

	Kellie Burchfield, CHISD, kellie.burchfield@cedarhillisd.net Brief Description of the proposal Our goal for this project is to improve 8th grade Science STAAR scores across Cedar Hill Independent School District. Cedar Hill Science STAAR scores in 8th grade have gone down since the start of Covid by 24 percentage points . With the new constructed response questions on the Texas 8th Grade STAAR it is imperative that the scholars have opportunities to write in science and this proposal will give us data on the scholars' ability to write and how to better help our students write in science. Collins writing is a district initiative put in place by the district to increase writing and reading comprehension.
3	**STEMing to STAAR** **Irving ISD school** Julien Yacho, Irving ISD, jyacho@irvingisd.net Kelly Hancock, Irving ISD, khancock@irvingisd.net Mentor: DSC Chris Dazer Brief Description of the collaborative proposal I will be collaborating with the 5th grade science teachers at each elementary school I work by facilitating STEM lessons created by our district. My collaborator on this project will do all of the following as well with her 5th grade students as well for a total of 3 schools. This entails meeting with these teachers during the planning stages of these lessons, helping gather and organize materials and co-teaching the lessons with them. My partner will focus on her classes while I focus on helping the teachers at each of my schools. My partner and I will also create STAAR related assessments that cover topics we will explore during the lessons. This is a new district initiative in our schools and I want to focus on how these lessons function. What makes these lessons a STEM lesson? What are some barriers teachers might face when implementing these lessons and how can we remove them? What improvements can be made in order to more align these

	lessons with STEM practices while still maintaining a STAAR lens in a manner that is still practical for my title 1 teachers?
4	**Which Properties Matter?** **GPISD School** Magda Gray, GPISD, magda.gray@gpisd.org Ian Talamantes, GPISD,ian.talamantes@gpisd.org Guillermo Lozano, GPISD, guillermo.lozano@gpisd.org Mentor: Tamara Majors, GPISD, tamara.majors@gpisd.org Brief Description of the collaborative proposal Bilingual science educators at GPISD will give students in grades 2 & 3 continuous opportunities to explore the properties of matter through the engineering and investigative design process. Our dual language students will begin by first exploring the properties of matter, including flexibility, size, shape, texture, buoyancy and how these impact the effectiveness of the prototype that they will create. Students will work through a series of investigative stations during their spanish science class block to gain a strong foundation of the properties of matter so that they are able to then apply what they have learned about the properties of matter in order to create and engineer a product or invention that will be useful to everyday life.
5	**GFAA ST*Arts* Club!** **GPISD School** Sidra Clark, GPISD, sidra.clark@gpisd.org Tiffany Spaulding, GPISD, tiffany.spaulding@gpisd.org Annette Trammell: GPISD,annette.trammell@gpisd.org

	Mentor: DSC Tamara Majors Brief Description of the collaborative proposal Host an after-school arts integrated science club with focused activities relating to force and motion to give students in need of a positive connection with academia, multiple hands-on, fun experiences. It is our goal to build a love for science in students that currently are struggling with the idea of energy, force and motion, and circuits. The students will be teacher nominated to ensure they are ideal candidates.
6	The DeSoto ISD school project will commence in January 2023.

Collaborative Grants

These can be collaboration between Fellows and teachers of one district/schools or between districts. Some collaborative projects could be also considered as School projects (see above).

1	**NSEC Enrichment for Middle School** Tamara Butler, Grand Prairie ISD (mentor), tamara.butler@gpisd.org Lindsay Reeves, Grand Prairie ISD (mentor), lindsay.reeves@gpisd.org Megan Hunt, Grand Prairie ISD, megan.hunt@gpisd.org Deanna Chapman, Grand Prairie ISD, Deanna.Chapman@gpisd.org Brief Description of the collaborative proposal: Our collaboration will bring middle school content to the GPISD Natural Science Education Center (NSEC). The team will work together to build four interactive, culturally relevant, hands-on activities that will reinforce frequently assessed TEKS clusters (Newton's Laws, Human Impacts on Watersheds, Interdependence of Organisms, Chemical Reactions). Middle school students will have an opportunity to visit the NSEC as part of their pre-STAAR summit review program, which will allow students to interact with the content in a more relevant and concrete manner. The TEKS clusters selected have traditionally been low using the STAAR Frequency Distribution report from Lead4Ward. By providing a unique hands-on learning review outside of the school will allow the students a deeper understanding of these TEKS.

