THE POWER OF MANIPULATIVES IN EDUCATION

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Developing intuition for polynomials as a basis for further algebraic and analytical study of polynomials with understanding is an essential skill in modern society. According to the article of Hadar and Shmukler (2006) entitled "A Qualitative Study of Polynomials in High School", there are different career professionals who use polynomials daily.

Understanding polynomials is very important in today's modern and innovative society. Those professions can only be done correctly if they understand polynomials. Many of today's learners need help finding it easy to solve the simple fundamental operations in polynomials, like adding and subtracting polynomials. As a result, they need help to solve the complex one. Most of the students need clarification regarding the variables and their degrees. They need to figure out what to do if they will add, subtract, multiply, or copy the degrees of the variable. Even the variables themselves, learners need to learn how to add and subtract polynomials given the exact variables or different variables. Learners need to understand the basic knowledge and simple operations in polynomials to understand the most complex ones better and apply them in their chosen professions or everyday lives.

Teachers need to make the lesson more accessible so students can understand it. Nowadays, learners learn more if they have experience or are involved in the lesson or activity. Learners learn more if they have something to manipulate. Manipulative (Tower of Hanoi) is a tool that helps the teacher make the lesson on how to add and subtract polynomials much easier. Manipulative makes the complex one easy to understand. It

helps teachers with their praxis and predicaments in teaching polynomials (Addition and Subtraction). Some teachers today need help because some students are dissatisfied if they see numbers and variables together. As a result, they need help understanding the lesson, even if it is easy to understand.

Moreover, manipulation helps the students better understand the lesson regarding addition and subtraction of polynomials. It begins a complicated process of enabling the learners to understand and improve themselves in polynomials. In addition, it also helps the teacher and the students bring back their interest in math, particularly polynomials.

References:

https://www.studentsblogs.live/post/polynomial-functions