

The New Teacher Support Program: An Individualized Support Plan for Retaining STEM Teachers

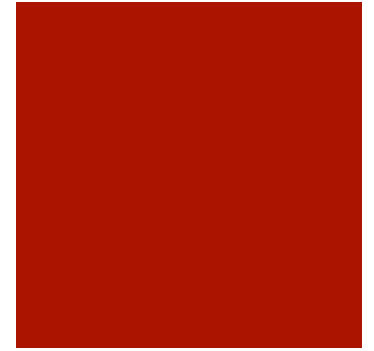
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National Science Foundation
WHERE DISCOVERIES BEGIN



This presentation will



- Introduce the audience to the PRNP
- Explore the component parts of the Philadelphia Regional Noyce Partnership (PRNP)
- Describe the activities and outcomes of the New Teacher Support Program
- Describe the tools used to analyze outcomes
- Discuss the implications and next steps of the NTSP
- Engage the audience in discussion about mentoring and new teacher support

Introductions

The Philadelphia Regional Noyce Partnership (PRNP)

Vision

To make Philadelphia a leader in STEM teacher education and to serve as a national model for partnerships in STEM teacher preparation and development.

Members

Arcadia University
Bryn Mawr College
Haverford College
Drexel University

La Salle University
Temple University
Saint Joseph's University
University of Pennsylvania
The Philadelphia Education Fund

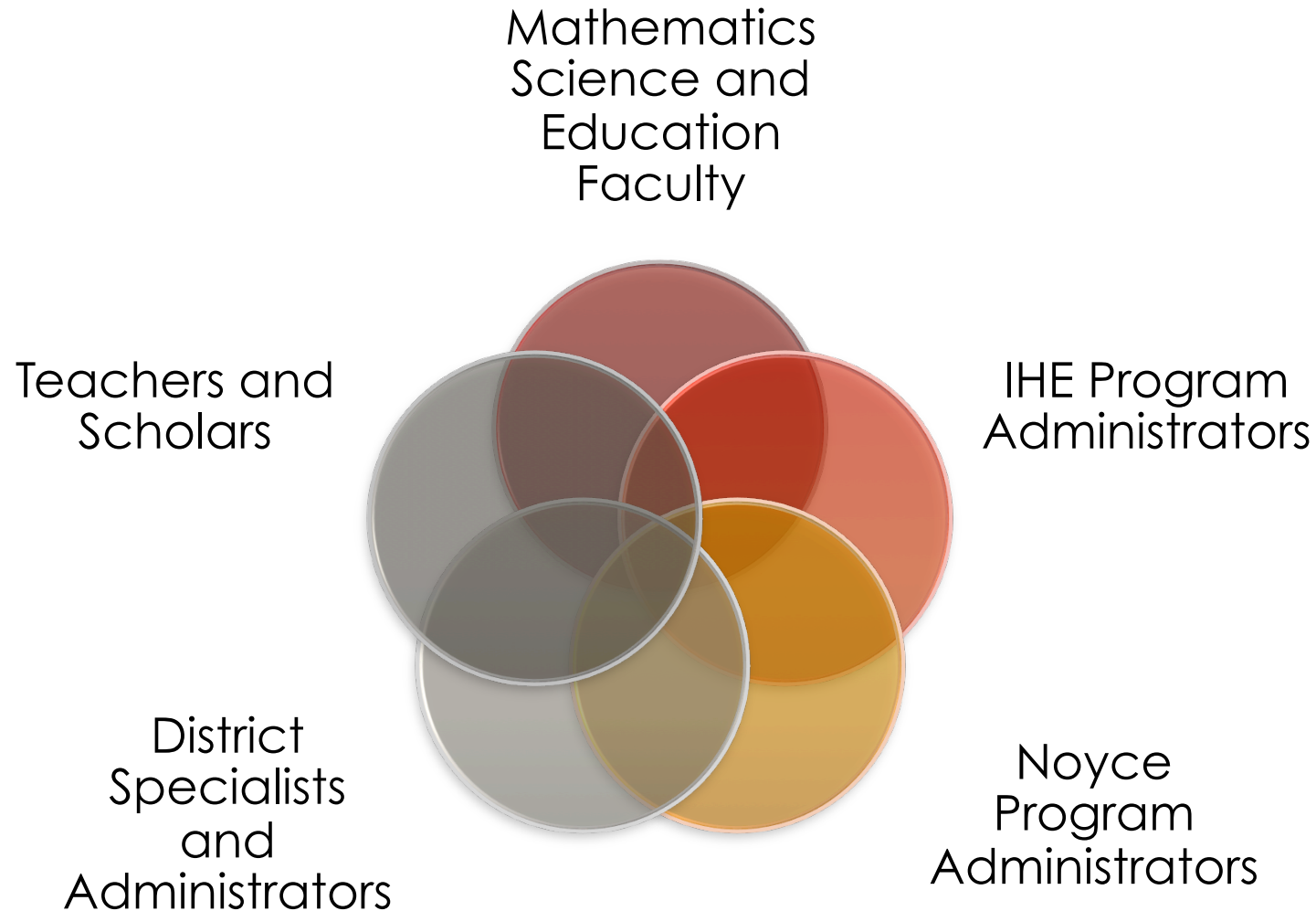
What is the PRNP?

