

# Using Mathematics Journals to Enrich the Methods Course Experiences of Prospective Mathematics Teachers

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## **ABSTRACT**

This paper illustrates ways to employ Mathematics Teacher Journals to improve the quality of methods course experiences for prospective mathematics teachers. Based upon research conducted in an undergraduate teacher preparation program, this study describes how the author used Mathematics Teacher Journals to mentor prospective teachers in new ways. The study describes the author's experiences through this educational activity, but did so in ways that highlighted strategies for change to the methods course. Through the Mathematics Teacher Journals reading and analyzing activities the author identified specific ways that the prospective teacher were impacting their teaching practices, a result that enabled them to better performances in the methods course reflect on their teaching.

The main topics of Methods of teaching mathematics course were: Problem solving and posing, Teaching Fractal Geometry, Using dynamic geometry software (Cabri 3D, Geometric Sketchpad) in teaching, Using Graphing Calculator (Casio cfx9850+) in teaching Functions, and teaching mathematical proof. Selected articles were chosen from Mathematics Teacher Journal focused on these topics.

The activities of reading and analyzing of Journal articles were dividing in three dimensions: Articles related to course content, articles in new ideas in teaching mathematics; and articles in mathematics problem solving. Student-teachers were asked to develop new ideas based on the articles context for their teaching practices.

By providing a detailed account of the feedback process that led to this result, this paper illustrates how mathematics student-teacher can use Mathematics Teacher Journals activities to enrich the quality of their methods courses.

## **Keywords**

Mathematics education, mathematics teachers, Technology content in math teaching methods course