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Further, during the memorising of the multiplication table, teachers or instructors should help children to understand its concepts and meanings. In that case, children will naturally “construct” the meaning of the multiplication table by themselves while applying it to math questions. After they become familiar with the multiplication table, they can then start to learn advanced and creative imagination. On the other hand, Tai thought that the subject of abacus mental arithmetic should be included in the school curriculum. So far, the improved teaching of abacus mental arithmetic has broken people’s stereotypes of the traditional abacus, as they had previously thought of it as “just a bunch of beads,” “an abacus with a bunch of sliding beads” or “so much boring and dull formulae.” Based on the principle of “imagery memorisation” of the abacus, Tai Chiang Ching designed a set of 32 “pictures,” including teachers, students, mice, monkeys, lions, apes, parrots, peacocks, fish, crabs, chickens, ducks, leaves, roses, apples, strawberries, dumplings, peanuts, football, basketball, the sun, stars, cars, trains, computers, cups, plates, hamburgers, French fries, logos and chocolates.

According to the teaching method of abacus mental arithmetic created by Tai Chiang Ching, one should first build pictures of the animals and objects that can be seen in daily life.

Secondly, one should use these lively pictures to replace the “beads” on the abacus. In other words, when “calculating” math questions on the abacus, it won’t be “five beads plus four beads,” but “five hamburgers plus four hamburgers,” “three monkeys plus two monkeys,” “two soccer balls plus four soccer balls,” etc.

This kind of teaching method of abacus mental arithmetic not only enhances children’s “logical thinking and memory,” but also develops their innovation and imagination. This teaching method can be applied further to enhance memory, speed and the accuracy of calculation.

To children who are learning abacus mental arithmetic, the teaching method of “image memory” is very suitable for them. Since

computers and the Internet are widely used, Tai also designed images, arithmetic practice and games for computers and the internet at the CMA. Children can approach the abacus as a toy, and “play” with these new and interesting computer images in order to stimulate their interest in learning. They can see that the beads of the abacus are replaced with “images of animals, plants and objects from daily life.” Further, they can see these images as numbers and manipulate them. They will be happy when they get the answers correct and can then further enhance their skills in observation and determination through learning. Thus, their calculation speed will be faster and more accurate after training. Moreover, their school performance and self-confidence will be enhanced.

Therefore, Tai believed that abacus mental arithmetic and constructive math could complement one another. During kindergarten and the lower grades in elementary schools, children’s concentration, stability and patience should be trained first, and then they can start to build the foundation of basic calculation.

When they come to attend higher grades in elementary schools, they will be able to utilise the constructive teaching method provided by their schoolteachers. In that case, they will be able to train their skills in thinking and organising on their own in order to reach the goal of putting what they have learned toward life experiences.

Children who follow the method mentioned above can increasingly enrich their ability in critical thinking when they continue to attend junior and senior high schools. They also will be more likely to be able to adopt and solve problems in today’s ever-changing society. Once they encounter any incidents or unexpected problems, they are able to calm down first and then think, determine and analyse the situation. They will then be able to try to solve any problems they are facing on their own.

Empowering children’s brain potential and memory functions During the progress of training children to do abacus mental arithmetic, many scholars have found that the children who learned abacus mental arithmetic have higher intelligence levels than other children.