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

WIPRO SEF

YEAR 11
QUARTERLY REPORT
March 2024

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Executive Summary

For over 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 total students (approximately 1.5% of US pre-K – 12 students). The original phases of the program 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.

This quarter, the theme of the report reflects on the work of our second year of the "innovation phase" of the Wipro SEF initiative. Each university is continuing efforts unique to their sites as we implement and investigate strategies to promote district transformation through teacher leadership. As a means of better understanding what is occurring at each location, site visits that include visits to Fellows in their classrooms and meetings with principals take place. These site visits also provided increased recognition of the programs at each school district.

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

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 video recording 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 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 Fellows complete 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 December 2024 through March 2024. We are now in the second year of the Innovation Phase (Phase II/Phase III) of the Wipro SEF where all sites are now moving beyond the Foundation Wipro SEF program (Wipro SEF Classic).

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
2023-2024	Innovation Phase	Innovation Phase	Innovation Phase & Lead Institution	Innovation Phase	Innovation Phase	Innovation Phase	Innovation Phase

Table of Wipro SEF sites

	Cohort 1	*Cohort 2*	*Cohort 3*	*Phase II (innovation phase)*
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	
Innovation Phase (Phase II &III)				Activities proposed by individual sites.

Key to yearly activities

BY THE NUMBERS

Foundation Phase (Wipro SEF Classic)

Site (Institution)	Districts	Total Students in Districts	Fellows	Non-Fellow teachers involved (e.g. GPS)	District Science Coordinators	Presentations and Publications
California (Stanford)	5	97,288	60	88 (C1=18 C2=29 C3 = 41)	5	7
Florida (U of South Florida)	3	398,960	50		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	8
New Jersey (Montclair State)	5	31,486	60 – Phase I 24 – Phase II 31 – Phase III		5	22
New York (Mercy College)	5	33,580	60 – Phase I 60 – Phase II		5	31
Texas (U North Texas – Dallas)	5	83,160	46 – Phase I 20 – Phase 2	5	5	28

Current Innovation Phase

Site (Institution)	Projects Submitted	Projects Approved	Alumni Fellow	New Fellows	Non Fellow Teachers involved	District Science Coordinators
California (Stanford)	N/A	N/A	60	16	43	5 plus 8 admin
Florida (U of South Florida)	10	6	6	0		3
Massachusetts (UMass – Boston)	8	5	7	0	11	5
Missouri (U of Missouri)	N/A	N/A	6	13	3	4
New Jersey (Montclair State)	13	13	13	26		5
New York (Mercy College)	16	11	4	33	55	3 Plus 2 admin
Texas (U North Texas – Dallas)	14	14	11	22		5 plus 9 admin

UPCOMING MEETINGS AND MILESTONES

March	April	May	June
CA - March – Virtual PL Session with Wipro Team and Fellows – In-Person PL Session with School Leader Program – Cohort 5 Recruitment	**CA** – April – In-Person PL Sessions with Wipro Team and Fellows – Cohort 5 Recruitment – Conference Preparation	**CA**-May – In-Person PL Session with School Leader Program – Cohort 5 Recruitment – Conference Preparation	**CA**-June – In-Person Year Completion Conference with Presentations
FL – March – Virtual Wipro Meeting – Virtual Recruitment Meeting for Cohort 3 – Meeting with a Leadership team member and the Fellow with their project team	**FL** – April – Virtual Wipro Meeting Monthly Leadership Meeting	**FL**-May – May celebration including Cohort 3 Fellows – Monthly Leadership Meeting	**FL**-June – Virtual Wipro Meeting
MO – March – Cohort 5 meeting (presentation of research articles by Fellows, hands-on physics and math activities, work on lesson plan template and content) – Continue discussion of Lesson plan for Yr. 1	**MO** – April – Cohort 4 and 5 combined meeting – Present one of year 2 lesson plans	**MO**-May – Wipro conference presentations (Cohort 4 and 5, DC, and previous fellows are invited)	**MO**-June – Cohort Recruitment
NJ-March	**NJ**-April – Call for proposals for Years 3-4 projects will be sent out in April (Fellows–new and Alumni)	**NJ**-May – Culminating event (Alumni + new fellows)	**NJ**-June
NY-March – NSTA Denver – eight Wipro Reimagined, Cohort 1 Fellows presenting	**NY**-April	**NY**-May – Site visit 2 – MCSE IHE team will attend all five project site events in-person.	**NY**-June – Funding period concludes – Cohort 2 prepares for MCSE Conference in the fall

		– Virtual Cohort 2 meeting (5/15/24) – final debrief, highlights, info for 2024 MCSE Conference	
TX-March – Virtual meeting	**TX** – April – Face to Face Dinner Meeting – Focus on participants data collection	**TX**-May	**TX**-May

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.

Executive Summary Statement - CA

The California Wipro Team's vision for developing teacher leadership in the Wipro SEF Program focuses on developing leadership practices and broadening educators' perspectives beyond the classroom by applying their leadership skills within their school and district contexts.

To meet these goals, in this quarter the CA Wipro Site continues to offer the traditional Wipro SEF Program to science teachers from the five partner school districts.

To further support the partner school districts, the CA Wipro Leadership Team has created specific plans for each district based on their needs. These plans have been co-constructed with District Coordinators and often include the participation of past Wipro fellows. The goal of this district 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.

Finally, the CA Team launched its first Wipro School Leaders Program, which brings together school leaders from across the five districts and builds their capacity to support high-quality teaching and learning, increase equitable opportunities, and support the goals of the Wipro Program.

Executive Summary - FL

The Florida Wipro Team's goal is to continue empowerment of the Wipro Fellows.

It is unusual for educators to choose their professional development direction much less spearhead a project with it. In this quarter, the program's initiatives included: (1) Participation in a 2-day St. Petersburg Science Festival with about 100 exhibitors showcasing STEM activities. Florida Wipro fellows and leadership team were presenting one of those exhibits. This event attracted over 1,000 4th and 5th graders from Pinellas County Schools on the 1st day, and about 12,000-15,000 attendees on the 2nd day when the exhibition was open to the public.

(2) Initiation of recruitment for the third cohort of fellows for their projects. The Florida Wipro team sent out application materials to every person and now is in the process of getting confirmation from them. Based on the feedback from last year, the Florida team is modifying the application process by changing the timeline and structure of the meeting sessions. In this round of applications, the project team eliminated the question session and instead will run a session led by the fellows so that they can answer questions related to running a project based on their own experiences. (3) Florida team is actively planning spring celebration that will be help in May, as well as starting to prepare fellows to present at a national conference or at the Florida Association of Science Teachers (FAST) event which will be held in Tampa this year in October.

Executive Summary Statement - MO

The Missouri Wipro program is committed to improving teacher practices by combining the teaching of math and science through collaborative teams of math and science teachers.

The MO team continues work with Cohorts 4 and 5 by helping to harmonize the teaching of math and science so that students see them as complimentary subjects. In the first quarter of this year, Cohort 4

is continuing work on their individual lesson plans integrating math and science in the classroom. Each Grade 6-12 fellow will produce four lesson plans by the end of the cohort that integrate math and science in the classroom. As an example, one fellow is planning momentum and impulse lessons and labs, considering forces in a collision and humans moving on a hovercraft. The recently added K-5 teachers (August 2023) to this cohort are benefiting from vertical collaboration with the 6-12 cohort fellows. They are working on developing collaborative methods and a lesson plan to include science with math teaching to develop understanding of math application early in childhood education and introducing more science into the elementary grades.

Following their end-of-semester presentations in December, Cohort 5 fellows are meeting in their district teams as well as with MO Wipro project team. Cohort 5 fellows are focusing on their research article and developing concepts for how it will inform their teaching and recorded H-CCLS lessons. They must integrate the selected research topic into both the math and science lessons. Team members will be presenting their selected research paper during the March monthly meeting. Discussions on teacher leadership continue.

During the May Wipro conference Cohort 4 will present their lesson plans and Cohort 5 their H-CCLS lessons and initial lesson plan.

To support efforts in district transformation, all the fellows are developing relationships between grade levels and between local districts. Their completed lesson plans will be presented to other teachers in their school and district. The plans will be shared on a project-created website and provide professional development for their peers. Fellows have also been serving as mentors for other teachers in their district. There have been discussions of how to expand math-science collaboration to other subjects such as language arts.

Executive Summary Statement - NJ

The New Jersey Wipro team has made progress through the initial stages of its Phase III project. As stated in the previous report, 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.

Executive Summary Statement - NY

The New York Wipro team's goal for the 2023-24 AY was to support Wipro projects that spanned across different schools in each district and connected elementary schools, middle schools, and high schools through STEM programming. The Mercy University team received high-quality proposals for five vertically articulated projects this year including a K-12 engineering design challenge, a 5th grade-high school math peer mentorship, an elementary-high school family STEAM night, an elementary science teacher conference hosted by high school and middle school science faculty, and a K-5 garden club. These projects are supported by administrators representing various grade levels across the district. Establishing such vertical relationships could improve sustainability outcomes for

all these projects.
In this quarter, the Mercy University team has supported five new groups of Wipro Reimagined Fellows in their projects for school/district change. Cohort 2 of Wipro Reimagined includes 17 participating teachers of which 9 are newly participating teachers and 8 are returning Fellows from either Cohort 1 or the Foundation Wipro program. These Fellows represent 4 districts, including Tarrytown, White Plains, New Rochelle, and Port Chester.

Executive Summary Statement – TX
The Texas Wipro Team continues to work this year (Phase 3, year 2) toward the goal of District Transformation through Teacher Leadership by providing opportunities to Wipro Fellows to advance their development as leaders.
All the funded proposals of Wipro Phase Three at UNT Dallas (2023-2024) continue to be carried out successfully by all the participants involved. The highlights of the Wipro program continue to be the School Proposals at several of the partner school districts. To have a greater impact on student learning and participation, some of the projects that started during Wipro Phase 2 (2022-2023), have expanded to include more school grades, and increase personnel by adding new Wipro Fellows. The new DeSoto ISD Garden project, that started in Phase 3 and focused on developing participating school's gardens, is progressing well. All the other projects, collaborative and individual, are also progressing well.
All the Wipro Fellows and DSCs continue to work productively. All groups have submitted their Quarterly reports and will be working on updating their Wix portfolios. Each of the participants will have an individual page that shows their progress. Several of the Wipro Fellows were awarded Teacher of the Year at their schools.

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

Monthly Leadership meetings

Meetings of representatives from the seven sites in the Wipro SEF program occur monthly to share best practices, plan strategic initiatives, and share progress. The agenda for the January, February and March meetings is provided here.

Monthly Meeting Agenda
Tuesday, January 16, 2024
11 AM – 1 PM (EDT)

1. Updates from each site
2. Pride in Wipro SEF - Wipro Employees and our universities
3. Cross site collaborations of Fellows - Gardening, ELL, Teaching sustainability/climate change
4. Wipro book
5. Leadership meeting Feb 2-4: Agenda
6. Monthly meeting time for spring
7. Wipro Website – help on seeding
8. DSC meetings - Topics – 10 responses (CA-3, MA -3, NY-1, NJ-0, FL-3, TX -0, MO -0)
   a. How to run a meeting? 5 positive
   b. Demystifying Teacher Leadership and/or District Transformation – 9 positive
9.

Meet Our Community page: Progress? Check "copy"
Photos:
https://www.dropbox.com/scl/fo/pzzkxkgc6kp9sofcj3tln/h?rlkey=rvjway4i3hwqkuomixao1g0wz&dl=0
Also – name, position and photo for leadership
Please send Arthur excel ss with information on Fellows and photos for those for which you have gathered information. We can add more later. Please, send Arthur similar information for Site Leaders in a separate excel ss. You can have this info repeated in the larger excel that includes all

Fellows, etc.
Post the spreadsheets to both on SLACK under Website.
Wipro SEF 4 minute video:
https://drive.google.com/file/d/1jAUEDkya0DXUScXGp80spTiXK0WPXfBM/view?usp=sharing

10. Wipro Fellows Cross-site Topic Meeting – New Teacher Community
    a. Gardening: Kristen (structure) take the lead with Marcia (questions that will be asked)
        1. The 1-hour meeting will take place on Thursday, December 7th from 6-7 PM (EST)/3-4 PM (PST). How involved is your gardening project.
        2. Marcia – finding the weeds in your gardening project? Insurance, funding, the future
        3. (7 maybe, 12 yes)
    b. Emergent bi-lingual – Preetha take lead
        1. How to define; NJ comment: Asset based approach; literature; what is integrated content and science. District transformation – how are you approaching?
        2. The 1.5-hour meeting will take place on Wednesday, Dec 13 from 6-7:30 PM (EST)/3-4:30 PM (PST)
        3. (6 maybe, 12 yes)
    c. Response spreadsheet on Slack
    d. SEND out dates and times with RSVP for link
        1. Kristen and Preetha – please provide and each site can then I will create a note with an RSVP link that we can all send out.
11. DSC meetings - Topics – 10 responses (CA-3, MA -3, NY-1, NJ-0, FL-3, TX -0, MO -0)
    a. How to run a meeting? 5 positive
    b. Demystifying Teacher Leadership and/or District Transformation – 9 positive
        1. Set up this session. Time and RSVP for link (Arthur)

12. Site visits – MO (11/15-11/16)
    a. How to set up feedback form for Fellows and Administrators???
        1. As we continue our efforts to support and promote the work of our Wipro Fellows, it has become increasingly clear that there is a need for a systematic approach to gather feedback continuously from teachers and administrators. This feedback mechanism should focus on a few key areas:
        2. Sharing of Efforts and Insights: We want to encourage our teachers and administrators to regularly share their experiences, successes, and learnings with others in their schools and districts. Their journey holds immense value and can serve as a source of inspiration and practical knowledge for their peers.
        3. Enhanced Communication: It's crucial that we foster more active communication about the impact and outcomes of our Fellows' work. By sharing these achievements within the larger school and district community, we can elevate the profile of our program and its participants, and also provide valuable insights to other educators.

4. Recognition and Support: Highlighting the contributions of our Wipro Fellows in various communication channels, including meetings with principals, district officials, and school newsletters, is essential. Public recognition not only acknowledges their hard work but also boosts morale and encourages a continuous pursuit of excellence.

b. The purpose of this agenda item is to brainstorm and develop a framework for this continuous feedback mechanism. This initiative is intended to not only gather valuable insights but also to strengthen the ties between our program and the broader educational community.

c. Please come prepared with ideas and suggestions on how we can effectively implement this system. Your input will be invaluable in shaping a mechanism that is both efficient and impactful.

d. Dosage – how much and how often; once we get these, we can share within sites and across sites.

13. Annual report/evaluation
14. Hold the date: Dallas Leadership February Retreat – Feb 2-4, 2024
15. King's College – climate change collaboration
    a. Saturday, March 9; 1:30 PM EST
    b. an introduction to the seminar and talk about her work and then some discussion of implementation of climate change education in both our contexts could be a useful activity.

Monthly Meeting Agenda
Tuesday, Feb 20, 2024
11 AM – 1 PM (EDT)

Join Zoom Meeting
https://umassboston.zoom.us/j/99914434497
Meeting ID: 999 1443 4497
Passcode: 973499

1. Feb IHE leadership meeting in Dallas – reactions
2. Discuss the new evaluation questions below – Anne will lead
3. Updates from each site
4. Book updates
5. Quarterly reports – March 2024
6. Website
7. Cross-site conferences
    a. ELL
    b. Climate and sustainability
    c. Gardening
8. Upcoming visits
    a. Arthur to sites
    b. Sites to schools
    c. End of year plans
9. Wipro – employee relations updates
10. DSC Leadership
    a. Have we polled DSCs?
11. Other

The following formative evaluation questions, developed in collaboration with the Wipro Science Education Fellowship program leadership, guided our study during the 2022-2023 academic year:

Formative Evaluation Questions

• What evidence of teacher leadership development can be found at both the local level and in the program overall?

• How are the evolving structures of the Wipro SEF Innovation program affecting the leadership development of Fellows in each region?
• What evidence of district transformation can be found in each regional location?
• How are the evolving structures of the Wipro SEF innovation program affecting the district transformation opportunities in each region?
• What are the lessons learned, to date, with regard to implementing Wipro SEF programming and related professional development activities as it relates to teacher leadership development and district transformation?
• What are the challenges/barriers experienced by Wipro SEF key players (e.g., leaders, district coordinators) in implementing the program?
• How do participants understand and perceive the overall Wipro SEF program?
• What are the programmatic and strategic recommendations of Wipro SEF participants for improving the overall program for current and future participants of the program?
Looking ahead, in the final two years of the program (2024-2026), the evaluation team will also look to answer these summative evaluation questions.

Summative Evaluation Questions
• How and to what extent does participation in the Wipro SEF program build teachers' leadership self-concept and use of leadership behaviors?
• How and to what extent does participation in the Wipro SEF program encouraged or motivated district change or transformation in the participating districts?

Monthly Meeting Agenda
Tuesday, Mar 19, 2024
11 AM – 1 PM (EDT)

Join Zoom Meeting
https://umassboston.zoom.us/j/99914434497
Meeting ID: 999 1443 4497
Passcode: 973499

1. Cross-site conferences
    a. ELL
    b. Climate and sustainability - see agenda below.
        1. Wipro reaction

    c. Gardening
2. Quarterly reports – March 2024
    a. New additions to format – Exec summary; Eval reflections (see below).
3. Updates from each site
4. Book updates and progress
5. Website
6. Upcoming visits
    a. Site visit to NJ – Sept to coincide with NY conference.
    b. End of year plans – CA site
    c. DSC Leadership
    d. Have we polled DSCs?
7. Other

Website Development

With the support and guidance of Wipro, we have been working on a Wipro SEF website. It is shaping up and will be released soon. The website has expanded to include the Wipro education initiatives in England, as well.

Wipro Research Initiative

Professor Brooke Whitworth, Professor Julian Wenner and colleagues are initiating research regarding teacher leadership and how the Wipro SEF program aligns with current knowledge regarding this field.

The research team's plans include:

1. Submit the SNA study to Science Educator. It is outlined and a poster for NARST will be completed by 3/18/2024. We then hope to have the paper submitted by 4/30/2024.
2. The second study, an evaluation study, was accepted to an International Journal of Teacher Leadership (IJTL) special issue. The paper will be submitted to the special issue for initial review by 5/15/24.
3. The third study, the demographic comparison, was presented as a poster at ASTE. We are in the final rounds of edits for the paper and are planning to submit it by 3/5/2024 to JRST.

Cross Site Collaborations

As a new initiative, we are inviting Fellows from different sites to share their efforts in projects that have similar goals. Each of these meetings will be held on Zoom. If there is enough interest, we can follow these Zoom meetings with a face-to-face meeting, if deemed worthwhile.

The first of these "birds of a feather" meetings was on the topic of Gardening and its impact on science education held Thursday, December 7th with 5 attendees. We are in the process of scheduling a follow-up.

The second of these meetings is on the topic of emergent bilingual approaches in the classroom. Preetha (CA) will take the lead. Our first meeting was not attended, and a second attempt will be made.

Wipro SEF (USA) and King's College (UK)

We have collaborated with King's College and a 1-hour Zoom meeting took place on March 9, 2024. The meeting was well attended with approximately 10 teachers from King's and 10 teachers from the USA Wipro SEF program.

Conversations across the seas – how are teachers of STEM approaching the polycrisis in the UK and the US?

Saturday, March 9th, 2024

4:30-4:35 pm (London time) Welcome and introductions to the programs (Arthur, Melissa Glackin and Richard)

4:35-4:40 pm The Environmental Education context (Melissa Glackin)

4:40-5:00 pm A response from England – a presentation from Huwaidha Nasser, Biology Teacher, Sir

William Perkins' School
5:00-5:20 pm Responses from the United States – a single or multiple presentations
5:00-5:05 Sarah Lofgren, California – student led actions
5:05-5:10 Megan Graziano, New Jersey, State adopted climate change standards in all disciplines.
5:10-5:15 Chris Dazer, Texas, Field Trips in net zero school buildings
5:15-5:20 Elizabeth Hadly, Massachusetts, City councils and climate change
5:20-5:30 Discussion of issues arising including:

- What are the challenges? Where are the opportunities?
- How are professionals feeling in the 'work' that is required of them in this space?
- What resources are they turning to?

The session was a wonderful success. Sharing local efforts and seeing them in a larger context will hopefully lead to improved local efforts.
We are going to consider next steps at our respective locations. We see the need for a more in-depth q&a and discussion about each and every one of these efforts. We also would like to figure out how to support this international collaboration.
In sharing an update with Avinash Kumar, he provided some additional resources and suggestions:

> Dear Arthur,
> Thank you for the update and for sharing the recording. Glad to hear that the session was a success and there is an interest in taking it ahead.
> Incidentally a couple of days back we were having a discussion with our partners at SeasonWatch (a citizen-science program based on seasonal phenology of trees, which works with 100s of schools in India, https://www.seasonwatch.in/), around how to understand, enhance, and assess children's connection to nature. And I wondered if this is something that some of our teachers in the US and the UK may already be engaging with or interested in too!
> Do let me know if there is anything I/we can do to support this wonderful collaboration. And if at some point in future, we all see value in expanding it and having some of the organizations working on these themes in India (such as Nature Classrooms, Centre for Environment Education) join some of these sessions, will be happy to explore/facilitate that.
>
> Best regards,
> Avinash

Wipro Book Contract

We have entered into a book contract with Routledge (Taylor and Frances Group). The book should be completed by December 2024 and published June 2025. The working title is, "A Roadmap for Transformative Science Teacher Leadership: Building Meaningful Professional Development in Districts." A face-to-face meeting with the publisher took place on March 20 to update each other on progress and expectations for the book.

Wipro SEF Site Visits

Site visits are planned for New Jersey to coincide with the NY conference in September.

