Rice University
School Mathematics Project
(RUSMP)

Supporting Excellence in PreK-16 Mathematics since 1987
Administrators’ Conference
February 9, 2018
Agenda

7:30 am – 8:00 am    Breakfast
8:00 am – 8:10 am    Welcome and Introductions
8:10 am – 9:00 am    Overview of RUSMP
9:00 am – 9:30 am    Challenges Faced & Support Needed
9:30 am – 10:00 am   Closing Comments & Next Steps
<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
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<tbody>
<tr>
<td>Anne Papakonstantinou</td>
<td>Director</td>
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<td>Richard Parr</td>
<td>Executive Director</td>
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<td>Susan Troutman</td>
<td>Director of Secondary Programs</td>
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<td>Carolyn White</td>
<td>Director of Elementary Programs</td>
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<td>Robin Ward</td>
<td>Director of Curriculum Integration</td>
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<td>Adem Ekmekci</td>
<td>Director of Research and Evaluation</td>
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<td>Lilly Bonner</td>
<td>RUSMP Administrator</td>
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<td>Gloria Godinez</td>
<td>RUSMP Administrative Coordinator</td>
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Supporting Excellence in PreK-16 Mathematics

Rice University and Other Universities
School Districts
Schools
Teachers
Students
Parents and the Community

Research and Evaluation
Supporting Excellence in PreK-16 Mathematics

- Rice University and Other Universities
- School Districts
- Schools
- Teachers
- Students
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Research and Evaluation
Rice University and Other Universities

- Support for other Rice PreK-12 outreach efforts
- Collaborations with Rice faculty, departments, and schools
- Support for Rice faculty, post-docs, and graduate students
- Graduate student teaching seminars and classroom observations
- Promotion of campus mathematics events to the community
- Development of mathematics education centers at other universities
Supporting Excellence in PreK-16 Mathematics

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Research and Evaluation
School Districts

• Comprehensive needs assessments
• Mathematics vision for school districts
• District curriculum and assessment documents
• Appropriate print and digital instructional materials
• Access for students to higher-level mathematics courses
• Research on effectiveness of districts’ mathematics programs
Supporting Excellence in PreK-16 Mathematics

- Rice University and Other Universities
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Research and Evaluation
Schools

- Communities of practice
- Effective mathematics teachers
- Dynamic teacher leaders
- Support for new and/or struggling teachers
Supporting Excellence in PreK-16 Mathematics

Rice University and Other Universities
School Districts
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Research and Evaluation
Teachers

- Long-term professional development to strengthen mathematical knowledge for teaching
- Short-term professional development on specific content strands and/or pedagogical strategies that is aligned to teacher needs and district initiatives
- Assistance in developing effective instructional and/or management strategies to engage all learners
- Support in developing teachers as leaders
Supporting Excellence in PreK-16 Mathematics

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Research and Evaluation
Students

• Summer programs and camps
• Academic-year enrichment programs
• Rewards for academic achievement
• College admission and financial aid workshops
Supporting Excellence in PreK-16 Mathematics

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Research and Evaluation
Parents and the Community

• Information about school and district mathematics programs
• Opportunities to engage with the school community through mathematics and the other STEAM fields
• Resources for supporting mathematics instruction at home
Supporting Excellence in PreK-16 Mathematics

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Research and Evaluation
Research and Evaluation

• Projects
  – Impact of teachers’ beliefs and mathematical knowledge for teaching (MKT) on students’ mathematics achievement in high poverty urban schools
  – Factors influencing mathematics teachers’ technological pedagogical content knowledge (TPACK) in urban schools
  – Culture, art, and mathematics to enhance computer science motivation among underrepresented minority students
  – Longitudinal analysis of high school students’ college major intentions and persistence towards STEM areas
  – The nexus of science and mathematics teacher quality and students’ social cognitive career outcomes in STEM
Research and Evaluation (cont’d)

• Collaborations
  – Rice’s Kinder Institute (HERC)
  – University of Houston-Downtown
  – Texas A&M University
  – Harmony Public Schools
  – Galveston ISD
  – Houston ISD

• Dissemination
  – Research Conferences (e.g., AERA, PME, RCML)
  – Invited talks (e.g., THECB, Univ. of Wurzburg-Germany)
  – Peer-review journals (e.g., JMTE, AJTE, EJMSTE, IJSME)
Spring & Summer Programs for Teachers
Late Spring 2018 Programs

• Strategies for Success on STAAR Grade 3 Mathematics
• Strategies for Success on STAAR Grade 6 Mathematics
• Strategies for Success on STAAR Grade 7 Mathematics
2018 Summer Programs

• 32\textsuperscript{nd} Annual Summer Campus Program
• Developing Geometric Thinking across the Mathematics Strands in Grades K-2
• Developing Geometric Thinking across the Mathematics Strands in Grades 3-5
• Developing Geometric Thinking across the Mathematics Strands in Grades 6-8
Computer Science
Professional Learning Programs

- Code.org CS Fundamentals
- Code.org CS Discoveries
- Code.org CS Principles
- CS in Algebra
- CS in Science

Administrators’/Counselors’ Meeting on February 26
Summer Programs & Camps for Students
At Episcopal High School

• For students entering 7\textsuperscript{th} or 8\textsuperscript{th} grade

• For students entering Algebra I or Geometry

• For students who completed PreCalculus
At St. Mark’s Episcopal School

• rising 2nd – grade students
• rising 3rd – grade students
• rising 4th – grade students
• rising 5th – and 6th – grade students
Visit us

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http://rusmp.rice.edu

on Facebook:
https://www.facebook.com/rusmp.edu

on Twitter:
@RiceUSMP
Reflections on the Work of RUSMP

• Faye McNeil
  – Principal, Montgomery Elementary School, Houston ISD
  – Member, RUSMP Advisory Board

• Doris Robins
  – Superintendent, Academy of Accelerated Learning, Inc.
Discussion Questions

• What challenges do you face at your school or in your district?

• What support do you need to help meet these challenges?