The Philadelphia Regional Noyce Partnership (PRNP) is a collaborative partnership that began in 2011.

The project is funded by a capacity-building grant from the National Science Foundation (NSF).



PRNP Partners and Affiliates



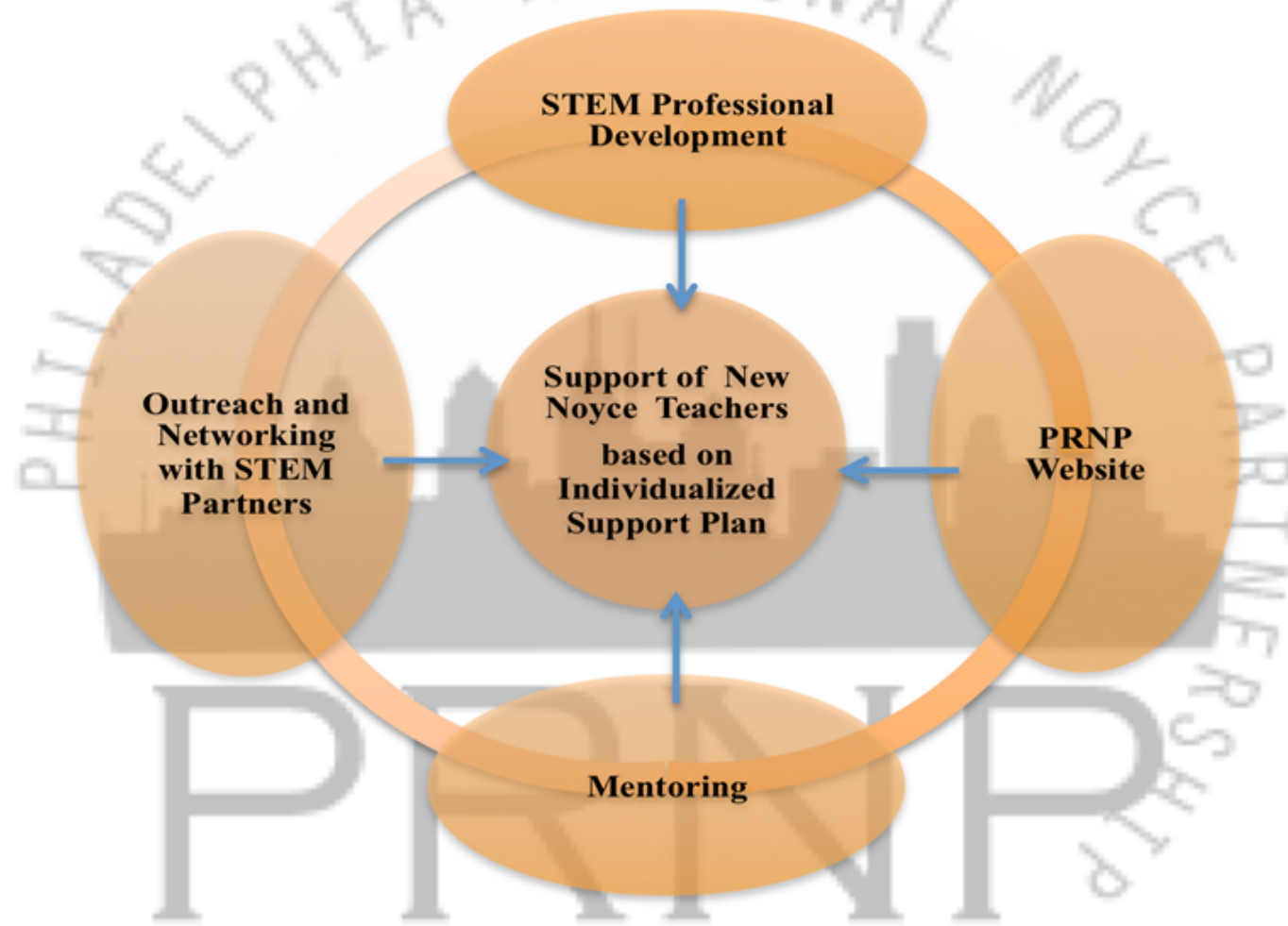
PRNP Today

- The project is in its 6th year of operation under a second capacity building grant from the NSF.
- Its focus continues to be building synergies and doing collaborative work that benefits the partners and the region.
- The **New Teacher Support Program** is a new initiative of the PRNP that provides individual support plans for new teacher in an effort to increase teacher retention in the region.

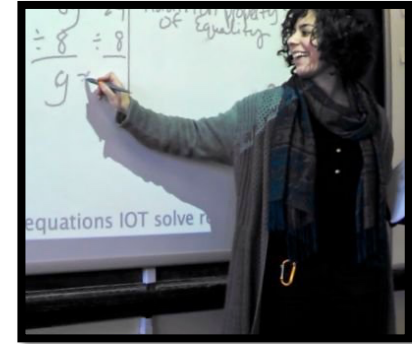


<http://prnp.org>

What is PRNP-New Teacher Support Program?



New Teacher Support Program Goals



The New Teacher Support Program (NTSP) proposes a flexible and individualized supportive services for new teachers designed to address the problem of teacher retention, especially in the area of early career, STEM teachers in high needs urban schools.

Coaching/Mentoring Literature



- A comprehensive induction and mentoring program is needed to support and retain teachers. (Feiman-Nemser, 2003; Ingersoll and Strong, 2011).
- The complexities of professional practice call for practice-based learning opportunities are needed while teachers are “on the job” (Feiman-Nemser, 2001a; Feiman-Nemser; 2001b; Ganser, 2002; Gold, 1996 and Hegstad, 1999
- Induction and mentoring have a positive impact including:
 - comprehensive, well-defined induction programs
 - knowledgeable mentors and veteran teachers
 - opportunities for new teachers to engage in learning communities both inside and outside of schools (Ingersoll and Strong, 2011).

Program-Wide Inquiry Stance

The authors have chosen to adopt an inquiry stance in order to contextualize the practice of mentoring in a newly developed program and to ask questions about its effectiveness. Ravitch (2015) refers to this as practitioner research.

Teacher research is the systematic and intentional study of one's professional practice (Cochran-Smith and Lytle 2009). Teacher research is also linked to action research (Stremmel 2007).

