

Learning enactivity: Can Alexander Technique-led music training enhance proprioceptual skills and awareness in dyspraxia?

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Disciplinary background A. My use of auto-ethnography derives from my PhD research in ethnomusicology, broadly a combination of music and anthropology.

Disciplinary background B. My background in cognition stems from my research developing models of timbre analysis, based on gesture and cognition, which I applied to Japanese-western cross-cultural music.

Abstract

I aim to show how Alexander Technique-led music praxis can increase proprioceptual awareness in dyspraxia.

I am a dyspraxic cellist. Dyspraxia (developmental coordination disorder) is a neurodevelopmental disorder like dyslexia and ADHD, and affects visuo-motor coordination, and gross and fine motor skills like those used for playing a musical instrument. A dyspraxic may have decreased musical enactivity—primarily proprioceptual and visuo-motor embodiment—(Schiavio and van der Schyff 2018, Hayes 2019) and participatory sense-making (Gallagher and Lindgren 2015: 394), but this may be subtle and depend on: the musical activity, instrument, notation, and the individual. I was not identified as dyspraxic until the first year of my music PhD and during my studies I started the cello with a teacher who also teaches Alexander Technique.

The enactive account constitutes embodied, embedded and extended knowledge; knowledge dependent on the body, within a socio-cultural context, and arising from co-dependent interactions (Schiavio and van der Schyff 2018, Hayes 2019: 449), which last Gallagher and Lindgren (2015: 394) consider participatory sense-making. Alexander Technique is enactive, focusing on increasing embodiment and reducing physical tension through “a bottom-up sensory-led experiential approach” (Easten 2021: 5) developed in teacher-led interactions. Could this participatory sense-making help me fine-tune proprioceptual-led embodiment in music performance and reduce inhibitory tension? As a dyspraxic, I am inviting my more disembodied body to participate in sense-making and become more proprioceptually and visually embodied by increasing my sensorimotor cross-modality and responsiveness.

My auto-ethnographic (Ellis et al. 2011) account uses my observations and reflections of learning cello and my lesson diary to consider how I am learning to inhabit my body more effectively in cello performance, where I am embedded in both western art music and Alexander sense-making. Perspectives from psychology, neuroscience and medicine provide more detailed understandings of dyspraxia and common therapies, albeit with a paediatric bias.

Music has rarely been considered an intervention in dyspraxia per se, which Díaz-Pérez et al. (2021: 1216) find surprising given the well-known benefits of music, especially when combined with movement, to children’s cognitive development with improvements in motor skills, attention, planning and memory. Furthermore, evidence suggests the auditory-motor feedback loop sends rhythmic signals to muscles without a mental representation taking place (Thaut 2005: 48), a sensorimotor process useful to address dyspraxic motor dysfunction. Given this, music has potential

as an intervention for dyspraxia to improve motor coordination, with improvements increasing possible engagement in, and performance of, dyspraxics in musicking and other cognitive domains, although activities like sightreading notation (of any cultural kind) may be problematic.

The Alexander Technique ethos, of developing integrated embodiment, informs my cello teacher's traditional western art music pedagogy (Schiavio and van der Schyff 2018). The student's musical praxis is centred in embodied knowledge and working on this may involve anatomical foci and/or whole-body awareness, via auditory-visual-spatial motor exercises, anatomical and biomechanical description, motor gesture metaphor, and diagrams, videos and mirrors, to enact the embodied knowledge. Crucially, his enactive musicality means he approaches a student's praxis by considering what they are doing physically rather than forming disembodied judgements. Through this participatory sense-making, my proprioceptual and visuo-motor embodiment, and sensorimotor strategies have improved, which has boosted my music performance.

Interdisciplinary implications. Although this experiential research has developed from one person, the enactive pedagogical approach (embodiment, embeddedness and participatory sense-making) has significant adaptive potential in music training and particularly for using music as a therapeutic intervention in dyspraxia. Participatory sense-making could address (dis)embodiment and engagement of dyspraxics in musical and non-musical activities. A wider study of this kind would require an interdisciplinary collaboration working with, for example, music therapists and dyspraxics (including dyspraxic musicians) and neuroscience/psychology researchers.

References

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