2	**Exploring Science Concepts Using Social Studies in A Cross Curriculum Research Study** Dr. Marsha Bolden, Irving ISD, mbolden@irvingisd.net Donna Bolden, Lancaster ISD, donnabolden@lancasterisd.org Brief Description of the collaborative proposal. This collaborative proposal is designed to explore a cross curricular experiment between social studies and science to better understand how the two disciplines can benefit students in a one lesson delivery. The proposal is designed to match science and social studies subjects that intersect. Both science and social studies students will create films. The social studies and science students will film an explanation of the same topic. Social Studies will explain the historical and social aspects of a topic and science will explain the scientific aspects of the same topic in film. When the film is complete, both clips will be edited and combined to present one lesson so students can see the connections between both subjects. The students will watch the films in their own classrooms and give their assessments of the connections that they are able to make in their journals.
3	**All Hands 0n Deck: The Impact of Hands-on Activities on Science Instruction** Tamesha Brown, Advantage Academy,Tamesha.brown@advantageacademy.org Markus Burkhalter. Lancaster ISD, Markusburkhalter@Lancasterisd.org Jennifer Mosley, Lancaster ISD, Jennifermosley@Lancasterisd.org Beverly Moore, Lancaster ISD, Beverlymoore@Lancasterisd.org Brief Description of the collaborative proposal. Educators from Advantage Academy and Lancaster ISD will collaborate to provide equitable outcomes for all students that will allow them to develop a deeper understanding of science through hand-on activities. This will be done by planning, collaborating, instructing, using intentional strategies to support ESL students, and providing hands-on activities to increase Science awareness amongst 5th Grade students at both Advantage Academy and Lancaster ISD. We will collaborate horizontally with three major Science themes as our focus that will allow students an opportunity to have hands-on experiences. In addition to that, we will use instructional strategies that support our ESL students by developing their language needs through the use of content vocabulary. We will track the data to show improvement in the students' district and state assessment data in comparison to last year. Covid- 19 caused many learning gaps that we are continuously working to close using hands-on experiences.

4	**STEMTASTIC MORNINGS** Megan Hunt, GPISD, megan.hunt@gpisd.org Sharon Thornton, GPISD, sharon.thornton@gpisd.org Kristin Martinez, GPISD, Kristin.martinez@gpisd.org Ragina Taylor, GPISD, Ragina.Taylor@gpisd.org Brief Description of the collaborative proposal Our collaboration will provide our students who arrive at school early in the mornings the opportunity to engage in a variety of STEM activities that otherwise they would not have access to at home or during the regular school day. The building opens to students at 8:00 am. Upon arrival, sixth grade goes to the cafeteria, 7th and 8th are in the gym and high school is in the library. Students remain in those locations from 8:00 until 8:30 with no instructional focus or technology at that time. Our proposal is to provide engaging stations for those students who don't want to just sit in the morning for 30 minutes. Students are in a staggered dismissal to their morning classes from their grade level holding areas that starts at 8:30 with breakfast in the classroom followed by morning advisory lessons at 8:50. We are going to build an array of STEM stations in the school that will be accessible to all students. We will incorporate a new WALKSTEM station with our natural ecosystem in our school field that the fire department burns annually. We will create a lego wall as well along with small technology stations that will ensure student success as they learn how to problem solve and build their critical thinking skills in a fun and engaging environment
5	**Edible gardening** Cynthia Capocci: GPISD, Cynthia.capocci@gpisd.org Roxanne Herrera: GPISD, Roxanne.herrera@gpisd.org Jennifer Melton, GPISD, Jennifer.melton@gpisd.org Brief Description of the collaborative proposal We seek to welcome and engage students in service with our edible garden using Quirkles as our curriculum to engage students. The project will be implemented with a science literature alphabet caricature vocabulary story set called the "Quirkles." (https://www.quirkles.com/) Teachers will use age-appropriate stories from the Quirkles books like "Botanist Bert" (this story would be great for K-5), to tell all about plants. Then when students go outside to the playground, they will see an alphabet mural of the Quirkles and Botanist Bert. Students can then go into the Outdoor Habitat , where our edible garden will be installed, and see many examples of different types of plants , edible and non-edible. We want to

	investigate the impact of an edible garden and quirkles on science vocabulary acquisition of our students.

Individual Projects

These were awarded to Fellows who were interested in working on their own or to Fellows who had moved out of their districts.

1	**Science Staar Bootcamp 2.0** Brittney Preston, Lancaster ISD brittneypreston@lancasterisd.org Brief description of the Proposal Through this grant, my goal is to provide a **STAAR Bootcamp 2.0** that will increase 5th grade students' science content knowledge so they will do better in the science STAAR in May 2023. The bootcamp will align to the district framework and pacing calendar. It will be composed of two components; 1) Targeted in class interventions, in which teachers will address individual student needs through small group instruction, 2) Enrichment sessions, after school "club" focused on accelerating student learning through hands-on investigations and learning games.
2	**Classroom Educational Website for Science Content** Shelby Allen, Denton ISD, sallen3@dentonisd.org Brief Description of the collaborative proposal This proposal is in collaboration with the parents of my students this school year and with the students themselves to a degree. The parents will be taking a survey over the at-home use of an educational website that is designed to be used by their school-aged children to supplement our science class instruction. The website will have notes, PowerPoints, videos, interactive activities, other websites, and many other tools to help students succeed in their science classes. This website will be used outside of school hours and will be available to the students and parents. The student has access to the website through Google Classroom and the web address will be emailed to the parents as well. I will track the trends in the progress of the science content taught to the students who use the website and those who do not.

3	**I CER You** Candace Edmerson. Duncanville ISD. caedmerson@gmail.com Brief Description of the proposal Claim, Evidence, and Reasoning (CER) is a pedagogical framework that is most often used in science classes, for students to write scientific explanations. The framework is cross-curricular and can also be used in daily life when communicating with others. I will use the CER pedagogical framework with my students who are Collegiate Academy Honors Biology scholars.There are prompts, and students are given sentence starters to help assist in writing their responses to the prompts. It is free writing, but it is structured, including the framework, based upon their thinking in response to the prompt.

Meetings and Conferences

Leadership meeting in Boston and DSC meeting in Dallas:

I attended both events in Boston and Dallas, I got several ideas that I will implement with regards to my Phase 3 Projects.

