Chisanbop Let your fingers do the computing

As children, some of us were chastised for solving math equations by counting on our fingers.

But in the future those digits at the ends of the arms might not be confined to numbering to 10. Their use might even be encouraged in classrooms.

Stories by CHERI O'NEIL Of the Emerald

Some persons believe these cheap, handy and constant companions might even surpass the age of the pocket calculator, since such computers are only as rapid as input by the human hand.

Chisanbop, a learning device created 20 years ago by Korean Sung Jin Pai and his son Hang Young Pai, renders it possible to perfect the four basic mathematical skills at the touch of the fingertip.

How is it done? In Chisanbop, the fingers represent different numerical values, and each hand embraces a decimal system.

Each finger on the right hand, excluding the thumb, represents a single unit. The right thumb represents five units. When all fingers of the right hand are "used," the total is 90 units.

Combining the values of both hands, the 10 fingers can be used to achieve a total count of 99 by pressing fingers at different intervals and "reading the results.

With a minimum amount of concentration and repetition, responses supposedly become automatic and complex equations can be solved.

During a recent appearance on the "Today Show," Chisanbop's developer Edwin Lieberthal discussed the technique while four young girls, ages 6-8 years old, displayed their knowledge of Chisanbop.

After eight hours of formal instruction and "many hours of practice," Lieberthal's daughter Amy was able to add a list of four-digit numbers in the time it took to add the figures on a calculator.

Each of the girls was able to accumulate, store and compute numbers in an amazingly short time and with accurate results.

"There's a turn-on here, and the kids enjoy doing it," Lieberthal said on the program.

He emphasized the game-like quality of Chisanbop in his descriptive booklet, in addition to results garnered from his own studies.

While progress varies with each individual, one advantage is age, "or should we say, the lack of it," says Lieberthal.

Children are fast-learners, and like other challenges such as language, the earlier the exposure, the more rapidly permanent mastery of Chisanbop will be gained, Lieberthal explained.

Lieberthal said younger minds are "pure" of previously mathematical methods, so they adapt most rapidly to Chisanbop.

"Teaching Chisanbop to children when they can first grasp rudimentary number concepts, will make it possible for them to escape the limited boundaries that heretofore confined them to using their fingers simply to count to 10," he said.

"And before long, even complicated multi-digit problems will be solved rapidly."

Lieberthal stressed the value of knowing not only the answers to problems, but also the route to the answer. He said he believes Chisanbop increases the motivation of children to learn math, while confirming the significance of the learning.

"Chisanbop stimulates an understanding of why a result was achieved."

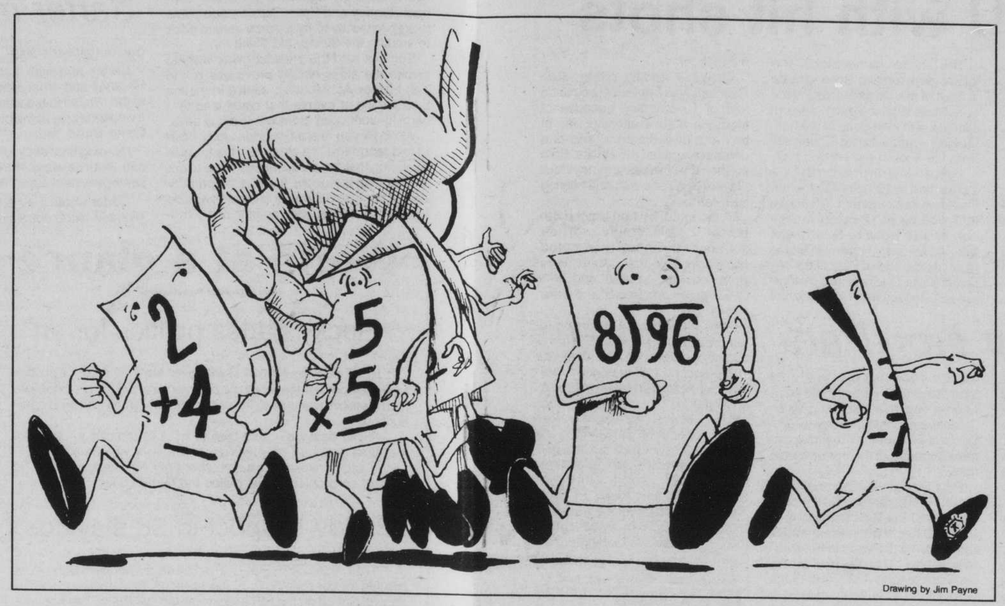
While Chisanbop was not originally created as a remedial device, Lieberthal said it can play a remarkable role in strengthening the math skills of pupils who experience problems with the subject.