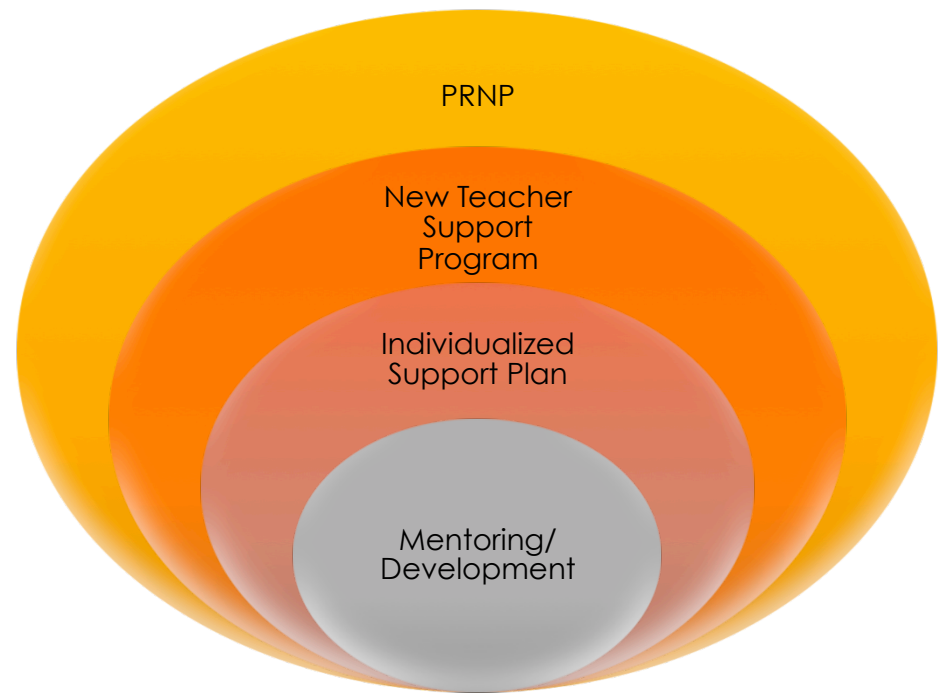
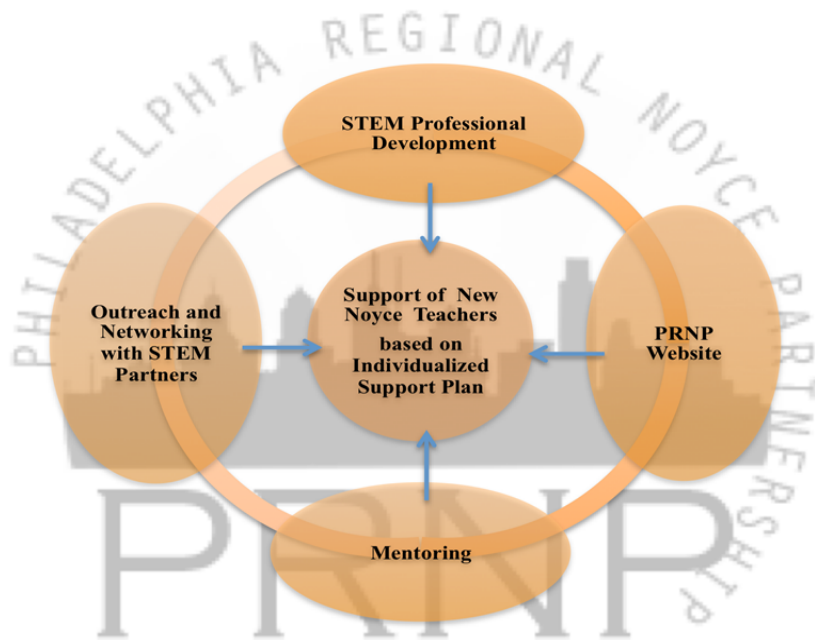
Each allows for the intersection of theory, research and practice that fosters reflection and action on professional practice which shape decision-making in communal and organizational settings (Ravitch, 2015).

Research Questions



1. What challenges do mentors face when providing teacher identified individualized support for new STEM teachers?
2. How well are new teachers' needs met by this coaching support?
3. In what ways can mentor development programs work effectively in this new mentor paradigm?

