



Transforming Education - One Touch at a Time

The rapid pace of social and technological change presents exciting opportunities but also significant challenges. While these changes allow for greater connectivity and innovation, they affect our adaptability, social behaviour, health, and personal experiences.

Nowhere is this more apparent than in education, where we increasingly demand new attitudes, tools, and skills that foster self-regulation and prevent mental health issues in children at an early age. (**Johansson, C., et al. (2020)**)

A growing body of research (**Montague, 1986 ; McGlone, 2018 ; Field, 2019 ; Linden, 2015 ; Demasio, 2000 ; Gallace & Spence, 2010**) highlights the deep-seated human need for touch, connection, and warmth (**Williams L.E. & Bargh J.A. (2008)**). Social emotional learning (SEL), which incorporates affective touch as a vital element, is essential in the 21st century school system (**El Hakim & Farsani, 2024 ; Schirmer, Croy & Schweinberger, 2021**). As social beings, promoting psychological and emotional well-being requires intentional efforts to foster human connectedness. In a world increasingly shaped by digital interaction and a growing mental health crisis, education must prioritise experiences that develop the skills needed for genuine human connection. (**NESET REPORT, EU Commission 2018**)



The Role of Touch in Human Development

Touch is perhaps the most forgotten sense, but it is an integral part of human development and communication from infancy through old age (**McGlone, 2018. McGlone 2019**). It shapes cognitive and emotional regulation throughout life (**Field, 2010 ; Cascio, Moore & McGlone, 2019**). Touch enables prosocial emotions, which help bond and connect individuals (**Bowlby, 2004. Field, 2019**). It is the essence of what makes us human, as affective social touch is at the core of positive health (**Anderson & Keltner, 2012 . Harris & Orth, 2020**).

However, the ways we now live, work, and relate to one another are shifting as we move toward a unified digital society. Social media has been shown to have a detrimental impact on children's and young people's mental health (**Harris & Orth, 2020 ; Schmidt-Persson et al., 2024**). Its consequences include anxiety, depression, body-image issues, self-harm, substance abuse, and even suicide (**Barnardo's Report, 2019 ; Thomee et al., 2011 ; Lee et al., 2016 ; Lemola et al., 2014 ; McDaniel, 2015 ; WHO Report, 2024**). Particularly since COVID-19, and with an increase of using digital devices, children often retreat into virtual worlds after school, having escaped through television, cell phones, and computer games (**Barnardo's Report, 2019**) but also having access and being vulnerable to inadequate information and connections.

The Crisis in Education and Mental Health

Teachers are increasingly struggling to adapt to the external and internal pressures of education today. The 2023 Teacher Wellbeing Index highlights the stress epidemic in the profession and demands urgent action to address mental health concerns across the sector (**Teacher Wellbeing Index, 2023**). Amongst teachers, symptoms such as stress, loneliness, depression, burn-out and suicide (5%-6%) have increased over the last years. In children,



symptoms such as low self-esteem, lack of focus and emotional dysregulation are becoming increasingly common among students. One in seven children and adolescents between 10 and 19 now suffers from anxiety, depression, or behavioural disorders (**WHO Report, 2024**). Furthermore, there has been an increase in online sexual abuse to children who can freely access internet.

Children as young as five are experiencing physical manifestations of mental health problems, such as regular stomach aches, headaches, anxiety, and insomnia. The Good Childhood Report shows that children's happiness with their friends, school, and life overall has declined (**The Children's Society, 2019**). All data supports the urgent need for change, for a shift towards a more holistic approach to mental health, which integrates education, healthcare, and social protection systems.

Lack of Proprioception , Self-awareness and Self-esteem in children

When children retreat into their devices and when there is not enough play, social interaction and movement in children, then there is a lack of proprioception — awareness of one's body. In children this manifests as continuous fidgeting, postural issues, and this often leads to attention deficits as students with poor body awareness struggle to sit still, experience discomfort, and direct their energy away from learning. Proprioception, the ability to perceive and control one's body, is essential for self-awareness and focus. (**Kalbantner-Wernicke K, Wernicke T. 2019**)

In addition, lack of body awareness can result in social challenges, as students may struggle to respect personal boundaries. This can escalate into prejudice and bullying, particularly in diverse environments. These challenges are well integrated in the **Mindful-Touch Education program**, designed to foster an inclusive, supportive learning environment where



students feel comfortable, respected, and aware of their own and others' well-being. In addition, the program benefits not only children, but also the teachers who direct the practices. Furthermore, what happens in class, also benefits the whole school community, which is one the most important environments for support, development and learning for children.