First meeting for Phase 3 Year 1: Sept 26th , 2022

The first meeting for Phase 3, year 1 was on Sept 26th, 2022, at UNT Dallas. Most of the participants were in attendance at the dinner meeting. President Mong gave the Welcome address and Dean Remley also addressed the group. During the meeting, I provided a general overview about the Wipro program at UNT Dallas. The link below is the slides I used.
https://docs.google.com/presentation/d/1etogbWN3lQAi6Yb8Kwihnk1H1uH8hkd-/edit?usp=sharing&ouid=107793172212823875753&rtpof=true&sd=true

President Mong and Dean Remley speaking at the event

Fellows (new and alums) at the Sept 26th event.

At the event, I also talked about CAST 2022 and our expectations with regards to presenting at CAST.

Wipro@UNT Dallas Quarterly newsletter

At the meeting in Boston as well as the Dallas DSC meeting, we talked about ways to keep the Wipro community informed as to what we were doing. The idea resonated with me as we have a lot of partners, fellows and no means of communicating the ideas in my head. I decided to create a Quarterly newsletter that I would send to alums, new fellows, principals, ISD administrators. I purchased a subscription to a newsletter template called Smore (which is what all the local ISDs use). The first newsletter went out on October 17th, 2022 and can be viewed at this link: https://www.smore.com/2uhbj-wipro-unt-dallas. Our next newsletter is scheduled to go out in January.

Conference for the Advancement of Science Teaching,(CAST 2022)

CAST is the Conference for the Advancement of Science Teachers, an annual, regional conference hosted by the Science Teachers Association of Texas. It is a requirement of our grant that all participants submit a proposal to present at CAST or a conference of their choice. All the Phase 2 participants submitted proposals to present at CAST. Few were not accepted. The following conference proposals were accepted for presentation at CAST 2022, Nov 10-12 at the Anatole Hilton, Dallas, TX. A total of 22 Wipro Alums and new fellows presented at CAST 2022. I was very happy Dr. Eisenkraft attended CAST 2022.

Wipro Title	Presenters	Date	Time	Room
All Hands-on Deck: The Impact of Hands-on Activities on Science Instruction	Tamesha Brown, Markus Burkhalter, Beverly Moore	11/10/22	08:00 AM - 09:00 AM	Stemmons C
Science Text Comprehension Through Note Taking	Maria Louise Soto	11/10/22	04:00 PM - 05:00 PM	Sapphire
STEM & Informal Writing Tasks Build Writing Skills	Maria Louise Soto, Tracey Craft, Courtney Silverberg	11/11/22	08:00 AM - 09:00 AM	Topaz
STEM Collaboration Across Classrooms and Beyond	Sherry Thompson, Tiffanie Johnson, Shelby Allen, Julien Yacho	11/11/22	11:00 AM - 12:00 PM	Stemmons A
Using WalkSTEM to promote student inquiry in the real world.	Jeremy Hesse, Faith Milika, Tamara Majors, Chris Dazer, Danielle Moore	11/11/22	12:30 PM - 01:30 PM	Cardinal
Science! It's Elementary!	Ratna Narayan and expert Wipro and non-Wipro teachers	11/11/22	02:00 PM - 04:00 PM	Imperial
Investigating Climate's Impact on the Environment	Rhenett Ingram, Marquita Muhammed, Vickie Hines, Danielle Moore	11/12/22	08:00 AM - 09:00 AM	Cooper
Science! It's Elementary!	Ratna Narayan and expert Wipro and non-Wipro teachers	11/12/22	09:30 AM - 11:30 AM	Imperial

For the session “Science! It's Elementary”, CAST requested me to organize and present twice on two different days. The sessions were run round robin style and were very interactive and hands-on. The session also gave some Wipro Fellows the opportunity to present at CAST. Wipro Presenters and their presentation topics are listed below:

- Jeremy Hesse, DSC, Cedar Hill ISD, “Sprout House Activity”
- Chris Dazer, DSC, Irving ISD, “Carbon Footprint”
- Faith Milika, DSC, Lancaster ISD and Jennifer Mosely, Lancaster ISD, “Periscope”
- Tamara Majors, DSC, Grand Prairie ISD, “Dig In”
- Raisha Allen, DSC, DeSoto ISD and Danielle Moore, “Mouse Trap Cars”
- Ana Belmonte, Irving ISD, “Life Cycles, From Egg to Adult”
- Julien Yacho, Irving ISD, “Apparent Movement of the Sun”
- Tiffanie Johnson , Cedar Hill ISD and Sherry Thompson, Irving ISD, “Food Chains and Food Webs”
- Maria Soto, Arlington ISD, Tracey Craft, Irving ISD, Courtney Silverberg, Irving ISD, “Slow changes to the Earth’s surface”
- James Mining, Irving ISD. “Electricity in Circuits”

Prior to the conference, I emailed each Wipro Presenters’ Principal, superintendent, administrators that the Wipro fellow would be presenting at CAST 2022, the name, date and title of the presentation and that we would be registering the fellow for the conference. After the conference, I emailed them once again and attached a certificate of participation for presenting at the conference (see below).


The Wipro Science Education Fellowship at the
University of North Texas at Dallas

Certificate of Participation

Marquita Muhammed, Marshall ISD, was a presenter at the Conference for the Advancement of Science Teaching (CAST) Professional Development Conference, Dallas, TX, Nov 10-12.