Even older people can be taught to improve their computational skill, speed and accuracy and general ability to perform mathematically, Lieberthal said.

In addition, "it provides a sense of security," he said.

Chisanbop is especially valuable to handicapped students, Lieberthal affirmed.

Such a pupil can "find his place" by seeing and feeling the entire sequence of manipulation.



Drawing by Jim Payne

Profs to pioneer special applications

Everyone is looking for techniques to solve the age-old problem that kids can't add, subtract, multiply or divide, says William Lamon, associate professor of education and director of the University Psychological Research Laboratory for Mathematics Learning.

He is leading a local five-member team investigating Chisanbop, Korean for finger calculation, which has gained popularity as a learning alternative and has been featured recently on various television talk shows since it came to the United States six months ago.

Clarence Schminke, professor of education; Richard Rankin, assistant professor of developmental studies and educational psychology; George Sheperd, professor of special education and teacher education, are helping research the effect of this computational method on the mathematical skills by normal and handicapped children.

Chisanbop Enterprises, Inc., headquartered in Mount Vernon, N.Y., has associated itself with only this University, enabling Lamon and his associates, "exclusive rights to that research in the United States."

The majority of the research will be conducted in the Willamette Valley elementary schools in the next three years, Lamon says.

Since becoming involved in the study, Lamon says he has received much correspondence from school districts and concerned parents who say their children need learning aids such as Chisanbop.

Lamon feels Chisanbop owes its sudden popularity to two recent trends: "back to the basics" and "mainstreaming" of underdeveloped children.

But he stresses people must be trained by someone competent in the area of Chisanbop.

"We want to avoid it becoming a fad," he says.

Lamon also believes it is necessary to research the unanswered questions of Chisanbop "before we are bombarded with kids messing around with their fingers."

Lamon knows the basics of the technique, but says he hasn't practiced enough to master it. His own children will later serve as "guinea pigs," he says.

Like playing the piano, Lamon says, proficiency in Chisanbop is gained with practice. He compares pounding fingers in solving problems with pounding fingers in making music.

This is not Lamon's first pioneering venture in math aids.

Last year he investigated and wrote a manual for a talking calculator for persons with impaired vision.

"Speech Plus" is slightly larger than a pocket calculator, performing basic arithmetic functions, storing them in a memory bank and announcing the results with a 24-word vocabulary.

Some schools are using the devices now, Lamon says, but only in limited quantity because of their high cost.

Four years ago, Lamon collaborated with a Belgian mathematician to develop a non-electronic device that bears his name, the Papy-Lamon Minicomputer for the Blind.

Lamon has worked with the visually handicapped in his projects at the University, but he says he's interested in all kids.

He follows the philosophy of author Jean Piaget, saying his responsibility as a professor is to support new innovations.

"It's worthwhile especially to help our kids."

Lamon will appear on KING-TV in Seattle Tuesday to explain the Chisanbop method. He obtained approval from University Pres. William Boyd to represent the University in this project.

Chisanbop will also gain publicity on Tuesday's "Good Morning America" show, and later on various news programs.

There will be a two-week workshop at the University in July to prepare teachers who will participate in the longitudinal study. Ten teachers will work with normal children and 20 instructors will train handicapped in Chisanbop.

Lamon says he hopes to receive funding from local state and national sources for research and training.

Baroque concert set

Capella Antiqua, the Eugene-based chamber choir and orchestra will present the second in its series of concerts Tuesday at the United Lutheran Church, 22nd Avenue and Washington Street, at 8 p.m.

Admission is $1.50 for Tuesday's program.

Formerly known as the Innsbruck Chamber Chorus, the group has given concerts of baroque and Renaissance music during the past two years. The group now consists of almost 30 singers and players, many from the University's music department, the Eugene Symphony and Eugene Opera.

The program will open with Mozart's Missa Brevis in F, K. 192 for choir and small instrumental ensemble, a composition of the early classical period. A capella work will follow, the three-voice Mass of William Byrd (d. 1623), and the conclusion will be J.S. Bach's Cantata 106 (Gottes Zeit).

Another concert is planned for late May, including music by Bach and Heinrich Schuetz.