National Science Teaching Association Annual Conference – March 21-23 (Denver, CO). Approximately 18 Fellows from across our sites attended the conference and presented papers. These included the following:

Arthur	Eisenkraft	"The marriage of pbl and phenomenon for an engaging physics/chemistry course. Thursday, March 21 from 3:40-4:40 in room 101
Victor	Pereira	[Speed Sharing] Moving Beyond Lecture - Proven Pedagogy for the 21st Century College Science Classrooms, Friday, March 22, Time: TBD (`10:30am)
Nicole	Holman	Creating Three- Dimensional Instructional Sequences for Florida's NGSSS Sat, Mar 23, 2024 8:00 AM for presentation and Sat, Mar 23, 2024 12:00 PM for poster
Vittoria	Condello-Vessecchia	Computer Science and SEL meet- Saturday 12:00-1:00 (I believe)
Susannah	Genty-Waksberg	Friday, March 22 at 12pm
Michelle	Memoli	Saturday - poster presentation
Aimee	Ferguson	Computer Science and SEL at 1pm on Saturday, March 23, 2024 (poster session)
Elcilia	Taveras	STEM Hub: Authentic Experiences in Science and Engineering for Young Learners, Friday 3/22/24 from 12-1pm

Colleen	Cahill	Eggcellent Bridges explorations in science engineering with fourth and fifth grade students presenting during the poster session on Saturday
Carmen	King	STEM Hub: Authentic Experiences in Science and Engineering for Young Learners - Friday, March 22nd @ 12:00 PM
Darren	Wells	Mar 22, 2024 1:20 PM Vocabulary Instruction for ELL Notebooking Karen Ziminski.

On Friday of the conference, we hosted a Wipro dinner for those attending. Twenty Fellows, University Leads and researchers attended. These interactions are quite valuable in building our network.

CALIFORNIA- STANFORD UNIVERSITY

Authors: Preetha Menon, Tammy Moriarty

Executive Summary Statement

The CA Wipro Team's vision for developing teacher leadership in the Wipro SEF Program focuses on developing leadership practices and broadening educators' perspectives beyond the classroom by applying their leadership skills within their school and district contexts. To meet these goals, the CA Wipro Site continues to offer the traditional Wipro SEF Program to science teachers from the five partner school districts.

To further support the partner school districts, the CA Wipro Leadership Team has created specific plans for each district based on their needs. These plans have been co-constructed with District Coordinators and often include the participation of past Wipro fellows. The goal of this district 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.

Finally, the CA Team launched its first Wipro School Leaders Program, which brings together school leaders from across the five districts and builds their capacity to support high-quality teaching and learning, increase equitable opportunities, and support the goals of the Wipro Program.

By addressing the work at these three levels—teachers, district teams, and school leaders—the CA site is working towards the goal of district transformation.

Summary of Current Project(s) and Goals

The CA site continues to offer the traditional Wipro SEF Program to 16 science teacher leaders across 5 districts to further excellence in science teaching and learning. The goals of the program for the current Cohort 4 fellows have been to integrate the NGSS dimensions and the nature of science as well as address equity in science classrooms by focusing on multilingual learners, who comprise a large percentage of students in our partner districts. The structure of the CA Wipro SEF Program for the fellows follows the traditional Wipro model, with an emphasis on doing the V-CCLS and H-CCLS reflective practice work in the first year and teacher leadership GPS Projects in the second year.

The CA site is also working with district teams with the aim of developing their collective capacity to advance effective science teaching and learning in their districts that highlight NGSS, address the needs of multilingual learners, and support science teachers' commitment to maintaining rigor in their science classrooms.

This year, the CA site launched a program specifically for school leaders (principals, assistant principals, and other district roles). The goal for this program is to build instructional leadership capacity and create strong district teams that will support the overall goals of the Wipro SEF program. Building capacity at all levels of the system - classroom teacher, school leader, and district - can lead to transformational changes at the site and district levels and address persistent inequities that pervade science education.

Selected/Highlighted Projects

In our pursuit of district transformation, our site has adopted a comprehensive three-pronged strategy to catalyze change in participating districts. Through these three ways, Wipro Science Teacher Fellowship (traditional), District Partner work, and Wipro School Leaders program, we envision a way to showcase how distributed leadership and collaborative endeavors, including professional learning and science teaching, coalesce to steer districts toward transformational progress.

Wipro SEF Cohort 4

In the second year of our fellowship program, our dynamic fellows have embarked on their GPS projects, most of which are classroom-based initiatives designed to advance student learning. During this phase, our Wipro Professional Learning Sessions delve into a spectrum of crucial topics. This includes expanding the concept of teacher leadership as a practice and fostering the mindsets and skillsets necessary to support multilingual learners, thereby advancing equity in education. Through these sessions, we arm our educators with the knowledge, tools, and strategies to drive substantial change in their classrooms, school sites, and districts.

Throughout the second year, our approach involves providing individual mentoring and intentionally

delivering differentiated support. We aim to empower each teacher to thrive in their GPS project and ensure they receive ample support tailored to their unique needs. This emphasis on individual empowerment contributes to the effectiveness of our transformative initiatives.

The following quotes exemplify the reactions of some of the teacher fellows following a professional learning session held on January 18th, 2024 that focused on Understanding Change.

"I loved the chart today with missing pieces [factors to consider when supporting change], many ah-ha moments. I also had big connections today with conflicts happening at my own site. I needed this!"

"I got to engage in an enlightening conversation about how we react to change."

"I liked the Knoster model and the Immunity to Change tables. I think they help us voice the cognitive dissonance we experience with change and help us recognize our true intentions with change and our teaching practice over time."

The following quotes exemplify the reactions of some of the teacher fellows following a professional learning session held on February 10th, 2024 that focused on Leadership Practices as well as supporting Multilingual Learners.

Quotes about Leadership Practices:
"I liked the leadership jigsaw. Reading and seeing all the articles and situations people had to manage and grow from was super helpful and important."

"Many ideas of how leadership may navigate issues, changes, and people."

" I was able to make many connections to the types of leaders and what leadership looks like at our school/district based during the activities today."

"Ideas to think about [regarding] approaching challenging situations as a leader."

"Personally I got validation from today's learning about what I am experiencing at my school site and with my department. I feel good about how I am handling some issues that are arising with my science department members."

"I got a lot of interesting insight into leadership, and a lot of ideas for how I can become a better teacher leader. "

Quotes about Supporting Multilingual Learners:

"I am really grateful for the two teaching strategies that were introduced today that include all students, especially Multilingual Learners. I will be using the discussion diamond diagram with my students, make sure that they are given time to read, brainstorm, summarize and practice talking and listening to each other."

"Tools for MLLs in science and general language development. I appreciated the different methods for working with multilingual learners."

"I liked the diamond activity, I also really liked reading and thinking about how often classroom interactions are lacking in an information gap to create meaningful conversation."

CA Site Visit (Agenda)

We had the privilege of hosting Arthur Eisenkraft and Anne Gurnee at the CA Site Visit in early December 2023. The purpose of their visit was threefold,

- To get a better sense of the schools, teachers, and administrators and how Wipro has influenced/impacted the work in districts
- To better understand what is going well, what challenges or obstacles exist and how to support the science district goals and efforts in partner districts
- Recognize the high-quality work being done through the Wipro supported programs

Both Arthur and Anne gave the CA Team meaningful feedback from the site visit. A summary of this feedback can be found below:

Key take-aways

- School culture – Numerous individuals highlighted and discussed the significance of a robust school culture. A supportive and positive culture has a ripple effect on both teachers and students within the school, fostering greater cohesion and productivity in teamwork.

- Development of a cadre of teacher leaders – In alignment with the school culture, several sites emphasized the importance of cultivating a "critical mass" of teacher leaders through their participation in the Wipro SEF program. These leaders not only find support among themselves but also emerge as go-to individuals for additional tasks within the schools, such as curriculum selection/implementation and professional development.

- Focus on multilingual learners—The Fellows clearly and appreciated the emphasis on supporting multilingual learners. For many, improving services for these learners is a daily necessity, and it stands as a priority in numerous districts. Facilitating this topic during the Fellows PL Meeting was impactful and evidently beneficial.

- School leaders – The introduction of the School Leaders program is delivering much-needed professional development and coaching for participating school leaders, particularly in the post-COVID educational landscape where resources for administrators are limited.

Key themes that emerged as challenges

- Time Constraints - Numerous teachers and administrators highlighted the challenges posed by limited time. One potential area of support for participants in these programs could involve assisting them in prioritizing the extensive workload they face.

- Specific Grade Science Testing - Science assessment occurs in 5th and 8th grades in California, creating difficulties for Fellows in garnering attention for science education in lower elementary grades. Wipro SEF is making progress in addressing this persistent issue in certain schools and districts, which is promising.

- District-Level Changes- Particularly in the San Francisco Unified School District (SFUSD), organizational disruptions at the district level affect everyone and threaten to drain the energy of dedicated educators.

Insights from the CA Wipro Leadership Team

The site visit provided our Leadership Team with the opportunity to visit schools and interact with teachers and school leaders in ways that could not be gleaned through our regular interactions with the Wipro fellows (past and present) and Wipro School Leaders.

Observations of teacher leadership within school sites revealed exciting developments and potential improvements. Anisha Dalal (Principal), Renee Rice (Assistant Principal), and Diane Aronson (District Science Coach) from the San Jose Unified School District talked about the importance of developing science teacher leadership within a school site. One particularly interesting part of the site visit was when Yichang Liu, a former Wipro fellow, shared her personal leadership journey with our team. The school leaders from this school site, who are also active participants in the Wipro School Leaders Program, emphasized the importance of having teacher leaders who are prepared to adapt and actively seek out their colleagues' needs through surveys and other interactions and work to help each other grow in their classroom practice. Yichang has been one of these teacher leaders. Yichang's growth and development through her Wipro experience has made her one of the strongest teacher leaders in their science department.

Teachers from other districts, like Moreland, are engaging in district-wide science initiatives voluntarily, reflecting a genuine desire to contribute and collaborate. With a critical mass of elementary Wipro Fellows and two highly engaged school administrators at one particular school

(both in the Wipro School Leaders Program), there exist exciting possibilities for significant change in science teaching and learning at both the school and district level.

Despite challenges at the San Francisco Unified School District, meeting one teacher fellow and two alumni at Alice Fong Yu School was invigorating. As such, two alumni Fellows are not teaching science, but their unwavering enthusiasm and commitment to the students and education are evident. One former fellow, who is teaching English and math, is discovering innovative ways to integrate informal language into content instruction. Another fellow, who teaches music, is integrating science into her music lessons, thus exemplifying a dedication to continuous improvement and student success. The site visit allowed the team to see teacher fellows practicing leadership by facilitating productive conversations at their school sites and helping their peers overcome resistance to change, fostering an environment conducive to growth.

Wipro School Leaders Program

The Wipro School Leaders program participants continue their learning in whole-group professional learning sessions and individual leadership coaching calls. The leaders participated in a week-long summer institute followed up by school year professional learning. The first follow-up learning session occurred at the Moreland School District Office and the following two sessions were held virtually. The last two professional learning sessions will then take place in person again at the Moreland District office. Professional Learning sessions focus on supporting teachers' transformative professional learning and creating a supportive learning culture. The professional learning sessions are now shifting to a stronger focus on science instruction. During the last in-person session, school leaders learned more about NGSS with a particular focus on the 5E Instructional Model using a simple common experience using baking soda and vinegar.

Plan for the Next Two Quarters

Date	People	Activity
Wipro Fellows		
Jan - March 2024	Wipro Fellows + Preetha + Tammy	Ongoing coaching with Support in GPS projects
Jan 18 2024	Wipro Fellows + Preetha + Tammy	**PL Session** Agenda, Norms, Goals Leadership Review Understanding Change Slide Deck
Feb 10 2024	Wipro Fellows + Preetha + Tammy	**PL Session** Multilingual Learners & Science - Integrated Language Essentials - Scaffolding Language GPS Work Time Leadership Review Leadership Practices Jigsaw Slide Deck
Mar 14 2024	Wipro Fellows + Preetha + Tammy	**PL Session** Ways of Knowing GPS Project - WiX Portfolios - Poster Template - Presentation Guidelines & Expectations Slide Deck
Wipro District Coordinators		
March 22nd, 2024	Tammy + Preetha + District Coordinators	Planning for Cohort 5 recruitment. Deciding next SFUSD district coordinator as Eric will be on sabbatical.
Wipro School Leaders		
Jan - May 2024	Tammy	Ongoing Coaching of School Leaders
March 6th, 2024	Tammy + Preetha	**In-person PL Session** Science Common Experience NGSS & 5Es Debriefing the Common Experience with a 5E lens Aligning your observations tools

		Classroom video- practice application **Slide Deck**
Cohort 5 Recruitment		
March - May 2024	Tammy + Preetha+Wipro Fellows+Alumni+District and School Leaders	Recruitment Brochure Emailed the brochure and application to all Wipro fellows and alumni and School and District leaders
Preparation for the End Of Year Conference		
April-June 2024	Wipro Fellows + Stanford Coaches	Support with Wix portfolio and posters
May 2024	School Leaders	Invitations to End-of-Year Conference
June 1st 2024	Wipro Fellows	End-of-Year Conference with Presentations
May 2024	School Leaders	Attend End-of-Year Conference with Presentations

Jonathan Lee
Wipro SEF CA Cohort 4
San Francisco Unified School District

Reflections on Teacher Leadership after a Full-Day Professional Learning Session on Leadership Practices:

I wanted to process my thoughts a little more before writing down my reflection about today's learning about ML strategies and Leadership Practices. During the gallery walk, I was trying to think how each leadership practice applied to my own experiences, and I really appreciate the others being vulnerable to share from their own. I was going to share my example, but I wanted to be conscious of my voice because I felt like I spoke a lot today. So, here goes:

The last three posters really resonated with me (Think Politically, Orchestrate conflict, and Hold Steady) as I thought about how our science department is functioning this year. To give you some context, last year was amazing for our department and we developed a reputation in the school as THE department that has their stuff together. Last year was the first year that CPT (common planning time) was built into our schedule, and the admin wanted us to focus on developing a way to improve literacy across grade levels. We had a mission and we executed. We developed brand new C.E.R. activities to enhance our curriculum, looked at student work, and left the year feeling good about our accomplishments (as the model department at Presidio).

This year, we had a new principal (our AP stepped up to take on that responsibility as our principal took a district level position), and he basically had the same goal of focusing on literacy and adding in another goal like student connectedness or giving marginalized students chances to shine...something like that. With 2 brand new APs and our principal just trying to stay afloat, our staff meetings have been disjointed and the quality of time has decreased.

That is the context. So, for my personal experience this year: As a science department, we needed something to add to our agenda, so we had been working on a shared Google sheet where we take the NGSS Performance Expectations for each grade level and figure out what assessments we use to address those, whether they are projects, handouts, etc. This would be a resource for any teacher joining our department in the future, and teachers could easily reference it to identify what they would need to cover or use with students. Sounds good right? One of our science teachers flat out said that they weren't going to complete this because they felt it was a waste of time. This teacher is a veteran teacher and has a grade level partner who is a 1st year teacher (that also happens to be my former student teacher). We tried reasoning with that resistant teacher about how useful it would be, how it will help shift to standards based grading once our district presumably will eventually mandate it, and also how it would be a tremendous resource to the new teacher and help them plan lessons and assess their students. The veteran teacher was not budging, and I can be stubborn at times as well, and I got into a heated

argument with that teacher which made some others uncomfortable. Right after it happened, I knew I should have handled it differently and was set to apologize to the veteran teacher, but that opportunity did not arise because they were absent for a couple of meetings.

A month later was the holidays, so I bought that veteran teacher a Christmas present and they were surprised when I gave it to them. They acted a little suspicious of me too. I did not mention our past interaction and just perhaps wanted a fresh start with them.

Fast forward to this past week, that veteran teacher came into my class after school with a bag (that had cookies in it) and said they wanted to reciprocate because of the Christmas gift I gave them. However, they also did want my perspective and help with something. Turns out that her 1st year partner teacher is relying too much on their expertise and not putting in the work to plan lessons and just "winging it." The veteran teacher was basically venting and focusing on all of the things that the 1st year teacher is not doing. I found myself redirecting her negative comments away from the 1st year teacher and bringing it back to how we can find a solution to help them, because they obviously came to me out of frustration. Ultimately, that veteran teacher wanted me to facilitate a meeting with their partner teacher and really have a solid conversation about setting boundaries (in terms of helping out) and what the 1st year teacher needs to be doing.

This was totally out of the blue, and I felt grateful for this opportunity to practice my teacher leadership. After today, I can pinpoint some of the strategies that I didn't even know had labels. For example, with Think Politically, hearing out the "opposition" and taking in their perspective while also trying to maintain them as an ally and a valuable part of our department. For Orchestrating the Conflict, I found it ironic that the veteran teacher was resistant to working on the tool that would have been beneficial to alleviating the exact problem they were encountering, but I did not bring up the past and focused on developing a solution to help both teachers while making sure their professional relationship with each other is not damaged.

The meeting between these two teachers will be this coming Monday, so I'm already thinking of how to mediate and phrase things so that the veteran teacher feels that the 1st year will be open and committed to making improvements and that the 1st year doesn't feel like we are doubting their abilities, especially since I was their cooperating teacher last year.

Margaret Poor
Wipro SEF Cohort 2
Current Interim District Coordinator
ELD TOSA, Mtn. View Whisman School District

It has been two years since my cohort finished its work, and I still refer back to the deep learning, the meaningful discussions, and the camaraderie that the Wipro Fellowship provided us. Fortunately, this year I have been able to join back in as an interim district coordinator while our science coach is on leave.

In my own role as an instructional coach in the district, I have been able to apply the student-centered instructional science practices we learned in Wipro to other content areas and language learning. I have been able to use leadership skills that the Wipro CA Leadership Team exposed us to when navigating challenges and building consensus and coalition around ideas. I have been hearing a voice urgently, telling me, "Get up on the balcony, Margaret!"

But most importantly this year, I have had the fantastic opportunity to work with the Wipro Cohort 4 Fellows in my district on their GPS projects as well as learning side by side with them during the sessions. Our district has been focusing on literacy and comprehensible input, and I am thrilled to say that our fellows are creatively incorporating these areas of focus in different ways into their GPS projects, each in their own way. It truly has been an honor to be involved in this way with the cohort, and I so look forward to seeing the presentations and posters that I know will bring new ideas to light, and which will further the visibility of science teacher leadership in our schools. We are all thankful to be part of this community - its effects will be felt for years to come in classrooms across the area.

Calendar

Master Calendar for 2023-2024 Academic Year - Wipro SEF

September 23	9:00 AM - 2:30 PM	Wipro Kick-Off PL Session | In Person-Stanford
October 12	4:30 PM - 6:00 PM	PL Session | virtual
November 9	4:30 PM - 6:00 PM	PL Session | virtual
December 8	8:00 AM - 4:00 pm	Wipro Site Visits
December 9	9:00 AM - 2:30 PM	PL Session | In Person - Stanford
January 18	4:30 PM - 6:00 PM	PL Session | virtual
February 10	9:00 AM - 2:30 PM	PL Session | In Person - Stanford
March 14	4:30 PM - 6:00 PM	PL Session | virtual
April 20	9:00 AM - 2:30 PM	PL Session | In Person - Stanford
May 16	4:30 PM - 6:00 PM	PL Session | virtual
June 1	9:00 AM - 2:30 PM	End of Year Conference| In Person - Stanford

Master Calendar for 2023-2024 Academic Year- School Leader Program

September 13	4:30 PM - 6:30 PM	PL Session | In Person-Moreland District Office
October 25	4:30 PM - 6:30 PM	PL Session | Virtual
November 29	4:30 PM - 6:30 PM	PL Session | Virtual
January 10	4:30 PM - 6:30 PM	PL Session | Virtual
March 6	4:30 PM - 6:30 PM	PL In Person-Moreland District Office
May 1	4:30 PM - 6:30 PM	PL In Person-Moreland District Office

FLORIDA – UNIVERSITY OF SOUTH FLORIDA

Author: David Rosengrant, Allan Feldman, and Nancy Islam

Executive Summary

This quarter included a big first for us. We participated in the St. Petersburg Science Festival. This was a two-day event. We (The Science Festival, David is on the steering committee and is co-chair for school day) bring around 100 exhibitors to show various activities and demos relating to STEM, but mostly science. This happens simultaneously with Marine quest that focuses on Marine Science. The first day is what we call School Day. This involved bringing over 1,000 4th and 5th graders from Pinellas County Schools into the festival. The second day is when the festival is open to the public and brings in roughly 12 – 15,000 individuals that day. Our fellows and leadership team were one of those exhibits.

We also started recruiting for our third cohort of fellows for their projects. We have sent out application materials to every person and are in the process of getting confirmation from every person. We are modifying our application process. Based on feedback from last year, fellows had stated they wanted to start over the summer, so we bumped up the deadline while also bumping the time we sent out the applications. We had 2 different sessions last year run by the leadership team. The first was an overall general info and the second was designed to be just for questions. This time, we eliminated the question session so that we could have a session led by a fellow so they can answer questions on their perspective of the running a project.

Our meetings have been project-wide online (updates, lessons on action research, and journal club meetings) and have been either online or in person with the fellow and their team. We are also currently planning out our spring celebration to be held in May. One of our fellows is also presenting

at NSTA in Denver and she is also enrolled in a doctoral program at USF. She is currently in the process of writing a paper to submit for publication based upon her project in Wipro.
This is one example of how we are having something greater than district wide impact. We are also starting to prepare our fellows to present at a different national conference, or at the Florida Association of Science Teachers (FAST) event which will be held in Tampa this year in October.

