Math Philosophy

Patricia Brandt

University of Mary

 I believe that all students have the ability to grasp mathematical concepts at some level of understanding. I believe in Piaget’s theory that “children will learn mathematical concepts by manipulating materials and observing what happens”. (Cathcart, Pothier, Vance, & Bezuk, 2015, p. 27) I think that manipulatives help the students to better understand the concept that they are working with as they can see what is happening such as the example, you have 5 bears add 3 more bears, how many bears do you have total. They start with five bears, then put three more bears next to their five bears, then the students are to count the total number of bears. I would allow my students to use their manipulatives until I feel that they are confident in what they are doing, then I would like for them to try solving the problems without using manipulatives. I feel that some students will require using concrete representation throughout their mathematical learning process; while other students may require using the concrete representations for a very short time.

 I believe that some mathematical concepts will come rather easy for some students; while, other students might struggle with all concepts. For this reason, I would like to provide instruction for all levels of learners. I would like to differentiate my mathematical lessons in such a way that students will be working with those who display the same ability level. I will have a daily five structure so that my students who grasp the concept quickly are also challenged in a way so they are not getting bored and start disliking school. I will provide instruction for those on grade level with a bit of a challenge so that they are always learning something new. For those who struggle with mathematics, I will provide scaffolding instruction for them so over time they understand the mathematical concept we are working on.

 I believe that mathematics is not an easy subject for all students. Because of this, I will provide instruction as Piaget mentions with the use of manipulatives. I feel that with real world problems, students will have the opportunity to use manipulatives such as with balancing a checkbook and purchasing an item (they will have the use of a calculator for their checkbook and with purchasing an item, they will have actual money in hand).

Reference

Cathcart, W. G., Pothier, Y. M., Vance, J. H., & Bezuk, N. S. (2015). *Learning mathematics in*

*elementary and middle school* (6th ed.). Boston, MA: Pearson.