Session Title: Investigating Climate’s Impact on the Environment
Dates of Presentation: November 12, 2022

Dr. Ratna Narayan, PhD
Associate Professor of Science Education
University of North Texas at Dallas

UNT DALLAS
UNIVERSITY OF NORTH TEXAS AT DALLAS

wipro

Certificate of Participation

Investigating Climate impact session

WalkSTEM Presentation

All Hands on Deck Presentation

Cross District STEM Initiative Presentation

STEMbins Presentation

Reflections from CAST 2022

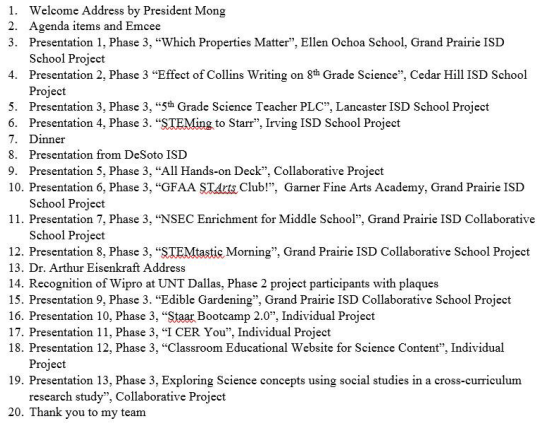
I was happy at the number of Wipro presentations accepted and that I was able to take so many Fellows to CAST. It was a good experience all around. Thank you Dr. Eisenkraft for hosting us for dinner. I like the requirement of all our participants having to present at CAST. Next year CAST is at Houston in November, I will work with the Phase 3 presenters on getting their project proposals in and accepted.

December 5th Meeting at UNT Dallas

This was an important meeting for several reasons:

- I approved 13 projects for Wipro@UNT Dallas Phase 3, Year 1. The participants included the 5 DSCs, 20 new Fellows and 11 alums (this does not include the new DeSoto Project)
- It was my intention that all new fellows would be inducted into the Wipro fellowship and receive a Wipro jacket, flowers and a badge

- I also wanted to honor the Phase 2 participants who had completed their projects with plaques (their choice)
- I also wanted to hear from all the Phase 3 participants regarding their Phase 3 projects and their progress
- I invited all the Principals of the Phase 2 as well as Phase 3 participants to attend the meeting. A total of 15 principals/ their representatives attended the event
- I not only wanted to be able to honor the new fellows, alums and principals, but I also wanted the event to help in recruiting for year 2. If the fellows and principals got to hear details about the types of projects that were funded, I hope it would set their creative juices flowing as to what projects they could submit for phase 3, year 2.



1. Welcome Address by President Mong
2. Agenda items and Emcee
3. Presentation 1, Phase 3, "Which Properties Matter", Ellen Ochoa School, Grand Prairie ISD School Project
4. Presentation 2, Phase 3 "Effect of Collins Writing on 8th Grade Science", Cedar Hill ISD School Project
5. Presentation 3, Phase 3, "5th Grade Science Teacher PLC", Lancaster ISD School Project
6. Presentation 4, Phase 3. "STEMing to Starr", Irving ISD School Project
7. Dinner
8. Presentation from DeSoto ISD
9. Presentation 5, Phase 3, "All Hands-on Deck", Collaborative Project
10. Presentation 6, Phase 3, "GFAA STArts Club!", Garner Fine Arts Academy, Grand Prairie ISD School Project
11. Presentation 7, Phase 3, "NSEC Enrichment for Middle School", Grand Prairie ISD Collaborative School Project
12. Presentation 8, Phase 3, "STEMtastic Morning", Grand Prairie ISD Collaborative School Project
13. Dr. Arthur Eisenkraft Address
14. Recognition of Wipro at UNT Dallas, Phase 2 project participants with plaques
15. Presentation 9, Phase 3. "Edible Gardening", Grand Prairie ISD Collaborative School Project
16. Presentation 10, Phase 3, "Staar Bootcamp 2.0", Individual Project
17. Presentation 11, Phase 3, "I CER You", Individual Project
18. Presentation 12, Phase 3, "Classroom Educational Website for Science Content", Individual Project
19. Presentation 13, Phase 3, Exploring Science concepts using social studies in a cross-curriculum research study", Collaborative Project
20. Thank you to my team

Welcome to the Wipro Dinner and Celebrations ☺

We appreciate you joining us especially after a full days work. The agenda is packed , we will endeavor to keep it moving as quickly and smoothly as possible. We respect your time and appreciate your support!

Phase 3 Presentations: these will involve:

Introduction of the DSC /Participants

Induction of new fellows/welcome to alums

Brief description of the project and progress so far

Participant Principals, ISD admins will be recognized and thanked

You will hear more about Phase 3 participants projects at our next meeting on March 27th, 2023

Recognition of Phase 2 Participants, this will involve:

Participants come to the Podium and are awarded a plaque

Participant Principals are recognized and thanked

Thank you for your patience and support!

The agenda was packed and very ambitious, I was a little concerned about how much time it would take. The slideshow was another miracle, 120 slides!! Please see link below for slideshow:

https://docs.google.com/presentation/d/1Cx3RfHfidH-L-AJkF029soA87Ak9SINLiO1GvPprGxs/edit?usp=sharing

Full credit to Tamara Majors, the DSC or GPISD for setting the slideshow up. Once that was done, the other DSCs shared the link with the participants who added their material. For each new project I asked for an introductory slide from each participant, 3 slides about their project where they provided a title slide, their research question and rationale and progress they made on the project till date.