Summary of Current Project(s) and Goals

Title: Storyline: How to use scientific narratives purposefully in science education.
This project enhances scientific literacy in Biology. The approach centers on utilizing storylines—narrative-driven methods that interweave scientific content and practices into a cohesive and engaging learning experience. Drawing on pedagogical content skills such as 5E lessons, inquiry-based teaching, 3-dimensional instruction, and Socioscientific Issues (SSI), the narrative aims to connect learners to the content through personalized perspective-taking. This project is led by Nicole Holman, Phase 1 Fellow.

Title: Working Across Grade Levels to Improve Grades 3-5 Science Teaching
This is two-year V-CCLS project to improve the teaching of science at their school. The team is led by Tara McClintick, Phase 1 Fellow Floyd Howze, classroom teacher, and Nicole LeGrant, Assistant Principal. The team will work together to establish a science progression for the three grades, identify appropriate curriculum materials, and implement them.

Title: Gifted but 'Off Track': Serving the Gifted Students of a Title 1 High School Team
In this two-year project Jacqueline Bromley, Phase I Fellow, Carolyn Graham, classroom teacher, and Aaron Melvin, Assistant Principal, is establishing an after-school club to support gifted students who have been designated either 'at-risk' or 'off track' according to Early Warning Intervention data.

Title: Flipped classroom in advanced courses in Hillsborough County High Schools
This project is an extension of Bhagyashree Kulkarni's Phase 1 GPS project which is two separate but related projects. Chelsey Swat leads the other project (described below). The other team members (Steven Velez Hernandez and Alan Sherburn, classroom teachers, and Khadijah Gaskins-Jones, Science Coach) are implementing flipped classroom strategy by using available videos or videos made by the teachers. The focus is advanced courses like AP, AICE and Honors classes for this upcoming year and a goal to extend this to other classes in year 2. They will disseminate their work to other high schools in Hillsborough County, and through conference presentations.

Selected/Highlighted Projects
Chelsey Swats (phase 1 Fellow), Alan Sherburn (biology teacher), and Khadijah Gaskins-Jones, Science Coach.
The aim of our project is to create more class time for classroom activities, which will facilitate learning and using traditional homework time for notes/lectures. We are all working in different content areas, so many of us are utilizing different modes of note taking strategies for content

knowledge. In the second year of our project, we intend to create a training for new teachers to implement the same strategies into their science classroom, as we have had much success in our project so far. We know that many new teachers do not have many tools in their toolbox to pull from when it comes to strategies they use in their classroom. The training will help new teachers learn of these strategies we are using in and out of the classroom. The focus may be shifting to the curricular adaptions during the class which would complement Bhagyashree's project of video development.

Goals

Our major goal this quarter is to effectively recruit fellows to submit a project for the second phase project. As stated earlier in the executive summary we are modifying the timeline and the application process. We are still reaching out to every fellow and working on getting a response back to make sure every fellow received the document. This way we can gauge interest levels and help those that have expressed in interest in working on the project.

Our other major goal for this quarter is to start working with our fellows on disseminating findings from their work. This could be either a publication or a presentation. We are targeting two upcoming conferences. In addition to any district presentations, we have FAST which will be held on the USF Tampa Campus this October. This will showcase the work of our fellows to leaders across the state, whereas the National Science Teachers Association will be in New Orleans this November.

Progress and Highlights

Much of what we have done was described above regarding our progress and highlights for this quarter.

I did want to include a picture of the rocket station Wipro led which includes a very excited 11-year Wipro Protege (Jonathan Rosengrant)

Plan for the Next Two Quarters

Date	People	Activity
3/4	All	Online Wipro Meeting
3/18	Future applicants	Online recruitment meeting for Cohort 3 which is led by a fellow from Cohort 2
March	Leadership / Fellows	Remaining meetings with a leadership team member and the fellow with their project team.
4/15	All	Online Wipro meeting
April	Leadership	Monthly Leadership Meeting
5/4	All	May celebration, includes cohort 3 fellows
May	Leadership	Monthly Leadership Meeting
June/July	All	Online Wipro Meeting

Vignettes

Jacqueline Bromley & Carolyn Graham
Jacqueline Bromley is a Phase Two WIPRO Fellow with a deep passion for seeing Gifted and High Achieving high school students find extra layers of support to help them traverse the high school experience. She invited Carolyn Graham to be her teammate and support the work. Both have been serving at Pasco High, a Title 1 High School in Pasco County, for over a decade, in multiple instructional leadership capacities and as Cambridge AICE Instructors. From this commitment, a student-directed club called Above Deck was formed. During the monthly club meetings, Jacqueline and Carolyn work with students to support their various cognitive and affective needs, addressing perfectionism, executive functioning, and learning how to balance social and academic goals. Further, the club plans to partner with local universities to structure STEM- based exploratory learning experiences for students over the summer. They plan to provide scholarships, transportation, and access to opportunities to explore and learn outside of the school day.

Jacqueline Bromley & Carolyn Graham

Jacqueline Bromley is a Phase Two WIPRO Fellow with a deep passion for seeing Gifted and High Achieving high school students find extra layers of support to help them traverse the high school experience. She invited Carolyn Graham to be her teammate and support the work. Both have been serving at Pasco High, a Title 1 High School in Pasco County, for over a decade, in multiple instructional leadership capacities and as Cambridge AICE Instructors. From this commitment, a student-directed club called Above Deck was formed. During the monthly club meetings, Jacqueline and Carolyn work with students to support their various cognitive and affective needs, addressing perfectionism, executive functioning, and learning how to balance social and academic goals. Further, the club plans to partner with local universities to structure STEM- based exploratory learning experiences for students over the summer. They plan to provide scholarships, transportation, and access to opportunities to explore and learn outside of the school day.

Fawnia Schultz
District Science Coordinator
9-12 Science Staff Developer
Pinellas County Schools

Fawnia Schultz has been a part of the Tampa Bay Wipro Science Education Fellowship Program since 2018. During this time, she has served as the district science coordinator for Pinellas County Schools and has witnessed first-hand the impact of this fellowship program on science education in her district. Teachers who have participated in the fellowship have been empowered to take on more leadership roles within the district. Many of the current and former fellows have become science coaches within the district or schools, have provided professional development, and have planned and implemented various STEM programs for students throughout our district. The collaboration of science educators between the three Tampa Bay districts has been invaluable to not only the fellows but also the district science coordinators as well!

Fawnia is an experienced educator, instructional coach, and mentor. Fawnia earned her Bachelor of Science in Biology from the University of Wisconsin-Lacrosse. She has been a science educator for 17 years and is currently a District Staff Developer for high school science in Pinellas County, Fl. In her role as District Staff Developer, she provides instructional coaching for teachers, delivers professional development, and develops curriculum. Fawnia' s goal is to ignite a passion for learning and curiosity in both teachers and students that she works with, creating a dynamic educational environment where reflection is valued, and science becomes a source of inspiration.

MISSOURI- UNIVERSITY OF MISSOURI

Author: Meera Chandrasekhar and Linda Godwin

Executive Summary Statement

Work continues with Cohorts 4 and 5 in harmonizing the teaching of math and science so that students see them as complimentary subjects. The program is committed to improving teacher practices by combining the teaching of math and science through collaborative teams of math and science teachers.

In the first quarter of 2024 Cohort 4 is continuing work on their individual lesson plans integrating math and science in the classroom. Each Grade 6-12 fellow will produce four lesson plans by the end of the cohort that integrate math and science in the classroom. As an example, one fellow is planning momentum and impulse lessons and labs, considering forces in a collision and humans moving on a hovercraft. The recently added K-5 teachers (August 2023) to this cohort are benefiting from vertical collaboration with the 6-12 cohort fellows. They are working on developing collaborative methods and a lesson plan to include science with math teaching to develop understanding of math application early in childhood education and, we hope, introducing more science into the elementary grades. Following their end-of-semester presentations in December, Cohort 5 fellows are meeting in their district teams as well as with us and focusing on their research article and developing concepts for how it will inform their teaching and recorded H-CCLS lessons. They must integrate the chosen research topic into both the math and science lessons, structuring lesson plans and creating or adapting a template. Team members will be presenting their selected research paper during the March monthly meeting. Discussions on teacher leadership continue.

During the May Wipro conference Cohort 4 will present their lesson plans and Cohort 5 their H-CCLS lessons and initial lesson plan.
In terms of district transformation, all the fellows are developing relationships between grade levels and between local districts. Their completed lesson plans will be presented to other teachers in their school and district. The plans will be shared on a project-created website and provide professional development for their peers. Fellows have also been serving as mentors for other teachers in their district. There have been discussions of how to expand math-science collaboration to other subjects such as language arts.

Summary of Current Project(s) and Goals

The current project is an expansion of the teacher network, providing opportunities for collaboration and leadership, and focusing 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. Examples include terminology used in math vs science, the sequencing of math units with relation to science, the infrequency of discussion about the relevance of science topics in math units, and the differences in graphing methods used in math and science classes. The collaboration between math and science teachers is essential to the implementation of successful science and math curricula. This project will focus on having teachers develop such a culture in a systematic manner using appropriate research articles and paired Science and Engineering Practices and Common Core Math Practices.
In the first year of a fellow's participation, the project will enroll middle school math and science teachers in teams from previous and new school districts. A team can be either from a middle (6-8) or a high school (9-12) grade band. A team will consist of 2 to 4 teachers, with at least one science and one math teacher. Members of a given team will participate in the project in the same cohort. Grade 6-12 fellows will work with the project for 2 years. Three cohorts of fellows will be recruited in 2022, 2023 and 2024, with up to 15 fellows per cohort. Fellows will work in V-CCLS and H-CCLS teams in Year 1, and will each develop one lesson plan that integrates math and science. In Year 2 they will work within their teams and develop 3-4 lesson plans or a module of lesson plans that they will disseminate to their and other school districts.
In Year 2 of each cohort 4 (beginning fall 2023) and cohort 5 (beginning fall 2024) elementary teachers are recruited from Year 1 fellows' districts as associate fellows. Elementary teachers typically teach both math and science. The purpose of having them work with middle and high school teachers is to have them learn content and methods as well as work on vertical collaboration across the K-12 spectrum so that they can integrate science into their math classes and vice versa.
For Cohort 6 (beginning fall 2024) we have changed our recruitment strategy: we will recruit from the entire K-12 spectrum for the 2-year program, allowing us to observe the differences among the two groupings.

Selected/Highlighted Projects

Cohort 4 grade K-5 fellows are working on graphing data showing how both science and math both use graphs. Students can observe weather data including temperature and precipitation over time,

and talk about energy transfer, such as observing how a solar oven heats up.
Cohort 4 grade 6-12 fellows are working on lesson plans in their classes that show the science and math harmonization that is the goal of this Phase 2 project. For example, Karen King, teaching AP Physics in the Columbia School District, is putting together her plans for physics momentum lessons. These include how force affects motion, and interaction of impulse and momentum. Some activities include describing the linear momentum of a system, creating qualitative sketches, deriving a symbolic expression, and applying a model to make a claim. Observing and understanding the changes in momentum and impulse requires students to engage in critical thinking, exploring and explaining the phenomena, specifically exploring types of collisions.
Cohort 5 grade 6-12 fellows are working on their H-CCLS projects, but are actively planning their year 2 lessons with the intent of creating modules that bring math and science together in closer alignment. Being a smaller group they seem mre sensitive to need for expanding their work have been planning in-school extension of their project that can be implemented in the 2024-25 school year.

Progress and Highlights

January 10, 2024 Cohort 4 Meeting
All fellows discussed their continuing work on their lessons that integrate science and math in the classroom and entered specific ideas in an online folder. The 6-12 fellows are working on their individual set of four lesson plans which will be shared with fellow teachers and within their district.

January 11, 2024 Cohort 5 Meeting
This was an HCCLS research meeting for the fellows to find and discuss an article in depth and to decide ways that it will inform their teaching and recorded lessons. They discussed how to integrate their research topic and mathematical/science practice in their lessons including the structure and template for their lesson plans. We discussed presentation guidelines for our May Wipro Conference. Our ongoing discussion on teacher leadership continued.

February 20, 2024 Cohort 5 Meeting (Zoom makeup from Feb 15)
This meeting was held over Zoom to make up for a previously scheduled meeting canceled to illness among the fellows. There was further discussion on lesson plan structure and specific lessons and lesson plans.

Plan for the Next Two Quarters

Date	People	Activity
March 14, 2024	Cohort 5	Presentation of research article by Fellows; Hands-on physics and math activities (Meera); work on lesson plan template and content
April 4, 2024	Cohorts 4&5	April meeting, presentation by Speaker – Ayça Fackler, Asst Prof, LTC, College of Education, MU.
May 4, 2024	Cohorts 4&5, DCs, past fellows	May Wipro conference presentations
March – July 2024	Linda and Meera	Recruitment of Cohort 6
August 2024	Cohorts 5 and 6	Introductory meeting for 2024-25

Vignettes

My name is Vera Reichlin and I am a Wipro fellow from Columbia Public Schools (Cohort 4). I teach Precalculus and Algebra 2 Honors at Rock Bridge High School in Columbia. I have been teaching at Rock Bridge since the 2006. Prior to that, I was a SMART2 intern and NOYCE grant recipient at University of Missouri – Columbia, where I received a Masters degree in Curriculum and Instruction. Prior to that I earned a Bachelor of Science degree in Mathematics from the University of Wisconsin – Madison.

In my classroom this school year I have applied my V-CCLS and H-CCLS work by selecting application-based tasks where students can conduct sense-making discussions of with their peers. I also regularly ask them to convince each other of their ideas with a "Are you convinced?" prompt. This prompt allows another student to explain and provide their peer the opportunity to accept or refute an idea. I find that these conversations promote deep learning and building of understanding. I see myself as a facilitator of those conversations. I am also trying to emphasize the relevance of topics taught in the classroom by discussing how the math topic applies to or connects with something in their current lives and/or relates to their prior knowledge in math or science.

My name is Kelli Anthes. I am an eighth-grade math teacher at Hallsville Middle School in Hallsville, Missouri. I have taught math for the last 14 years and have taught in grades six through eleven. I have been teaching eighth-grade math for the last 8 years and I thoroughly enjoy this grade level. I recently graduated with my Education Specialist degree in the Elementary Mathematics Specialist program at the University of Central Missouri. I am currently a part of the Wipro program in Cohort 5. I am partnered with my fellow teammate, Bryan Bolton, who is our eighth-grade science teacher. Since being in the Wipro program, we have looked more closely at our two curricula and to investigate the curriculum common between our two classes. This quarter we are working together to have students collect data on motion using three different types of vehicle toys. We will start with students matching graphs to charts and scenarios in my math class. After the students match graphs and scenarios to charts, they will make a hypothesis as to which graph matches with the three experiments. Students will collect data in science and then use that data in my class to graph and determine if their hypothesis was correct. They will then have to support their decision with evidence-based reasoning.

Bryan and I hope this multi-day lesson is a success and hope to do more cross-curricular collaboration in the future.

Calendar

Upcoming meetings for the 2023-2024 year.
Location: Physics Building Rm 223a University of Missouri, Columbia
All meetings will be face-to face unless it snows (snow location: online)

Date	People
March 14, 2024	Cohort 5 meeting
April 3, 2024	Cohort 4 & 5 combined meeting
May 4, 2024 (Wipro conference)	Cohort 4&5, DCs, past fellows invited

NEW JERSEY MONTCLAIR STATE UNIVERSITY

Author: Mika Munakata, Monica Taylor, Emily Klein, Colette Killian

Executive Summary Statement

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 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.

Summary of Current Project(s) and Goals

On January 26, 2024, the SEF Fellows and leadership came together for a half-day retreat. The agenda was based on the Fellows' input gathered at the Fall meeting.

1:00 Arrival. Give them their self-assessments back
Snacks and coffee available
1–1:45 Three Ice breakers led by Monica and Emily: Theatre of the Oppressed
1:45–2:30 Driving Initiatives in the Districts- Kristen, Megan, Jenna, and Stephanie
2:30–4 workshops–45 minutes:
2:30–3:15: Student learning

- John - Team 1
- Kristen S
- Jim W
- Pat
- Shanna -Team 2
- Alison
- Justine
- Frances

3:15-4: Collaboration

- Ursula - Team 1
- Susan
- Janine
- Aarti
- Tim - Team 2 Kearny
- Mary G
- Jayme

4–5 Innovation Maze led by Mika
5 Break for getting dinner
5:15–6 Closure + enjoy dinner
PowerPoint from Jan 26

On February 13, 2024, the MSU leadership had a meeting to plan the proposal process and culminating event for May 29, 2024.
The Fellows' proposals for next year's projects will be due in June.

The current projects being undertaken by the Fellows range from interdisciplinary projects to partnerships with local community programs. The table below offers a snapshot into the Fellows' work.

First Name	Last Name	Wipro Initiative
Alison	Mahfouz	Collaborating on PD and Teacher Ed Using Number Strings
Patricia	Hester-Fearon	Career Day for Grade 7
Jessica	McMasters	Career Day for Grade 8
Susan	Bartol	Improving Teacher Capacity to Deliver Elementary Science Instruction
Kristen	Scrivens	Collaborating on Professional Development and Teacher Education using Number Strings
Frances	Carlo	Arts Integration and STEAM Club
Megan	Graziano	Identifying and Supporting Science Teacher Leaders
David	Kleiner	Improving and Facilitating Effective Math Stations
Mary	Goffredo	Data Analysis and Collaboration
Janine	Hogel	Family STEAM and Makerspace
Colleen	Nolan	Roosevelt Community Garden 2023-24
Kristen	Trabona	Fostering Teacher Leadership

Progress and Highlights

The research team received acceptances to present at AERA and NARST. The following are the titles of the presentations:

- Reimaging Teacher Leadership through Social Network Mapping: A Collaborative Self-Study. (Self-Study SIG, AERA, April, 2024)
    - Shanna Anderson, Timothy Aberle, John O'Meara, Ursula Derios, Emily J. Klein, Monica Taylor, Mika Munakata
- Developing a social network tool to support and characterize STEM teacher leadership (NARST, March 2024)
    - John O'Meara, Shanna Anderson, Timothy Aberle, Ursula Derios, Mika Munakata, Monica Taylor, Emily J. Klein

The team also had an extended abstract accepted for the special Science Teacher Leadership issue of the International Journal of Teacher Leadership. The full manuscript is being written and will be submitted for full review in May 2024.

Plan for the Next Two Quarters

Date	People	Activity
Spring/Summer	Fellows–new and Alumni	Call for proposals for Years 3-4 projects will be sent out in April.
May 29, 2024 4:30–6:30	Alumni + new fellows	Culminating event

Vignettes

Patricia Hester-Fearon
7th grade teacher of Robotics
Kearny School District

With Kim Serino 7 Mathematics & Ericka Kliszus 7/8 Digital Literacy Communications elective & ELA, Also, Margaret Blair 7/8 Computer Science
The goals of this project are to increase students' awareness of careers and for the middle school students to be provided with opportunities as developing youth to research careers of interest to pursue their passions. For the school, our goal is to map out how to sustain 'Career Day' for the future. The goal(s) for teachers are to become involved and add creative ideas for such activities.
The progress that the team has made on the project so far this year is the planning and coordination of ideas. In discussion with the Wipro 8th grade Career Day team it was decided to keep the days separate so that LMS could sustain career day going forward. In other words, Career day 8 is in person and Career day 7 is pre-filmed and displayed on trifolds for the Career 7 showcase. Therefore, the Career Day 7 team of Kim, Ericka, and Margaret are coordinating efforts with after school clubs, programs, and sports in addition to working with extracurricular classroom teachers. Kim Serino's Future Engineering after school club members have already conducted a webinar with a local civil engineer with regard to a school parking issue to begin the research of a civil engineer. The next step is having the school district's buildings and grounds administrator visit with the club members in person Thursday, December 14th to give more insight of the coordination between a civil engineer and the local district. All of the inquiry is student driven in their quest for future college and career awareness.
The process of having students drive their research is currently being documented to provide other clubs, programs, and sport teams in addition to extracurricular classes at LMS to seek their students' interest. Already, the digital literacy communication members are generating questions of career interest and thinking about ways to come to an agreement for conducting and webinar and with whom. Recently, the computer science coding class was visited by an Amazon Engineer who provided insight as to what a logistical engineer does and how computer programming skills are necessary.
Steps in the near future include a passion interest survey completed by all 7th grade students on the Achieve3000 Center center platform along with a Google Form to collect data and then the student council will sift through the data to sort into categories and then relay that information to the matching after school clubs, programs, sports.
I appreciate all that you have done to continue this fellowship program and further grow it. I hope that you will be able to continue this for years to come.

Megan Graziano
Supervisor, Pascack Valley Regional HS District

Identifying and Supporting Science Teacher Leaders
With Dr. Aarti Mallya - 9th Grade Biology & 11th/12th grade AP Biology
Mr. Matthew Will - 11th Grade Physics & 11th/12th grade SETS (Science, Ethics, Technology, and Society)
Ms. Julia Abahazy - 11th Grade CP Physics & AP Physics I
Mr. Al Cann - 9th grade biology, 11th/12th grade AP Biology, & 12th grade Astrology & Earth's Natural Disasters.

As a former teacher leader and current department supervisor, my project is focused on identifying teacher leaders within my department and supporting them in their personal teacher leadership goals. The goals for my project include identifying a set of teacher leaders, working with them to develop their specific goals and plans for achieving them, meeting with them regularly to discuss progress, struggles, and supports needed, providing them a platform/opportunities to share their projects with departmental colleagues, and sharing out with upper administration.

The Pascack Valley Regional HS District prides itself on its progressive, innovative, and forward-thinking staff. In an effort to support teachers who fit this description, my Wipro project is focused on encouraging and supporting teacher leaders who will bring new, exciting ideas and practices to our department.

Ultimately, all their goals align with increasing student engagement and supporting a deep understanding of science content while developing the SEPs. As these practices are built within their classrooms, and shared with their colleagues, I expect science instruction to improve and student learning to deepen.

