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Lessons Learned from a Unique Collaboration Opportunity between two Noyce Programs at two Different Universities

2019 Western Regional Noyce Conference

University of Arizona

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Lessons Learned from a Unique Collaboration Opportunity between two Noyce Programs at two Different Universities

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Two Noyce Programs

**The Rice University Noyce Master Teaching Fellowship
Program (RU-MTF) - DUE #1556006**

PI: Anne Papakonstantinou

Co-PIs: Richard Parr, Judy Radigan, Richard Tapia

**The Louisiana Mathematics Masters in the Middle
(LaM³) - DUE #1240054**

PI: Peter Sheppard

Co-PIs: Patricia Beaulieu, Melissa Gallagher



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Goals

The overarching goal of this collaboration was to have teachers from the two programs connect with and learn from one another and share/exchange ideas about effective teaching strategies for successful mathematics instruction.

	Related Project Goal	Visit goal
RU-MTF	to develop leadership, mentoring, and adult education	to interact with other Noyce teachers
LaM³	to influence the instructional practices of their colleagues	to see observe classrooms outside their regular education context



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Overview of the Visit

	February 12	February 13
Eight LaM³ Middle School Teachers	Observed one Noyce & two non-Noyce teachers	Observed one Noyce, one non-Noyce teacher & met with instructional coordinator
Two LaM³ High School Teachers	(HS 1) Observed one Noyce, one non-Noyce teacher & met with instructional specialist	(HS 2) Observed one Noyce & two non-Noyce teachers



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Expectations

	LaM ³	RU-MTF
They expected to share:	<ul style="list-style-type: none">• Strategies and activities for student engagement• Classroom management strategies• NCTM's Principles to Actions	<ul style="list-style-type: none">• Technology integration• How success is defined• Motivating students, in particular, at-risk students



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Expectations (cont.)

	LaM ³	RU-MTF
They expected to learn:	<ul style="list-style-type: none">• Differences between TX and LA standards• New strategies and ideas about effective teaching• New ways of reaching other teachers and impacting communities• New ideas for productive struggle• New approaches to motivate students	<ul style="list-style-type: none">• Similarities and differences between their teaching and LaM³ teachers• Getting some feedback• New teaching strategies

Brainstorming Activity - 1

- ❖ At your table take 5 minutes to discuss:
 - (1) How could similar collaborations be organized?
 - (2) What would you expect to share from a cross project collaboration?
 - (3) What would you expect to learn from a cross project collaboration?
- ❖ Share with the whole audience

Middle School Perspective

- ❖ Overview Pin Oak Middle School
- ❖ What did UL-L teachers experience while at Pin Oak MS
- ❖ What did Pin Oak MS teachers gain from UL-L visit.



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Middle School Perspective Pin Oak Middle School

In the Houston Independent School District,
very large urban school setting

Located in a more affluent section of the city

Application-only school, students are from
everywhere in the city
(transportation is provided)





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Middle School Perspective Pin Oak Middle School



High academic performance has been maintained for the sixteen years of its existence

Language magnet school

High school credit classes offered for Algebra, Geometry, Integrated Physics & Chemistry, Spanish, French, German, Theater





Middle School Perspective Pin Oak Middle School

Most of the Rice University Noyce Fellows are high school teachers, but most U. L. Lafayette Fellows are in middle school.

The UL-L teachers requested middle school observation, so they all came to Pin Oak, where there is one Noyce Fellow.



Middle School Perspective Pin Oak Middle School

Since the overall program at Pin Oak is has been successful, we opted to give the Fellows a broad cross-section of math instruction at Pin Oak.

The Fellows visited in all levels of math instruction, from sixth grade math with UL-L and special education co-teachers to high school geometry. They spent the day with us. At the end of the day, we all met together to debrief and discuss the experience.

High School Perspective

- ❖ Overview of Lamar High School
- ❖ What did UL-L teachers experience while at Lamar HS
- ❖ What did Lamar HS teachers gain from UL-L visit.



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High School Perspective



Lamar High School

AN INTERNATIONAL BACCALAUREATE
WORLD SCHOOL

Lamar High School is an International Baccalaureate School with over 3200 students. We are a “Flipping Classroom” and “Kagan Structure” Campus.





High School Perspective

Two UL-L High School Teachers observed Pre-IB Geometry class facilitated by Ms. Kamla (Kagan structure specialist) and Pre-IB Precalculus class facilitated by Lan Wu (flipping classroom specialist).



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High School Perspective

One of the UL-L high school teachers commented:

“In Kamla’s Geometry class, the classroom atmosphere was very structured .The transitions were smooth, students knew their roles and they worked well together. I plan to learn more about these methods and will try these with my math essentials class. I believe these students, arranged in groups according to this method, would work well and hopefully spark more math conversations and participation by all.”



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High School Perspective

The other UL-L high school teacher remarked:

“ In Ms. Wu’s class, she has created quite a number of video lessons for use with her precalculus class. The flipping classroom method she used would work well with my precalculus students. Also the class dojo app she used encouraged all students to work within their groups because the students could use the points each group collected toward their next major assessment.”

