



Shisa Kanko: “Point and Call” to Increase Attention to Detail and Foster Accuracy

Shisa Kanko, a Japanese practice of “pointing and calling” is over 100 years old. It was first used by train drivers and is now commonly used in Japanese industry. Workers make large descriptive gestures in conjunction with vocalizations to acknowledge the status of switches or gauges, or the positions of objects. The practice serves to heighten attention to detail; it raises consciousness levels and promotes accuracy by integrating multiple modalities, thereby reducing errors and increasing safety.

(Gordenker, Alice , October 21, 2008. “JR gestures”. The Japan Times.)

An experimental initiative started this fall in our Elementary-Middle School math classes adapts Shisa Kanko principles to prompt accurate initiation of a task or activate prior knowledge within the context of math. For example, some students reverse the orientation of numerals such as 3, 5, or 2. Using the “point and call” strategy, the teacher prompts a student to initiate a learned multimodal script that drives them to generate numerals in correct orientation. Using a sheet of notebook paper to provide structure, a student flashes three fingers, touches the highest of the three holes on the paper’s left side, and says “Three.” The routine guides them to the starting point, and the student then finger-writes the numeral 3 over the paper, touching all 3 holes in succession and producing a correct rendition of the numeral. To prompt the correct encoding of “5,” the teacher may prompt the class, “Five days.” Students point to the (right) corner of a worksheet where the name, date, and five (school) days are written. They say, “Five” then touch the corner and proceed to finger-write the numeral 5 on the paper in the correct orientation.

Video: <https://www.youtube.com/watch?v=0xU3toMx4q4>



Another application of “point and call” serves to link math terms with their meanings. Students may confuse terms and procedures such as range, median, mean, and mode. Having a robust memory of one or two of these terms helps make them distinct from the others. Range and median can be demonstrated as follows: hold one hand high, and one low. Say, “Range.” Then bring your hands together with a clap at the middle and say, “Median.”



<https://www.youtube.com/watch?v=Zs5eoV690JE>

When studying Pythagorean theorem, correctly label the three sides from a seated position (with body 90 degrees to thighs) Tap chest: “A.” Tap thighs: “B.” Point away from right angle: “C.”

Video Link: <https://www.youtube.com/watch?v=J8JJYGjs1kE>



Use this same body-based right triangle, with the student’s eye as the reference angle θ to describe the relative positions of angles and sides: Tap thighs: “Opposite.” Tap chest: “Adjacent.” Point away: “Hypotenuse.”