

Faculty Work Comprehensive List

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11-13-2015

## Critical Thinking and High-Level Discourse in a 1:1 Environment

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### Recommended Citation

Zonnefeld, R. G., & Zonnefeld, V. L. (2015). Critical Thinking and High-Level Discourse in a 1:1 Environment. Retrieved from [https://digitalcollections.dordt.edu/faculty\\_work/417](https://digitalcollections.dordt.edu/faculty_work/417)

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## Critical Thinking and High-Level Discourse in a 1:1 Environment

### Abstract

Learn about our experiences co-teaching a K–8 methods course using 1:1 tablets in a high-tech lab. This innovative course included a move away from a textbook to a dynamic research-based curriculum supported by NCTM resources and CCSSM as well as integral utilization of apps, web 2.0 tools, and professional learning networks.

### Keywords

critical thinking, learning, teaching, classroom environment

### Disciplines

Christianity | Mathematics | Teacher Education and Professional Development

### Comments

Presented at the National Council for Teachers of Mathematics Regional Conference held in Minneapolis, Minnesota, November 11-13, 2015.



# Critical Thinking and High-level Discourse

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Teaching, Learning, and Professional Development  
in a 1:1 Environment

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# EDUC 332

## Teaching Mathematics in Grades PK-8





# Supported by:

- The Learning Lab



# Supported by:

- Co-teaching
- Innovations Grant
  - 30 iPad 2's
- Library
  - iPad cart
  - Technical support





# Intended Goals

Prepare prospective teachers to:

- Teach in a 1:1 environment
- Locate resources
- Think critically
- Develop a PLN

Model:

- Collaboration
- Deep, conceptual learning
- Constructivist approach
- Co-teaching strategies



# Co-Teaching Strategies

- One Teach, One Observe
- One Teach, One Assist
- Station Teaching
- Parallel Teaching
- Supplemental Teaching
- Differentiated Teaching
- Team Teaching





# “Textbook”less Curriculum

- Curriculum resources
- Professional organization membership
- Canvas



# Successes

- Safe environment
  - Encouraging, plussing
  - Challenging each other
- High level discourse
  - Classroom structure (tables, huddle boards, iPads)
  - Inquiry-based environment
- Co-teaching





# Successes

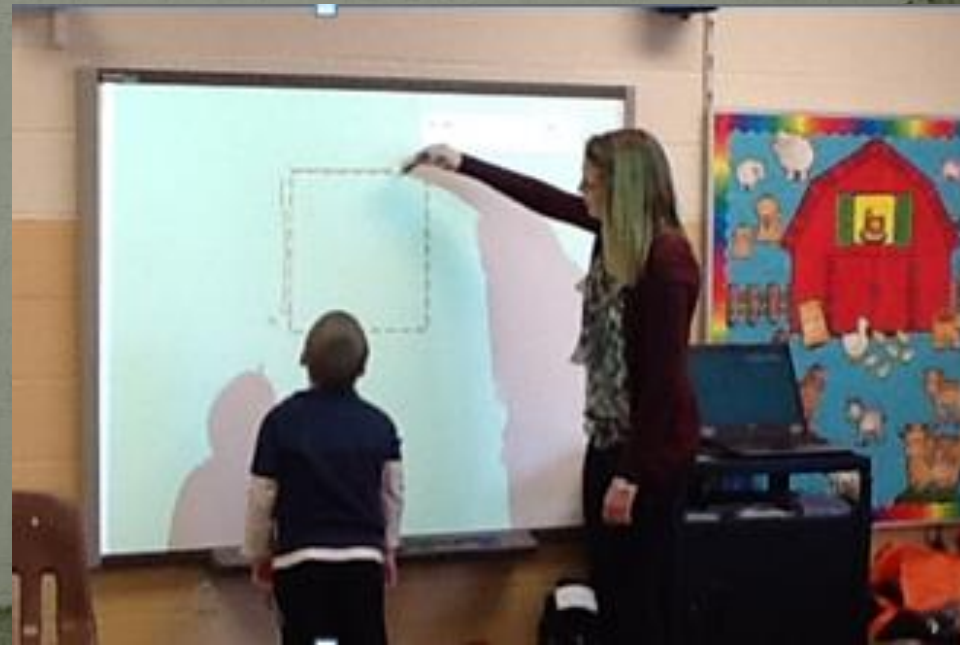
- Critical thinking
  - Constructivist approach
  - Small group discussions
  - “Meta” questions
  - Plussing
- K-8 Practicum
  - Relevance
  - Deep Questions