Human Connection and Positive Touch

Despite the popularity of mindfulness in schools (**Kabat-Zinn J. 2006; Paulson, S. et.al 2013**) , many children struggle to still their minds and bodies. Instead, they respond more effectively to embodied practices, like hands-on activities, crafts, and positive touch practices, which offer deeper engagement and meaningful learning experiences (**Bryant A.L. 2023**). Neuroscientist Francis McGlone highlights this need to redefine human connection in our touch-deprived digital world. “We direly need to rethink how we relate to and care for ourselves and each other” (**McGlone, 2019**).

Sherry Turkle, founder of the MIT Initiative on Technology and Self, similarly argues that technology is altering not only what we do, but who we are. As we expect more from technology and less from each other, we risk losing the human connection that forms the foundation of emotional intelligence (**Turkle, 2017**). Dr. Dacher Keltner’s research at UC Berkeley emphasises the importance of touch and human warmth for health and well-being throughout life (**Keltner,D. 2012**), while Dr. Tiffany Field’s extensive work on the therapeutic effects of touch demonstrates its benefits in addressing a variety of mental health disorders, from depression, anorexia to bulimia and self-harm (**Field, 2019**). Social and affective touch from caregivers is consistently associated with rewards such as comfort and nourishment, making it a key factor in learning, which shapes the developing "social brain." (**Ackerley, R. et al 2014; McGlone F. 2022**)



Social affective touch is also a tool (**Schirmer A. et al, 2022**). It is reciprocal. It is not just communicative as part of our non-verbal communication, but regulatory and it impacts both giver and receiver (**Cascio J.C., 2019**). When we touch we are also being touched. The reward value is so significant that it rivals drugs of abuse and may help protect against substance use disorders (**Zernig et al., 2013**).

Addressing the Crisis of Connection

In addition, in our highly connected yet increasingly isolated world, real conversations – those that engage all of our senses – are becoming rare. Technology allows us to control how we present ourselves, but at the cost of meaningful human interaction and connection that also incorporates our non-verbal communication (**El Hakim, S., & Farsani, D. (2024)**). When not, and over time, this leads to emotional fragmentation, loneliness, and disconnection. This lack of touch, essential for our well-being, particularly affects children and the elderly (**Field, T., 2003**), who are most vulnerable to isolation (**Royal Society for Public Health, 2017 ; Bowlby, 2004**).

Touch deprivation has been shown to stunt mental and emotional development, as demonstrated by studies in Romanian orphanages (**Nelson et al., 2014**), Harlow's experiments on maternal bonding (**Harlow, 1958**) and COVID-19. These findings highlight the devastating effects of a lack of tactile communication throughout life. The 2020 survey conducted by Goldsmiths College in collaboration with BBC4 found that 52% of the global population feels they are not touched enough. This 1st ever conducted international Touch Test pointed already before COVID-19 to an urgent need for more human contact in our daily lives (**The Touch Test, 2020**).



A Call to Action

To ensure healthy human development in the digital age Neuroscientist F. McGlone assures that we must include teaching the *mechanics of touch* at schools, how touch works, how it affects us and how we can use it as a tool to prevent mental health and negative social behaviour issues from an early age (**McGlone F. 2020**). Childhood education provides an adequate place and framework for addressing this need by promoting touch as a fundamental and preventative tool for connection and learning.

Our children, who have never known a world without digital devices, are the most vulnerable. Research in social and affective touch, and the importance of a special receptor in the skin, the CT-afferents ([see below](#)), play an essential role for the development of and the effects in our social brain (**Ackerley, R., Saar, K., McGlone, F., Backlund Wasling, H., 2014; Croy, I., Fairhurst, M.T., McGlone, F., 2022.**) Introducing positive, mindful touch between children at an early age can help counter the negative effects of digitalisation and fear surrounding tactile interaction in schools (**Sekhar et al., 2018 ; Johansson et al., 2020**). “It is like a vitamin that we all need. People need to understand that touch is a necessity, not a luxury!” (**McGlone F. 2020**). Mindful-Touch Education teaches this human connection as a preventative tool, reminding us of our fundamental need to bond and nurture our relationships as social beings. As such, the goal of Mindful-Touch Education is to act as a bridge between the digital and human. HOW?



Synthesising Western Science and Eastern Wisdom

In the “we-ness” we encounter ourselves

Both Western neuroscience and Eastern practices accentuate the bidirectional nature of touch and the notion that *"when we touch, we are also being touched"*. In every instance of touch, a **sensory exchange** occurs, activating brain regions in both individuals, influencing **emotional states and regulation, modulating stress**, and enhancing **social bonds**. (Cascio, C.J. et.al. 2019.)

- For the person being touched, this evokes feelings of **comfort, care, or connection**. (Cascio C. et al., 2019)
- For the one touching, it strengthens **empathy, compassion**, and provides **reassurance**. (Olausson, H., et al, 2016).