I have identified 4 teachers and helped them plan out their individual projects: Julia Abahazy's project is focused on "Building the "A" into STEAM" - integrating opportunities for art & creativity into her physics instruction. Matt Will is exploring the OpenSci Ed Physics curriculum and developing a unit focused on Earth and Space Science. Al Cann's project is focused on integrating board games into his science instruction. Finally, Dr. Mallya's project is focused on increasing student engagement in biology through creative lesson design & expanding the lesson impact through collaboration with her co-teacher and colleagues. Each teacher has developed their own set of goals and I am meeting with them regularly to discuss progress, struggles, and supports needed.

Moving forward, I will be building in opportunities for my teachers to share their projects with their colleagues during department meetings. I will also be speaking with our Assistant Superintendent, Dr. Barry Bachenheimer, about setting up a time towards the end of the year when my 4 teachers could share their work with him as well.

NEW YORK -MERCY COLLEGE

Author: Kristen Napolitano, Amanda Gunning, Meghan Marrero

Executive Summary Statement

Since December, the Mercy University team has supported five new groups of Wipro Reimagined Fellows in their projects for school/district change. Cohort 2 of Wipro Reimagined includes 17 participating teachers of which 9 are newly participating teachers and 8 are returning Fellows from either Cohort 1 or the Foundation Wipro program. These Fellows represent 4 districts, including Tarrytown, White Plains, New Rochelle, and Port Chester.

Mercy University's goal for the 2023-24 AY was to support Wipro projects that spanned across different schools in each district. In other words, Mercy was looking for projects that connected elementary schools, middle schools, and high schools through STEM programming. The Mercy team was happy to receive such high quality proposals for five vertically-articulated projects this year including a K-12 engineering design challenge, a 5th grade-high school math peer mentorship, an elementary-high school family STEAM night, an elementary science teacher conference hosted by high school and middle school science faculty, and a K-5 garden club. These projects are supported by administrators representing various grade levels across the district. Mercy hopes that establishing vertical relationships will improve sustainability outcomes for all of these projects.

Summary of Current Project(s) and Goals

The Mercy University Greater New York (GNY) Wipro Science Education Fellowship, in partnership with University of Massachusetts at Boston and other colleges, has successfully supported a new iteration of Wipro, that the Mercy University Center for STEM Education calls, "Wipro Reimagined." This innovation phase of Wipro involves teacher-led, collaborative projects that are designed to enact district change in STEM education. 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, MCSE aims to establish a norm of collaborative action towards district change in the five existing Wipro districts. Year 1 was largely successful as 30 teachers and 1 retired teacher worked with 11 administrators to increase accessibility to and interest in STEM education across the New Rochelle, Port Chester, and White Plains school districts. These Fellows implemented leadership projects including 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.

Year 2 is off to a strong start with an additional five funded-projects underway representing four of our five partner districts. New to this year, projects reflect a distinct vertical alignment with each teacher team gaining partnerships across district schools (elementary, middle, and high school). This vertical articulation is anticipated to contribute significantly to district change and sustainable outcomes.

MCSE plans to equip participating teachers with the tools and practices necessary to carry on transformative efforts even when Wipro funding is gone. In Year 1, Wipro Reimagined Fellows and the MCSE team established and strengthened relationships with district administrators to ensure sustainability. Year 2 will continue to foster these relationships to help both Fellows and administrators to meet district goals. Mercy reached teachers in more grade levels this year (expanding from Year 1 to include secondary level teachers) and reached four of their five partner districts.

Selected/Highlighted Projects

Cohort 2 Fellows met in January with their administrators and the NY IHE team at the Mercy University Center for STEM Education in Tarrytown, NY. Teams worked together to share their progress and their challenges with the group. During this time, groups brainstormed new ideas for connecting their projects to district initiatives and ways for navigating obstacles.

Progress and Highlights

New Rochelle has two teams. The Ward Elementary School team is partnering with the high school robotics club to bring computer science and robotics to a districtwide family STEAM night in March. The Webster Elementary School team is creating a K-5 gardening club to engage students in science literacy through nutrition and ecology. Their culminating event is set for May.

White Plains has one group developing a vertically articulated engineering design challenge that will engage elementary, middle, and high school students in creating 3D printed boats that they will eventually race in May. In this project, both the teachers and students are collaborating vertically to design boats that can win the race, testing them, and then making improvements before the final race day which will be held at the high school pool.

Port Chester has one group fostering a high school – 5th grade math peer mentorship program in which AP Calculus students are mentoring 5th graders as they prepare for middle school math expectations.

Tarrytown's group is launching their first Elementary Science Teacher Conference set for March 2nd. The group encountered some challenges with gaining funding and registrations, but Mercy is hopeful that they can help support this group in their efforts!

Plan for the Next Two Quarters

Date	People	Activity
February 2024	Kristen Napolitano	Site visit 1 – KN will visit all five project sites (in-person or over video conference at the Fellows' convenience)
March 2024	IHE	NSTA Denver – eight Wipro Reimagined, Cohort 1 Fellows presenting
May 2024	MCSE	Site visit 2 – MCSE IHE team will attend all five project site events in-person. Virtual Cohort 2 meeting (5/15/24) – final debrief, highlights, info for 2024 MCSE Conference
June	MCSE	Funding period concludes – Cohort 2 prepares for MCSE Conference in the fall
September 28, 2024	MCSE	MCSE STEM Educator Conference – Wipro 10 year anniversary celebration – face-to-face

Vignettes

Each quarter, Fellows report their progress to MCSE updating the team on their successes, surprises, and challenges. Below are copies of these updates from two groups: Port Chester and Webster Elementary.

Port Chester: Colleen Cahill, Carrie Poulos, Anton Raskin

[Elementary Students at Edison being introduced to the concept of Calculus/Measuring Change]

- We have collected survey data about how students feel about math and science.
- We were pleasantly surprised to find 82.1% of our students felt they were a "Math or Science Person"
- 61% of our students said they would take a science class as an elective.
- 66% of our students said they would take a math class as an elective.
- The main two goals are, after our investigations and partnership,
    - to increase the number of students willing to take a math o
    - r science class as an elective.
    - There was an 18% increase in students who felt they were "A Math or Science Person"
- Individual classroom introductions have been made, with the first Google Meet between the High School and Elementary School is scheduled for February.

Webster Elementary – Kathleen Coyne, Sandra Galano, Samantha Eisenberg, Melissa Landau, Johanna Vasquez


[Left: Magnet facilitator, Kathleen Coyne, working with 5th graders to start seed germination during the lunch time gardening club. Right: Lettuce seeds begin to germinate.]

- Webster's Gardening Club is up and running for 5th grade students. The 4th grade club will begin next week, followed by 3rd graders at the beginning of March and 2nd graders at the beginning of April.
- The 5th grade gardening club has already planted their first lettuce seeds in the germination systems and has had great success. They are excited to transfer the seedlings to the hydroponic towers in the next few weeks.
- Students have taken a large interest in gardening and are excited to participate in this opportunity. So many students have shown interest, that we've had to select students using a lottery system.
- Our group is focusing on making sure that all of our hydroponic and gardening supplies are organized and accessible for our clubs' use.

Webster's Annual Fit Fair is expected to run on May 30th and 31st and will include a 'Farmer's Market' showcasing the vegetables grown during the lunchtime gardening club.

TEXAS - UNIVERSITY OF NORTH TEXAS - DALLAS

Author: Dr. Ratna Narayan

Executive Summary Statement

All the funded proposals of Wipro Phase Three at UNT Dallas (2023-2024) continue to be carried out successfully by all the participants involved.

The highlights of the Wipro program continue to be the School Proposals at several of the partner school districts. The school projects at Cedar Hill ISD, Lancaster ISD and Grand Prairie ISD especially are projects where they have continued the project started during Wipro Phase 2 (2022-2023) and extended it both grade wise as well as personnel wise (adding new Wipro Fellows) to have a greater impact on a larger number of students. The new DeSoto ISD Garden project, started in Phase 3, is an ambitious project involving four schools in DeSoto and developing their school gardens to facilitate science learning of their students. The project is progressing well. I am very proud of the way they have involved several external entities from the city in helping them with their gardens.

All the other projects, collaborative and individual, are also progressing well. I am proud of my Wipro Fellows and DSCs. All groups have till date submitted their Quarterly reports. Each group will be working on updating their Wix portfolios, each participant will have an individual page that will show what they are doing with regards to the progress. Participants are also reading relevant research to inform their projects.

I am happy to report that three Wipro Fellows were awarded Teacher of the Year at their schools.

Wipro Fellows From CHISD who are STEM teacher of the year at their campuses!

Carlece Jackson from Bessie Coleman (second year participating in the CHISD Wipro project)

Krystal Rising from Collegiate Prep
Wipro Fellow from GPISD awarded Teacher of the Year at Ellen Ochoa
Ian Talamentes (second year participating in the GPISD Wipro project)
The only negative was that I was down with covid, recovered and got rebound covid due to which I had to cancel a meeting with the fellows in February.

Wipro Phase 2 (2022-23)	Wipro Phase 3(2023-24)
Faith Malika, DSC PLC coordinator 5th grade	Faith Malika, DSC PLC coordinator 3rd grade 3 non-Wipro Fellow teachers
Brittney Preston, Wipro Fellow PLC Participant	Preston & Mosley PLC Coordinators, 5th grade. 3 non-Wipro Fellow teachers
Jennifer Mosley, Wipro Fellow PLC Participant	
Markus Burkhalter, Wipro Fellow PLC Participant	Markus Burkhalter, Wipro Fellow, Dean of Instruction, PLC coordinator 6th grade 3 non-Wipro Fellow teachers
	Meisha Medford, Wipro Fellow, Assistant Principal, PLC Coordinator 4th grade 7 non-Wipro Fellow teachers
	Monica Hatley, STEM Teacher, New Wipro Fellow, (23-24) PLC Coordinator, STEM 3 new STEM teachers, non-Wipro Fellow teachers

- Jennifer Melton, Wipro Fellow from GPISD, currently participating in a project titled Sphero Sisters led a PLC for their GT Teachers that focused on how to code with spheros and the different ways they can be used in the classroom in Oct 2023, approximately 23 GT teachers were in attendance.

Summary of Current Project(s) and Goals

Phase 3, year 2 at UNT Dallas

S. No	Title of Project and ISD	Project goal	Number of participants
A	**School Projects**		
1	Professional Learning Communities Lancaster ISD	This collaborative project will focus on developing Professional Learning Communities (PLC) for elementary science and STEAM teachers in Lancaster ISD.	1 DSC 4 Alums 1 New 5 elementary schools
2	Effects of Collins Writing in Science Cedar Hill ISD	The goal for this project is to improve 5th grade, 8th grade Science and Biology STAAR (State of Texas Assessment of Academic Readiness)/(EOC)End Of Course scores across Cedar Hill Independent School District using Collins Writing (a district Initiative)	1 DSC 3 alums 3 new 2 elementary 2 middle 1 high school
3	From Seed to Flower: The Growing Project DeSoto ISD	The project aims to establish an edible garden that will serve as an interactive classroom for students in Pre-K through 5th grade at 4 different schools in DeSoto ISD.	1 DSC 7 new 4 elementary schools
4	Exploring STEM Wonders with 3D Printing: First Graders Unleash Innovation Irving ISD	The project goal is for first grade students to gain a better understanding of how we use products of STEM, construct solutions to world problems, design a prototype, and create a device using a 3D printer.	1 DSC 1 alum 2 new 1 elementary school

5	Gamifying Forces Grand Prairie ISD	The goal of the project is for students in grades 3 to 5 opportunities to explore the connections between the Energies and Forces by creating a game using engineering and investigative design	1 DSC 2 alums 3 new 1 elementary school
6	Savvy Sphero Sisters Grand Prairie ISD	Savvy Sphero Sisters is a project designed to address the gender gap in the technology industry by creating a supportive environment for girls to learn and succeed in coding.	1 DSC 1 alum 2 new 2 elementary schools
B	**Collaborative Projects**		
1	All Hands-on Deck Lancaster ISD, Trinity Basin Prep	The project participants aim to collaborate to provide equitable outcomes for students in grades 4, 5, and 6 that will allow them to develop a deeper understanding of science through hands-on activities.	3 alums 4 new 3 elementary 1 middle school
C	**Individual Projects**		
1	STEMtastic Club Denton ISD	The goal is to develop an after-school STEM program for my campus for 4th and 5th grade students, who will conduct PBL's, STEM challenges, and hands-on learning to enhance their knowledge and skills.	1 alum 1 elementary school
2	Exploring Science Concepts Using PBL Strategies and Activities to Engage Struggling High School Learners Irving ISD	The project is designed to explore IPC student's science content, engagement, creative thinking, collaboration, increased literacy, and problem-solving skills using PBL (Problem Based Learning) strategies and activities.	1 alum 1 high school

Selected/Highlighted Projects

The Growing Project: From Seeds to Flowers. DeSoto ISD School project

The project aims to establish edible gardens that will serve as an interactive classroom for students in Pre-K through 5th grade at 3 different schools in DeSoto ISD. These gardens will provide a unique and engaging opportunity for students to learn about plant and animal life cycles, the importance of sustainable agriculture, and the benefits of healthy eating (Farm to Table). It will also provide students with an outdoor learning environment for teachers and counselors to conduct science and social emotional lessons. The project is an ambitious project about which I am excited! What is very creditable is that in addition to the materials that the grant has provided, they have reached out to the community and are receiving assistance from various sources. For instance:

A small local Organic Nursery in Glenn Heights whose owner is interested in supporting efforts in developing "Master Junior Gardeners" and a local landscaping business owner has offered to support their students' efforts in garden planning and layout. The HOA has also offered to assist with creating a community garden. The campus leadership team, with the help of their student body presented the WIPRO Garden Leadership Team with a sum of over $300.00 at their monthly January campus Pep Rally. These funds are earmarked to purchase garden borders and soil amendments for the month of February.

As one of the participants reported," The garden has generated positive energy and excitement on behalf of the student body. Student engagement has increased, and the garden becomes a focus of attention on days of good weather. Students volunteer to work in the garden in lieu of playing during recess. All staff anxiously await updated news of our garden project. Each had an opportunity to get their hands dirty in the Fall. We receive "car horns" from our neighbors as they drive by witnessing our labors in revitalizing a neighborhood garden, we all will be proud of. "

DeSoto is a poor district that has been plagued with several problems over the years. I am happy to share this update as a Project to be highlighted!

Progress and Highlights

In this section I will bring you up to date with the work accomplished by each project

A. School Projects

1. Professional Learning Communities: Lancaster ISD School Project

Brief Description of the proposal: This collaborative project will focus on developing Professional Learning Communities (PLC) for elementary science and STEAM teachers in Lancaster ISD. This PLC process is intended to create the conditions (improve their own content knowledge and pedagogical knowledge) that help educators become more skillful in facilitating student learning to a greater degree.

Updates: The PLC collaborative group in Lancaster has been facilitating district and campus-based PLC sessions with 3-6 grade science teachers in Lancaster ISD. Topics that have been covered include kinesthetic movement for vocabulary acquisition, learning outside the classroom and in nature, data drive instructional interventions, targeted learning stations and game-based review. Our STEAM teachers have been working with Ms. Hatley developing learning units that connect to the science

content that is currently in the core classrooms. The topics focused on energy, space, and environments.
Challenges: The larger the group, the tougher it is to get everyone on the same schedule. For next year, we will consider using just the teachers and not administrators. This project has its challenges with the different grade levels and different schedules. Seeing feedback from new teachers after a PLC would be a high of the project and not getting participation would be a low. This project is a need for our district because the teachers in the district need these training and learning opportunities to help bring best practices and meet the instructional needs of the students.
District Transformation/ Teacher Leadership: The PLCs help teachers; especially new and inexperienced teachers develop both their content knowledge and pedagogy, using hands-on instruction and ultimately impacting the students and how they learn science. So, this constitutes both Teacher Leadership as well as is a way, albeit small, to transform the district.

2. Effects of Collins Writing in Science

Brief Description: Our goal for this project is to improve fifth grade, eighth grade Science and Biology STAAR (State of Texas Assessment of Academic Readiness)/(EOC)End Of Course scores across Cedar Hill Independent School District.

Updates: As of this week we have given 30 Collins writing prompts in 5th, 8th, and Biology

- They have been graded and students have been given feedback on their writings.
- Amount of Collins writings broken down by grade. The numbers below are the number of Short Construct Responses students have written this year.
  5th grade- 12,720
  8th grade - 13,710
  Biology - 17,610

As far as the project goes, I would not make any changes at this time. It ran smoothly like last year.

Challenges: Our biggest challenge to date has been getting everyone onboard. By expanding the project, it has introduced more teachers into the scope of the project. This has caused the need for more intentional conversations just to get everyone doing what they are supposed to do. This happened at the start of the project. At the end it was much smoother. The only low would be when I looked at the Response scores from the Interim Assessment. Looking at them it was clear some students did not take the time to answer the questions thoroughly.

District Transformation/Teacher Leadership: Two quotes from participants
Terri Harris: My role as a fifth-grade teacher of seventy-one students is to facilitate the completion of two short constructive responses weekly. The impact has been tremendous. Scholars came in with little writing ability and have progressed to answering questions that have thoughtful, sequential responses. Additionally, this supports a deeper learning of current science content and allows students to express their knowledge in a method that will be used during state testing. The district's benefit will be two-fold #1 the district should see improved test scores in science and #2 The responses allow me to understand gaps in learning that give me the opportunity to provide additional support or reteach opportunities.

Kellie Burchfield: I am the instructional facilitator for eighth grade. I serve all of our eighth-grade scholars. My role in this project is to assist Mr. Hesse in data analysis, assist the teachers with facilitation and grading of the SCRs, and provide the scholars with feedback regarding their writing. I believe this project has impacted our scholar's ability to write using academic vocabulary more effectively and has caused them to use more academic vocabulary when engaging in conversation. As a teacher leader I have been able to see the impact at various campuses but more importantly at the district level. It has helped me to narrow down coaching conversations and assist our teachers. I think this project should continue to grow into other grade levels that are not tested. I believe it enhances the way our scholars engage in the material, the way they think about the material, and how they communicate regarding their learning.

3. From Seed to Flower: DeSoto ISD School Project

Brief Description of the proposal: Our project aims to establish an edible garden that will serve as an interactive classroom for students in Pre-K through fifth grade at 4 different schools in DeSoto ISD. These gardens will provide a unique and engaging opportunity for students to learn about plant and animal life cycles, the importance of sustainable agriculture, and the benefits of healthy eating (Farm to Table). It will also provide students with an outdoor learning environment for teachers and counselors to conduct science and social emotional lessons.

Update: We have been able to clean out old gardens and begin planting new seeds.

- We have begun incorporating the garden lessons into the science classrooms.
- Planting seeds in the hydroponic garden and showing students the different fruits and vegetables from the seeds.
- Community outreach

I feel like the project is going well. Staff and students are able to use the garden as a stress reliever. The highs would be students and teachers being able to plant and work in the garden as well as the community partnership.

Challenges: The lows would be individuals stealing material from the garden and hydroponic classrooms. We have placed locks on all gates and rooms with garden materials to ensure no one is taking any of the materials. Other challenges are:

- Tilling the grounds of the garden.
- Finding the time for staff and students to go into the garden during the school day.

We need increased time to commit to tending the garden daily. With the barriers of District and State testing, lack of extra class time and weather conditions, makes it difficult to pour in the time needed to create a successful garden. By creating a garden club, we are hoping to relieve some of these barriers.

District Transformation/Teacher Leadership: this has a huge impact on students and teachers' mental health. Students are beginning to take ownership of the gardens.

Two quotes from participants

Lorenzo Wilborn: The hydroponics in our third-grade classroom and student active participation in composting has generated much interest, curiosity, and anticipation. Students ask daily if they can donate to the compost and if we will go to the garden. I have also noticed that students are now paying attention to plants and fungi that appear on or near the playground during recess. It is not uncommon

for them to come running with news of a discovery or to be observed examining the flowers, colors and leaves as they observe the plants under their feet. They give this same attention to the plants growing in the classroom.

Steve Harman: The garden has generated positive energy and excitement on behalf of the student body. Student engagement has increased, and the garden becomes a focus of attention on days of good weather. Students volunteer to work in the garden in lieu of playing during recess. We are excited as the growing season approaches and anticipation grows as students will have an opportunity to visualize the fruits of their labors. All staff anxiously await updated news of our garden project. Each had an opportunity to get their hands dirty in the Fall and as a "child exists in each of us" are energized to see our students engaged in a project that will benefit us all. We have built relationships we would not have made if not for our garden project. We have opened our minds to possibilities as these relationships have developed thus far. Our students are the beneficiaries as we work together in collaboration.

4. Exploring STEM Wonders with 3D Printing: First Graders Unleash Innovation: Irving ISD School Project

Brief Description of the proposal: Our project will consist of a STEM project that will provide opportunities to explore what STEM is, how it impacts their everyday life, and how they can improve someone else's quality of life through STEM.

Update: We have been able to complete the following thus far:

October:

- Introduce STEM, how is STEM used in the world around them.
- Students will draw what they think STEM is and explain in a Flipgrid response what they drew and how these products of STEM make their lives better.
- Students will also begin to think about things at home and school that are products of STEM.

November:

- Identify STEM in the world around them (home, school, city, hospital, etc.)
- Watch videos of how different products are made.
- Students will be in small groups and work in stations to discuss products of STEM and how they can make a difference in people's lives.

December/January:

- Create design activity. (Include literacy of the 3 Little Pigs and students will
- discuss how to make the houses stronger)
- Discuss empathy and understanding.
- Create design activity. (movement of a finger)

Challenges: Thompson: Due to a teacher resigning and not having a replacement, I have been teaching a fifth-grade class. This has prevented me from helping during our scheduled time. I will ask if I am able to have coverage for an hour to be able to assist in the upcoming weeks.

Rocha: scheduling Librarian PLC on Tuesdays, testing days.

