Texas School for the Blind and Visually Impaired
Outreach Programs

San Francisco State University VI Programs

Texas Focus 2026, 6/4/26 3:00-4:15pm

How Touch Can Promote or Inhibit Learning and Healthy Relationships

Facilitated by

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What will we cover today?

- Physiology of touch
- Psychology of touch
- Teaching implications

Three Systems of Tactile Input

- Exteroception
- Interoception
- Proprioception

Exteroception

Perceiving and responding to tactile information from the world outside the body

Interoception

Perceiving and responding to tactile information from the world inside the body

Proprioception

Perception & control of body position and balance: may be viewed as both inside and outside the body.

Processing of Tactile Information

- Discriminative Touch
- Affective Touch

Discriminative Touch

- Glabrous, non-hairy skin (Hands, mouth, feet)
- Neural pathway travels mainly to cortical regions of the brain
- Intellectual processes like discrimination, recognition, identifying, sorting, categorizing.

Affective Touch

- Hairy skin
- Neural pathway travels mainly to brainstem & midbrain
- Physiological homeostasis, fight flight freeze (survival stuff)

Attention & Touch

- Volitional vs. Non-volitional
- Learning vs. Survival

Volitional Movement

- Movement with attention is required for human brains to form neural pathways (learn)

Volitional vs. Non-volitional

- Non-volitional movement=lack of control/survival stuff kicks in
- Volitional = awareness, responsiveness, attention, initiation, experimentation, repetition; builds schemas/memory

Learning vs. Survival

Physiological and Psychological Homeostasis (survival stuff) overrides cortical processes.

> *We always learn what we experience--that which is actually happening for us. This is different from learning from our experience. (Baniel, 2012, p.43)*

Social and emotional implications

- Social Messages
    - Relatedness
    - Autonomy
    - Competence

Social Messages & Relatedness

> *Who do the persons you seek to communicate with and engage perceive you as being? (Symonette in Mertens & Ginsberg, 2009).*

Autonomy & Competence

- How is messaging internalized by our students?
- Power dynamics & stigma
- A 2014 found that stereotype threat to individuals with vision loss was associated with a reductive effect on traits such as challenge-seeking, well-being and employment (Silverman & Cohen, 2014).

What does this mean?

- Is there a student you have known whose response to touch makes more sense now?
- Are we using touch in a way that activates the areas of the brain that are compatible with learning?
- What are students learning about themselves from the way that we use touch?

Questions?

- Ask now or
- Email us if you think of it later

Resources

- Baniel, A. (2012). *Kids beyond limits: the Anat Baniel method for awakening the brain and transforming the life of your child with special needs*. Penguin Group
- Mertens, D. M., & Ginsberg, P. E. (2009). *The handbook of social research ethics*. Sage.
- Snapp-Childs, W., Casserly, E., Mon-Williams, M., & Bingham, G. P. (2013). Active prospective control is required for effective sensorimotor learning. PLoS ONE, 8(10). https://doi.org/10.1371/journal.pone.0077609
- Silverman, & Cohen, G. L. (2014). Stereotypes as Stumbling-Blocks. *Personality & Social Psychology Bulletin*, 40(10), 1330–1340.
- Pacheco Estefan, D., Zucca, R., Arsiwalla, X., Principe, A., Zhang, H., Rocamora, R., Axmacher, N., & Verschure, P. F. (2021). Volitional learning promotes theta phase coding in the human hippocampus. Proceedings of the National Academy of Sciences, 118(10). https://doi.org/10.1073/pnas.2021238118
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- Spitoni, G. F., Zingaretti, P., Giovanardi, G., Antonucci, G., Galati, G., Lingiardi, V., Cruciani, G., Titone, G., & Boccia, M. (2020, June 15). Disorganized attachment pattern affects the perception of affective touch. Nature News. Retrieved February 7, 2023, from https://www.nature.com/articles/s41598-020-66606-5

Thank you for joining us!

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