

Supporting Equity and Social Justice Through Mathematics In the Public Interest

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What is MEPI and Its Goals?

Mathematics Education in the Public Interest –
NSF funded research project

- Support Equity and Social Justice in Mathematics Education
- Diversify Student Interest and participation
- Change the way math is viewed as a discipline
- Uses math to evaluate and understand broader social, economic and political issues facing our communities, nation and world

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MEPI Theoretical Foundation



- Mathematical Literacy – NCTM

Problem solvers, communicate and reason mathematically

- Critical Literacy

Examine and evaluate issues in our world

- Community Literacy

Address common concerns; culturally relevant, funds of knowledge

Our Current Research Focus

- *Math for Social Analysis* – Jr. Level
Elementary and middle grades preservice teachers mathematics course
 1. Deepen mathematical content knowledge
 2. Critically analyze the world using math
 3. Connect math to other subjects and to children's lives outside of school

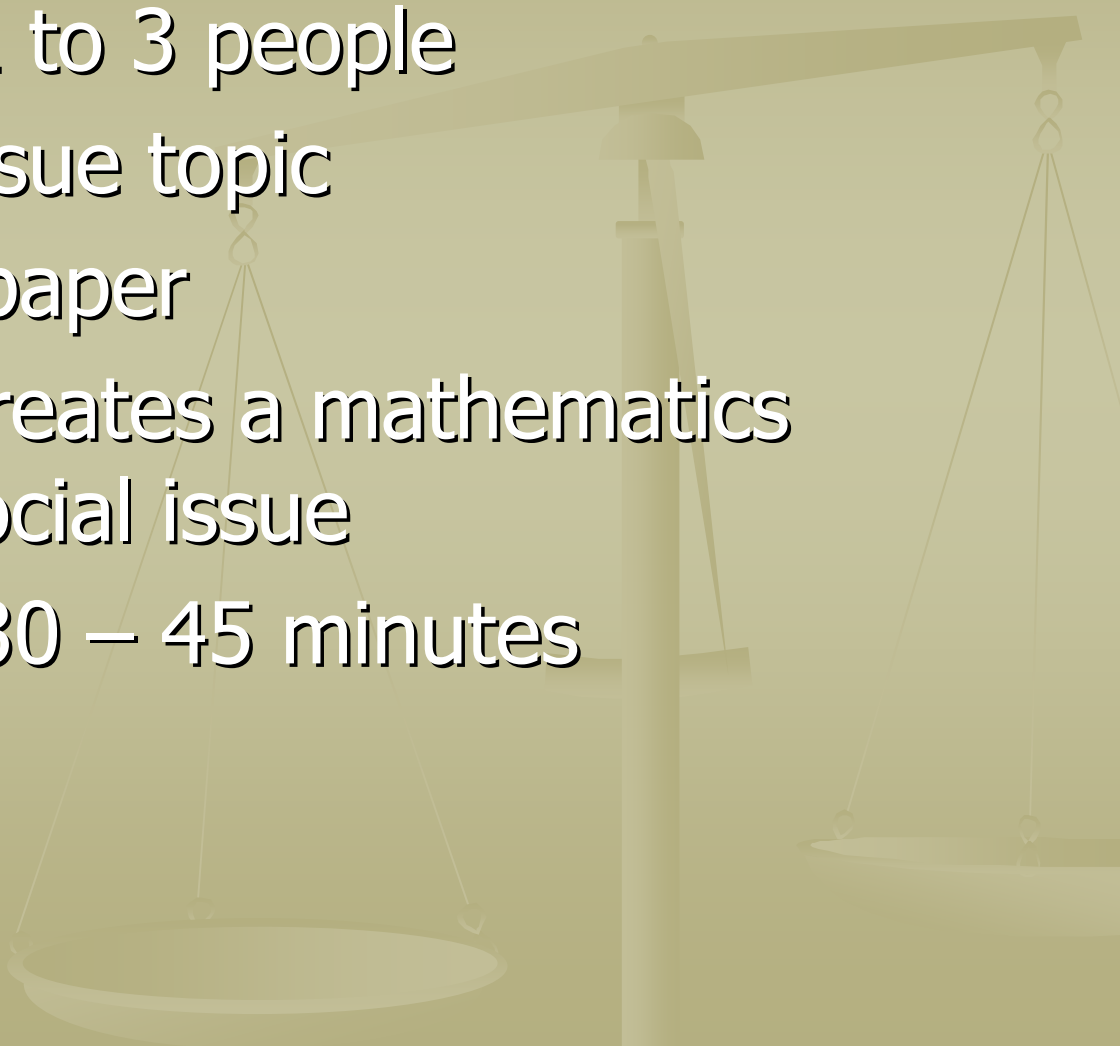
Math for Social Analysis

- Curriculum focus on social issues;
Environmentalism
Global economy
Health
- Semester Long Projects Options
Service Learning Project
Research/Teaching project
- Daily Work, Journals, In Class Activities