Mr. Dazer: The Fellows are doing their best to meet the challenges affecting their project. Staff shortages are a huge problem in public education and their current situation is proof of that. I applaud the effort they are putting forth and I am impressed with the progress they have made.

District Transformation/Teacher Leadership: Two quotes from participants
Sherry Thompson: This project will have been helpful in creating new innovative ways to incorporate STEM into the district's curriculum. Hopefully, opportunities will be presented to be able to collaborate with other teachers in the district. Once teachers and administration see what is happening and the steps taken to build a foundation in such a young grade level, more students will be exposed to a higher level of thinking as it relates to STEM.

Erica Rocha: The impact I have seen has gone further than just understanding STEM, prosthetics, etc. I have seen the most impact in their empathy towards people and animals that require a prosthesis in their daily life. Even though I have been a lower grade classroom teacher in the past I have been very surprised with the ability of our first-grade group to retain the information we are providing and their ability to problem solve so quickly. As far as IISD I think that if we can impact our school stakeholders that will trickle down to other members of our district. Ms. Thompson did reach out to a teacher at one of our middle schools and he and a student came and presented it to our kids on the campus. I noticed that the children were very motivated and excited to see another child, albeit older, be so successful and knowledgeable in STEM.

5 Gamifying Forces: Ellen Ochoa School Project, Grand Prairie ISD
Brief Description of the proposal: This collaborative proposal is an extension of last year's project for 2nd and 3rd grades. Last year, 2nd and 3rd grade students invented a useful tool using the efficiency of the properties of matter of the object they invented. Our 2nd and 3rd graders were able to improve their communication skills, their ability to problem solve during science investigations, and increased their content knowledge. These anecdotal data points were collected through observations of students during the activities as well as by analyzing the entries in their science journals. This year, students are creating a game that uses forces and the students' ability to reengineer strategies to win. For example, their game can use a variety of energy sources that will transfer FROM circuits.
Update and challenges: Ian Talamantes: We have slowly fallen out of concordance. As the lead fellow, I have dropped the ball a few times in communicating and offering guidance. It has not been easy scheduling times to meet with the team. We have different conference times. Mondays through Thursdays have different after-school functions, i.e., Clubs, Tutoring, and faculty meetings. I myself have taken on plenty, so I am having to scramble for time to go meet with teachers separately. Mr. Lozano, Guerrero, and I should reach the scheduled goal of completion of the project. I will make sure I work with Miles and Balbuena more to complete the project, for I have already seen the value it has had on my students, and I want the same for them.
DSC Tamara Majors: A great part of this project has been a challenge FOR the teachers. They have had to reach into their own creativity to help facilitate and help enhance student ideas. They have had to push them to reach grade 5 TEKs using forces and the use of Independent Variables. Those are the highs. The lows have been the application of said challenge. Many teachers have never taught the fifth grade TEKs, so they are having trouble applying an independent variable to the project, or at least facilitating it.

District Transformation/Teacher Leadership: Two quotes from participants

Guillermo Lozano: The impact on me as a teacher is diverse. It has strengthened and reinforced my thoughts and beliefs that student interest is high when given the opportunity to create. This is the first year in which I have extensively used project-based learning. It works! I relish leadership. I realize that I and all teachers in the classroom have a leadership role. This gives me the opportunity to contribute more to my school. With regards to this project, the district is slowly embracing it. The more successful it is the more that it will apply the merits of what we are accomplishing through this endeavor. I would petition the district to allot more time towards this endeavor. I would petition the district to include what we are doing into its curriculum to ensure there is more time devoted to it.

Rosalyn Miles: Because my students have been working hard on their creations, I am excited to see the outcome of every game. I am hoping that I have impacted and motivated my students with my suggestions and praises. I am hoping that by the students displaying their hard-working creations, the district will encourage more projects like these. I am also hoping to see proud student faces when they finally display their creations. When my students finally get to display their creations, I am hoping to motivate more teacher participants so that this project can be an ongoing project in future school years.

6. Savvy Sphero Sisters: Grand Prairie ISD School Project

Brief Description of the proposal: Savvy Sphero Sisters is a project aimed at fostering girls' confidence and increasing interest in the world of coding. This proposal is designed to address the gender gap in the technology industry by creating a supportive environment for girls to learn and succeed in coding.
Update: So far, the beginning of the year and middle of the year checklist and self-evaluations for confidence and collaboration have been given. Girls have learned how to code movement, speed, distance, color, light, and sound. In addition, students have learned what loops are and how they work with coding.

<u>October</u>

Coding Through a Maze - Choose a story scenario and use simple block coding to go through a maze.
Partner Coding - Work collaboratively as one person draws a map and gives directions to the programmer.
Making Loops - Create and execute a Draw Program

<u>November/December</u>

Lights & Emojis - Use matrix animation to express emotions
Pong - Trigger a reaction with proximity and obstacle detection.
Animal Toss - Use if/then/else statements

<u>January</u>

Coding an App - Use Swift coding to code on Selecting Your Mood
Storytelling with sound effects - Use orientation sensor to control program execution and use a nested if/else control blocks structure to check for multiple conditions.

Challenges: Student absences can be a challenge as the skills build upon other skills. We try to catch students up during lunch/recess or at an enrichment block. This is not a challenge but a thought. If we involve the community and have mentors, even more people can benefit from this project, not just the students in our school. In addition, with the involvement of others, we could scale our numbers and

reach more students.

District Transformation/Teacher Leadership: Two quotes from participants
Jennifer Melton: This project has changed how I lead as a Teacher Leader. It helped me learn new ways to lead, work with others, and improve teaching. Planning and doing this project have made me a better leader, and I feel more empowered to talk to others and create change in our campus or even our district.

Patricia Lee: This initiative has a positive impact on the district. The Savvy Sphero Sisters initiative contributes to addressing the gender gap in the technology industry by actively engaging and encouraging girls in coding. This, in turn, positively influences the district's commitment to diversity and inclusivity in STEM education. The project serves as a model for creating supportive environments that foster interest and confidence in coding among female students, potentially impacting the overall educational culture within the district.

B. Collaborative Projects

All Hands-on Deck:

Brief description of the proposal: Educators from Trinity Basin Preparatory and Lancaster ISD will collaborate to provide equitable outcomes for students in grades 4, 5, and 6 that will allow them to develop a deeper understanding of science through hands-on activities. This will be done through strategic planning, instructing, using intentional strategies to support ESL students, and providing hands-on activities to increase Science awareness amongst all students. We will collaborate vertically with three major Science themes being our focus that will allow students an opportunity to have hands-on experiences. This project is a continuation of the work that has been implemented in our schools over the last two years, which has allowed us to see significant gains with our students' academic growth in science.

Updates: Our Team has been able to accomplish the following:

- Pre and Post Tests, Hands on Activities, and Flipgrid recordings for Exploring Forms of Energy
- Pre and Post Tests, Hands on Activities, and Flipgrid recordings for Environmental Changes

Currently, we are still working on the following:

- Pre and Post Tests, Hands on Activities, and Flipgrid recordings for Exploring Earth

Challenges: Our team has not encountered any unexpected challenges; however, we have had to monitor and adjust our instruction and activities to better align the TEKS that we are teaching across all grade levels. The highs are able to connect and support one another, knowing that each of us have our own grade level and campus struggles. The lows happen to be the pressures of wanting to do everything but not feeling like there is enough time to do it. Though we try to meet and support each other, timing will always be the thing that we wish we could change.

District Transformation/Teacher Leadership: Two Quotes from participants
Jennifer Mosley: The project has definitely impacted my 4th Grade science students because they have the opportunity to explore, collaborate, and learn in ways that they have not been able to do through the regular classroom experience. The project continues to support my growth as a leader, it stretches

me to continue developing other leaders. This project will bring the awareness of science on the elementary level that is currently missing on our campus and within our district.

Tamesha Brown: The project has definitely impacted my 4th Grade science students because they have the opportunity to explore, collaborate, and learn in ways that they have not been able to do through the regular classroom experience. The project continues to support my growth as a leader, it stretches me to continue developing other leaders. This project will bring the awareness of science on the elementary level that is currently missing on our campus and within our district.

C. Individual Projects

1. STEMtastic Club

Brief description of the proposal: I am developing an after-school STEM program for my campus for 4th and 5th grade students. I want to track how this program helps build interest and academic progress in the students that consistently attend this program. The students will conduct PBL's, stem challenges, and hands-on learning to enhance their knowledge and skills that are being taught in their science classrooms.

Updates: At this time, my students have completed four projects and are in the middle of a fifth right now. It has taken a little longer than I expected because I have had to cancel some classes due to meetings and holidays. So far, the students have really enjoyed having these opportunities to explore and grow in their science knowledge. They are looking forward to their next project over organisms. The students love being able to build and produce solutions. However, I am considering taking away one project so that there is a bit more flex time built into the schedule.

Challenges: Time has been the biggest challenge since this is an after-school program, however I think that I might just take out one of the projects so that the students aren't feeling rushed with the projects as they are conducting them and if needed, I can give an extension week for any project. I might also make some changes to the ending of the program.

District Transformation/Teacher Leadership: This is giving me more insight into the fourth grade TEKs and students. I also am able to highlight some of our projects to others. It is impacting the school through giving a hands-on experience after school to students who are thriving or wanting to do more in STEM education. It also gets the students involved more excited in their science education.

2. Exploring Science Concepts Using PBL Strategies and Activities to Engage Struggling High School Learners.

Brief description of the Proposal: This proposal is designed to explore IPC students' science content engagement, creative thinking, collaboration, increased literacy, and problem-solving skills using Problem Based Learning (PBL) strategies and activities.

Updates: I have completed 4 PBL projects out of six, one will be done immediately after spring break and the last PBL following that. The PBLs are progressing well, and students really like it.

Challenges: As this is an alternative school, students have a twenty-day placement, but sometimes they do not stay for the entire time period, so they do not complete the work.

District Transformation/Teacher Leadership: I will be presenting PBLs as a professional development for others during our PLC after spring break. The students love PBLs as they get to explore their creativity, they get time to think about what they are doing and also how it applies to their lives (should energy drinks be banned or regulated and the effect it has on their bodies).

Plan for the current semester and summer:

The plan in general for the rest of the semester and the summer is for participants of each group to work on completing their projects.

- Wix Portfolio:

  This year, all participants will submit a Wix portfolio where each individual participant will have an individual Wix page detailing how they contributed to the project. The completed Project Wix links will be shared with Wipro via a quarterly report as well as with the ISD administration. This task is currently in progress, each group has a Wix portfolio that they are updating with the help of a C1 Fellow Raino Bhatti.
- CAST Proposal:

  Like every year, each participant group will submit a conference proposal to present at CAST 2024 (Conference of Advancement of Science Teaching, San Antonio, November 2024. CAST Proposals are due in April. It is a requirement of the grant at UNT Dallas that each group submit a CAST proposal. Several of my fellows have never attended CAST. At the meeting on Monday March 18th, I will be walking them through how to write a CAST proposal and will help them with the process and give them feedback prior to submitting it.
- Research informing their projects:

  It is necessary that their proposals should be informed by relevant research and will be working with each group to incorporate research that informs their project by adding it to their Wix portfolios.
- Projects presented at the Annual Wipro dinner on June 4th.
- I will also work with the DSCs to complete the NCST STEM Teacher Certification.
- I will work with the DSCs on their articles/ reports on their school projects and also on framing the requirements for the projects dealing with the new science TEKS I want to fund in 2024-25.

Vignettes

Mr. Steven Harmon, New Wipro Fellow (2023-24) DeSoto ISD

As the middle child and first-born son with five siblings in a military household, my experiences as a child of a Navy Pilot from the east coast in New York, the west coast in San Francisco, to the Southwest here in the Dallas / Fort Worth area have provided me personal experiences with diverse cultures that makes me who I am today. Maximizing our education was the expectation, respect for others the norm, interacting with the outdoor world around us from growing a family garden, building model airplanes, engaging in sports and fun with family molded me into the compassionate educator, father, and grandfather I am today.

I am a graduate of Texas Wesleyan University with a Bachelor of Education with a Reading Specialization and eventual master's in educational leadership from Texas Woman's University. I was able to earn my first classroom experience as a 6th Grade Teacher in Arlington ISD. I ventured into educational leadership for five years. I learned as a potential change agent my Principalship changed me taking me away from that which I value most… my family. I then returned to my calling and passion for the past seventeen years in the classroom in Desoto ISD. I have served two campuses in multiple roles in 5th Grade Departmental Science, 4th Grade Departmental Math / Science, and as an I-STEAM educator in a fourth / 5th Grade blended math/science classroom for period of three years. Currently, a 5th Grade Science teacher, the norm continues to be every day is a challenge and every day is an opportunity to change, touch, and influence young lives.

WIPRO is a shared opportunity with an amazing fellowship of facilitators of thinking. It is much like making the all-star team in baseball. We are a team of expert educators who use our individual talents, skills, and passion to fulfill our respective purpose in the learning communities we serve. Our common bond is building young minds through experiences beyond the classroom. I look forward to my opportunity in a long-lasting fellowship with the WIPRO community and hope to do my part as a return exponentially. It is our vision to build our campus garden into a community garden that belongs to the student community and more importantly The Meadows Community. The seeds of growth expand to our students, their families, and the families of our community…our garden "a place to grow, learn, share, and be edified."

Sherry Thompson, C3 Fellow, currently working on the Irving ISD project (2023-2024)

My name is Sherry Thompson, and I am a native of Jeanerette, Louisiana. Currently I reside in Irving, TX. I obtained a Bachelor of Science with a concentration in Kinesiology in addition to a Master of Education with a concentration in Educational Leadership from the University of Louisiana at Lafayette. I have been in public education for 18 years, two of which I have served as an Academic Specialist. During my years as an educator, I have been afforded the opportunity to serve as district teacher of the year for Irving ISD in 2020. Additionally, in 2019 I completed the Irving ISD LEAP program and became a Wipro fellow. "The best part of teaching is seeing students' reactions when they discover something new and make real life connections. The excitement they get from learning is priceless!"

As a Wipro Fellow, I have grown so much as an educator. Wipro has provided professional development that is essential for ensuring science content is meeting and exceeding the needs of our scholars. Since being a fellow, I have been supported by colleagues while working in vertically and horizontally aligned teams. Through team collaboration, I have learned new ways to incorporate project-based learning with my students. As a result, I have presented research-based pedagogy strategies at CAST and the Southwest Dallas Collaborative Conference. The exposure of STEM projects has also fueled my passion for encouraging other young scholars to delve deeper into all thing's science related. Because of Wipro, materials have been provided for my students to engage and explore their hypotheses of various experiments. They have learned a new way of thinking that will only elevate throughout their educational career. I believe that being a Wipro fellow is the gift that keeps on giving! A big thanks goes to Dr. Ratna Narayan, Mr. Chris Dazer, and Dr. Arthur Eisenkraft for providing me with the opportunity of a lifetime to be a Wipro Fellow.

Calendar

Monday March 18th 5:30 – 7 pm via zoom
Monday April 15th 5:30 pm- 8:30 pm FH 138AB, Face to face Wipro meeting
I am planning to meet with each participating group via zoom or in person at their convenience on their campus.
Tuesday June 4th 5:30-8:30 pm Annual Wipro Dinner and Meeting, Campus Hall, UNT Dallas.

See Following Pages for

- **Monthly Evaluation Updates**
- **Mid-Year Survey 2024 Response Summary**

ANNE GURNEE
CONSULTING, LLC

Wipro Science Education Fellowship
Evaluation Update
January 2024

Activities this Month

- Administered the mid-year survey administered January 16-29, 2024.
- Began analysis of mid-year survey data and produced a presentation of initial results for IHE Leadership meeting in Dallas, February 2-4, 2024.

What's Next?

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

- Producing a report with mid-year survey results (submitted by February 15, 2024).
- Finalizing the IRB for remaining Wipro SEF Innovation project work.
- Planning for year-end evaluation activities including: year-end survey, year-end interviews, DSC leadership meeting surveys, and any additional site visits.
- Continuing to work with Brooke/Clemson team as needed for research project.
- Participating in any scheduled/needed meetings for the project and/or research.

ANNE GURNEE
CONSULTING, LLC

Wipro Science Education Fellowship
Evaluation Update
February 2024

Activities this Month

- Participated in the IHE Leadership meeting in Dallas, February 2-4, 2024. Presented initial findings from the mid-year survey. Provided meeting feedback to project leadership after the meeting.
- Continued analysis of mid-year survey data and will submit a final report by early March 2024.
- Participated in monthly Wipro call on February 20, 2024.

What's Next?

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

- Producing a report with mid-year survey results (submitted by March 8, 2024).
- Planning for year-end evaluation activities including: year-end survey, year-end interviews, DSC leadership meeting surveys, and any additional site visits.
- Continuing the completion of the IRB for remaining Wipro SEF Innovation project work.
- Working with Brooke/Clemson team as needed for research project.
- Participating in any scheduled/needed meetings for the project and/or research.

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Wipro Science Education Fellowship

Evaluation Update

March 2024

Activities this Month

- Continued to prepare for year-end evaluation activities including interviews with IHE leads, DSCs and select administrators.
- Submitted mid-year report on March 18, 2024.
- Participated in monthly Wipro call on March 19, 2024.
- Revised year-end survey for Fellows and DSCs. Submitted draft for review on March 28, 2024.
- Reviewed chapter 5 of Wipro SEF book and suggested possible quotes for addition.

What's Next?

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

- Continuing to plan year-end evaluation activities including year-end survey and interviews with key stakeholders.
- Supporting the book project as needed.
- Participating in any scheduled/needed meetings for the project and/or research.

Science Education Fellowship

Mid-Year Survey 2024
Fellows & District Science Coordinators
Response Summary
3.18.24

Introduction

This report summarizes the responses from the recent mid-year survey sent by Anne Gurnee Consulting, LLC (AGC) to all active Fellows and District Science Coordinators in the Wipro Science Education Fellowship. The 104 participants responding of 162 invited worked through the survey January 16-29, 2024. Those invited to participate were all those identified as active Fellows and District Science Coordinators in the program in 2023-2024.

During this Innovation phase, each site is modifying the original program design in order to meet the needs of the universities and their partner districts. Because of this, the sites are no longer as comparable as they were during the original phases of work when all were following a very similar program format. As a result, this report presents each state individually to consider how the program is continuing to impact participants in each state. The comments can also provide guidance on how the site-specific and programmatic elements can be strengthened. The different sites can also learn from each other through the respondents' comments and insights.

Another important consideration is the length of time that participants responding have been involved in the program. Some responding are new to the program this year and others have been involved for five or more years. Each site should take this into consideration as they consider their state's data presented here.

There are two distinct through-lines that the evaluation will be continuing to investigate going forward: 1) the continued impact of the program on the development of teacher leadership; and 2) evidence of district transformation as a result of the program's long-lasting relationships with the partner districts. Since the data included here is intended to offer a mid-year snapshot of program effectiveness and impact, concluding thoughts and recommendations will not be included here but at the end of the academic year in the final evaluation report.

Notable Findings

Overall

- Fellows are most interested in learning more about finding new leadership roles and interacting with other teachers effectively.
- DSCs are most interested in learning more about advocating for teacher leadership in their schools/districts and writing professional articles

California

- More than two-thirds (67%) of California Fellows are beginning to consider themselves leaders because of participating in Wipro SEF
- The most frequent teacher leadership behaviors California Fellows have engaged in since the beginning of the school year are providing guidance to other teachers who asked for or needed support and working collaboratively with other teachers and administrators to solve a school problem.
- The least frequent teacher leadership behaviors California Fellows have engaged in since the beginning of the school year are leading professional development opportunities for other teachers in the district and assuming leadership roles in the district.
- All California Fellows (100%) strongly agree that teachers have a role to play in school change and all strongly agree or agree that teachers have a role to play in district change.
- Two-thirds of California Fellows (63%) agree or feel neutral that they do not know how to contribute to district change.

Florida

- Two of four responding Florida Fellows are beginning to consider themselves leaders because of participating in Wipro SEF, and the other two considered themselves leaders before participating in Wipro SEF.
- The most frequent teacher leadership behaviors Florida Fellows have engaged in since the beginning of the school year are providing guidance to other teachers who asked for or needed support and engaging in discussions with other teachers in their school/district about how to teach a particular concept.
- The least frequent teacher leadership behaviors Florida Fellows have engaged in since the beginning of the school year are leading professional development opportunities for other teachers in their school and/or district.
- All four Florida Fellows agree or strongly agree that teachers have a role to play in school change, can help lead school change and that positive change is possible for their school. They feel slightly less positive about district change.
- Two Florida Fellows agree that they do not know how to contribute to district change.

Missouri

- More than half (59%) of Missouri Fellows considered themselves teacher leaders before participating in Wipro SEF.
- The most frequent teacher leadership behaviors Missouri Fellows have engaged in since the beginning of the school year are providing guidance to other teachers who asked for or needed support and taking action to increase the success of all students at their school.
- The least frequent teacher leadership behaviors Missouri Fellows have engaged in since the beginning of the school year are leading professional development opportunities for other teachers in the district and visiting another teacher's classroom in their school or district to observe his/her teaching.
- All Missouri Fellows (100%) agree or strongly agree that teachers have a role to play in school change. About three-quarters of Missouri Fellows (77%) agreed or strongly agreed with all the statements about teachers' roles in district change.
- Less than a fifth of Missouri Fellows (18%) agree that they do not know how to contribute to district change.

New Jersey

- Just under half (46%) of New Jersey Fellows are beginning to consider themselves leaders because of participating in Wipro SEF. The same percentage considered themselves teacher leaders before participating in Wipro SEF.
- The most frequent teacher leadership behaviors New Jersey Fellows have engaged in since the beginning of the school year are providing guidance to other teachers who asked for or needed support and taking action to increase the success of all students at their school.
- The least frequent teacher leadership behaviors New Jersey Fellows have engaged in since the beginning of the school year are leading professional development opportunities for other teachers in their school and/or district.
- All New Jersey Fellows (100%) agree or strongly agree that teachers have a role to play in school change, can help lead school change and that positive change is possible for their schools. Regarding district change, New Jersey Fellows agreed most strongly that teacher have a role to play in district change.
- A small number of New Jersey Fellows (16%) agree or strongly agree that they do not know how to contribute to district change.

