TAMU's MTC Project: Using Multiple Partnerships to Reach One Common Goal

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Agenda

- Introduction
- Project Purpose & Scope
- Collaborative Partnerships
- MTC Inservice
- MTC Preservice
- MTC Website

Introduction

- Texas Essential Knowledge & Skills (TEKS) adopted in 1997
- Refined math TEKS adopted by SBOE in 2005
- Refined math TEKS implemented in 2006-2007

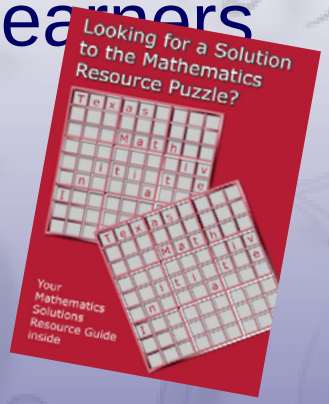
Introduction

- The state is committed to improving education

- TEA has invested heavily in mathematics professional development for inservice teachers

TEA Mathematics Professional Development Portfolio

- Mathematics for English Language Learners (MELL)
- Math TEKS Refinement (MTR)
- Teaching Math TEKS Through Technology (TMT3)
- Maximizing Algebra II Performance (MAP)
- Math TEKS Connections (MTC)



MTC Purpose & Scope

Project Objectives

- Facilitate understanding of connections among the TEKS and instruction & assessment
- Facilitate teachers' ability to effectively instruct math students using TEKS
- Facilitate a common core of knowledge and method between:
  - Teachers and administrators
  - K-12 and teacher preparation programs

MTC Purpose & Scope

- Professional learning opportunities targeted to four audiences:
  - K-12 Mathematics Teachers
  - K-12 Administrators
  - Teacher Educators
  - Preservice Teachers

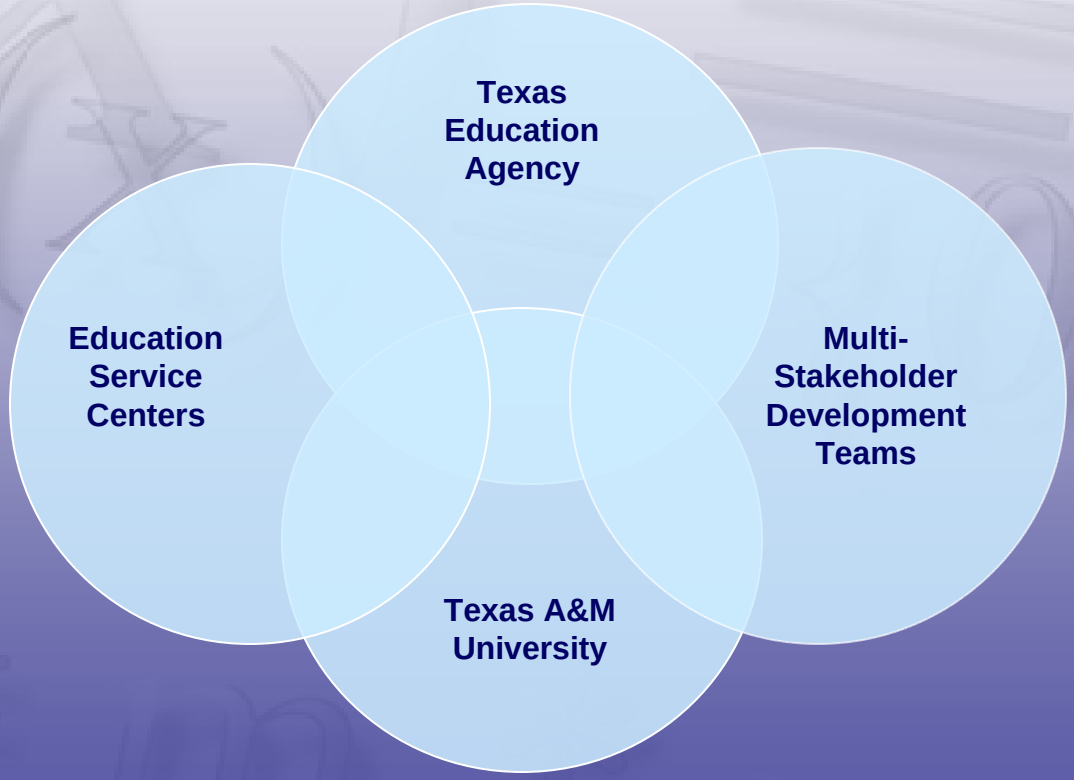
MTC Modules

- Five 2-day TOT-model professional development modules (each 12 hours in length)
  - K-2
  - 3-5
  - 6-8
  - 9-12
  - Geometry
- One 3-hour administrator module
- Teacher education modules
  - K-4
  - 5-8
  - 9-12