# Successes

- Discerning users of technology
  - Modeled in class
  - Discussed qualities of good apps and bad apps
  - A-ha moment with lattice multiplication app
- Growth in teaching confidence and ability
  - Practicum teaching
  - Textbookless curriculum



# Not successful...yet

- PLN
- Integral use of NCTM
- Time with specific methods decreased

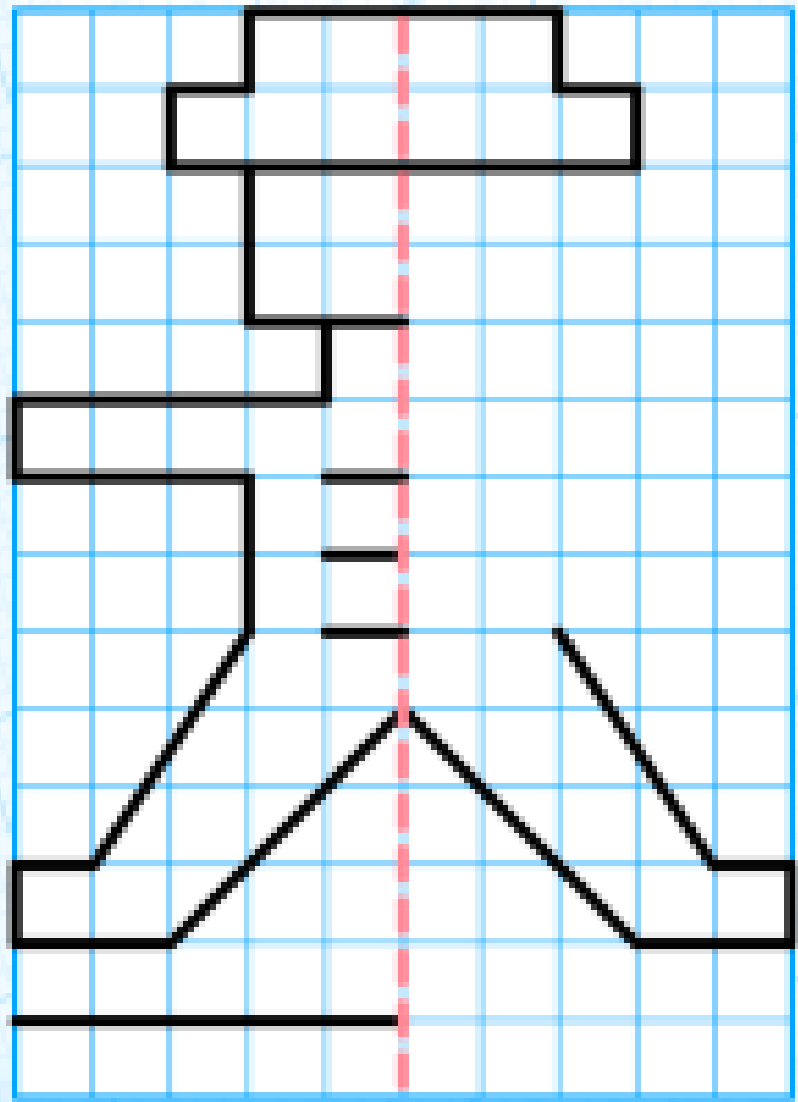


## Connected Educators





# MATH





# Plussing

- I wonder...