New York

- Over two-thirds (69%) of New York Fellows considered themselves teacher leaders before participating in Wipro SEF.
- The most frequent teacher leadership behaviors New York Fellows have engaged in since the beginning of the school year are providing guidance to other teachers who asked for or needed support and taking action to increase the success of all students at their school.
- The least frequent teacher leadership behaviors New York Fellows have engaged in since the beginning of the school year are leading professional development opportunities for other teachers in their district and assuming leadership roles in the district.
- Almost all New York Fellows (93%) agree or strongly agree that teachers have a role to play in school change and that teachers can help lead school change. About three-quarters (71%) agree or strongly agree that teachers can help lead district change.
- Almost a quarter of New York Fellows (23%) agree or strongly agree that they do not know how to contribute to district change.

Texas

- Two-thirds (67%) of Texas Fellows considered themselves teacher leaders before participating in Wipro SEF.
- The most frequent teacher leadership behaviors Texas Fellows have engaged in since the beginning of the school year are providing guidance to other teachers who asked for or needed support and taking action to increase the success of all students at their school.
- The least frequent teacher leadership behaviors Texas Fellows have engaged in since the beginning of the school year are leading professional development opportunities for other teachers in their district and assuming leadership roles in the district.
- Over 90% of Texas Fellows agree or strongly agree that teachers have a role to play in school change, that teachers can help lead school change, that positive school change is possible for their school and that school change is an important goal for every teacher. Regarding district change, 92% agree or strongly agree that teacher have a role to play in district change.
- Just under half of Texas Fellows (42%) agree or strongly agree that they do not know how to contribute to district change.

Leadership Topic Interests

The mid-year survey asked Fellows and DSCs about leadership topics of interest for them currently. (See Tables 1 and 2.) The Fellows top interests were in finding new leadership roles and interacting with other teachers effectively. The DSCs top interests were advocating for teacher leadership in their schools/districts and writing professional articles.

Table 1. Fellows Mid-Year 2024: Overall Leadership Topic Interests (n=85)

Topics	*Overall (n=85)*	*CA (n=5)*	*FL (n=4)*	*MO (n=17)*	*NJ (n=21)*	*NY (n=13)*	*TX (n=25)*
Finding new leadership roles	34%	60%	25%	35%	38%	38%	24%
Interacting with other teacher leaders effectively	32%	40%	75%	24%	43%	38%	16%
Presenting at conferences	29%	40%	75%	18%	24%	15%	40%
Advocating for teacher leadership in your school/district	29%	20%	25%	29%	33%	15%	36%
Giving feedback	26%	-	25%	35%	38%	23%	16%
Writing professional articles	26%	40%	75%	6%	24%	31%	28%
Preparing professional presentations	24%	20%	25%	-	10%	46%	40%
Conducting research in my classroom/school	21%	40%	25%	24%	14%	23%	20%
Professional presentation skills	20%	20%	25%	6%	10%	8%	44%
Working with teams	19%	20%	-	18%	24%	23%	16%
Leading from the classroom	19%	20%	-	24%	19%	15%	20%
Leading teams	16%	20%	-	18%	5%	8%	32%
Using/interpreting research	15%	20%	-	-	29%	8%	20%
Receiving feedback	13%	20%	-	18%	10%	8%	16%
Asking for feedback	11%	20%	-	24%	10%	8%	4%

Table 2. DSCs Mid-Year 2024: Overall Leadership Topic Interests (n=19)

Topics	*Overall (n=19)*	*CA (n=2)*	*FL (n=2)*	*MO (n=3)*	*NJ (n=6)*	*NY (n=2)*	*TX (n=4)*
Advocating for teacher leadership in your school/district	58% (11)	2	1	2	3	1	2
Writing professional articles	53% (10)	1	1	-	4	2	2
Leading teams	37% (7)	1	1	1	2	-	2
Finding new leadership roles	37% (7)	1	2	-	2	1	1
Interacting with other teacher leaders effectively	32% (6)	1	-	2	3	-	-
Presenting at conferences	26% (5)	1	-	-	3	1	-
Giving feedback	21% (4)	-	1	1	2	-	-
Preparing professional presentations	16% (3)	-	-	1	2	-	-
Using/interpreting research	16% (3)	-	-	-	3	-	-
Conducting research in my classroom/school	16% (3)	-	-	-	3	-	-
Professional presentation skills	11% (2)	-	-	1	1	-	-
Working with teams	5% (1)	-	-	1	-	-	-
Leading from the classroom	5% (1)	-	-	1	-	-	-
Receiving feedback	-	-	-	-	-	-	-
Asking for feedback	-	-	-	-	-	-	-

California Responses

California: Respondent Demographics

Table 3. California Respondents Mid-Year 2024: Wipro Connection, Grade Level & Years Teaching (n=8)

		CA (n=8)
Wipro Connection	New Fellows (Began 2022 or later)	6/6 (100%)
	Returning Fellows (Began prior to 2022)	-
Wipro Connection (DSC)	New District Science Coordinators	-
	Returning District Science Coordinators	2/2 (100%)
Fellows' Grade Level	K-2	-
	3-5	50%
	6-8	50%
	9-12	-
	Other	-
Fellows' Years Teaching	0-2 yrs	-
	3-5 yrs	17%
	6-10 yrs	33%
	11-15 yrs	-
	16-20 yrs	17%
	21-25 yrs	17%
	26-30 yrs	-
	31+ yrs	17%

Table 4. California Respondents Mid-Year 2024: Gender and Race/Ethnicity Demographics (n=8)

		CA
Gender	Woman	6 (75%)
	Man	2 (25%)
	Genderqueer or Non-binary	-
	No Response	-
Race/Ethnicity	White	6 (75%)
	Asian	1 (12%)
	Multiracial or Multiethnic	1 (12%)
	Black or African American	-
	Hispanic or Latino	-
	Middle Eastern or North African	-
	Native American or Alaska Native	-
	Native Hawaiian or other Pacific Islander	-
	Another race or ethnicity, please describe below	-
	No Response	-

Table 5. California Respondents Mid-Year 2024: District Breakdown (n=8)

District	Respondents
San Francisco Unified	4 (50%)
Moreland	2 (25%)
Mountain View Whisman	2 (25%)
Campbell Union	-
San Jose Unified	-

California: Program Logistics

Table 6. California Fellows & DSCs Mid-Year 2024: Program Logistics (n=8)

	Strongly disagree	*Disagree*	*Neutral*	*Agree*	*Strongly agree*	*NA*	*Weighted average*
The program is well-organized	13%	-	-	25%	63%	-	4.25
Communication about the program is clear	13%	-	-	25%	63%	-	4.25
I am clear on what is expected of me for Wipro SEF this year	13%	-	-	25%	50%	13%	4.14
I am able to get the help I need for my Wipro SEF work	13%	-	-	25%	50%	13%	4.14
Meetings are constructive	13%	-	13%	13%	63%	-	4.12

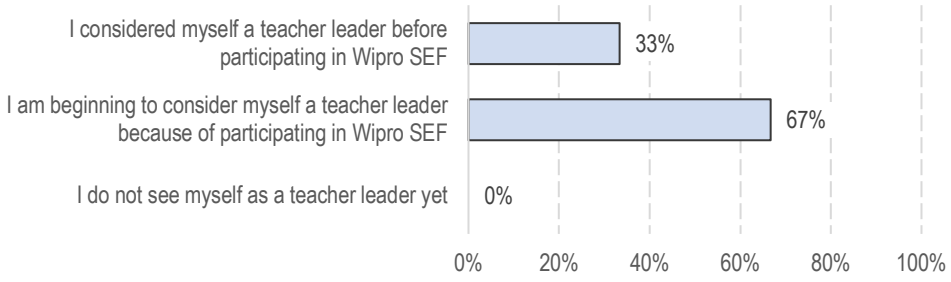
California: Leadership Learning

Table 7. California Fellows Mid-Year 2024: Leadership Learning (n=6)

	Strongly disagree	*Disagree*	*Neutral*	*Agree*	*Strongly agree*	*Weighted average*
Wipro SEF has provided opportunities to discuss ways to positively change our schools/districts	17%	-	-	50%	33%	3.83
I am learning how to improve my leadership	17%	-	17%	33%	33%	3.67
I am learning leadership skills that I can use regularly	17%	-	17%	33%	33%	3.67
I am learning how teachers can affect change in our schools	17%	-	-	67%	17%	3.67
I am learning how teachers can affect change in our districts	17%	-	50%	17%	17%	3.17

California: Leadership Self-Concept

Chart 1. California Fellows Mid-Year 2024: Leadership Self-Concept (n=6)



California: Teacher Leadership Behaviors

Table 8. California Fellows Mid-Year 2024: Teacher Leadership Behavior Frequency Since Beginning of School Year (n=6)

	Never	*Rarely (1-2 times)*	*Sometimes (3-4 times)*	*Often (1-2 times/week)*	*Almost Every Day*	*Weighted Average*
Provide guidance to other teachers who asked for or needed support	-	-	17%	67%	17%	4.00
Work collaboratively with other teachers and administrators to solve a school problem	-	17%	17%	17%	50%	4.00
Take action to increase the success of all students at my school	-	17%	-	67%	17%	3.83
Work with other teachers in my school/district to prepare instructional materials	-	-	33%	50%	17%	3.83
Invite other teachers to observe my classroom and teaching	-	17%	17%	50%	17%	3.67
Engage in discussions with other teachers in my school/district about how to teach a particular concept	-	17%	17%	50%	17%	3.67
Assume leadership roles at my school	-	17%	33%	50%	-	3.33
Visit another teacher's classroom in my school or district to observe his/her teaching	-	33%	17%	33%	17%	3.33
Work collaboratively with other teachers and administrators to solve a district problem	17%	17%	33%	33%	-	2.83
Review research to inform my teaching practices	33%	-	33%	33%	-	2.67
Lead professional development opportunities for other teachers at my school	33%	-	50%	17%	-	2.50
Lead professional development opportunities for other teachers in the district	33%	33%	33%	-	-	2.00
Assume leadership roles in the district	33%	50%	17%	-	-	1.83

California: School Change Attitudes

Table 9. California Fellows Mid-Year 2024: School Change Attitudes (n=6)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Weighted average
Teachers have a role to play in school change	-	-	-	-	100%	5.00
Teachers can help lead school change	-	-	17%	17%	67%	4.50
Positive school change is possible for my school	-	-	17%	33%	50%	4.33
School change is an important goal for every teacher	-	-	33%	33%	33%	4.00

California: District Change Attitudes

Table 10. California Fellows Mid-Year 2024: District Change Attitudes (n=6)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Weighted average
Teachers have a role to play in district change	-	-	-	17%	83%	4.83
District change is an important goal for every teacher	-	17%	-	17%	67%	4.33
Teachers can help lead district change	-	17%	-	33%	50%	4.17
Positive district change is possible for my district	-	33%	-	50%	17%	3.50

California: District Change Behaviors

Table 11. California Fellows Mid-Year 2024: District Change Behaviors (n=6)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Weighted average
I am actively engaged in helping to improve my school	-	-	-	67%	33%	4.33
I am actively engaged in helping to improve my district	-	-	33%	33%	33%	4.00
I am aware of the top goals of my district	-	17%	-	67%	17%	3.83
I do not know how to contribute to district change	17%	17%	33%	33%	-	2.83

California: Key Learnings

What are some of your key takeaways or core learnings so far this school year from the Wipro SEF program?

DSCs	The focus has been expanding science instruction using the district curriculum. It's been great working with our elementary Wipro Fellows to develop trainings.
	I really appreciate the flexibility in the program - ensuring that the meetings are addressing the interests and needs of the SEFs, but also constantly moving towards increasing capacity as Science leaders.
Fellows	1. Leadership can be defined, processed and ignited. 2. School Project can and does enhance engagement from fellow colleagues, students and the school community at large.
	Aside from working on the GPS, I really appreciated the viewpoint of how the ELL program started in California and the history behind it, which I did not previously know. The strategies to include MLL's now were helpful.
	I've learned how to teach science in a more effective way, and I've learned how to be a teacher leader when I don't have a leadership role.
	Leadership can be shown in different ways. Being open minded is very important.
	How to help meet the needs of my students.

California: Hopes for Change

What kind of change would you most like to see happen in your school and/or district?

DSCs	Increased science instruction in elementary grades.
	We need to find better ways to support new teachers and find alternative ways to move teachers quickly on our pay scale - more CEUs, support for National Board Certification, etc. We need to better define pathways that lead to higher pay and increased responsibility from the classroom. And, we need to have ways to reward leadership that is not always defined in our contract.
Fellows	At my school site, our principal advocates leadership. For the core of veteran leaders at our school site, igniting the next generation is essential to continue our school's mission. For the school district, I am stumped. Up until our last Superintendent, leadership would engage with school sites, be present and active. Our new Superintendent, is trying but this year not the visual presence. Along with our school communities, no presence of Supervisors or the Mayor. Under Willie Brown, and Gavin Newsom and Mayor Lee, visible and present at school sites. The connection to the city representation for our students, as well as our school community sets the stage that education is important!
	SFUSD needs to get their act together from the top. Admin need to make teacher lives easier, get EMPOWER to work and thus pay teachers accurately, and ultimately be fiscally responsible and not waste money with unnecessary initiatives and programs or contracts with vendors.
	A lot of the changes I want to see relate to giving more as agency to the teachers, and reducing workload.
	Not so much turnover/ more support for new teachers.
	I would like a change in direction. I feel that the district is focusing on the wrong things and that trickles down to the schools.

California: Other Thoughts

Fellows	The program created the culture for more! What does that mean, I want to learn more and apply what I have learned to my school as well as the district.
	Wipro has been the best professional development I've participated in!

Florida Responses

Florida: Respondent Demographics

Table 12. Florida Respondents Mid-Year 2024: Wipro Connection, Grade Level & Years Teaching (n=6)

		FL (n=6)
Wipro Connection	New Fellows (Began 2022 or later)	-
	Returning Fellows (Began prior to 2022)	4/4 (100%)
Wipro Connection (DSC)	New District Science Coordinators	1/2 (50%)
	Returning District Science Coordinators	1/2 (50%)
Fellows' Grade Level	K-2	25%
	3-5	25%
	6-8	-
	9-12	75%
	Other	-
Fellows' Years Teaching	0-2 yrs	-
	3-5 yrs	-
	6-10 yrs	25%
	11-15 yrs	75%
	16-20 yrs	-
	21-25 yrs	-
	26-30 yrs	-
	31+ yrs	-

Table 13. Florida Respondents Mid-Year 2024: Gender and Race/Ethnicity Demographics (n=6)

		FL
Gender	Woman	6 (100%)
	Man	-
	Genderqueer or Non-binary	-
	No Response	-
Race/Ethnicity	White	6 (100%)
	Asian	-
	Black or African American	-
	Hispanic or Latino	-
	Middle Eastern or North African	-
	Multiracial or Multiethnic	-
	Native American or Alaska Native	-
	Native Hawaiian or other Pacific Islander	-
	Another race or ethnicity, please describe below	-
	No Response	-

Table 14. Florida Respondents Mid-Year 2024: District Breakdown (n=6)

District	Respondents
Hillsborough County	3 (50%)
Pinellas County	2 (33%)
Pasco County	1 (17%)

Florida: Program Logistics

Table 15. Florida Fellows & DSCs Mid-Year 2024: Program Logistics (n=6)

	Strongly disagree	*Disagree*	*Neutral*	*Agree*	*Strongly agree*	*NA*	*Weighted average*
I am able to get the help I need for my Wipro SEF work	-	-	-	33%	67%	-	4.67
I am clear on what is expected of me for Wipro SEF this year	-	-	-	50%	50%	-	4.50
The program is well-organized	-	-	17%	33%	50%	-	4.33
Communication about the program is clear	-	17%	-	33%	50%	-	4.17
Meetings are constructive	-	17%	-	33%	50%	-	4.17

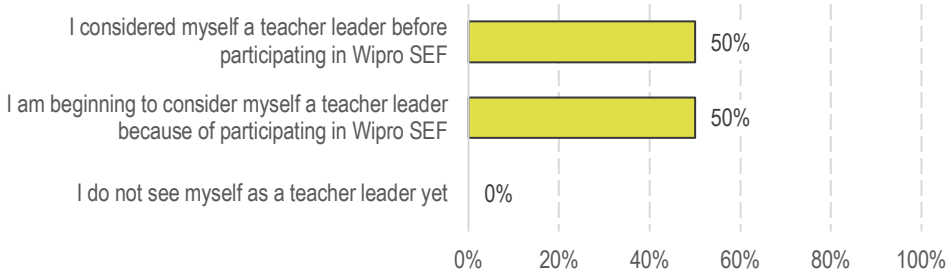
Florida: Leadership Learning

Table 16. Florida Fellows Mid-Year 2024: Leadership Learning (n=4)

	Strongly disagree	*Disagree*	*Neutral*	*Agree*	*Strongly agree*	*Weighted average*
Wipro SEF has provided opportunities to discuss ways to positively change our schools/districts	-	-	-	50%	50%	4.50
I am learning how to improve my leadership	-	-	25%	25%	50%	4.25
I am learning leadership skills that I can use regularly	-	-	-	75%	25%	4.25
I am learning how teachers can affect change in our schools	-	-	-	75%	25%	4.25
I am learning how teachers can affect change in our districts	-	-	25%	50%	25%	4.00

Florida: Leadership Self-Concept

Chart 2. Florida Fellows Mid-Year 2024: Leadership Self-Concept (n=4)



Florida: Teacher Leadership Behaviors

Table 17. Florida Fellows Mid-Year 2024: Teacher Leadership Behavior Frequency Since Beginning of School Year (n=4)

	Never	*Rarely (1-2 times)*	*Sometimes (3-4 times)*	*Often (1-2 times/week)*	*Almost Every Day*	*Weighted Average*
Provide guidance to other teachers who asked for or needed support	-	-	-	75%	25%	4.25
Engage in discussions with other teachers in my school/district about how to teach a particular concept	-	-	-	75%	25%	4.25
Take action to increase the success of all students at my school	-	-	25%	50%	25%	4.00
Assume leadership roles at my school	-	-	25%	50%	25%	4.00
Work with other teachers in my school/district to prepare instructional materials	-	-	25%	50%	25%	4.00
Work collaboratively with other teachers and administrators to solve a school problem	-	-	75%	-	25%	3.50
Visit another teacher's classroom in my school or district to observe his/her teaching	25%	-	-	50%	25%	3.50
Review research to inform my teaching practices	-	25%	25%	50%	-	3.25
Invite other teachers to observe my classroom and teaching	25%	25%	-	25%	25%	3.00
Work collaboratively with other teachers and administrators to solve a district problem	25%	-	50%	25%	-	2.75
Assume leadership roles in the district	25%	25%	25%	-	25%	2.75
Lead professional development opportunities for other teachers at my school	25%	-	75%	-	-	2.50
Lead professional development opportunities for other teachers in the district	25%	25%	25%	25%	-	2.50

Florida: School Change Attitudes

Table 18. Florida Fellows Mid-Year 2024: School Change Attitudes (n=4)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Weighted average
Positive school change is possible for my school	-	-	-	25%	75%	4.75
Teachers have a role to play in school change	-	-	-	50%	50%	4.50
Teachers can help lead school change	-	-	-	50%	50%	4.50
School change is an important goal for every teacher	-	-	75%	-	25%	3.50

Florida: District Change Attitudes

Table 19. Florida Fellows Mid-Year 2024: District Change Attitudes (n=4)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Weighted average
Positive district change is possible for my district	-	-	25%	50%	25%	4.00
Teachers have a role to play in district change	-	-	25%	50%	25%	4.00
Teachers can help lead district change	-	-	25%	50%	25%	4.00
District change is an important goal for every teacher	-	-	75%	25%	-	3.25

Florida: District Change Behaviors

Table 20. Florida Fellows Mid-Year 2024: District Change Behaviors (n=4)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Weighted average
I am actively engaged in helping to improve my school	-	-	-	25%	75%	4.75
I am aware of the top goals of my district	-	-	-	50%	50%	4.50
I am actively engaged in helping to improve my district	-	-	25%	25%	50%	4.25
I do not know how to contribute to district change	50%	-	-	50%	-	2.50

Florida: Key Learnings

What are some of your key takeaways or core learnings so far this school year from the Wipro SEF program?

DSCs	Collaboration and rich discussion/learning across K-12 with other districts grounded in research.
	The fellow's project design of the second phase of the grant is impacting more students than phase 1.
Fellows	Students can help change the way they learn, teachers must facilitate new ways of learning.
	Learning about action research and how to positively impact my school with it.
	Action Research doesn't always look like typical scientific research. Dialogic / anecdotal evidence IS DATA. What we are doing IS actual action research.

Florida: Hopes for Change

What kind of change would you most like to see happen in your school and/or district?

DSCs	Increased collaboration with other districts across all content areas.
	An increase in student engagement for science/STEM
Fellows	More student and parent involvement
	Teachers viewed more as professionals and paid for our time and effort.
	Increased trust in the experience and wisdom of effective Teacher leaders. Actually LISTEN and ACT on our recommendations for student placement in courses for science / science progression. Stop SHOVING 35 students in a science class and then wondering WHY we're not effective.

Florida: Other Thoughts

DSC	I have enjoyed being part of the Wipro fellowship in my role.
Fellow	WIPRO SEF is the most validating environment for teachers. I am a very, very busy single Mom but I make time for WIPRO SEF because it is good for my Teacher mental health! Thank you, WIPRO!