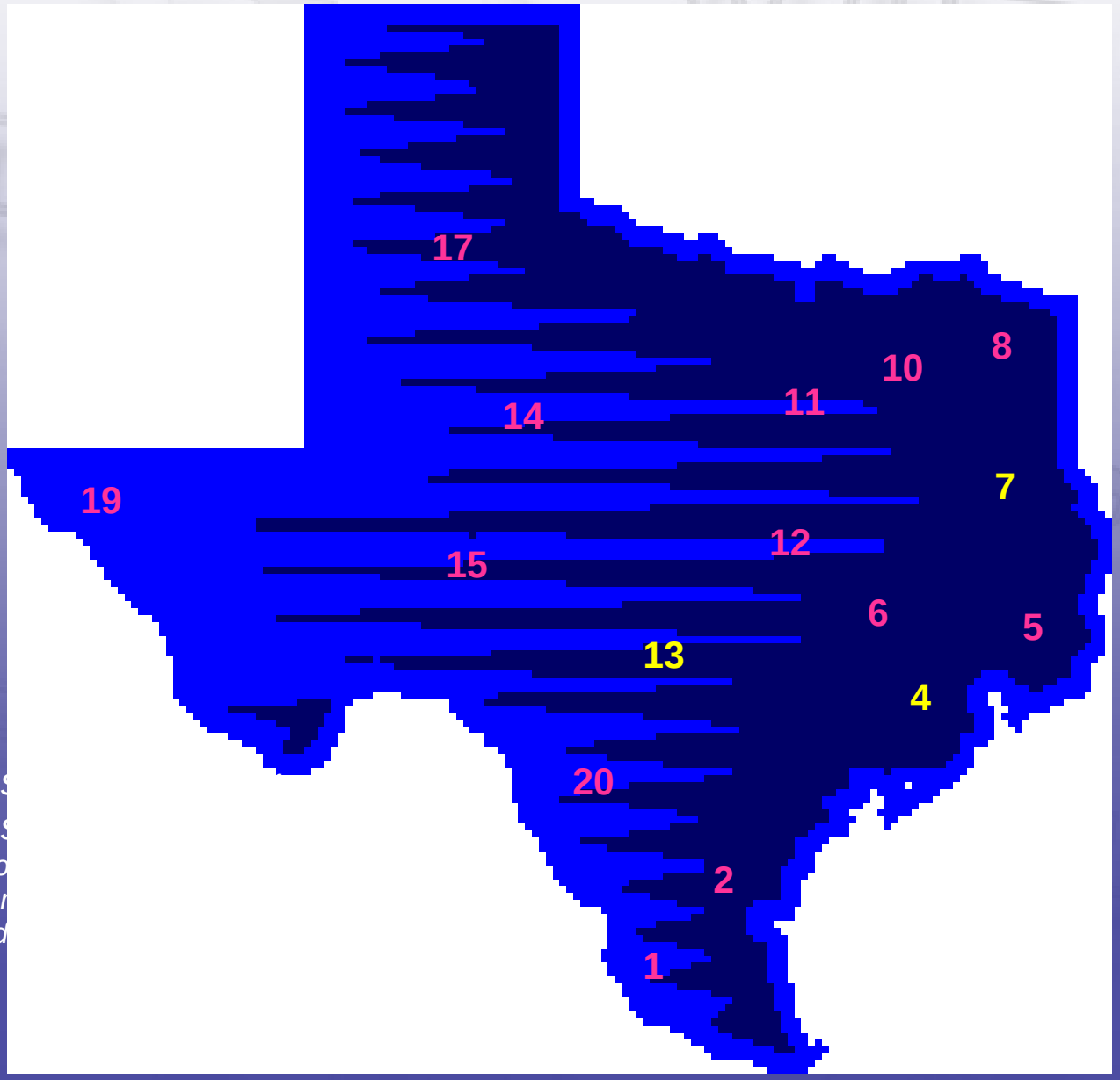
MTC Modules

- Offer a framework to help teachers understand the depth and complexity of the TEKS
- Offer online support for teachers
- Informed school administrators
- Provide a grounding in the math TEKS for preservice teachers

Collaborative Model of Planning & Implementation



MTC Development Team Members & Contributors



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MTC Inservice

Project Collaborative Approach

- Developed collaboratively by TAMU and Education Service Centers
- Composed of several components, including smaller subcontracted grants within the larger grant
- Contains several cross-functional teams
- TAMU serves as lead partner