[My YouTube videos](#)

[Blendspace Lesson plan](#)

[Class Dojo](#)

What did we learn?

What worked

- Everything went well logistically
- Some expectations of master teachers were met

What did NOT work

- Many expectations of master teachers fell short
- Continued communication between the two groups was not achieved
- Not enough interest for follow-up discussions from teachers



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Facilitators/ Barriers

Facilitators

- Planning ahead
- Communication among project directors and co-directors and among teachers
- High engagement from both sides

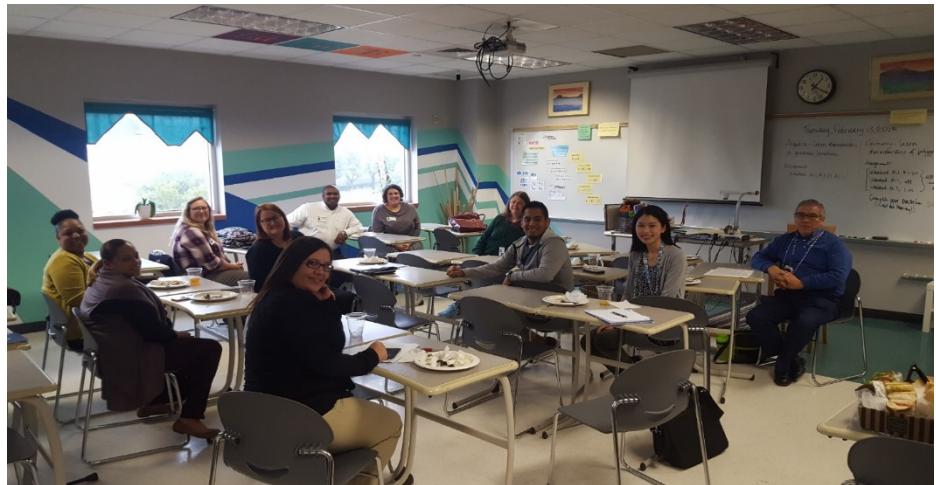
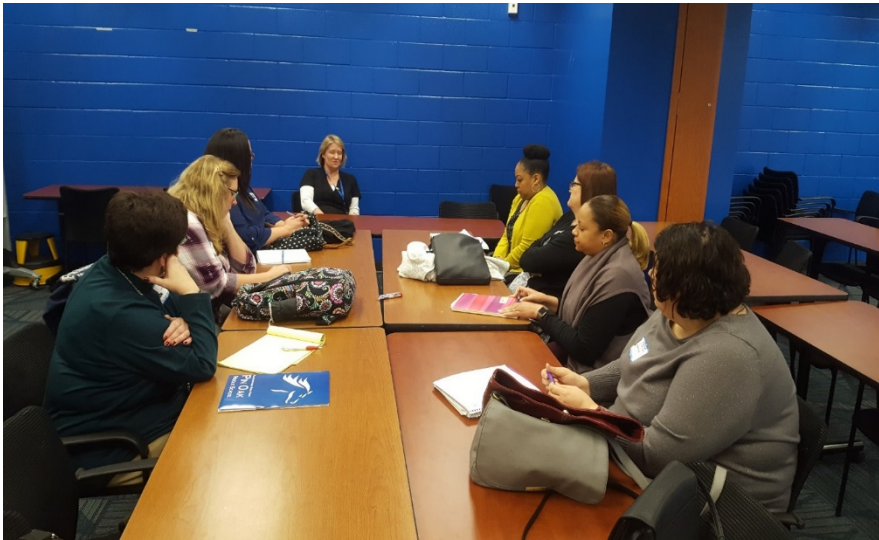
Barriers