Research Context

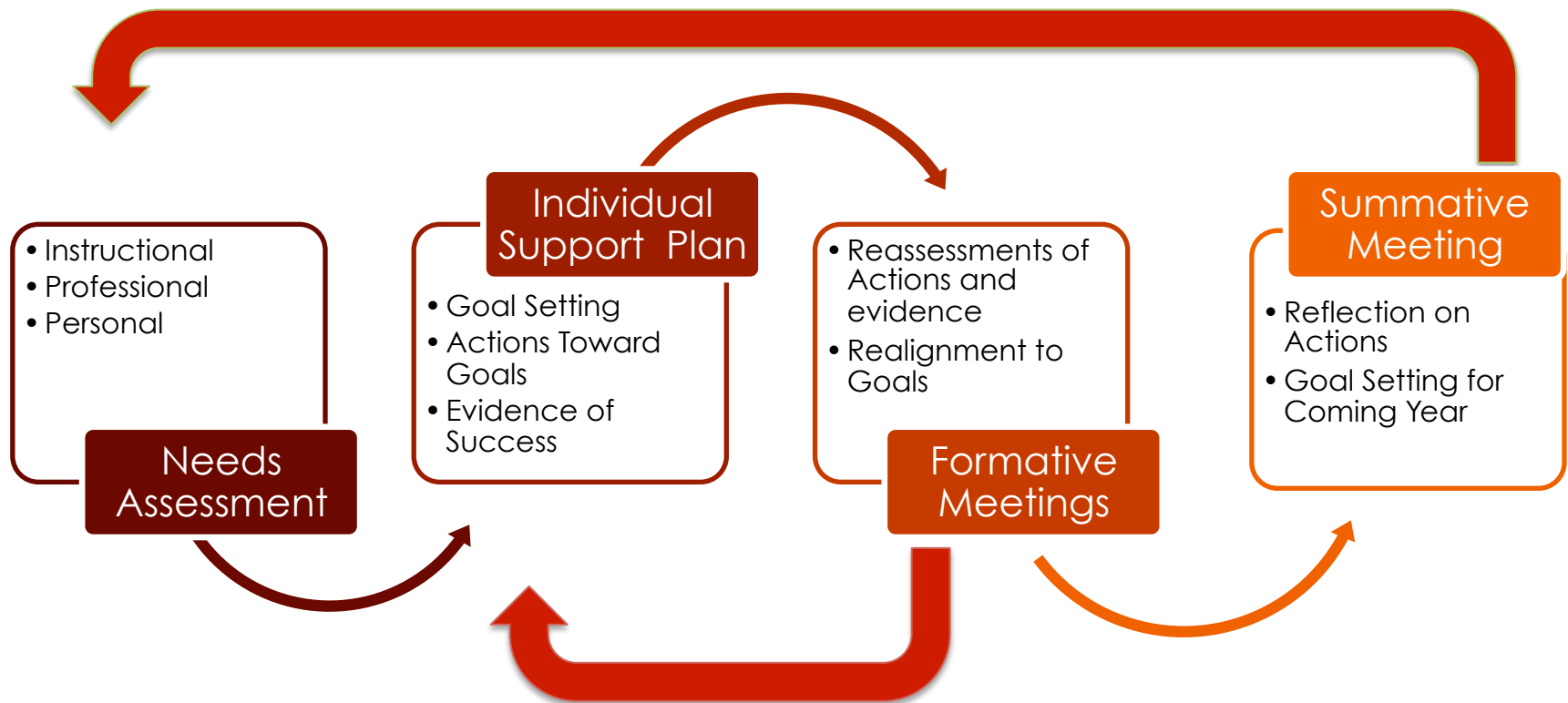


Research Context Participants

- First and second year STEM teachers
- External mentors
- Program administrators



Year 1 Support External Mentoring



Year 2 Support

Transition to Internal Mentoring

External Mentoring Support

- New teacher continues working with external mentor to meet identified needs.
- New teacher works with external mentor to identify an in-service teacher mentor.
- External mentor facilitates initial interactions with in-service teacher mentor.
- Monitoring forms are used to track new teacher progress during the year.

