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Math for Elementary Teachers III

### Problem Posing Mathematics

*Some Reflections on Problem Posing: A Conversation with Marion Walter* by Juliet Baxter is a summary of her interview of Marion Walter. During the interview, Baxter has Walter inform educators how to use problem posing to engage students in mathematics.

Once Baxter defines problem posing as “creating new problems from old ones, as well as in reformulating given problems”, Baxter asks Walter how to begin using problem posing with student. Walter says there are many strategies but one of the best ways to begin with “accepting the given”. When “accepting the given” a student looks at the basic facts of the problem and formulates questions around those facts. Walter said some examples of these questions would be: How many? or Is there a pattern?. Such questions pose another question about the problem. This method helps students recognize the problem and what information they need to solve the problem. Another strategy Walter shared with Baxter was the “what-if-not?” technique. This method has students question the problem’s known information. By questioning the problem’s fundamentals, students learn how to change perspectives and form new strategies for solving the problem. Walter says “accepting the given” and “what-if-not” are only two of infinite ways to problem pose, but these are easy to begin with.

Satisfied with learning about two of the strategies to problem pose, Baxter asks Walter what students benefit from problem posing. Without hesitation, Walter says students of all varieties can benefit. Walter explains problem posing can be used for students who are advanced, struggling, old, young, math lovers, or math haters. Problem posing is a way for students to explore mathematical concepts without feeling the

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pressure to find a correct answer. Also, when using problem posing students construct meaning from their basic understanding of the problem by developing questions from what they already know or do not know. All the questions students develop are essential because they can lead to new problems or ideas for solving the initial problem.

Baxter's interview of Marion Walter shares with educators how to begin using problem posing. Two methods of problem posing are "accepting the given" and "what-if-not?". Students of all ages and learning abilities can benefit from problem posing. When using problem posing teachers can help students make connections and construct meaning. Problem posing is an excellent method for teaching mathematics.

Source:

Baxter, Juliet. **Teaching Children Mathematics**. *Some Reflectionson Problem Posing:*

*A Conversation with Marion Walter*. Oct. 2005. 122-128.