

COVER SHEET

MODELS OF INNOVATION & BEST PRACTICES IN TEACHING & LEARNING AT UND

NAME : Ryan Zerr

DEPARTMENT: Mathematics

STRATEGY: A Peer Review Process in Mathematics

CLASS(ES) AND CLASS(ES) SIZE WHERE UTILIZED SUCCESSFULLY:

Currently only used in Math 330 – Set Theory and Logic, which, each semester, typically enrolls approximately 15-20 students.

STRATEGY'S APPLICABILITY: WHAT KINDS OF STUDENTS (FRESHMEN/ MAJORS/ GRADS, ETC.), COURSES, LEARNING ENVIRONMENTS, ETC.?

The specific strategy I have utilized would be appropriate in mathematics courses at any level, freshman through graduate. The primary requirement would be that the course involves students making mathematical arguments, which most typically manifests itself as the writing of proofs in courses at the sophomore through graduate levels. Given that type of proof-writing setting, the courses at UND would include Math 208, 330, 408, 430, 431, 432, 441, and 442, as well as any of the mathematics graduate courses. Having said this, I may also use this strategy next year in a freshman

ABSTRACT OR SYNOPSIS OF STRATEGY YOU ARE SUBMITTING:

Many mathematics courses ask students to make arguments in support of their solution to a problem or as a means for verifying the truth of a mathematical fact. In many cases this type of task causes difficulty for students, and so a large amount of time is spent in such classes practicing the necessary skills. Probably the most common situation of this type occurs when students are asked to read and write mathematical proofs. Since these are just logical arguments, similar in nature to arguments that might be given in any well-reasoned essay, a peer review process, not unlike that used in a college composition course, has been utilized. This process involves students writing proofs, reading the proofs written by their peers, and then responding to the peer feedback that they receive. By having the instructor also evaluate the work produced at each step in this process, students are also given instructor feedback on their work as both authors and reviewers of proofs.