In-Service Teacher Mentoring Support

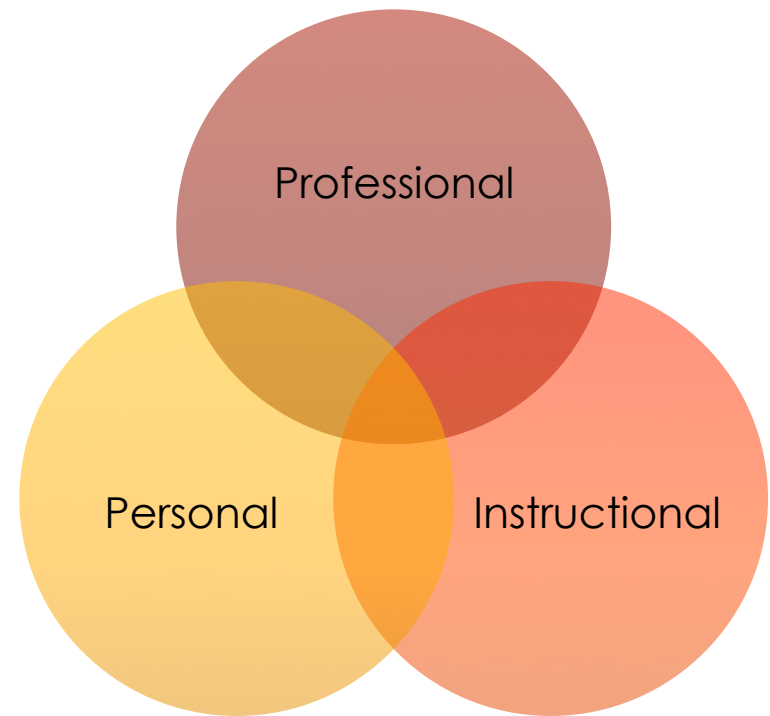
- New teacher has regular meeting with the in-service teacher mentor to meet identified needs.
- In-service teacher mentor brainstorms potential new teacher leadership opportunities.
- Monitoring forms are used to track new teacher progress during the year

Teacher Leadership

- In-service teacher mentor facilitates initial interactions with colleagues to focus the leadership opportunities.
- New teacher collaborates with colleagues to lead educational initiatives.
- Monitoring forms are used to track new teacher progress during the year.

