

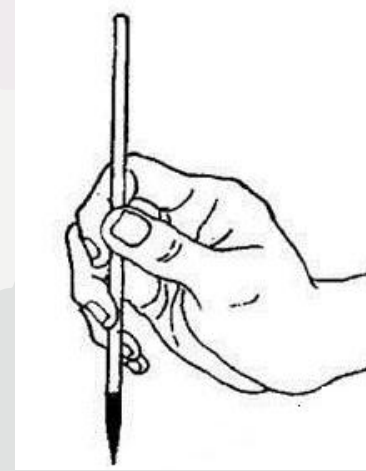


*Effects of Grip and Wrist  
Position on Calligraphy  
Handwriting*

By: Vivien Li

# *Traditional Posture*

- Shoulders should be even
  - Facilitates stability, keeps you calm and relaxed
- Keep feet on the ground
- Keep head and neck straight but relaxed
- Keep torso straight
- Different methods of where to place the wrist
  - Wrist and elbow suspended
  - Elbow on table and wrist lifted
  - Resting wrist and upper arm on the table
- Holding the brush firmly inside an empty palm

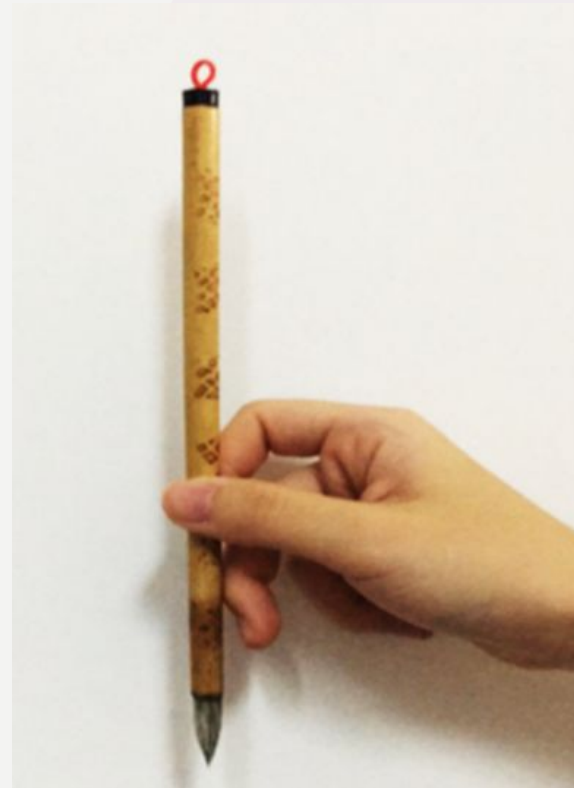


# *Focusing on Grip and Wrist Position*

- Using the correct operating combination in early learning stage can improve performance, make learning easier, and promote skill development
- Research study that investigated writing stability, agility, and hand-eye coordination when finger grip and wrist position varied
- Two finger grip methods
  - Two finger grip
  - Three finger grip
- Two wrist positions
  - Suspended wrist
  - Raised wrist

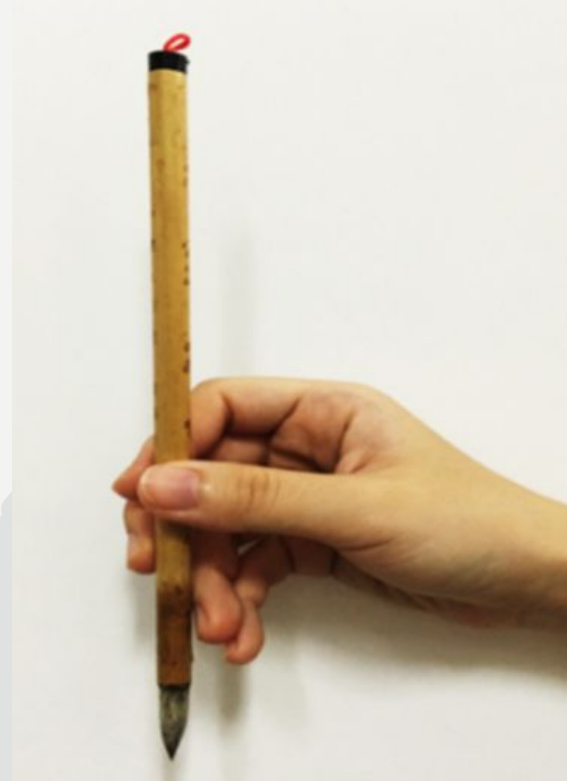
# Three Finger Grip

- Brush held vertically
- Gripped straight using the thumb and index finger
- Middle finger lightly grasps the handle on the lateral side
- Middle finger maintaining the balance
- Ring and pinky curls tightly and presses against base of palm, without contacting the brush



# Five Finger Grip

- Thumb, index, and middle finger used to hold brush straightly
- Brush held between middle and ring finger for balance
- Pinky closes with the ring finger for support