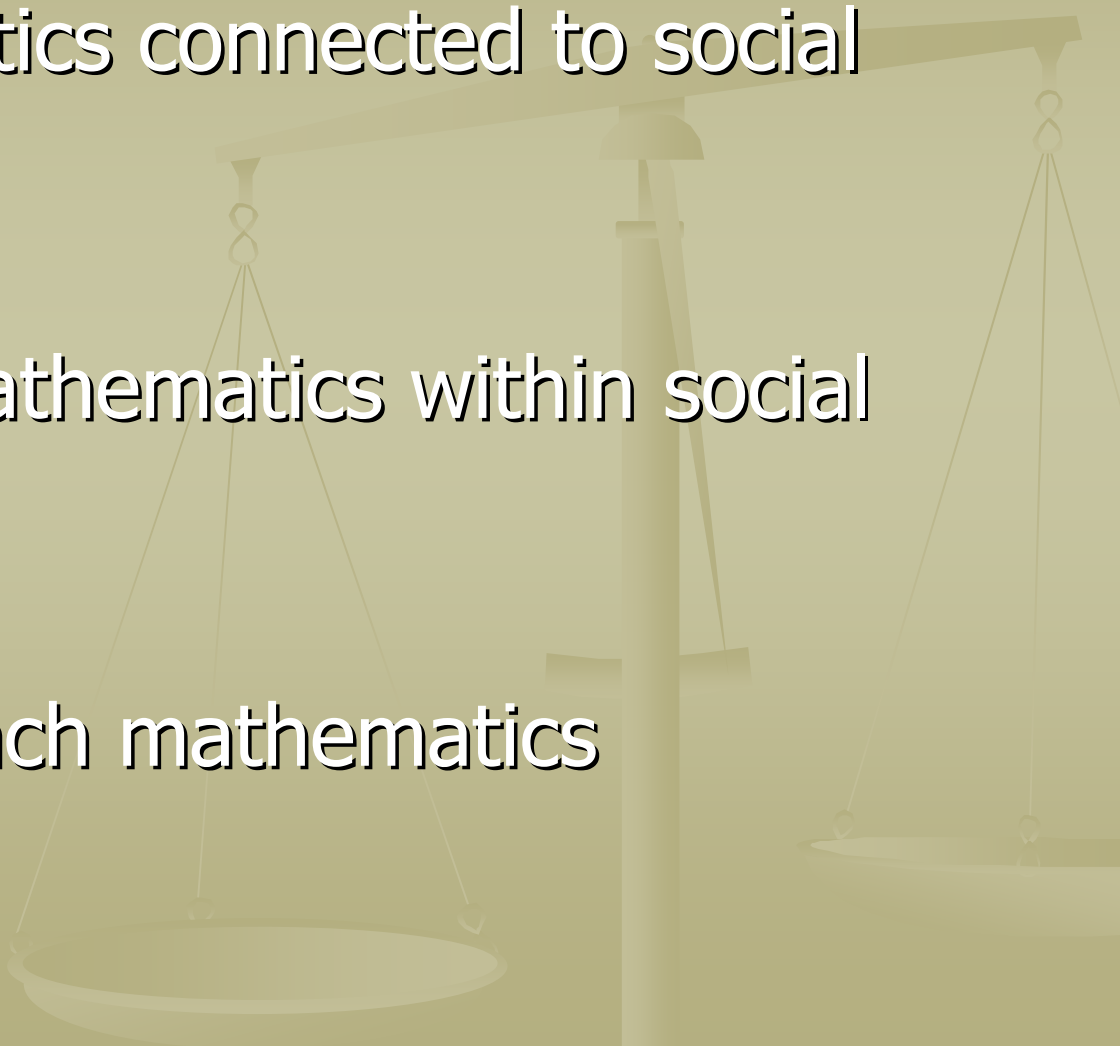
Service Learning Option

- Beans and Rice Organization
- Local economic and educational development non profit organization
Website: <http://www.beansandrice.org>
- Low and moderate income families
- After School Program: k - 5
- Tutor, mentor, connect with children
- 5 Math Activities – preservice teachers design
- Presentation end of semester

