ROLE OF MATH IN COGNITIVE DEVELOPMENT

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As young as five weeks, a fetus will start to develop the brain. As time goes by, that brain will function and will produce brain activities. When a human was born, it already had a brain with limited functions (Konkel, 2018). The brain is the most important organ of the human body. In order to improve its function, we have to continuously keep on learning (Harvard Health Publishing, 2021). There are various activities to sharpen our mind, and one of those techniques is crunching numbers.

Mathematics, since the day we started entering school, is always present in our scholastic years. Yearly, the level of difficulty is also increased; hence, the brain is being exercised to improve its function. Pre-school level also have math even though it is not formally introduced as a subject, but preschoolers got their way to learn using math. Kids at this age tend to measure their height, it is obviously a mathematical property. Second, math is being used when they encounter problems like proper stacking of toys (Early Childhood Learning and Knowledge Center , 2020).

In early years of schooling, mainly elementary, math plays a tremendous role in improving the cognitive ability of the pupil through math. A research conducted by Vinod Menon stated that after a short period of learning early math like arithmetic, the brain changes that improves neurological communication inside the brain. It improves numerical abilities and working memory. Highlighting the thought that Menon stated, he said that the more complex the problem that the pupil solves, the greater improvement it gives the brain (Digitale, 2011).

Children are solving math problems also mean that it is improving the brain capacity of the child. By doing math, it develops their generalization skills. To further discuss the benefit of math, it entails critical thinking, creativity, and logical reasoning (Early Childhood Learning and Knowledge Center , 2020). It is easy to spot the improvement that math brings but there are inconveniences if we are avoiding math. University of Oxford (2021) claimed that there is significant loss if math is not exercised. They stated that low mathematical practice will produce low brain chemical plasticity. This chemical is very vital in the brain for cognitive functions. One of the professors, Roi Cohen Kadosh, also added that mathematics is important in daily life. It is present in economy, employment, heath, and so on. With that, mathematical abilities should be improved so that people will not be left out from reality.

It is surprising that lack of mathematical practice may cause significant loss to us. This only proves how important this thing is. Thus, we have to look at math differently; accept math that this is not just a subject in school that dreads students. It is a key to most of our problems and helps us improve ourselves.

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