Inquiry Based Learning in Mathematics: The Moore Method

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Outline

1. Moore and His Method
2. Pros and Cons
3. My Experience
R.L. Moore

- Most prolific producer of Mathematicians with 50 PhD students and 1678 descendants.
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- President of AMS and 5 students have also been president.
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- President of AMS and 5 students have also been president.
- Developed his method at U. Pennsylvania between 1911 and 1916
The Moore Method

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- Students present their solutions in class
- Students verify accuracy of each others work.
Advantages

Students will:

- perform Authentic Tasks
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- No procedures to memorize
- Course notes are free or very inexpensive
- Solutions are not online
Disadvantages

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- Students can get frustrated “He doesn’t teach us anything!”
- Weaker students can fall behind
- Students lack writing to model work on
I’ve taken

Four semesters of graduate course work taught in this style.
Classes I’ve Been Involved In

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- Foundations of Mathematics
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Moore and His Method
Pros and Cons
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Problems

Students don’t know where to start

Begin with review of proofs and modeling the proof discovery process.
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Whole class arrives with no solutions prepared
Assign problems in groups so that students have more direction.
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**Students don’t know where to start**
Begin with review of proofs and modeling the proof discovery process.

**Whole class arrives with no solutions prepared**
Assign problems in groups so that students have more direction.

**Cover Drastically less material**
WHO CARES!
My Next Steps

- I talk too much!
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- I talk too much!
- Improve positivity of feedback
My Next Steps

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- Find balance between modeling and discovery
My Next Steps

- I talk too much!
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- Find balance between modeling and discovery
- Write and publish own course notes
Course Evaluations

“I think it has really helped develop my understanding of the topic.”
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- “The instructor has pushed the students to really think...”
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- “The instructor has pushed the students to really think...”
- “Feels like a one-on-one class...”
More Info

- http://legacyrlmoore.org/
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More Info

- http://legacyrlmoore.org/
- http://www.jiblm.org/
- *The Moore Method: A Pathway to Student-Centered Learning* Coppin, Mahavier, May, Parker
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Thank You.