

Addiction and Agency: A New Therapeutic Model Based on Improvisation

Presented by Jennifer McManus for the 2008 Guelph Jazz Fest Colloquium

Abstract: The social practice of scaffolding in group improvisation has inspired a conceptual model for a more inclusive, interpersonal, and pragmatic cognitive remediation in addictions therapy.

Improvisation,
Community,
and Social Practice

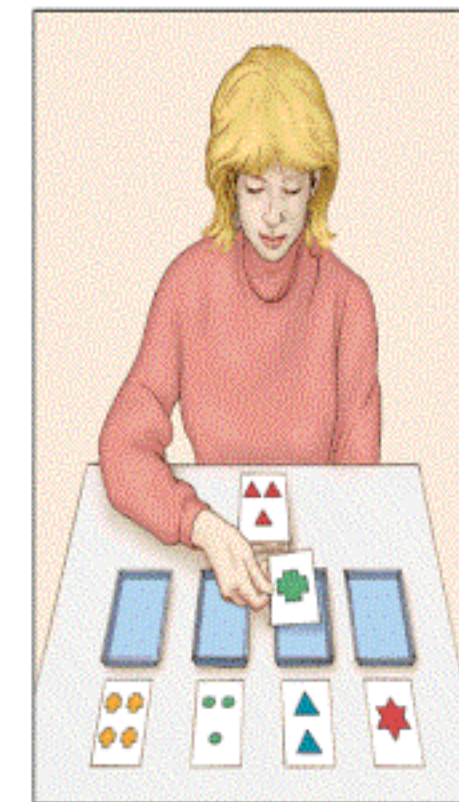
What is Cognitive Remediation?

A behavioural intervention designed to identify and improve specific cognitive disabilities in people who have neuropsychological dysfunction, such as mental illness, traumatic brain injury, or substance-induced damaged¹.

The Process of Cognitive Remediation:

- Identify the patient's cognitive strengths and weaknesses using structured tests of attention, memory, executive function, spatial cognition, problem solving, and other processes
- Focus on the patient's disabilities, repeating tasks that require the disrupted cognitive processes
- Patients reacquire those cognitive skills, possibly by means of neuroplasticity: neuronal re-growth, alterations in neurotransmitter activity, recruitment of other neurological structures²

Wisconsin Card Sorting Test



Substance-Induced Cognitive Impairments:

Many substances damage the pre-frontal cortex, which is involved in executive function, flexible thinking, and decision making³. These cognitive processes are crucial for overcoming addiction, so an impairment of these processes will drastically reduce the outcome of treatment⁴.

What is Scaffolding?

A formal teaching strategy devised to provide individualized support to students according to their skills in order to engage in a task that is just beyond their abilities⁵. The students are able to accomplish the tasks with assistance and internalize the knowledge needed to do so. This support is gradually removed as the student acquires the skills. Instructional scaffolding is both a formal model for teaching as well as an informal social interaction in everyday situations.

Scaffolding and Improvisation Pedagogy:

The common social practice of scaffolding during group improvisation has been applied to the pedagogy of improvisation. Teachers scaffold imitation to present new sequences in music and movement education, such as in jazz and Capoeira⁵.

Parse complex sequences:

Jazz – Introducing a piece in smaller sections, then group the smaller sections: motif to phrase to larger section

Capoeira – New complex movements are broken into component stages, then built up as chains of actions

Reduce degrees of freedom:

Jazz – Focusing on one dimension of sound while ignoring others, such as imitation of rhythm, regardless of pitch

Capoeira – Frame a new sequence of actions with other movements that reduce the possibility to commit common errors

The Therapeutic Model of Cognitive Remediation through Improvisation:

- Identify each patient's cognitive profile
- Design improvisation activities that isolate certain processes
- Outline each patient's task in the improvisation activity so that the patients may use their abilities to scaffold sub-tasks for their peers while reacquiring their abilities
- Mediate the group to stay focused on the task and provide support
- Encourage the group to continue to improvise after treatment

Predicted benefits of the model:

- Positions the patients as the agents of the therapy
- Provides variety in the task while preserving the targeted cognitive processes
- Offers activities that the patients can continue to engage in after treatment, in order to avoid cognitive decline due to a sedentary lifestyle and susceptibility to relapse
- Encourages the patients to build a supportive community with their peers and develop their interpersonal skills
- Sensitive to cultural and individual interests, such as the emotional and symbolic content, instruments, music, dance style

Works Cited:

- 1 Medalia, A., & Richardson, R. (2005). What predicts a good response to cognitive remediation interventions? *Schizophrenia Bulletin*, 31(4), 942-953.
- 2 Allen, D. N., Goldstein, G., & Seaton, B. E. (1997). Cognitive rehabilitation of chronic alcohol abusers. *Neuropsychology Review*, 7(1), 21-39.
- 3 Goldstein, R. Z., et al. (2004). Severity of neuropsychological impairment in cocaine and alcohol addiction: Association with metabolism in the prefrontal cortex. *Neuropsychologia*, 42 (11), 1447-1458.
- 4 Tapert, S. F., Ozyurt, S. S., Myers, M. G., & Brown, S. A. (2004). Neurocognitive ability in adults coping with alcohol and drug relapse temptations. *The American Journal of Drug and Alcohol Abuse*, 30 (2), 445-460.
- 5 Downey, G. (2008). Scaffolding imitation in Capoeira: Physical education and enculturation in an Afro-Brazilian art. *American Anthropologist*. 110(2), 204-213.