President Mong, Welcome address

Participants, Principals, Lancaster ISD

What Properties matter Presentation

NSEC GPISD Participants, Principal

Phase 2 participants being presented their plaques

Happy Faces!

Reflection about the event

I am glad that went off well. It was stressful. I had issues with the food service and will make sure those problems won't recur. The feedback I received from principals and fellows was very positive. Surprisingly many of the alums commented that they did not realize just how “far they had come”. Tamesha Brown said, “ to know where we all started and to see us now makes me so proud of us all”. This will probably be the format I will follow next year as well.

Plan for Next Two Quarters

March 27th 2023	Face to face Meeting with the Phase 3 participants
June 2nd 2023	Annual Wipro Meeting and dinner

Featured Fellows

Megan Hunt - Wipro Phase 2 and 3 Fellow

Megan Hunt is an 8th Grade Science Teacher at YWLA (Fort Worth). Megan holds a Bachelor of Science in Multidisciplinary Studies from Texas Tech University and a master's degree in STEM and Educational Leadership from the University of North Texas at Dallas. Hunt has spent 22 years in public education in the state of Texas as an educator in kindergarten through 8th grades.. She has previously been a Campus STEM Coordinator and GT Specialist. She has been awarded Campus Teacher of the Year, District Teacher of the Year and nominated for National Science Teacher of the Year. She has presented various topics at campus, district, regional, state and national levels. Her passion is getting students involved in STEM through literacy rich environments and real-world applications. Providing these relevant and exciting opportunities will open the world of possibilities.

Being a science teacher leader is important to me. I want other educators to understand that science encompasses all subjects. It's the area of school that children love, but often is cut short because of state exams. If educators would use nonfiction, real world topics that incorporate the fundamentals of Math and ELAR into science, they would see student growth. As educators we must instill the skills for our students to be productive and contributing members of society. Taking the time to intentionally incorporate these skills that include the ever-desirable soft skills must start the minute students begin learning.

Being a WIPRO fellow not only has allowed me to grow but to challenge me as an educator. As I am surrounded by other WIPRO fellows, the collaboration and teamwork is providing a network of professionals who understand the necessity of providing our learners with as many different hands-on critical thinking experiences. We are building confidence amongst our students and challenging them to justify, analyze and draw conclusions of their experiments.

Raisha Allen - District Science Coordinator, DeSoto ISD

Raisha Allen is a proud graduate of Baylor University (2011) with a Bachelor of Science in Education with a concentration in Health Science Studies. She later went to Meharry Medical College to obtain her Master of Science in Public Health (2014). At Meharry Medical College she focused her research on Primary Care professionals serving in disadvantaged communities. She worked for the Centers for Disease Control and Prevention and the Dallas County Health Department for 2 years and then found her calling in teaching. Being a graduate of DeSoto High School, she wanted to come back and give back to the community that gave so much to her. She began her teaching journey in 2015 working at DeSoto East Middle School.

While at East, she taught 6th through 8th grade Science and Medical Science courses. She taught in a STEM academy, introducing students to real-world problems and 21st century skills. In addition to serving as a model science instructor, she has also worked with the DeSoto ISD Science Department where she has served for three years as a secondary curriculum writer. She also obtained her Master's in Education with a concentration in Curriculum and Instruction in 4-8th Science from University of North Texas at Dallas (2018).

Raisha Allen has been in education for 8 years. She was a WIPRO Fellow in cohort 2 at UNT Dallas focusing her research on concept mapping and argument and argumentation in the science classroom. Her work ethic and experience has allowed her to be promoted to DeSoto's K-12 Science Instructional Facilitator and the District's Science Coordinator with WIPRO. She is excited for this new journey and ready to impact student engagement in the Science Classroom.

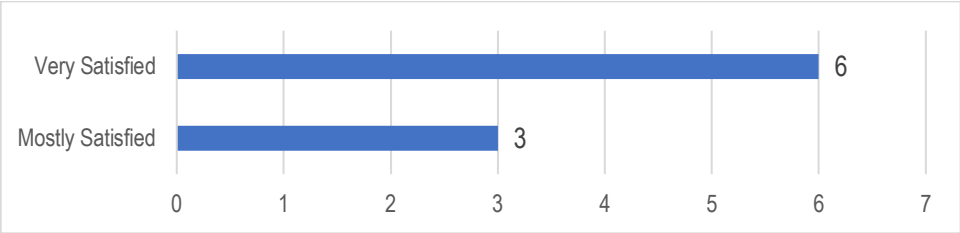
A summary of the evaluation report follows.

