

Jenggo, Toys for Children to Learn Math

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Students of UGM continue to create innovative products. Now, students joining Student Creativity Programme for Entrepreneurship create toys for learning mathematics. The toy named as JENGGO is the creation of Windi Tiasari, Meilinda Chrisdian Pertiwi, Galih Yudithya Utama and Safita Ema Amalia from Faculty of Mathematics and Natural Sciences, and Micahel Sigit Wicaksono Anugrah Kristanto from Faculty of Agricultural Technology. JENGGO is a combination of jenga and lego.

The background of JENGGO making was the concerns that among children, mathematics is applied on various disciplines, hence it is important. The UGM students considered that mathematics would be better comprehended if taught since early age. So, in the next stages of education, children will find it easier to learn math.

“Mathematics is introduced at early education, but many people consider math is a monster that is difficult to comprehend,” said Meilinda on Thursday (15/6). Meilinda thought math is familiar for children since a young age, but the notion that it is hard has made them avoid learning it.

On the other hand, children prefer playing to learning. “Children prefer playing to learning,” Meilinda added.



The childhood is the best time to learn. So, these inspired Meilinda and her team to make an educational demonstration tool. This tool can be used by children while playing. JENGGO takes the form like jenga but with block colouring innovation that will attract the children to play. The blocks can also be knocked down and re-assembled like lego. The blocks come in five shapes, triangle, circle, trapezoid, parallelogram, and square. These shapes also teach the children on two known dimensional shapes.

The toy comes with direction cards that can be used for children from early education to junior high school of which each has its own rules and is adjustable according to age or level of education.

JENGGO can be played together by two children or more. First step, each three blocks are installed upwards and two dices are rolled. A player will get one direction card whilst also take one block depending on the number that corresponds to the math work in the card. This will be put on top of the jenggo, and so on until it collapses. If the player gets a knock-down block, he has to mention the block shape in that block.

JENGGO can be played by early childhood students up to junior high school. It is an alternative teaching tool for teachers. With JENGGO, the student team hopes to contribute to the nation, which is put into the slogan *think big, start small, act now*. "From UGM we build Jogja for Indonesia and on to the world," Meilinda concluded.

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