

## 启发儿童智慧的奥秘35

Using students in abacus classrooms in Kyoto senior homes as subjects, Dr. Hayashi found that seniors who are diligent in using the abacus have higher energy level and better health conditions than average seniors. He thinks exercising the fingers while using the abacus stimulates the right brain, delaying aging of nerves and stimulating a balanced development of the cerebrum.

Dr. Toshio Hayashi points out that to stimulate revitalization of the brain, seniors may work on three areas at the same time:

1.a balanced life: other than sufficient rest and balance nutrition, exercise is also important, including exercise for the brain and exercise for the body.

2.effective fingertip exercise: fingertip exercises can be divided into simple fingertip exercise (such as massage), high-level fingertip exercise (such as abacus arithmetic) and activity exercises (such as playing games) that achieve goals. By performing abacus arithmetic and other finger exercises that attain goals, brain nerves can be revitalized through coordination of the brain's exercise-linked area and the frontal lobes.

3.train both the left and right brains: performing abacus mental arithmetic and other creative brain exercises help revitalize left and right brain functions.

Dr. Toshio Hayashi thinks that those who learn abacus arithmetic and mental arithmetic as children are "abacus arithmetic learners." Those who learn as teenagers are "skilled in abacus arithmetic." Those who have started working are "experienced in abacus arithmetic," or "abacus experts." By old age, they are "abacus teachers" and at the same time "healthy abacus people." Therefore, abacus arithmetic is a subject worthy of promotion due to its beneficial qualities throughout a person's lifetime.

Dr. Toshio Hayashi points out that intense exercise should start from the hand muscles, passing to the hand's sensory area then to the brain's exercise-linked area. The hand's muscles and the hand's exercise area also link to the hand's skin sensory area, proof of the intimate relationship between finger exercises and the cerebral cortex. After comparative research, Dr. Hayashi found extremely big differences between seniors who are skilled in abacus arithmetic and those who don't practice it in terms of the percentage affected by forgetfulness, insomnia, discomfort, arthritis, high blood pressure and heart attack (please see attached chart).

Those who don't practice abacus arithmetic	Those who are skilled in abacus arithmetic	category
26%	13%	forgetfulness
28%	9%	Insomnia
58%	22%	Bodily discomfort
30%	14%	Arthritis
32%	18%	High blood pressure
23%	8%	Heart attack

Abacus arithmetic--a subject that can be studied for a lifetime, is indeed a skill suitable for all ages. If you wish to be smarter and healthier, why not hop on the abacus and mental arithmetic train?

(Appendix)

How to become a professional abacus and mental arithmetic teacher

Founder of CMA / Tai Chiang Ching

In each realm of knowledge, some people achieve outstanding success. Of course, some also fail. No matter what, there are reasons behind each success or failure. It is no exception for those who serve as educators in the abacus and mental arithmetic industry.

With my learning experience and interest in abacus and mental arithmetic in school, I hoped to reap harvest in the industry, thus after completing military service, I began teaching abacus and mental arithmetic. It has been more than thirteen years since then. Although at times I encountered difficulties and setbacks, I was able to overcome them with my passion for and confidence in abacus and mental arithmetic. To allow the quintessence of Chinese culture to continue to prosper and benefit more people, I hope to, based on my past teaching experience and research results, offer my humble opinion as a reference for those who wish to become abacus arithmetic educators.

Generally speaking, to excel as an abacus arithmetic teacher, one not only needs to be passionate about his or her job, but also constantly strive and study intensively. Therefore, I think a successful abacus and mental arithmetic teacher should at least possess the following qualifications:

First, an abundance of professional knowledge

As the old saying goes, "teachers preach, instruct and answer questions." As teachers have the responsibility to pass on knowledge and skills as well as answer students' questions, they should possess an abundance of knowledge in certain areas. Modern citizens, especially educators, who cannot progress with advancements in technology and society by constantly training themselves and absorbing new information, will be incompetent for their job.