The NTSP Mentoring Model

Mentors are trained to utilize a **coaching stance** to address areas of new teacher needs.



Mentor Development

- Results of mentor skills survey used to target mentor professional development
- Monthly mentor meetings developed the learning community
- Mentors addressed stated needs of each new teacher through twice a month meetings with each new teacher
- Mentors completed initial, formative and summative report forms linked to action plan

Mentor Development

Mentor Activity	
January	• Mentor orientation
February	• Meet your mentor
March	• Problems of practice
April	• Active listening
May	• Culturally relevant teaching
June	• School year wrap and evaluation
August	• New School year preparation
October	• Revisit expectations
November	• Mentor role in new teacher transition
December	• Mentoring for health and wellness

Research Design



- Concurrent mixed methods design (Creswell, 2009).
- Both qualitative and quantitative data were collected and analyzed in order to fully address our research questions.

Qualitative

- Mentor reports
- Mentor interviews using Stages of Concern framework (SoC)

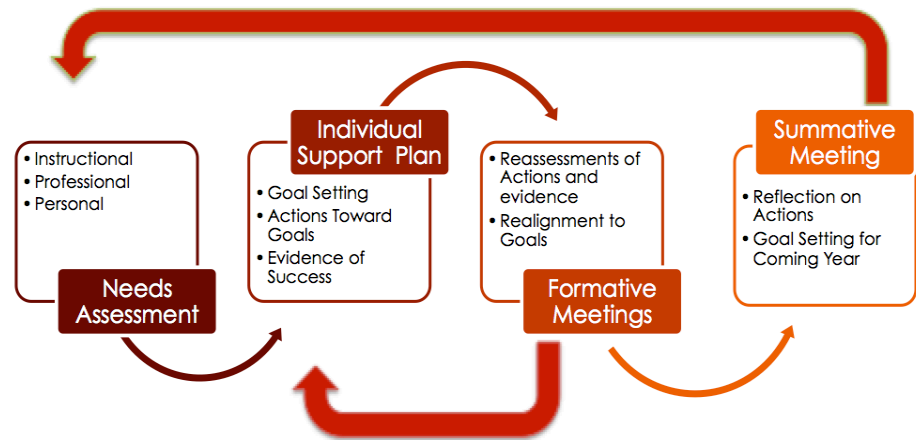
Quantitative

- Mentor Relationship Questionnaire (MRQ)