Leadership Conference | Fall 2022
Survey Response Summary
11.15.22

Total Participants & Survey Responses

	Total
Participants	10
Survey Respondents	9

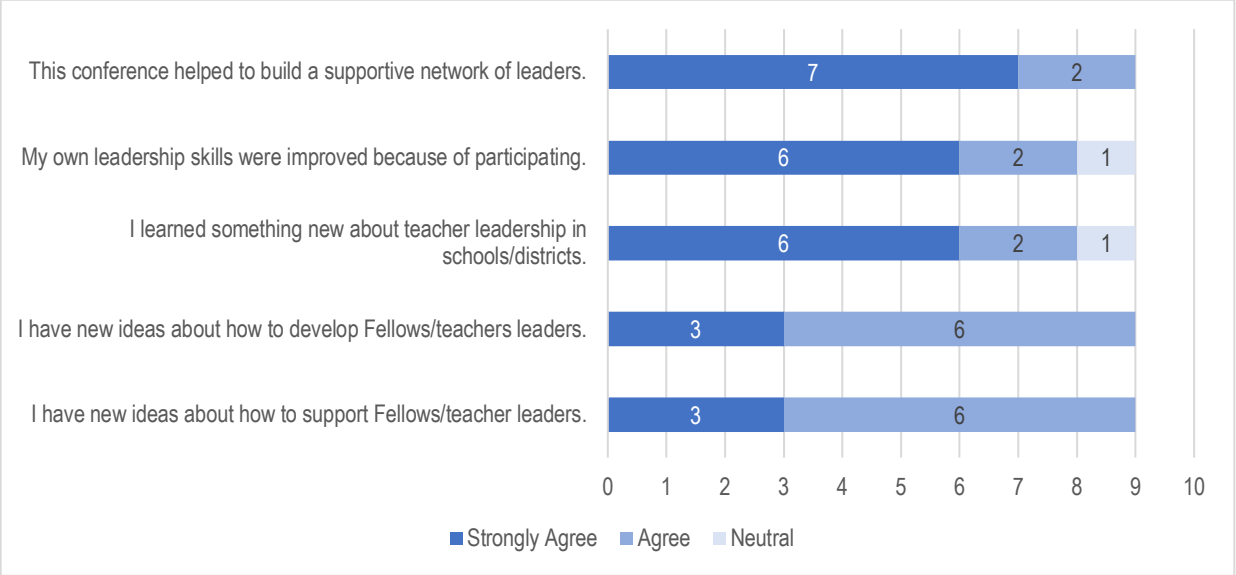
Satisfaction



Satisfaction Comments:

DSC	It was a pleasure to meet with educational leaders from multiple districts in multiple states. It provides perspective and gives us an opportunity to continue this work.
DSC	This was the first opportunity I have had to collaborate with colleagues from across the country with unique positions and districts, centered on leadership and teacher leadership.
DSC	It is always wonderful to be in the room with motivated like minded people. Im excited to be included in this upper level planning
DSC	There is nothing like time to be together in the same room to share with and learn from colleagues who suffer the same challenges and celebrate similar visions of high quality teaching and learning.
DSC	It's always a pleasure to be with like-minded folks who are trying to support the growth of our science teachers. I've learned so much from other folks and can't wait to continue meeting with them in the future. And, Ratna, Tammy, and Arthur really know how to make an attendee feel welcomed and cared for.
IHE	I always leave these conferences feeling I have learned the most
IHE	I thought the time was well spent and that a nice community was formed. I wish more people from the different sites would have committed to come.
IHE	new relationships; good discussions; valuable interactions; enjoyable meals (company and food)

Conference Impact



Other comments:

DSC	I have gained knowledge around leadership and exercising leadership with some practical examples. I would like more support in developing more practical applications of how to support and develop teacher leaders.
DSC	Such a pleasure to be with thoughtful, caring educators!

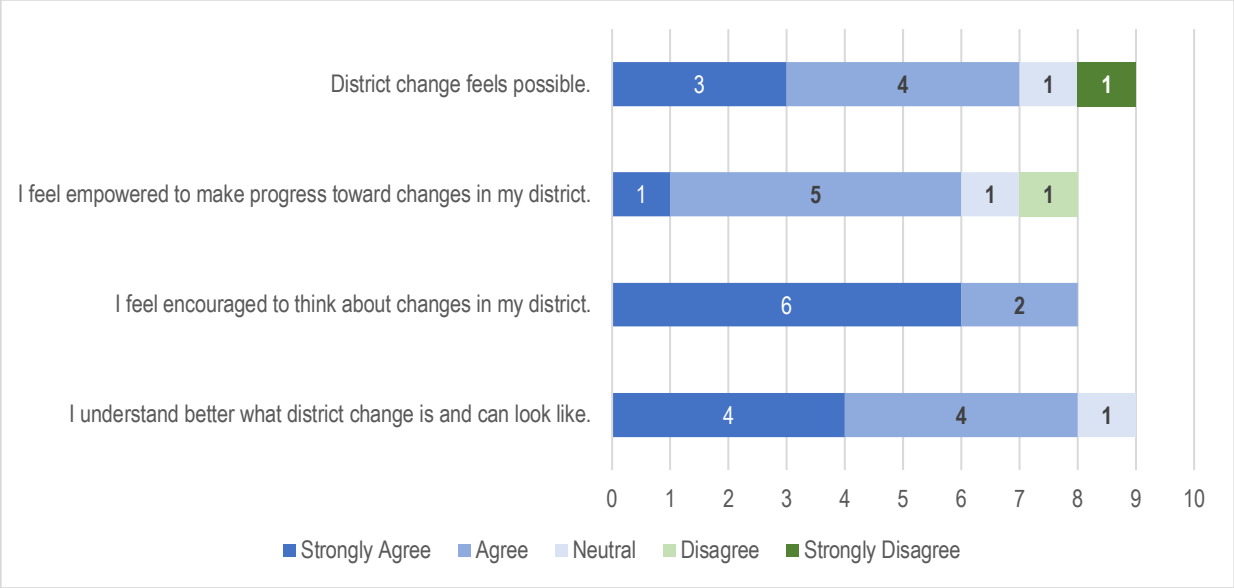
What further support would help your own professional leadership development?