Missouri Responses

Missouri: Respondent Demographics

Table 21. Missouri Respondents Mid-Year 2024: Wipro Connection, Grade Level & Years Teaching (n=20)

		MO (n=20)
Wipro Connection	New Fellows (Began 2022 or later)	13/17 (76%)
	Returning Fellows (Began prior to 2022)	4/17 (24%)
Wipro Connection (DSC)	New District Science Coordinators	2/3 (67%)
	Returning District Science Coordinators	1/3 (33%)
Fellows' Grade Level	K-2	18%
	3-5	6%
	6-8	41%
	9-12	35%
	Other	-
Fellows' Years Teaching	0-2 yrs	-
	3-5 yrs	12%
	6-10 yrs	12%
	11-15 yrs	12%
	16-20 yrs	29%
	21-25 yrs	24%
	26-30 yrs	12%
	31+ yrs	-

Table 22. Missouri Respondents Mid-Year 2024: Gender and Race/Ethnicity Demographics (n=20)

		MO
Gender	Woman	16 (80%)
	Man	4 (20%)
	Genderqueer or Non-binary	-
	No Response	-
Race/Ethnicity	White	20 (100%)
	Asian	-
	Black or African American	-
	Hispanic or Latino	-
	Middle Eastern or North African	-
	Multiracial or Multiethnic	-
	Native American or Alaska Native	-
	Native Hawaiian or other Pacific Islander	-
	Another race or ethnicity, please describe below	-
	No Response	-

Table 23. Missouri Respondents Mid-Year 2024: District Breakdown (n=20)

District	Respondents
Columbia	9 (45%)
Boonville	6 (30%)
Hallsville	5 (25%)
Community SD	-
Eldon	-
Fulton	-
Jefferson City	-
Maries R-II	-

Missouri: Program Logistics

Table 24. Missouri Fellows & DSCs Mid-Year 2024: Program Logistics (n=20)

	Strongly disagree	*Disagree*	*Neutral*	*Agree*	*Strongly agree*	*NA*	*Weighted average*
I am able to get the help I need for my Wipro SEF work	-	-	10%	65%	20%	5%	4.11
Meetings are constructive	-	5%	45%	40%	10%	-	3.55
The program is well-organized	-	15%	30%	45%	10%	-	3.50
Communication about the program is clear	5%	20%	25%	45%	5%	-	3.25
I am clear on what is expected of me for Wipro SEF this year	5%	25%	25%	40%	5%	-	3.15

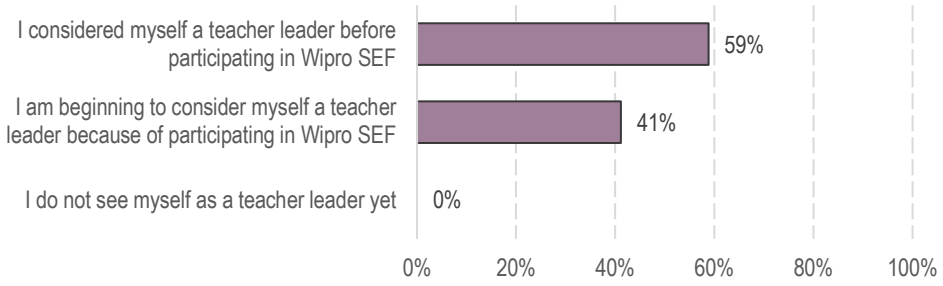
Missouri: Leadership Learning

Table 25. Missouri Fellows Mid-Year 2024: Leadership Learning (n=17)

	Strongly disagree	*Disagree*	*Neutral*	*Agree*	*Strongly agree*	*Weighted average*
Wipro SEF has provided opportunities to discuss ways to positively change our schools/districts	-	-	12%	71%	18%	4.06
I am learning how teachers can affect change in our schools	-	12%	6%	76%	6%	3.76
I am learning how to improve my leadership	-	6%	18%	76%	-	3.71
I am learning leadership skills that I can use regularly	-	12%	12%	71%	6%	3.71
I am learning how teachers can affect change in our districts	-	12%	24%	65%	-	3.53

Missouri: Leadership Self-Concept

Chart 3. Missouri Fellows Mid-Year 2024: Leadership Self-Concept (n=17)



Missouri: Teacher Leadership Behaviors

Table 26. Missouri Fellows Mid-Year 2024: Teacher Leadership Behavior Frequency Since Beginning of School Year (n=17)

	Never	*Rarely (1-2 times)*	*Sometimes (3-4 times)*	*Often (1-2 times/week)*	*Almost Every Day*	*Weighted Average*
Provide guidance to other teachers who asked for or needed support	-	-	41%	41%	18%	3.76
Take action to increase the success of all students at my school	-	6%	41%	41%	12%	3.59
Engage in discussions with other teachers in my school/district about how to teach a particular concept	-	12%	29%	47%	12%	3.59
Work with other teachers in my school/district to prepare instructional materials	-	12%	41%	29%	18%	3.53
Work collaboratively with other teachers and administrators to solve a school problem	-	12%	59%	29%	-	3.18
Assume leadership roles at my school	-	18%	59%	18%	6%	3.12
Review research to inform my teaching practices	6%	41%	47%	6%	-	2.53
Invite other teachers to observe my classroom and teaching	12%	41%	41%	6%	-	2.41
Lead professional development opportunities for other teachers at my school	19%	31%	50%	-	-	2.31
Work collaboratively with other teachers and administrators to solve a district problem	6%	59%	35%	-	-	2.29
Assume leadership roles in the district	35%	29%	29%	-	6%	2.12
Visit another teacher's classroom in my school or district to observe his/her teaching	29%	47%	24%	-	-	1.94
Lead professional development opportunities for other teachers in the district	41%	35%	24%	-	-	1.82

Missouri: School Change Attitudes

Table 27. Missouri Fellows Mid-Year 2024: School Change Attitudes (n=17)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Weighted average
Teachers have a role to play in school change	-	-	-	65%	35%	4.35
Positive school change is possible for my school	-	-	12%	65%	24%	4.12
School change is an important goal for every teacher	-	-	12%	65%	24%	4.12
Teachers can help lead school change	-	-	12%	65%	24%	4.12

Missouri: District Change Attitudes

Table 28. Missouri Fellows Mid-Year 2024: District Change Attitudes (n=17)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Weighted average
Positive district change is possible for my district	-	-	24%	65%	12%	3.88
District change is an important goal for every teacher	-	-	24%	65%	12%	3.88
Teachers have a role to play in district change	-	6%	18%	65%	12%	3.82
Teachers can help lead district change	-	6%	18%	71%	6%	3.76

Missouri: District Change Behaviors

Table 29. Missouri Fellows Mid-Year 2024: District Change Behaviors (n=17)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Weighted average
I am actively engaged in helping to improve my school	-	-	-	82%	18%	4.18
I am aware of the top goals of my district	-	6%	18%	53%	24%	3.94
I am actively engaged in helping to improve my district	-	-	29%	65%	6%	3.76
I do not know how to contribute to district change	24%	41%	18%	18%	-	2.29

Missouri: Key Learnings

What are some of your key takeaways or core learnings so far this school year from the Wipro SEF program?

DSCs	Collaboration is key
Fellows	How graphing is used throughout our schools k-12 program. Professional meetings are useful to build relationships within and outside my district.
	Gathering a deeper understanding of how to effectively integrate math and science together.
	How to incorporate science practice standards into my math classroom.
	Collaboration in a vertical alignment can be effective. Using similar vocabulary when instructing is important.
	Volunteering to lead PD for other teachers helps me in my own growth
	The biggest benefit this year has been the vertical alignment when looking at topics k-12 and seeing how they progress from elementary to high school.
	Lesson Plan structure. Math ideas to incorporate into my science class.
	Working on a project incorporating both science and math in same lesson plan.
	Working closely with other teachers in our district to plan math/science lessons

Missouri: Hopes for Change

What kind of change would you most like to see happen in your school and/or district?

DSCs	More collaboration between our Math and science departments
Fellows	Increased rigor at the middle school math level
	Consistent support from admin. I feel students will thrive in an environment that where there is common expectations and consequences. Currently I feel students do not understand the impact of their actions.
	Have more collaboration time between science and math teachers.
	Moving forward with transparency. This seems to be a struggle for our district.
	More attention on research-based instructional strategies specific to science. Our science coordinator has a wealth of knowledge and has been trying to get teachers excited about implementing his ideas, but the district hasn't really given us enough PD time to do them well. The district goals feel like they are lacking anything about the quality of instruction (it's mostly aimed at attendance and just passing classes/state assessments). So when I say that I'd like more information on additional leadership roles, I guess I'm thinking about how to implement change on a district level regarding these goals.
	The change I would like to see most in the school and district is discipline. Students seem to think they can get away with things that used to not be tolerated.
	More collaboration and a more positive culture. More positive support from the admin.
	All good as far as now.
	More time for vertical teaming K-12

Missouri: Other Thoughts

DSC	Huge ask of time for coordinators. Meeting**s** need to be more timely and organized.
Fellows	Thank you for the opportunities to learn from each other and the program coordinators/facilitators.
	I feel the Wipro Program could be extremely beneficial in teaching teachers how to integrate math and science. I would like to see more of a focus on the curriculum development and having the math and science teacher construct a unit that integrate Math and science throughout. This could be something that those teachers could then using many years to come.

New Jersey Responses

New Jersey: Respondent Demographics

Table 30. New Jersey Respondents Mid-Year 2024: Wipro Connection, Grade Level & Years Teaching (n=28)

		NJ (n=28)
Wipro Connection	New Fellows (Began 2022 or later)	16/22 (73%)
	Returning Fellows (Began prior to 2022)	6/22 (27%)
Wipro Connection (DSC)	New District Science Coordinators	3/6 (50%)
	Returning District Science Coordinators	3/6 (50%)
Fellows' Grade Level**	K-2	14%
	3-5	32%
	6-8	41%
	9-12	32%
	Other	9%
Fellows' Years Teaching	0-2 yrs	5%
	3-5 yrs	9%
	6-10 yrs	14%
	11-15 yrs	14%
	16-20 yrs	23%
	21-25 yrs	18%
	26-30 yrs	9%
	31+ yrs	9%

**Grade levels sum to more than 100% where teachers work across multiple grade bands.

Table 31. New Jersey Respondents Mid-Year 2024: Gender and Race/Ethnicity Demographics (n=28)

		NJ
Gender	Woman	21 (75%)
	Man	6 (21%)
	Genderqueer or Non-binary	1 (4%)
	No Response	-
Race/Ethnicity	White	24 (86%)
	Hispanic or Latino	2 (7%)
	Asian	1 (4%)
	Another race or ethnicity, please describe below	1 (4%)
	Black or African American	-
	Middle Eastern or North African	-
	Multiracial or Multiethnic	-
	Native American or Alaska Native	-
	Native Hawaiian or other Pacific Islander	-
	No Response	-

Table 32. New Jersey Respondents Mid-Year 2024: District Breakdown (n=28)

District	Respondents
Clifton	6 (21%)
Kearny	6 (21%)
Hawthorne	5 (18%)
Pascack Valley	5 (18%)
Bloomfield	2 (7%)
Paramus	2 (7%)
Montclair	1 (4%)
Other	1 (4%)
Teaneck	-

New Jersey: Program Logistics

Table 33. New Jersey Fellows & DSCs Mid-Year 2024: Program Logistics (n=28)

	Strongly disagree	*Disagree*	*Neutral*	*Agree*	*Strongly agree*	*NA*	*Weighted average*
I am able to get the help I need for my Wipro SEF work	-	4%	7%	18%	61%	11%	4.52
The program is well-organized	-	4%	4%	32%	61%	-	4.50
Communication about the program is clear	-	4%	-	39%	57%	-	4.50
Meetings are constructive	-	4%	4%	32%	61%	-	4.50
I am clear on what is expected of me for Wipro SEF this year	-	4%	18%	25%	54%	-	4.29

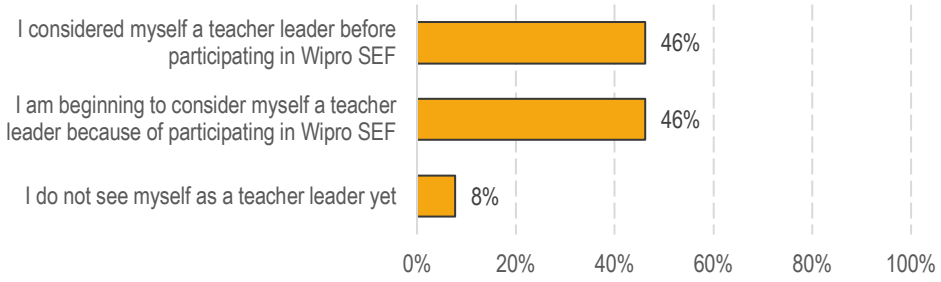
New Jersey: Leadership Learning

Table 34. New Jersey Fellows Mid-Year 2024: Leadership Learning (n=22)

	Strongly disagree	*Disagree*	*Neutral*	*Agree*	*Strongly agree*	*Weighted average*
Wipro SEF has provided opportunities to discuss ways to positively change our schools/districts	8%	-	12%	27%	54%	4.19
I am learning how teachers can affect change in our schools	8%	-	4%	46%	42%	4.15
I am learning leadership skills that I can use regularly	8%	4%	4%	38%	46%	4.12
I am learning how teachers can affect change in our districts	8%	-	4%	50%	38%	4.12
I am learning how to improve my leadership	12%	-	4%	38%	46%	4.08

New Jersey: Leadership Self-Concept

Chart 4. New Jersey Fellows Mid-Year 2024: Leadership Self-Concept (n=22)



New Jersey: Teacher Leadership Behaviors

Table 35. New Jersey Fellows Mid-Year 2024: Teacher Leadership Behavior Frequency Since Beginning of School Year (n=22)

	Never	Rarely (1-2 times)	Sometimes (3-4 times)	Often (1-2 times/week)	Almost Every Day	Weighted Average
Provide guidance to other teachers who asked for or needed support	-	4%	23%	38%	35%	4.04
Take action to increase the success of all students at my school	-	8%	31%	19%	42%	3.96
Engage in discussions with other teachers in my school/district about how to teach a particular concept	4%	12%	23%	46%	15%	3.58
Work with other teachers in my school/district to prepare instructional materials	4%	19%	23%	27%	27%	3.54
Work collaboratively with other teachers and administrators to solve a school problem	-	15%	42%	31%	12%	3.38
Assume leadership roles at my school	15%	8%	27%	23%	27%	3.38
Review research to inform my teaching practices	4%	23%	54%	8%	12%	3.00
Visit another teacher's classroom in my school or district to observe his/her teaching	12%	38%	19%	19%	12%	2.81
Work collaboratively with other teachers and administrators to solve a district problem	15%	35%	31%	8%	12%	2.65
Invite other teachers to observe my classroom and teaching	15%	42%	19%	15%	8%	2.58
Assume leadership roles in the district	33%	21%	21%	8%	17%	2.54
Lead professional development opportunities for other teachers at my school	27%	19%	46%	-	8%	2.42
Lead professional development opportunities for other teachers in the district	35%	19%	42%	-	4%	2.19

New Jersey: School Change Attitudes

Table 36. New Jersey Fellows Mid-Year 2024: School Change Attitudes (n=22)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Weighted average
Teachers have a role to play in school change	-	-	-	38%	62%	4.62
Teachers can help lead school change	-	-	-	42%	58%	4.58
Positive school change is possible for my school	-	-	-	62%	38%	4.38
School change is an important goal for every teacher	-	8%	8%	31%	54%	4.31

New Jersey: District Change Attitudes

Table 37. New Jersey Fellows Mid-Year 2024: District Change Attitudes (n=21)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Weighted average
Teachers can help lead district change	-	-	8%	52%	40%	4.32
Teachers have a role to play in district change	4%	-	-	60%	36%	4.24
Positive district change is possible for my district	-	4%	8%	52%	36%	4.20
District change is an important goal for every teacher	4%	4%	24%	44%	24%	3.80

New Jersey: District Change Behaviors

Table 38. New Jersey Fellows Mid-Year 2024: District Change Behaviors (n=21)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Weighted average
I am actively engaged in helping to improve my school	4%	-	4%	44%	48%	4.32
I am actively engaged in helping to improve my district	-	8%	29%	33%	29%	3.83
I am aware of the top goals of my district	-	20%	24%	36%	20%	3.56
I do not know how to contribute to district change	28%	24%	32%	4%	12%	2.48

New Jersey: Key Learnings

What are some of your key takeaways or core learnings so far this school year from the Wipro SEF program?

DSCs	I need to be more confident in my ability and just start doing or trying things.
	Change is a slow burn. Persevere. Support each other.
	This is my first year as a district coordinator and I have recruited 4 new teachers to participate in the program this year. I have learned that there is a lot of value to building up this program (e.g. - participating in the HCCLS & VCCLS) - it is challenging to bring in a new group of teachers and starting directly with the independent/district projects.
	Expand our social networking players within the district across various content areas through the newly created educator 2 educator Professional Learning Community. (Spreading the wings)
	Collaboration among teachers and school leaders is crucial to implementing effective math and science content to our students, as well as to making constructive changes in the school/district.
Fellows	Haven't seen enough to answer this question fully, but I have been impressed by the enthusiasm exhibited by the facilitators and participants of the program.
	Collaboration and wanting to start critical peer groups to promote change!
	Since my cohort is focusing on collaboration across districts, which is not something that is often done, I've taken away the importance of active listening and styles of communication since all places function differently. The information we've received on leadership styles and levels of leadership has been helpful as well since even in teacher leadership groups people fall into different rolls and levels in those rolls.
	My main takeaway from the Wipro program thus far is that every person in the district can make a difference if they are committed to bringing about change. Improvements do not need to come from the administration, but can begin with a grassroots approach from faculty members.
	That teachers are an important component of change.
	I'm enjoying our in house provided pd during our meetings...by the teachers, for the teachers!
	Collaboration with the appropriate individuals and establishing clear goals are essential components of implementing new initiatives and projects.
	We are working collaboratively with teachers and administrators to solve school problems.
	Collaboration
	Collaboration with other teachers and administrators is crucial to implement changes.
	Being a teacher leader is important. Helping others is vital.
	As a teacher who will be retiring at the end of the school year it is important to me that some of the positive programs I have started or been part of will continue after I am gone.
	Teachers are ready to embrace new ideologies when it comes from the district. Number string were not fully embraced until the district got on board.
	Ways in which I can help my fellow colleagues with student centered lessons and taking on a leadership role within my department.
	It is difficult to get elementary classroom teachers to be part of something like Wipro SEF.
	As a former teacher, EEO officer & prof. dev. leader in both a J-9 school & district (Ridgewood, NJ) and a Title I NYC public school, I'm so excited to see that a program like WIPRO exists. Besides bringing in the "latest pedagogy," I love the WIPRO commitment to sensitivities around "diversity."

New Jersey: Hopes for Change

What kind of change would you most like to see happen in your school and/or district?

DSCs	Positive climate, willingness to take teaching risks
	New central office leadership that values teacher leaders and utilizes their skills.
	I would like to see a stronger shift towards student-centered, 3-dimensional science instruction. While this exists in some classrooms, many teachers are still stuck in their traditional-style of instruction.
	Expand our social networking players within the district across various content areas through the newly created educator 2 educator Professional Learning Community. (Spreading the wings)
	More positive climate; increased motivation among teachers to work collaboratively; more collaboration among supervisors/district leaders to solve district issues and problems.
Fellows	More of a connection between the admins (superintendent and curriculum director) and the teachers.
	Staff all being on the same page with curriculum, dialogue and expectations that work for each building's population
	More faculty driven change and district support
	I would like to see teacher leadership expand. Right now we have one math coach (myself) and one ELA coach spread across 8 buildings that are K-6. We also visit BD, MD, and ED classrooms. This is a large caseload to take on to really make as much of an impact as I'd like.
	I would love to see our school and district be able to work more cohesively with our sending districts. This is always difficult because our HS district is regional with 2 different high schools and 4 different K-8 sending districts.
	Consistency in rules
	More positive recognition and praise instead of physical incentives.
	True collaboration Teacher wellness as a primary goal
	Communication and consistency about regulations...and the why we are doing the things we are doing
	I would like to restructure how grade-level PLCs/common planning times are conducted. I would like to see more collaboration on lesson planning.
	Addressing all the students' needs and behaviors in our classroom.
	Not have change just for the sake of having change, but having informed vision. And if there is a vision sharing it.
	Better support for minority populations
	I would like to see teachers feeling more comfortable working together and advocating for changes that are necessary.
	Happier teachers. More motivated teachers.
	Due to the increased rapport between administration and teachers we are seeing a lot of positive changes in the behavior of our students and the positivity of our staff. I truly hope that this atmosphere will continue.
	More opportunities for teachers to lead discussions about topics.
	Seeing my fellow colleagues shift the way in which they look at and implement lessons in the classroom.
	Less reliance on Chromebooks for instruction.

	#1) A school & district-wide commitment to improving science education. (Right now SB seems to be the main person plugging away!) #2) Balancing State-wide tests with "real goals" of what science education & "student learning" in general should be #3) Bringing "meta-cognition" more consciously into practices #4) Other change related to "inclusion" issues

New Jersey: Other Thoughts

DSCs	Thank you!!!!!
	Thank you for continuing this program.
	I love Wipro & I am extremely grateful to be able to continue participating in this incredible program!
	Thank you for all you have done for our teachers and district.
Fellows	Sounds like I am standing in front of a firing squad ... :-)
	It is amazing to be a part of a team of educators that all have similar goals of wanting to be a part of positive change!
	This is my first experience with WIPRO and I've gotten so much from working with teachers across other districts. I'd love to be able to further explore the benefits to students from this type of practice.
	Change is difficult, but necessary.
	I look forward to connecting with other teachers and learning as much as I can from this experience.
	It was really hard to choose only five of the items I want to learn more about. I'm also interested in: Preparing professional presentations, giving feedback, interacting with other teacher leaders, and advocating for teacher leadership
	I am grateful to Wipro and Montclair State University for their commitment and continued support of teachers.
	Wipro will be the driving force behind the advancement of science in our country. One day, we will look back and realize the role Wipro played.
	I have learned so much over the past few years and love to come to our gatherings.
	Please keep in mind that teacher/leaders are often involved in many projects beyond their classroom. Try not to ask more than we have time to give.
	I enjoy working with the WIPRO program and leaders.
	I love being part of Wipro SEF!