Instrumentation – Mentor Reports

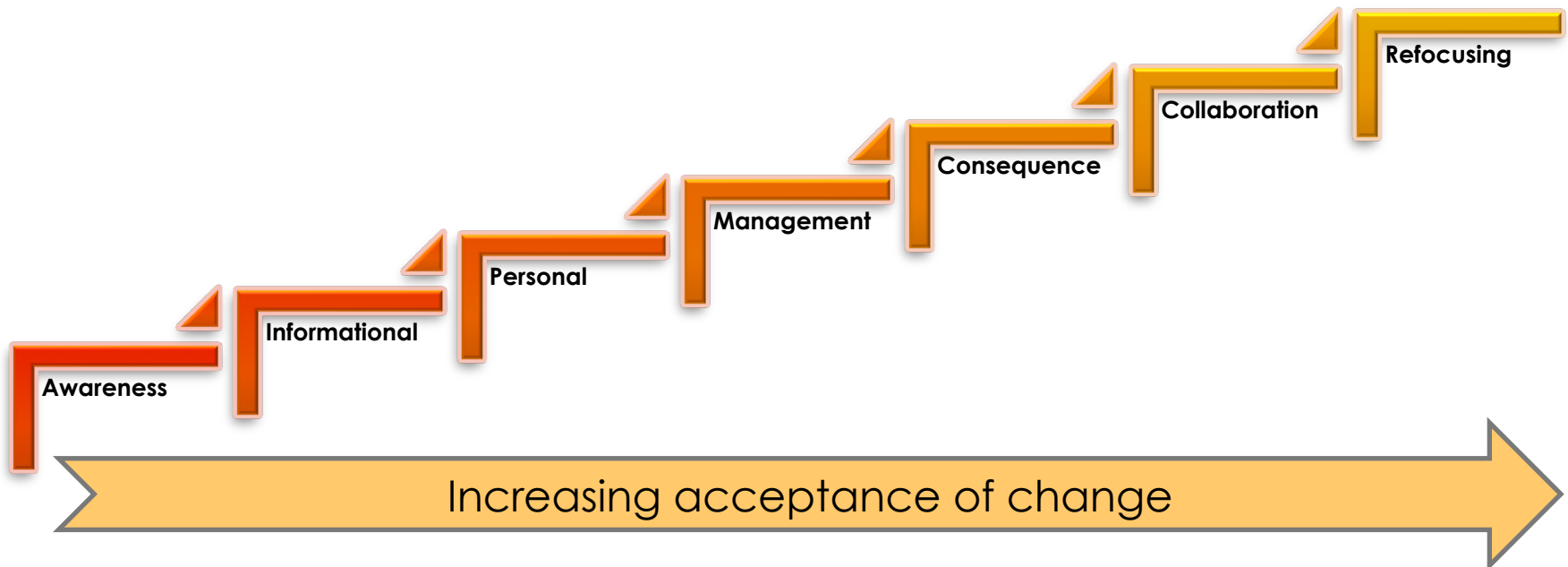
Mentors completed initial, formative and summative reports during the mentoring cycle. The information collected includes:

- Current needs/goals
- Evidence of resolution
- Future needs/goals
- Needed resources
- Markers of success
- Teacher next steps
- Mentor Next steps
- Next Meeting
- Focus



Instrumentation - SoC

The SoC describe stages through which teachers in educational settings move as they engage in the change process (Hord, 1981; Hall & Hord, 2001)



Instrumentation - MRQ

- Mentors and new teachers completed an adapted version of the Mentoring Relationship Questionnaire (MRQ) at the conclusion of the coaching cycle.
- The **four-part** survey was designed to surface the similarities and differences in the mentor-new teacher dyad relationship ([Greiman, 2002](#), Greiman, 2007; Burris, Kitchel, Grieman, and Torres, 2006).
 - Psychosocial, Professional Mentoring Need, Dyad Similarity and Dyad Satisfaction

Results – Mentor Reports

Mentor report item	Frequency
Action plan reference	73%
Health and wellness reference	73%
Data literacy reference	0%

N= 5 mentors

Sources: Mentor reports

Results – SoC Interviews

Stage of Concern	Average Score
6. Refocusing	5.0
5. Collaboration	6.3
4. Consequence	1.5
3. Management	1.1
2. Personal	0
1. Informational	2.8
0. Awareness	1.4

Note: Likert scale 0 = no concern to 7 = highly concerned for Stages 0-4,
0 = not likely to 7 = highly likely for Stages 5 and 6.

N= 4 mentors

Sources: Mentor interviews

Results – MRQ - Psychosocial



Part A To what extent have you...

Part A To what extent has your mentor... M Avg. NT Avg. Diff.

High Agreement

Thought highly of your new teacher/mentor	7.6	7.4	-0.3
Served as a role model	7.3	7.3	0.0
Conveyed feelings of respect	7.6	7.5	-0.1
Served as a sounding board for the new teacher/mentor to develop and understand him/herself	7.8	7.3	-0.5
Considered the new teacher/mentor a competent colleague	7.4	7.0	-0.4
Been someone you identified with	7.0	6.9	-0.1
Shared personal experiences as another perspective to help the new teacher/mentor work through his or her problems	7.8	7.4	-0.4
Been someone the new teacher/mentor could trust	7.5	7.3	-0.3

Low Agreement

Provided support and encouragement	7.9	7.3	-0.6
Been willing to discuss his/her questions and concerns	8.0	7.4	-0.6
Been available as a confidante	7.9	6.3	-1.6

N=16 (8 mentors/new teacher pairs)

8-point Likert scale (1=Not at all to 8=To a very large extent)

Results – MRQ Professional Mentoring Need

Part B To what extent did your new teacher need assistance in the following areas?