MTC Preservice

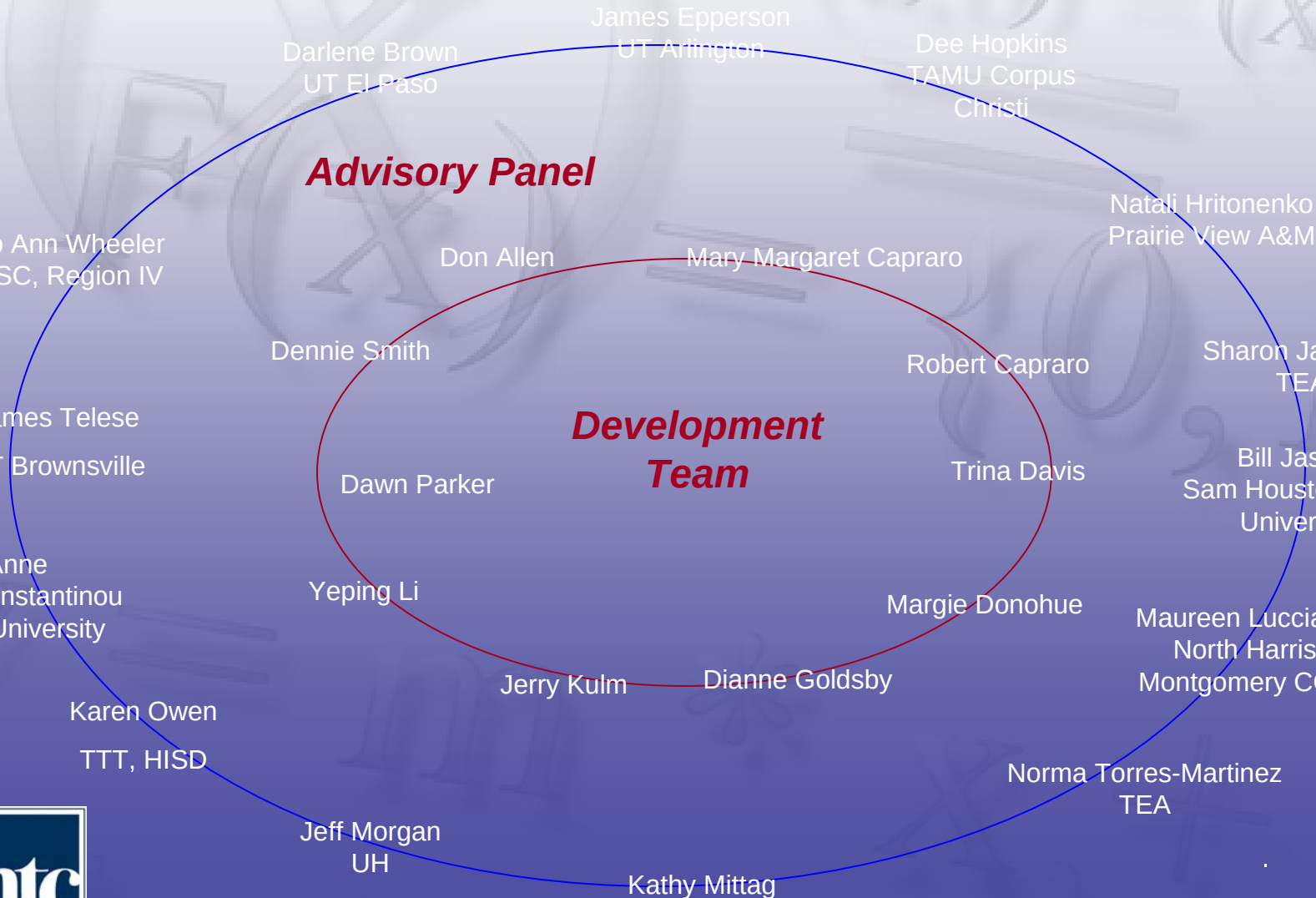
Modules developed collaboratively

- Professors
- Researchers
- Instructors
- Graduate students

MTC Preservice

- Team selection
- Content/design addressed
- Advisory panel
- Review team
- Seminar

MTC Preservice



Purpose

To disseminate innovative modules for preservice teachers that

- are research-based
- highlight key mathematics content in the Texas Essential Knowledge and Skills (TEKS)
- emphasize connections between important mathematical concepts in grades pre K-12

What We Mean by Research-Based

Current research is reflected in

- Content
- Activities
- Focus on student involvement and thinking
- Multiple representations

Dissemination

- Texas A&M System Universities
- Other universities
- Community colleges
- Regional education service centers
- Other teacher preparation programs

Matrix for MTC Teacher Education Modules

	Student Thinking	Problem Solving	Representation
Pre k -4	Lessons	Lessons	Lessons
5 – 8	Lessons	Lessons	Lessons
9 - 12	Lessons	Lessons	Lessons

Module Design

- Module welcome
  - Intended audience, objectives, standards addressed
- TEKS clarification activity
- Modules on representation, student thinking, and problem solving
  - Lessons with objectives, readings, activities, follow-up activities, reflection opportunities, checking for understanding, references/resources

What the MTC Teacher Education Modules Are

- Resources for teacher education mathematics methods instructors
- Sample material connecting the TEKS and important mathematics topics
- Resources to enhance, amplify, & replace materials used in teacher education coursework

What the MTC Teacher Education Modules Are Not

- A complete mathematics methods course for a grade band

Overview of TEKS Clarification Module

Learning Goal Clarification

- First module for each grade level
- A strategy for clarifying TEKS objectives
- Adapted from procedure developed by Project 2061: American Association for the Advancement of Science

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Clarification Procedure

- Define the mathematical content
- Determine the expected level of sophistication
- Identify necessary prerequisite knowledge & skills
- Identify possible misconceptions or difficulties that students might have

Clarification Process

- Examine a single TEKS objective & clarify its meaning
- Compare the TEKS with other grade levels & with national standards
- Discuss & determine TEKS prerequisites
- Read research about student learning to identify misconceptions

MTC Website

http://mtc.tamu.edu