DSC	1) I would greatly appreciate the opportunity to present material related to the Wipro SEF experience at conferences alongside other participants. 2) I believe the Wipro model is highly effective and could be developed as a successful method of professional development. I would be happy to help in the composition of a paper or book along these lines.
DSC	I would like more support in developing more practical applications of how to support and develop teacher leaders.
DSC	I benefited from being included in this community of IHE's and DSC's. I think we have all said what there is to be said. If WIPRO is to continue, I truly think it needs to be presented to districts as a professional development format and tried out by various science teachers to improve their practice. It has value but can not be left to the "goodness of people's hearts to continue it without remuneration in the midst of their busy schedules.
DSC	Coaching support, working with admin
DSC	Engaging with others about engaging teachers in leadership development Enjoyed discussing the leadership strategies... more please!
DSC	I'm really hoping to continue learning best practices with developing future science teacher leaders. There is SO much expertise in the room.
IHE	Grins! Personal one on one sessions
IHE	As an IHE person, I do a lot of coaching and supporting of others. I would love to have someone coach me every once in awhile because I think it would help me be a better leader.
IHE	Larger attendance at these meetings

What more do you want to learn about supporting teacher leaders in your district?

DSC	I would like support and ideas on how to navigate hierarchy of power in my district.
DSC	I think I have learned enough at this point.
DSC	I'm not a district supervisor, I'm a teacher, so ways to support the teachers as a fellow teacher leader
DSC	I would like to engage more in supporting others--as I always learn from them in that process. I always feel I learn so much when I engage in a coaching situation and learn from the problem-solving/troubleshooting process with someone/a team.
DSC	I want to continue finding resources, identifying best practices, and exploring new readings with our teacher leaders. I hope we can find some effective ways to share resources through Google Folders so that we can share some of the activities that we do that have been effective in our respective contexts.
IHE	Most of it is really trial and error, and being consistent with the support
IHE	I think just more of this kind of focused work as well as bringing in school leaders. The case study we discussed really emphasized the importance of involving folks at all levels.
IHE	What are their needs?

District Change



Other comments:

DSC	Those "strongly disagrees" have nothing to do with Wipro and everything to do with Montclair! I fear we are stagnating or moving in the wrong direction here. This has nothing to do with the highly positive experiences Wipro provided to so many fellows throughout the years. It's an "us" problem!
DSC	District change feels overwhelming, and my biggest concern is the fact that science is not a priority and that's a problem that is too huge for me to try to tackle and figuring out how to get around that roadblock is daunting.
DSC	I almost put N/A as I don't have a district, however, I work with a project and I believe that their DSCs/districts are very capable of making change happen....
IHE	As an IHE person, I am encouraged about the work in some districts and can see how they are developing momentum. However, there are some districts that need a lot more work in terms of developing clear systems that would support the changes we would like to see.

What kind of district change are you most interested in working toward in your district?

DSC	In the context of Wipro, I would appreciate more opportunities for science teachers to engage in multiple session of vertical and horizontal articulation. This was the most meaningful part of the Wipro SEF experience. I think we could enact positive change by following the Wipro model.
DSC	I want to work with building and district leadership to empower and elevate the voices of teacher leaders. I want to make plans to create spaces in the district for teacher leaders.
DSC	A solid model of continual collaboration among grade level content area colleagues.
DSC	Increased focus on science in the elementary levels; increase in phenomenon based lessons
DSC	I feel that the development of teacher leaders and the sharing of "knowing" and "being expert" to a broader set of "others" is really important! Empowering others to create, contribute to and support change is critical to student success.
DSC	I want to broaden the access to PD for science teachers in my district. The pendulum has swung to a place that is really limiting right now. I hope I can work with my IHE and others to get that movement back to a place where PD is more commonplace, accessible, and supported.
IHE	Building leadership capacity and clear systems that would support the work we would like to see.
IHE	District buy-in for support for science instruction and pd

What further support would help you make needed changes in your district?

DSC	I don't think Wipro can help... Again, it's an "us" problem...
DSC	I would appreciate support in developing an action plan or proposal to bring to the building and district leadership that includes developing spaces for teacher leaders in my district.
DSC	Support of the curriculum director and veteran fellows to make this happen.
DSC	Accountability, planning, money, working with admin, professional development...
DSC	How does one shift culture to want to engage in change in science teaching and learning... it is so far down the list. Keep strengthening this group--and building in supports to reach others in districts to encourage their support of these DSCs and Fellows...
DSC	I think we need some documentation of the success of Wipro as a whole to share with district leaders to help combat the apathy towards science teacher leader development.
IHE	A lot more money and district support
IHE	As an IHE person, I think we could do so much more in each of our partner districts if we were able to afford more project team staff to do the work. It has been hard keeping up with the moving parts with such a small team of people.
IHE	Time and attention from administration