Part B To what extent did you need assistance as a new teacher?

	M Avg.	NT Avg.	Diff
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High Agreement

Manage time	5.8	5.4	-0.4
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Manage personal stress	5.5	5.8	0.3
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Evaluate student work	3.5	3.9	0.4
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Manage daily tasks	4.9	5.4	0.5
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Use educational technology	5.3	5.5	0.3
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N=16 (8 mentors/new teacher pairs)

8-point Likert scale (1=Not at all to 8=To a very large extent)

MRQ Dyad Similarity



<i>Part C. My new teacher and I....</i>	M Avg.	NT Avg.	Diff.
<i>Part C. My mentor and I....</i>			

High Agreement

Have similar working styles	5.4	5.4	0.0
See things much the same way	5.9	5.5	-0.4

Low Agreement

Are alike in a number of areas	6.4	5.5	-0.9
Have similar values and attitudes	6.9	5.9	-1.0
Have similar teaching philosophies	6.6	5.3	-1.4

N=16 (8 mentors/new teacher pairs)

8-point Likert scale (1=Not at all to 8=To a very large extent)

MRQ Dyad Satisfaction

<i>Part D. When I reflect on my mentoring experience, I think that...</i>	M Avg.	NT Avg.	Diff
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High Agreement

I was satisfied with my interactions with my new teacher/mentor	7.4	6.9	-0.5
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Low Agreement

I am glad I had the opportunity to interact with my new teacher/mentor	8.0	7.1	-0.9
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My relationship with my new teacher/mentor has been successful	7.8	6.9	-0.9
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If I had it to do over again, I would want to have the same new teacher/mentor	7.9	6.8	-1.1
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N=16 (8 mentors/new teacher pairs)

8-point Likert scale (1=Not at all to 8=To a very large extent)

Research Questions



1. What challenges do mentors face when providing teacher identified individualized support for new STEM teachers?
2. How well are new teachers' needs met by this coaching support?
3. In what ways can mentor development programs work effectively in this new mentor paradigm?

Results

What challenges do mentors face when providing teacher identified individualized support for new STEM teachers?

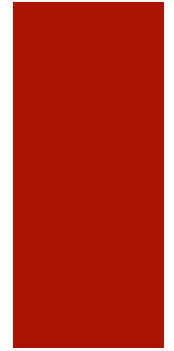
1. Mentors have little to no concern about the additional responsibilities and the changed focus of their work with their new teachers.
2. Mentors have a high degree of comfort with the mentoring model.
3. However, the evidence from the report analysis does not indicate this change.

Results

How well are new teachers' needs met by this coaching support?

1. Data from the document review consistently show that new teacher needs were met, especially in the areas of professional and instructional needs.
2. Mentors were thought of highly, viewed as role models, considered sounding boards, willing to discuss/share personal experiences/and expertise, respectful, encouraging, supportive and trustworthy.
3. Mentor ratings regarding feeling prepared with professional activities were generally higher than new teacher ratings on receiving that particular assistance.

Results



How well are new teachers' needs met by this coaching support?

4. Moderate agreement focused on managing time, stress, student behavior and acting professionally.
5. The dyads saw themselves as somewhat similar, agreeing most often on seeing things the same way and having similar work styles. Both were glad to have the opportunity to interact, thought the relationship was successful, considered it satisfying and would do it again
6. Mentors consistently reported higher satisfaction within the pairing.

Conclusions

In what ways can mentor development programs work effectively in this new mentor paradigm?

1. The mentoring experience was a positive one for both mentors and new teachers.
2. Mentors felt prepared to assist their new teachers in a number of key areas with strongest emphasis on managing classroom and students. New teachers identified these as areas of need as well.
3. While mentors felt prepared to support in many areas, new teachers did not feel strongly that they receive support in many areas.
4. The areas identified by the mentors were also the areas in which new teachers reported receiving the greatest assistance.
5. The individualized nature of the program allowed for focused mentoring rather than broad based support.

Next Steps

Areas to be considered moving forward include:

1. Adapting the mentor schedule to accommodate changing new teacher needs throughout the year,
2. Enhanced documentation of mentor and new teacher interactions,
3. Using these records of practice in mentor professional development, and
4. Sharing the results of this research with the mentors and the new teachers.

References

Please visit the webpage at **PRNP.org** for access to the research paper and a complete list of references.



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Questions and Feedback