New York Responses

New York: Respondent Demographics

Table 39. New York Respondents Mid-Year 2024: Wipro Connection, Grade Level & Years Teaching (n=16)

		NY (n=16)
Wipro Connection	New Fellows (Began 2022 or later)	12/14 (86%)
	Returning Fellows (Began prior to 2022)	2/14 (14%)
Wipro Connection (DSC)	New District Science Coordinators	1/2 (50%)
	Returning District Science Coordinators	1/2 (50%)
Fellows' Grade Level**	K-2	57%
	3-5	79%
	6-8	-
	9-12	-
	Other	-
Fellows' Years Teaching	0-2 yrs	-
	3-5 yrs	8%
	6-10 yrs	-
	11-15 yrs	15%
	16-20 yrs	54%
	21-25 yrs	15%
	26-30 yrs	8%
	31+ yrs	-

**Grade levels sum to more than 100% where teachers work across multiple grade bands.

Table 40. New York Respondents Mid-Year 2024: Gender and Race/Ethnicity Demographics (n=16)

		NY
Gender	Woman	16 (100%)
	Man	-
	Genderqueer or Non-binary	-
	No Response	-
Race/Ethnicity	White	6 (38%)
	Hispanic or Latino	5 (31%)
	Black or African American	2 (12%)
	Asian	1 (6%)
	Multiracial or Multiethnic	1 (6%)
	No Response	1 (6%)
	Middle Eastern or North African	-
	Native American or Alaska Native	-
	Native Hawaiian or other Pacific Islander	-
	Another race or ethnicity, please describe below	-

Table 41. New York Respondents Mid-Year 2024: District Breakdown (n=16)

District	Respondents
New Rochelle	10 (63%)
Port Chester	4 (25%)
White Plains	2 (13%)
East Ramapo	-
Tarrytown	-

New York: Program Logistics

Table 42. New York Fellows & DSCs Mid-Year 2024: Program Logistics (n=16)

	Strongly disagree	*Disagree*	*Neutral*	*Agree*	*Strongly agree*	*NA*	*Weighted average*
Meetings are constructive	6%	-	-	25%	69%	-	4.50
I am able to get the help I need for my Wipro SEF work	6%	-	-	25%	63%	6%	4.47
The program is well-organized	6%	-	-	31%	63%	-	4.44
Communication about the program is clear	6%	-	6%	38%	50%	-	4.25
I am clear on what is expected of me for Wipro SEF this year	6%	6%	6%	25%	50%	6%	4.13

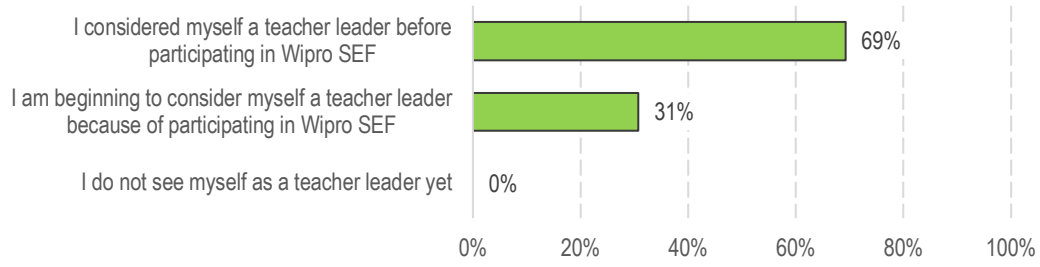
New York: Leadership Learning

Table 43. New York Fellows Mid-Year 2024: Leadership Learning (n=13)

	Strongly disagree	*Disagree*	*Neutral*	*Agree*	*Strongly agree*	*Weighted average*
I am learning how teachers can affect change in our schools	7%	-	-	50%	43%	4.21
Wipro SEF has provided opportunities to discuss ways to positively change our schools/districts	8%	-	-	54%	38%	4.15
I am learning how to improve my leadership	7%	-	-	57%	36%	4.14
I am learning leadership skills that I can use regularly	7%	-	7%	57%	29%	4.00
I am learning how teachers can affect change in our districts	7%	-	14%	43%	36%	4.00

New York: Leadership Self-Concept

Chart 5. New York Fellows Mid-Year 2024: Leadership Self-Concept (n=12)



New York: Teacher Leadership Behaviors

Table 44. New York Fellows Mid-Year 2024: Teacher Leadership Behavior Frequency Since Beginning of School Year (n=13)

	Never	Rarely (1-2 times)	Sometimes (3-4 times)	Often (1-2 times/week)	Almost Every Day	Weighted Average
Take action to increase the success of all students at my school	-	14%	-	36%	50%	4.21
Provide guidance to other teachers who asked for or needed support	-	-	29%	36%	36%	4.07
Work collaboratively with other teachers and administrators to solve a school problem	-	-	36%	50%	14%	3.79
Assume leadership roles at my school	-	14%	21%	36%	29%	3.79
Engage in discussions with other teachers in my school/district about how to teach a particular concept	-	7%	36%	43%	14%	3.64
Work with other teachers in my school/district to prepare instructional materials	-	21%	21%	36%	21%	3.57
Review research to inform my teaching practices	-	15%	31%	46%	8%	3.46
Invite other teachers to observe my classroom and teaching	7%	29%	29%	29%	7%	3.00
Visit another teacher's classroom in my school or district to observe his/her teaching	29%	21%	7%	29%	14%	2.79
Work collaboratively with other teachers and administrators to solve a district problem	7%	29%	50%	14%	-	2.71
Lead professional development opportunities for other teachers at my school	21%	-	64%	14%	-	2.71
Assume leadership roles in the district	29%	21%	21%	7%	21%	2.71
Lead professional development opportunities for other teachers in the district	50%	29%	14%	7%	-	1.79

New York: School Change Attitudes

Table 45. New York Fellows Mid-Year 2024: School Change Attitudes (n=13)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Weighted average
Teachers have a role to play in school change	-	-	7%	57%	36%	4.29
Positive school change is possible for my school	-	-	14%	50%	36%	4.21
Teachers can help lead school change	-	-	7%	64%	29%	4.21
School change is an important goal for every teacher	-	-	21%	50%	29%	4.07

New York: District Change Attitudes

Table 46. New York Fellows Mid-Year 2024: District Change Attitudes (n=13)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Weighted average
Positive district change is possible for my district	-	7%	14%	57%	21%	3.93
Teachers can help lead district change	-	7%	21%	50%	21%	3.86
District change is an important goal for every teacher	-	-	36%	50%	14%	3.79
Teachers have a role to play in district change	-	7%	43%	36%	14%	3.57

New York: District Change Behaviors

Table 47. New York Fellows Mid-Year 2024: District Change Behaviors (n=12)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Weighted average
I am actively engaged in helping to improve my school	-	-	-	54%	46%	4.46
I am aware of the top goals of my district	-	8%	8%	77%	8%	3.85
I am actively engaged in helping to improve my district	-	8%	15%	69%	8%	3.77
I do not know how to contribute to district change	23%	23%	31%	15%	8%	2.62

New York: Key Learnings

What are some of your key takeaways or core learnings so far this school year from the Wipro SEF program?

DSCs	Well, from its inception, the idea of taking on leadership rolls while still being a classroom teacher. I am in my final year of classroom teaching, and I am still involved in helping my fellow colleagues get their "science on" in their classrooms.
Fellows	Commitment and determination
	Collaborative work with colleagues to promote positive change within our building.
	Becoming aware of educational opportunities for SIFE students and newcomers
	I am not in the WIPRO program this year but in the 2022-2023 year I would say the main take away was how to be a more effective leader and feeling more comfortable talking with district administrators about needed changes.
	Lead teachers doing the work in the classroom have more of an influence that non classroom teachers. Not to say specialist do not play a role, but when a teacher leads, more teachers are influenced.
	Teachers can make a difference
	That we should push our students to be stronger in math and sciences. Give them the confidence to know they can do it.
	Integrating Science in various subjects and making it fun.
	I think that working collaboratively has helped the group and helped build relationships. The students have also really benefited from the learnings of the group.
	The importance of working with colleagues
	Active listening and collaboration continue to be key.
	Some key takeaways have been how to incorporate robotics tools and computer science in the classroom. It has also allowed me to share my learning with other teachers.

New York: Hopes for Change

What kind of change would you most like to see happen in your school and/or district?

DSCs	More elementary level colleagues stepping up to the plate to offer professional development in science.
	More teacher led change and less administration change.
Fellows	Communication
	More equitable work environment
	Support for STEM activities that include materials and hands-on field trips
	I would like to see a deeper dive into science and having it become an important subject. Each school should have a science facilitator the same as they have a math and ELA facilitator.
	I would like easily accessible resources and materials for teachers to have in their classrooms for STEAM
	Change in leadership
	More PLC time

	Genuine use of teachers ideas. It seems to me that they are very good at listening to us and making the time for that but nothing seems to change or the exact opposite of what we would like to happen or what was talked about.
	I would love to have a district wide presentation from all school WIPRO Fellows' lessons with the support of our districts central administrators.
	I would like to see more teachers involved and see more schools in our district participate.
	Integrating Stem into the curriculum
	Continued increase in STEAM education for all stakeholders: learners, staff development / training / parent workshops.
	I'd like to see more vertical alignment of STEAM throughout the school.

New York: Other Thoughts

DSC	I plan to continue this work in my retirement and expand it beyond science.
Fellows	I think educators need more opportunities like this in order to feel more comfortable pushing science in their districts. Districts need to start realizing that they need to push science especially in elementary schools.
	I am grateful for being part of this for a 2nd year
	Thank you for the opportunity
	Thank you.

Texas Responses

Texas: Respondent Demographics

Table 48. Texas Respondents Mid-Year 2024: Wipro Connection, Grade Level & Years Teaching (n=29)

		TX (n=29)
Wipro Connection	New Fellows (Began 2022 or later)	21/25 (84%)
	Returning Fellows (Began prior to 2022)	4/25 (16%)
Wipro Connection (DSC)	New District Science Coordinators	-
	Returning District Science Coordinators	4/4 (100%)
Fellows' Grade Level**	K-2	20%
	3-5	40%
	6-8	24%
	9-12	12%
	Other	8%
Fellows' Years Teaching	0-2 yrs	13%
	3-5 yrs	4%
	6-10 yrs	29%
	11-15 yrs	13%
	16-20 yrs	42%
	21-25 yrs	-
	26-30 yrs	-
	31+ yrs	-

**Grade levels sum to more than 100% where teachers work across multiple grade bands.

Table 49. Texas Respondents Mid-Year 2024: Gender and Race/Ethnicity Demographics (n=29)

		TX
Gender	Woman	22 (76%)
	Man	6 (21%)
	No Response	1 (3%)
	Genderqueer or Non-binary	-
Race/Ethnicity	Black or African American	17 (59%)
	White	8 (28%)
	Hispanic or Latino	2 (7%)
	Multiracial or Multiethnic	1 (3%)
	Native American or Alaska Native	1 (3%)
	Asian	-
	Middle Eastern or North African	-
	Native Hawaiian or other Pacific Islander	-
	Another race or ethnicity, please describe below	-
	No Response	-

Table 50. Texas Respondents Mid-Year 2024: District Breakdown (n=29)

District	Respondents
Cedar Hill	7 (24%)
Lancaster	7 (24%)
DeSoto	6 (21%)
Grand Prairie	4 (14%)
Irving	4 (14%)
Other	1 (3%)
Denton	-
Duncanville	-

Texas: Program Logistics

Table 51. Texas Fellows & DSCs Mid-Year 2024: Program Logistics (n=29)

	Strongly disagree	*Disagree*	*Neutral*	*Agree*	*Strongly agree*	*NA*	*Weighted average*
I am clear on what is expected of me for Wipro SEF this year	-	-	7%	21%	72%	-	4.66
The program is well-organized	-	-	3%	31%	66%	-	4.62
I am able to get the help I need for my Wipro SEF work	-	3%	10%	7%	79%	-	4.62
Communication about the program is clear	-	3%	7%	21%	69%	-	4.55
Meetings are constructive	-	3%	3%	34%	59%	-	4.48

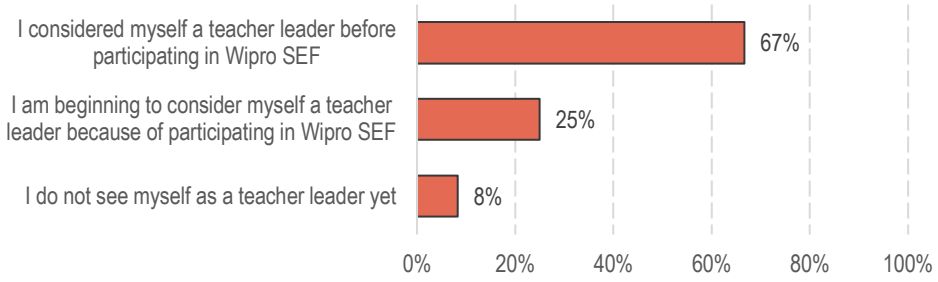
Texas: Leadership Learning

Table 52. Texas Fellows Mid-Year 2024: Leadership Learning (n=24)

	Strongly disagree	*Disagree*	*Neutral*	*Agree*	*Strongly agree*	*Weighted average*
I am learning how teachers can affect change in our schools	-	4%	-	29%	67%	4.58
I am learning leadership skills that I can use regularly	-	4%	4%	29%	63%	4.50
Wipro SEF has provided opportunities to discuss ways to positively change our schools/districts	-	4%	-	38%	58%	4.50
I am learning how teachers can affect change in our districts	-	4%	4%	33%	58%	4.46
I am learning how to improve my leadership	-	4%	8%	29%	58%	4.42

Texas: Leadership Self-Concept

Chart 6. Texas Fellows Mid-Year 2024: Leadership Self-Concept (n=24)



Texas: Teacher Leadership Behaviors

Table 53. Texas Fellows Mid-Year 2024: Teacher Leadership Behavior Frequency Since Beginning of School Year (n=24)

	Never	*Rarely (1-2 times)*	*Sometimes (3-4 times)*	*Often (1-2 times/week)*	*Almost Every Day*	*Weighted Average*
Take action to increase the success of all students at my school	-	4%	13%	21%	63%	4.42
Provide guidance to other teachers who asked for or needed support	-	-	13%	42%	46%	4.33
Work collaboratively with other teachers and administrators to solve a school problem	4%	-	25%	38%	33%	3.96
Engage in discussions with other teachers in my school/district about how to teach a particular concept	-	-	38%	29%	33%	3.96
Assume leadership roles at my school	-	13%	38%	17%	33%	3.71
Review research to inform my teaching practices	4%	13%	25%	29%	29%	3.67
Work with other teachers in my school/district to prepare instructional materials	13%	17%	25%	8%	38%	3.42
Work collaboratively with other teachers and administrators to solve a district problem	8%	17%	46%	13%	17%	3.12
Visit another teacher's classroom in my school or district to observe his/her teaching	17%	25%	38%	-	21%	2.83
Invite other teachers to observe my classroom and teaching	21%	17%	46%	-	17%	2.75
Lead professional development opportunities for other teachers at my school	21%	17%	46%	4%	13%	2.71
Assume leadership roles in the district	29%	33%	21%	-	17%	2.42
Lead professional development opportunities for other teachers in the district	42%	25%	13%	8%	13%	2.25

Texas: School Change Attitudes

Table 54. Texas Fellows Mid-Year 2024: School Change Attitudes (n=24)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Weighted average
Teachers can help lead school change	-	-	8%	21%	71%	4.62
Teachers have a role to play in school change	-	-	4%	30%	65%	4.61
Positive school change is possible for my school	-	-	8%	25%	67%	4.58
School change is an important goal for every teacher	-	-	8%	42%	50%	4.42

Texas: District Change Attitudes

Table 55. Texas Fellows Mid-Year 2024: District Change Attitudes (n=24)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Weighted average
Teachers have a role to play in district change	-	4%	4%	38%	54%	4.42
Positive district change is possible for my district	4%	-	13%	25%	58%	4.33
District change is an important goal for every teacher	-	4%	17%	29%	50%	4.25
Teachers can help lead district change	4%	4%	8%	33%	50%	4.21

Texas: District Change Behaviors

(Q15)

Table 56. Texas Fellows Mid-Year 2024: District Change Behaviors (n=24)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Weighted average
I am actively engaged in helping to improve my school	-	4%	8%	25%	63%	4.46
I am aware of the top goals of my district	4%	-	25%	42%	29%	3.92
I am actively engaged in helping to improve my district	-	4%	29%	38%	29%	3.92
I do not know how to contribute to district change	21%	21%	17%	21%	21%	3.00

Texas: Key Learnings

What are some of your key takeaways or core learnings so far this school year from the Wipro SEF program?

DSCs	Communication among group members is valuable
	The leadership provided by the experienced Fellow leading new Fellows.
	Collaboration with other sites within WIPRO has been helpful.
Fellows	Writing helps scholars incorporate a clear vocabulary and establish how they have connected concepts.
	Our campus based projects are designed to provide real world tactile experiences that expand the learning opportunities for all stakeholders. Secondly, This is an initial investment in learning that has the potential and expectation to integrate research, engaging experiences, and the birth of new opportunities that are the result of the initial investment. As a research based experience, students take ownership, engage, and are an active participant in the documented research experience. Last, there are no limits, unless specified the program, to the experiences and extensions as fruits of the labors of the stakeholders and outcomes.
	That I have been able to connect with other teachers who do the same work as myself.
	Collaboration with teachers and allowing students to have productive struggle.
	Change at the classroom level impacts not just the scholars, but affects the teachers and administration as well.
	Your team is always here to help, don't be afraid to ask questions.
	Nothing
	Being able to network with other teachers and districts to better strengthen what my classroom and district are doing.
	the extent, range and support that is available
	Leadership is key. Have an effective way to communicate goes a long way and is for the betterment of the team.
	I can help lead positive change in my district.
	I have enhanced my ability to think on my feet, adapting to sudden changes. I have developed more of a direct and assertive character.
	Fellowshipping with other educators is essential the success of your career.
	To be consistent in making learning impactful for students.
	Work collaboratively with my cohort and peers at my school. Explore and come up with different ways to get students involved in science activities/concept.
	I am working with 1st graders and I am proud of all of their great ideas as it relates to STEM. The resources provided by Dr. Narayan has been important to the way the students learn. Hands on learning is a great way to have students engaged and accelerate learning.
	A major take away is to keep raising the bar until EVERY scholar is successful.
	It ties into improving my students performance
	That collaboration is a key factor in being a teacher leader and seeing change.
	Leadership can start anywhere.

Texas: Hopes for Change

What kind of change would you most like to see happen in your school and/or district?

DSCs	Teachers renewed passion in teaching
	Enrollment to increase
	Leaders who understand science and the importance of science. I would love for them to understand science is a trial and error learning process for students.
Fellows	Experience from veteran teachers are utilized in making changes on campus.
	Unfortunately, we are all in a STAAR-based vacuum that dominates and drives instruction which can limit investment at the classroom related to the current instructional objective. Other objectives are spiraled and integrated in small groups. Opportunities to expand are limiting.
	They create a position that can help train the innovative lab teachers permanently
	More teacher involvement across the board, not just a few favorites here and there
	The demographic of teachers in higher courses reflect the demographic of students
	I would like to see the students become more engaged in the learning process. Many of them do not see the value in education and I am trying to change that.
	The testing procedure
	More training for teachers to prepare them better for the classrooms. Districts more active in the classroom settings to better make decisions.
	Less division between teachers and administration. Real acknowledgement of teacher hardships and concerns (don't just SAY you understand and then ACT like you do not). Resources seem to change (many times lacking), but expectations do not. Excessive burdens are placed upon teachers by redundancy, also, tasks are handed out like they are the only task considered at the time with no regard for the many tasks previously piled up. It is overwhelming and it is OFTEN.
	A stronger since of community
	Seeing teachers give more input in district decisions.
	I want a holistic approach to a community connected to its district. Parent involvement and motivation can move mountains.
	Educators that are actually doing the footwork in the class should be involved in deciding what the district requires from the classroom
	I would like to see our district become a STEM oriented district.
	Exploring and coming up with means and methods to link Science, Math, Reading and Writing when doing projects.
	I would like for more teachers to be willing to implement STEAM projects in their classroom.
	I would love to see better technologies in my district.
	Increased discipline
	I would like to see more focus on science.
	More positivity and leaders need to relate to teachers more

Texas: Other Thoughts

DSCs	Great project underway. I hope the team will follow through. I am supporting them, their Principal supports them.
Fellows	This program has allowed us to purchase materials that allow for far more immersive educational experiences for our students.
	I love this program so far. I am new to teaching and this program has gotten me excited to continue in STEM and sharpen my skills. This program has also allowed me to be more confident in my leadership skills and strengthen those.
	Wipro has been a great experience for me.
	This survey helped re-center my goals. Thank you.
	The Wipro program has truly helped me think out of the box and better prepare my students for next level learning.
	Wipro Fellowship is a great program but I believe that it needs to be taken more seriously (implementation) at a school and district level.
	Dr. Narayan is a great leader within this program. I have grown so much as a teacher and now as an Academic Specialist. She has taught me to see things from a new and even better perspective which has enhanced my teaching style. She is great with feedback and she makes herself available at any time to help.
	WIPRO has allowed me to align myself with like-minded individuals.