This mutual exchange releases **hormones** in both individuals (Uvnäs-Moberg, 2003), promoting trust and creating a shared sense of *"we-ness."* (Heinonen P. and Tainio, 2022)

This understanding of reciprocal touch is central to MTed's approach in fostering a more connected and compassionate educational environment.

Enhancing Learning through Touch - The Role of Shiatsu in Mindful-Touch Education

Shiatsu, a traditional Japanese therapeutic touch practice, has been instrumental in shaping the philosophy and techniques of Mindful-Touch Education (MTed). Rooted in the principles of Traditional Chinese Medicine



(TCM), Shiatsu views health as the harmonious flow of life energy—referred to as Ki (or Chi)—throughout the body (**Maciocia, G. 1989; Kaptchuk, T. 1983**). By perceiving mind and body as a unified whole (**Beresford-Cooke, C. 2022; Lundberg, P. 1992**), Shiatsu seeks to restore balance by applying gentle, intentional and at times more deep pressure along energy pathways known as meridians. These meridians correspond with acupuncture points and influence the body's physical, emotional, mental, and spiritual states. Through this integrative approach, Shiatsu aligns naturally with the objectives of Mindful-Touch Education (MTed), which emphasises holistic well-being and embodied learning.

Shiatsu's intentional, grounding touch fosters connection and a sense of safety, benefiting both physical and emotional well-being (**Beresford-Cooke, C. 2022**). It also serves as a powerful non-verbal form of communication that can bridge emotional and psychological gaps, making it a valuable tool in educational settings where verbal expression may be limited, such as among young children or those with communication barriers (**Cignolini A. and Silva L. 2017**). Shiatsu's approach is in line with MTed's goal to cultivate environments in which students feel seen and supported, even without words.

Recognized in Japan as a formal healthcare system since 1952, Shiatsu is known for promoting self-healing, well-being, and personal growth. It is one of eight complementary and alternative medicine (CAM) practices officially acknowledged in the European Union and integrated into various national health services as a respected therapeutic practice (**European Shiatsu Foundation, 2024**). By bringing Shiatsu into MTed, educators can create nurturing classroom environments that reduce stress and promote learning readiness.

While traditional Shiatsu emphasises energy flow through the meridian system, contemporary neuroscience offers insights into its physiological



mechanisms, explaining how this practice activates specific touch receptors in the skin, fosters sensory and emotional depth, impacts the nervous system and supports student well-being:

- **Pain Modulation:** Applying pressure to specific points stimulates mechanoreceptors, which block pain signals before they reach the brain (following the gate control theory of pain) (**Campbell, T.S., 2020; Jarmey, C. & Mojay, G., 1999**).
- **Stress Reduction:** Shiatsu activates the parasympathetic nervous system, which reduces cortisol levels and increases oxytocin, serotonin and dopamine – neurotransmitters essential for relaxation, bonding and emotional security. (**Ridolfi, R., 1990; Goodman, S., 1996**).
- **Improved Circulation:** Pressure techniques enhance blood flow, delivering oxygen and nutrients to tissues and promoting muscle relaxation and healing (**Beresford-Cooke, C., 2022**).
- **Neuromuscular Relaxation:** Shiatsu stimulates proprioceptors in muscles and joints, enhancing flexibility and reducing tension, which lowers injury risk (**Jarmey, C. & Mojay, G., 1999**).
- **Emotional Well-being:** Shiatsu activates the limbic system, which is involved in emotional regulation, promoting relaxation and well-being (**Goodman, S., 1996**).

While neuroscience highlights these physical mechanisms, Shiatsu's benefits are experienced holistically, encompassing emotional and mental dimensions as well (**Masunaga, S., & Ohashi, W., 1977; Yibing, S., 2023**).



Techniques and Principles of Shiatsu in MTed

Shiatsu in MTed involves non-invasive mindful touch without the use of lotions or instruments. Practitioners mainly use their palms, thumbs, and fingers to apply stationary pressure. This practice is rooted in moving and leaning on from the core, while always using both hands. This mindful engagement enhances the connection between practitioner and receiver, contributing to both physical and emotional well-being.

Cultivating Connection and Safety in the Classroom

In MTed, these principles of intentional, mindful touch are adapted to create nurturing educational environments. Research shows that affective touch positively influences children's behaviour, emotional regulation, and attentional focus (**Croy, I., et al., 2019; Cekaite, A., & Kvist Holm, M., 2017**). MTed applies these principles to support students in reducing stress, improving focus, and fostering a positive attitude towards others and towards learning (**Routarinne, S., et al., 2020; Ekström, A., & Cekaite, A., 2020**).