- FUNDING
- Time
- First experience
- Broad goals



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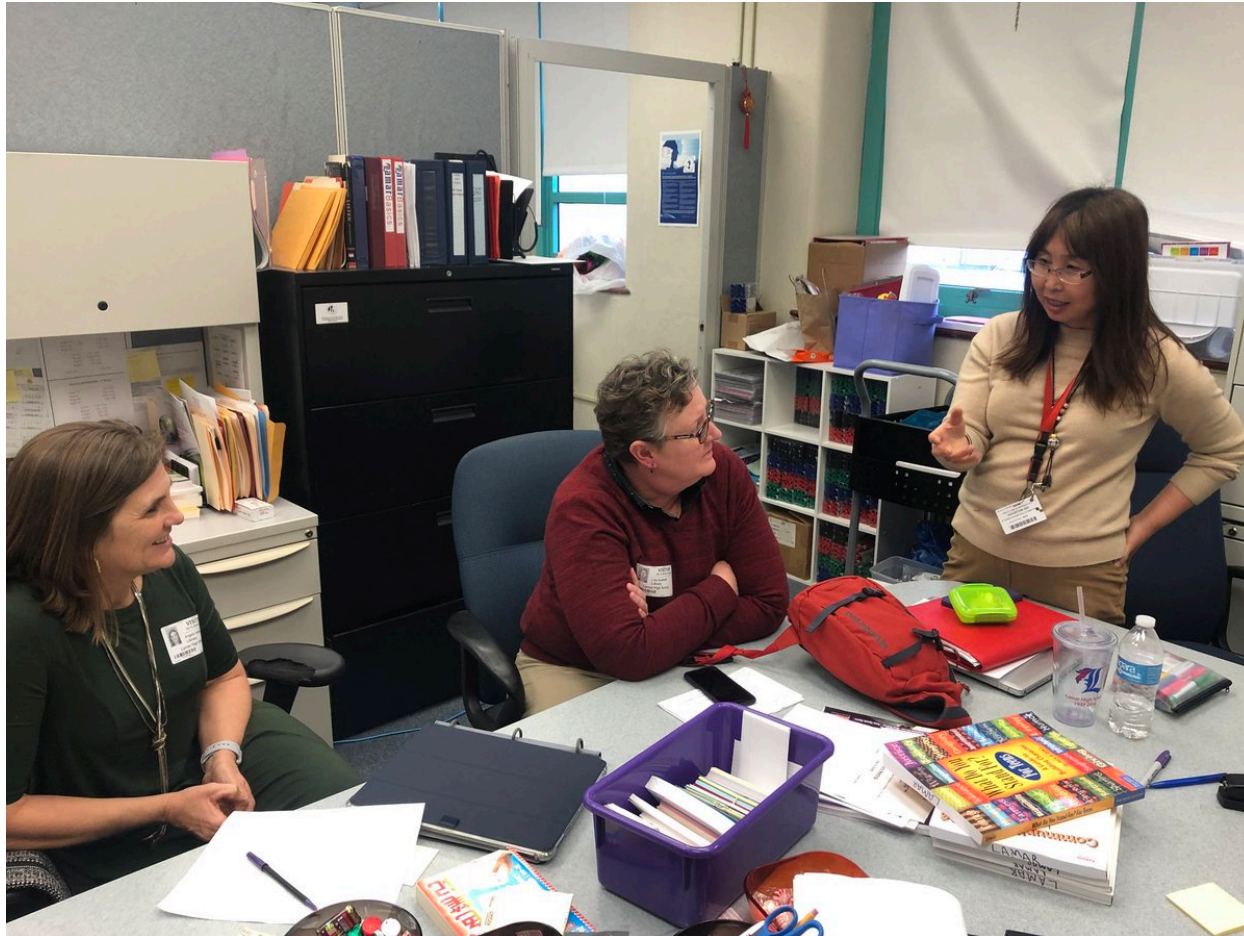
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Village News / Southwest News ♦ February 27, 2018

RUSMP Noyce Fellow Hosts Louisiana Noyce Fellows

By Dr. Anne Papakonstantinou,
Rice University School Mathematics Project

Three master mathematics teachers from the Rice University School Mathematics Project (RUSMP)'s National Science Foundation Robert Noyce Fellowship Program hosted ten Noyce Fellows from the University of Louisiana at Lafayette together with their professor, Dr. Peter Sheppard, earlier this month.

The ten visitors were guests of Charlie Burrus at Bellaire High School, Lan Wu at Lamar High School, and Dr. Gail Hamilton at Pin Oak Middle School. The collaboration between the two groups of teachers started remotely in the fall with discussions about mathematics instruction. While in Houston, the visitors attended classes and planning meetings, and participated in conversations about important issues in education.

Guests were in awe of the high achievement levels that they observed at all of the schools, yet with each school retaining its own unique identity. They felt students inherited the schools' culture of success and achievement.

One teacher commented that "Because of this experience, I will now be more aware of teachable moments and take advantage of them." Another visitor mentioned "I was reminded of the importance of strong instructional leadership. It is critical for the teacher to lay the foundation for learning. With this base of knowledge, I observed students easily transitioning into activities that were rich and meaningful."

RUSMP Director of Research, Dr. Adem Ekmekci, noted that "this was a unique collaboration between two groups of master teachers from different states and educational contexts.



Teachers in the RUSMP program enjoy conversation at lunch.

"A preliminary study revealed that teachers felt extremely positive about observing different school cultures and mathematics classrooms. As teachers reported, it was a great learning experience for both groups, and they all look forward to building upon this initiative by furthering the collaboration between the two groups."

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What else could have been done?

- ❖ Having a reciprocity: RU-MTF teachers to visit LaM³ teachers (Funding?? Resources??)
- ❖ Having a more focused visit (specific goals, more structure in terms of specific activities to pay attention during the observations)
- ❖ Diverse set of schools (more representative of the district)
- ❖ Debriefing with both observed and observing teachers after each lesson
- ❖ Ample time for group discussions involving both observed and observing teachers
- ❖ Pre-visit conferences or opportunities for more communication among observed and observing teachers

Brainstorming Activity - 2

- ❖ At your table take a few minutes to discuss:
 - (1) Seeing the successes and challenges of the Rice-UL-L collaboration, what do you foresee as the barriers and facilitators if you were to engage in a similar collaboration?
 - (2) How can the facilitators empower your teachers?
 - (3) How can the barriers be overcome?
- ❖ Share with the whole audience



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For more information and for a link to
this presentation please visit:

<https://rusmp.rice.edu/about/noyce>

Link to give feedback on sessions:
<http://tinyurl.com/WRNA19>

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