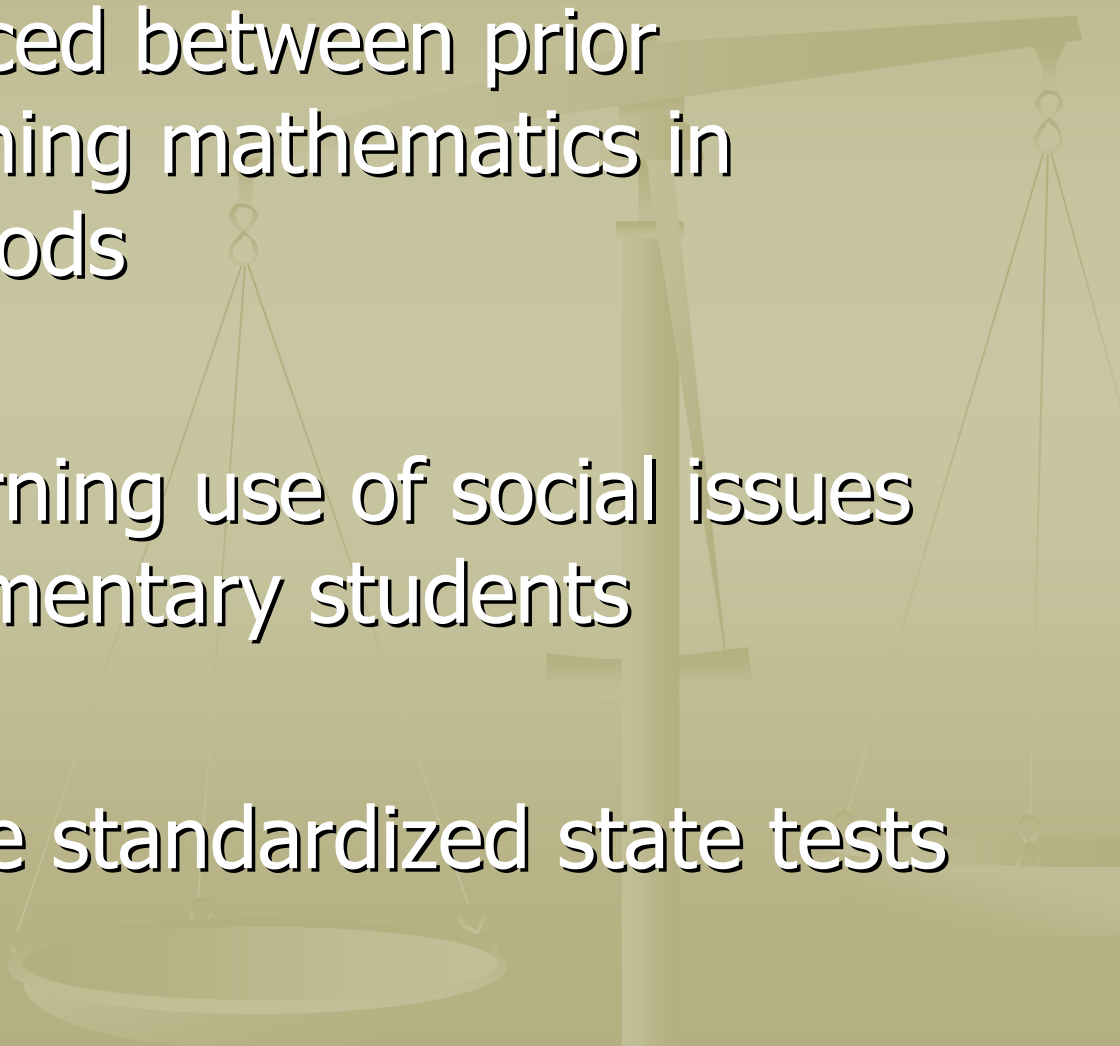
Research/Teaching Option

- Small Group – 2 to 3 people
 - Choose social issue topic
 - Write research paper
 - Each member creates a mathematics lesson on the social issue
 - Group teaches 30 – 45 minutes
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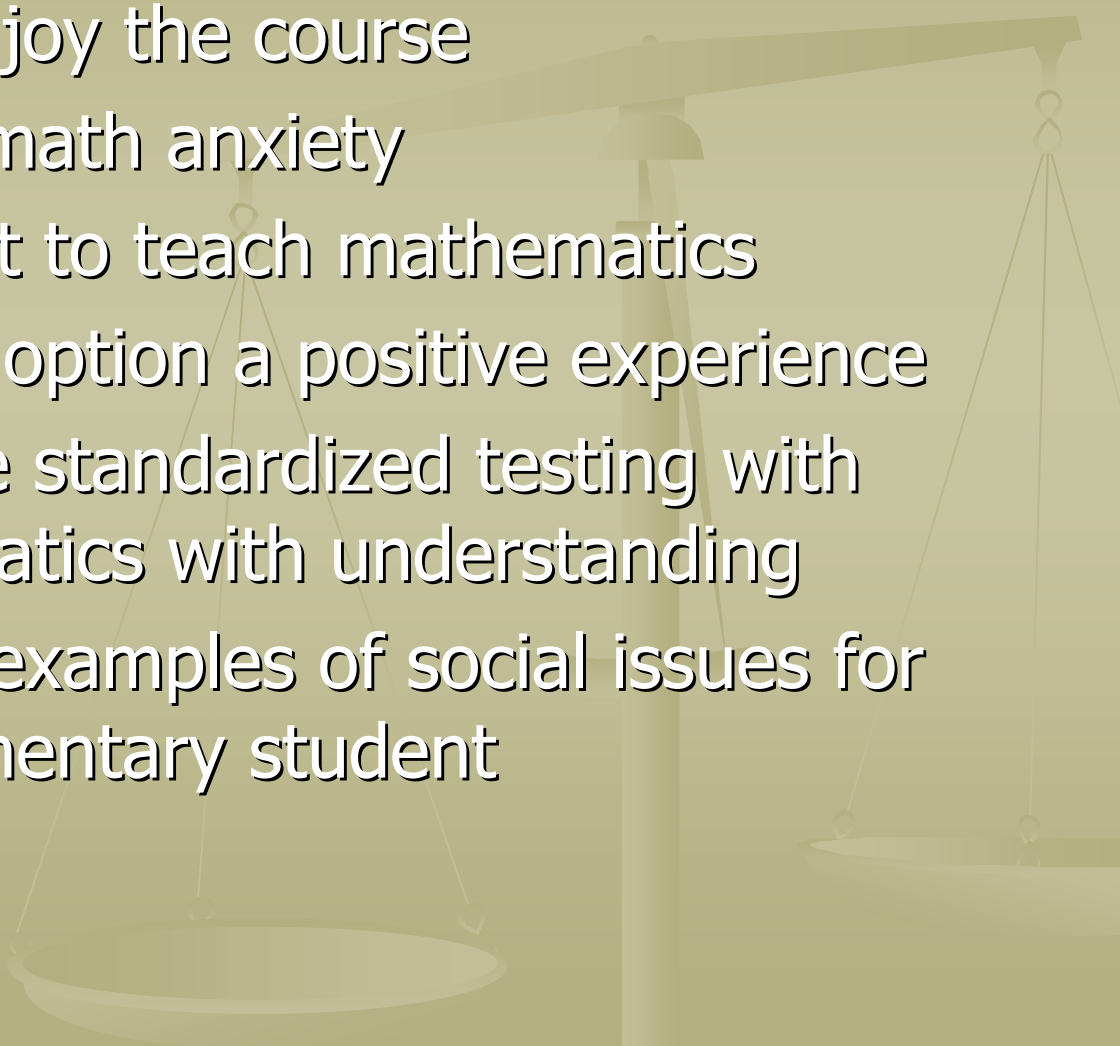
Early Results - Positive

- Enjoy mathematics connected to social issues
 - Relevancy of mathematics within social issues
 - Confident to teach mathematics
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Early Results - Concerns

- Tensions produced between prior experience learning mathematics in traditional methods
 - Tensions concerning use of social issues for younger elementary students
 - Tension with the standardized state tests
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Things We Have Learned

1. Most students enjoy the course
 2. Course reduced math anxiety
 3. Created confident to teach mathematics
 4. Service Learning option a positive experience
 5. Need to reconcile standardized testing with learning mathematics with understanding
 6. Need to provide examples of social issues for the younger elementary student
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Moving Forward



- Continue perfecting *Math for Social Analysis* course
- Extend research to other universities –
Michigan State
University of Delaware
- Longitudinal studies with our students when they become teachers

References

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