The Power of Leaning Touch

A key technique is "*leaning touch*", which involves applying gentle, sustained pressure through the practitioner's body weight rather than muscle strength. This pressure originates from the practitioner's "Hara" (core) and can be delivered through various parts of the body, including palms, thumbs, or even the whole body. The touch felt by the receiver is steady and calming, rather than forceful (**Beresford-Cooke, C., 2022**).

"*Leaning touch*" plays an essential role in regulating the nervous system, activating the parasympathetic response to induce relaxation in both the



receiver and the practitioner **(Goodman, S., 1996)**. A study from the University of Helsinki recently demonstrated that leaning touch in classrooms significantly improves student well-being and motivation, contributing to a positive learning environment **(Heinonen, P., & Tainio, L., 2023)**.

This idea of mutual support is beautifully captured by the Japanese character “hito” (人), meaning “person” or “human being.” The character consists of two strokes leaning toward each other, symbolising the belief that mutual support strengthens us all. This concept encapsulates the essence of Shiatsu and, by extension, Mindful-Touch Education: both thrive on connection, trust, and the recognition that we are stronger when we uplift each other **(Masunaga, S., & Ohashi, W., 1977)**.

The Emotional Connection

A central aspect of “*leaning touch*” is the deep emotional connection it fosters. Tokujiro Namikoshi, founder of the Japanese Shiatsu Therapist Association, famously stated, “Shiatsu no kokoro wa haha gokoro” — “The heart of Shiatsu is mother’s love” **(Namikoshi, T., 1981)**. This compassionate aspect of Shiatsu aligns seamlessly with MTed’s principles, where touch serves as a tool for building empathy, trust, and emotional security in educational settings.

Techniques for Emotional and Physiological Support

The following Shiatsu-derived techniques are incorporated into MTed to support emotional and physiological well-being:



- ***Leaning Touch and Palming:*** Reduces tension, enhances body awareness, and promotes emotional balance (Masunaga, S., & Ohashi, W., 1977).
- ***Intentional and Compassionate Touch:*** Regulates emotions and pain perception, fostering resilience in students (Masunaga, S., & Ohashi, W., 1977; Beresford-Cooke, C., 2022; Ackerley, R., et al., 2014; Croy, I., Fairhurst, M.T., & McGlone, F., 2022).
- ***Stroking and Caressing:*** Stimulates oxytocin release, aiding in bonding and stress reduction (Croy, I., et al., 2022; Banissy, M., 2023; Montague, A., 1986).
- ***Holding and Squeezing:*** Lowers cortisol levels, preparing students for better focus and engagement (Olausson, H., et al., 2016; Ackerley, R., et al., 2014; Croy, I., et al., 2022).
- ***Stretching, Tapping, and Tickling:*** Activates brain areas related to alertness and cognitive processing, enhancing focus and mental engagement (Masunaga, S., & Ohashi, W., 1977; Beresford-Cooke, C., 2022).

The Value of Shiatsu in Mindful-Touch Education

Incorporating Shiatsu's techniques and philosophy into Mindful-Touch Education has transformative potential for educational settings. By emphasising a compassionate, embodied approach to learning, Shiatsu in MTed creates a foundation of trust, connection, and mutual support. Through intentional, culturally sensitive application of these techniques, educators can promote children's learning alongside emotional well-being, fostering classroom environments that support students holistically and help them thrive.



Mindful-Touch is a language and a tool

Central to the MTED Program is the concept that touch serves as a powerful and intentional "language" of non-verbal communication. Just as learning a native or foreign language involves skills like listening, speaking, reading, and writing, Mindful-Touch uses the language of our hands as a profound tool for mindful communication. In fact, the program can also be taught as part of a linguistic immersion program as it uses the vocabulary of the body, senses and forms of touch, emotions, colours and movements.

Listening: The MTED Program teaches children to "listen" by being aware of their own emotional and physical responses, as well as those of others. This non-verbal listening involves attentiveness to the sensations and feedback that arise from simple mindful touch interactions.

Speaking: Just as we use words to speak, we can "speak" with our hands through different types of touch and intention. Various touches convey different messages—such as comfort, support, or affection—much like words express thoughts and feelings.

Reading: Children learn to "read" the language of touch by observing and understanding the meaning behind various types of touch. This involves recognizing the nuances of touch interactions and interpreting their emotional significance.

Writing: In Mindful-Touch Education, "writing" involves actively using our hands as tools to create meaningful tactile interactions, for instance, expressing a story with our hands on the back of a partner. By practising and refining how we touch, we communicate nonverbally, distinguishing between



care, empathy, and compassion, and learning about "the other" without using words.

Just as learning a language begins with individual words and progresses to grammar and sentence construction before storytelling, touch also has its own vocabulary, grammar, and capacity to form sentences and tell stories. The MTed Program is structured around these elements to provide a comprehensive understanding and application of touch.