Most Important Takeaway

DSC	There is a much better life outside of the Montclair Public Schools as they are at this point in time. Yes, I'm complaining! But it's relevant to my point... I left New Jersey last Friday feeling disrespected, unheard, and ignored by my district. I met a group of people are exemplars of science education leadership in Dallas. Initially, I felt like an imposter. (I am a teacher who does more than I should. Nothing more or less.) The Wipro leaders allowed me to participate. I felt like I was accepted and heard. It was a very validating experience. Perhaps it is time for me to think of making a change. I cannot thank you enough!
DSC	I struggle sometimes positioning myself as a teacher leader and I walked away feeling like I do belong in leadership roles.
DSC	I truly believe that you have to be realistic about the limitations present in districts at this time - lack of funds, shortage of teachers and substitutes, and shortage of time when considering how you could move the Wipro model forward in this present day context.
DSC	The struggles that occur in my state are happening in other states also, and I'm not alone in wanting to see change in how science is experienced by students and we are building a community of leaders to help that change become a reality.
DSC	A quote from Tammy--which was a key reminder for me -- "You can't solve an adaptive problem with a technical solution." AND--I was reminded that I still have something to offer to this project.
DSC	There are amazing folks leading this work across the country. I'm so pleased to be among them in this work.
IHE	Always be honest with yourself as a learner and it is beneficial for everyone
IHE	Spending time together to learn is really important and should continue to be a priority in our work together.
IHE	These are good people working toward a common goal.

Recommendations for Conference Improvement

DSC	The hotel, while lovely, was next to some live music venue that produced sound loud enough to be felt, not just heard, till 2am on Saturday. I would jump at the chance to meet like this again, but would greatly appreciate a different and quiet setting! I would also like to meet during the week as opposed to the weekend. I have an 11 year old daughter who I rarely get to see during the week!
DSC	My only hope is there will be more. I think developing relationships can lead to safe spaces and trust. Now we can build practice and community.
DSC	There has to be an understanding that you are pulling people from across the country to attend this meeting. It was great to see everyone and talk with them; however, there is a limited amount of time that we can be away from our jobs. Perhaps having some of the sessions on Friday afternoon (3:00pm - 6:00pm) before going to dinner would be a better option than asking attendees to stay on Sunday morning when they have flights to catch and families and work obligations to attend to.
DSC	I wish there had been more notice, mostly so more people from additional sites could have attended
DSC	I hate to say that the "numbers game" is important... but I wish that all sites had a couple of DSCs and an IHE person here... I just can think of others and what they would have contributed to these rich conversations!!
DSC	I wish there were more attendees... Other than that, I thought the pacing was great. I could have used a bit more time between the end of the day and dinner. :)
IHE	We could have had more DSCs attend and it could have been hoisted at UNT Dallas
IHE	I wish more folks would have come to add to the intellectual vibrancy of the discussions and group learning.
IHE	Larger attendance

Other Comments

DSC	Weekday meetings/conferences please!
DSC	I also liked that everything was in the hotel we were staying at and the dinner was in walking distance
DSC	More lead time? The hotel was great--the LOUD club nearby was not.
DSC	You all are pros at this. Amazing job.
IHE	Thank you!
IHE	So many people contributed to the conference

Demographics

Gender		
	Woman	6
	Man	2
	Non-binary	1
Race/Ethnicity		
	White	7
	Asian/Pacific Islander	2
Current Professional Role*		
	University Teacher/Professor	3
	University Administrator	1
	University Staff	1
	K-12 Teacher	4
	K-12 School/District Administrator	1
	Other	2
Wipro SEF Role		
	Fellow in 2nd Year	1
	DSC	6
	IHE Leadership	3
	Friend of the Program	1
State		
	California	2
	Massachusetts	1
	New Jersey	3
	New York	1
	Texas	1
	Other	1

*Participants could choose as many as applied.

ANNE GURNEE
CONSULTING, LLC

Wipro Science Education Fellowship
Evaluation Update
September 2022

Tasks this Month

- Completed annual evaluation report. (Draft delivered September 8, 2022; final draft to be delivered this week.)
- Prepared for and participated in leadership meeting in Boston, September 9-11, 2022.
- Continued working with project leadership to develop Wipro SEF Innovation evaluation plan.

What's Next?

During the month of October, AGC will be working on the following:

- Completing final annual evaluation report.
- Completing the evaluation plan for Wipro SEF Innovation evaluation plan in consultation with project leadership.
- Beginning any needed design and administration of fall data gathering for Wipro SEF Innovation.
- Observing and providing evaluation instruments for DSC leadership meeting October 28-30, 2022 in Dallas, TX.
- Participating in any scheduled call(s) with IHE leadership.

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Wipro Science Education Fellowship
Evaluation Update
November 2022

Activities this Month

- Completed an evaluation summary of the DSC Leadership Conference held in Dallas in October 2022.
- Communicated with all sites to request contacts for all active Fellows and information about their calendars for this academic year. (Have heard from all sites – to some degree -- except California and will be following up with Tammy about project status this month.)
- Created survey to be administered in January to all active Fellows at all sites
- Participated in team leadership call (November 16, 2022).
- Continued to work with project leadership to develop Wipro SEF Innovation evaluation contract with UMass Boston.

What's Next?

During the month of December, AGC will be working on the following:

- Continuing to collect contact information and 2023 calendar information from all sites.
- Preparing for mid-year survey administration in early January 2023.
- Beginning to plan travel to sites for Winter/Spring 2023.
- Completing the contract with UMass Boston for 2022-2023 Wipro SEF Evaluation work.
- Participating in any scheduled/needed meetings for the project.