# *Wrist Positions*

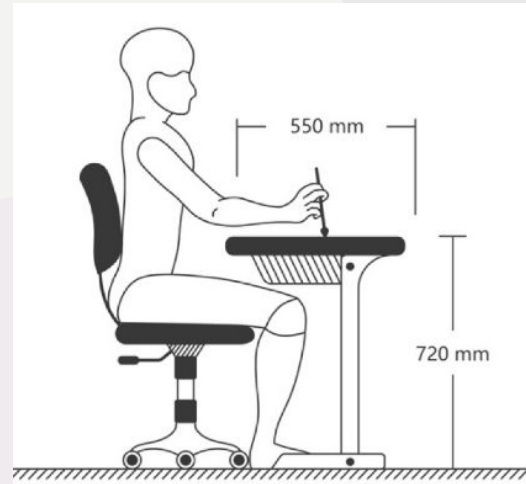
## *Suspended*

- Keep elbow and forearm on the table
- Lift the wrist slightly from the table for writing



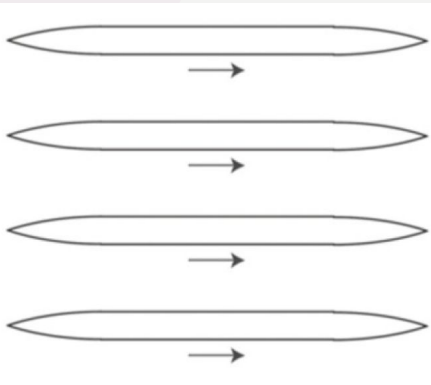
## *Raised*

- Elbow, forearm, and wrist is raised without touching the table during writing

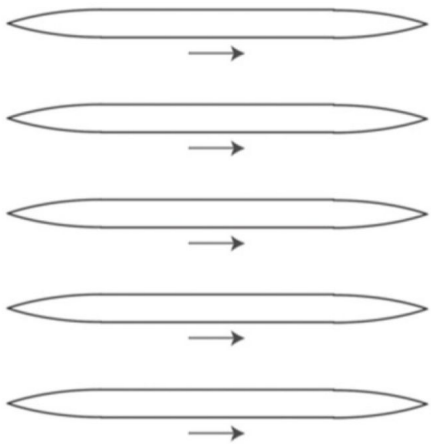


# Tasks tested

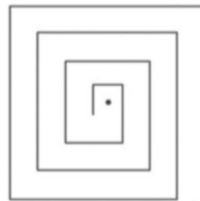
- Straight track task
  - Each track written in one continuous movement
  - Participants needed to press down on the brush, move along the track stably, and release the brush at the end
  - **Measured stability**
- Curved track task
  - Participants adjusted the direction of the brush by rotating the brush and moving the wrist to control the movement
  - **Measured agility** (ability to move quickly & easily)
- Maze Track task
  - Draw a line continuously along the spiral maze (inside-out-manner)
  - **Measured hand-eye coordination** because of direction changes and movements
    - Coordinating the information seen (directional changes) to control the hands



Straight track



Curved track




Maze track



# Results

- Grip
  - Three-finger grip had least area of error in the straight and curved track
    - Provided more stability and agility than five-finger grip
  - Five-finger gripping has significantly fewer errors formaze track
    - Involves more fingers (middle, ring, and pinky) to support the brush – can maintain upright position and press down more easily
    - More fingers for finger strength to complete complex movements and rotations
- Wrist
  - Suspended position performed better than raised wrist position
    - Holding the arm away from the body likely causes shaking and therefore poor performance when operating the brush



# *Synthesizing wrist and grip results*

- Five-finger grip and raised wrist performed worst in stability and agility tests
- Three-finger grip with raised wrist made several mistakes in the maze track task (hand-eye coordination)
- Five-finger with suspended wrist had a longer completion time for agility test
- Three-finger with suspended wrist performed best in terms of stability, agility, and hand-eye coordination
  - Produced best subjective responses (i.e., higher levels of comfort, ease of grip, less aching)

# Conclusion

- Three-finger grip with suspended wrist gave the best performance overall
- Three-finger grip for stability and agility
- Five-finger grip for improved hand-eye coordination
- Suspended wrist for better agility and hand-eye coordination
- These findings were primarily tested on beginners and focused on short-term effects
- Important to understand technical aspects of calligraphy, but it should not overshadow the importance of comfort and style

# References

Lee, Ching-Hung, and Yu-Chi Lee. “Effects of Different Finger Grips and Arm Positions on the Performance of Manipulating the Chinese Brush in Chinese Adolescents.” *International Journal of Environmental Research and Public Health*, vol. 18, no. 19, Sept. 2021, p. 10291. Crossref, <https://doi.org/10.3390/ijerph181910291>.

Li, Huiwen. “Introduction to Chinese Scripts and Basic Writing Skills.” *Chinese Calligraphy and Culture*, Pressbooks @ MSL, [pressbooks.ulib.csuohio.edu/intro-to-chinese-calligraphy/chapter/introduction-to-scripts-skills/](https://pressbooks.ulib.csuohio.edu/intro-to-chinese-calligraphy/chapter/introduction-to-scripts-skills/). Accessed 14 Oct. 2023.