
CSC: Second Sources Assignment

PRIMARY SOURCES

1. Daroglou, G. (2011). Coping skills and self-efficacy as predictors of gymnastic performance. *The Sport Journal*, 14(1).
<https://go-gale-com.ezproxy.oswego.edu/ps/i.do?p=AONE&u=oswego&id=GALE%7CA284323945&v=2.1&it=r>

This study investigates the demanding physical and psychological pressures experienced by gymnasts during practices and performances, especially among those who begin practicing gymnastics at a young age and those who excel rapidly. In particular, the psychological skills and the elements of self-efficacy involved in the practice of gymnastics are examined, in which the coping skills in dealing with stress during performances are further studied.

2. Marsh, H. W., Chanal, J. P., & Sarrazin, P. G. (2006). Self-belief does make a difference: A reciprocal effects model of the causal ordering of physical self-concept and gymnastics performance. *Journal of Sports Sciences*, 24(1), 101–111.
<https://doi.org/10.1080/02640410500130920>

This study investigates gymnasts' own evaluations of their skill levels in practices (their self-concept), and how this translates to performance in competitions. Their findings highlight the benefits of fostering a healthy self-concept concerning gymnastic skills and abilities. Higher levels in one lead to higher levels of the other, according to their results.

3. Asseman, F. B., Caron, O., & Crémieux, J. (2008). Are there specific conditions for which expertise in gymnastics could have an effect on postural control and performance? *Gait and Posture*, 27(1), 76–81. <https://doi.org/10.1016/j.gaitpost.2007.01.004>

This study examines how training at the elite level and the development of expertise in gymnastics is associated with postural control and performance, specifically pertaining to the maintenance of posture when engaging in various movements and when remaining fairly steady. The effects of postural maintenance were tested in bipedal, unipedal, eyes open, and eyes closed conditions in both gymnasts and non-gymnasts.

4. Luis del Campo, V., & Espada Gracia, I. (2018). Exploring visual patterns and judgments predicated on role specificity: Case studies of expertise in gymnastics. *Current Psychology*, 37(4), 934–941. <https://doi.org/10.1007/s12144-017-9572-1>

This study provides additional information into the perception of performance by gymnasts themselves, in addition to gymnastics coaches and judges. It examines how

specific sensorimotor experiences influence visual search patterns and performance judgments in gymnasts, coaches, and judges.

5. Pizzera, A. (2012). Gymnastic judges benefit from their own motor experience as gymnasts. *Research Quarterly for Exercise and Sport*, 83(4), 603–607. <https://doi.org/10.1080/02701367.2012.10599887>

This study investigates the difficult task that gymnastic judges are presented with in needing to appropriately classify various skills and gauge point deductions in a fairly short amount of time during and soon after gymnasts perform their routines. Findings indicated that judges who had previous specific motor experiences to the skills being performed were better able to accurately categorize and judge the particular routine, especially in detecting body angles.

6. Chirazi, M. (2021). Expressiveness of gestural communication through body actions. *Învățământ, Cercetare, Creație*, 1(1), 53–59. <https://www.cceol.com/search/article-detail?id=957635>

This article describes artistic expression and the importance of bodily awareness, perceptiveness, and adaptability in the context of gymnastics, sportive dance, figure skating, and swimming. Elements of neuroscience and neural patterns during such activities are also explored.

7. Kimmel, M., & Rogler, C. R. (2018). Affordances in interaction: The case of aikido. *Ecological Psychology*, 30(3), 195–223. <https://doi.org/10.1080/10407413.2017.1409589>

This article examines elements of embodied cognition and artistic expression in the martial arts, specifically in Aikido, “the way of harmonizing energy.” It describes the unique aspects of Aikido practice and performance, such as the importance of mindfulness, the defensive motions and their utility, the practiced movement phases, the exceptional technique involved, and the themes of reciprocity, noncompetitiveness, and nonviolence.

8. Bradshaw, E. J. (2010). Performance and health concepts in artistic gymnastics. *XXVIII International Symposium of Biomechanics in Sports*, July, 51–55. <https://ojs.ub.uni-konstanz.de/cpa/article/download/4378/4070>

This article provides an informative overview of the events, demands, and training involved in artistic gymnastics. This source will serve as an important reference for the introduction of my research paper.

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9. De Fano, A., Leshem, R., & Ben-Soussan, T. D. (2019). Creating an internal environment of cognitive and psycho-emotional well-being through an external

movement-based environment: An overview of Quadrato Motor Training. *International Journal of Environmental Research and Public Health*, 16(12), 1–20.

<https://doi-org.ezproxy.oswego.edu/10.3390/ijerph16122160>

This article investigates the internal and external environmental influences that contribute to cognitive and psycho-emotional well-being. Physical activity and Mindful Movement (MM), which include Hata Yoga, Tai Chi, and Aikido, are examined as mechanisms for achieving internal well-being. MM is characterized by a focused awareness of one's bodily movements in the present moment, while disregarding all other thoughts. These authors study a specific Mindful Movement-based environment training called Quadrato Motor Training (QMT), which is a structured sensorimotor training program that is designed to enhance coordination, attention, and emotional well-being by eliciting behavioral, electrophysiological, neuroanatomical, and molecular changes.

10. Barrero González, L. F. (2019). Dance as therapy: Embodiment, kinesthetic empathy and the case of contact improvisation. *Adaptive Behavior*, 27(1), 91–100.

<https://doi.org/10.1177/1059712318794203>

This article explores potential applications of dance, the phenomenology of psychiatry, and the embodied consciousness of the dancer as a form of treatment or therapy for a variety of psychopathological conditions. In particular, the effectiveness of contact improvisation (CI) and dance movement therapy (DMT) is examined. These are meant to help patients to become more aware of their bodies and more effectively recognize bodily signals. This article is expected to be used in the latter portion of the paper, which aims to describe how elements of embodied cognition can be applied to the attainment of a healthy lifestyle (sound body and sound mind).

11. Cox, A. (2016). *Music and embodied cognition: Listening, moving, feeling, and thinking*. Indiana University Press.

<https://www.amazon.com/Music-Embodied-Cognition-Listening-Interpretation/dp/025302160X?asin=025302160X&revisionId=&format=4&depth=1>

This book considers embodied cognition from a music cognition perspective. Cox explores conscious and unconscious influences of music on the human experience. Music cognition will be investigated through Cox's "mimetic hypothesis," which attributes a substantial portion of our experience and understanding of music (sensory, motor, and affective) to the listener's ability to replicate bodily movements that are associated with music production. Elements of neuroscience and phenomenology will be explored that pertain to embodied music cognition. Particularly of interest include parts 1 (Mimetic Comprehension, Metaphor and Related Means of Reasoning) and 3 (Music and the External Senses, Musical Affect, Applications, Implications).

12. Snowber, C. (2012). Dance as a way of knowing. *New Directions for Adult & Continuing Education*, 2012(134), 53–60. <https://doi-org.ezproxy.oswego.edu/10.1002/ace.20017>

This article specifically examines embodied cognition through dance as a form of artistic expression. Snowber defines dance generally, in a manner that encompasses creative movement, improvisation, and other expressive movements. Snowber discusses the importance of moving around in and interacting with the environment during childhood, which is primarily how children learn and acquire knowledge at an early age. Overall, this article offers more of a general take on embodied cognition and artistic expression and how they are involved in learning and understanding.

SECONDARY SOURCES

1. Raab, M. & Araújo, D. (2019). Embodied cognition with and without mental representations: The case of embodied choices in sports. *Frontiers in Psychology*, 10(August), 1-12. <https://doi.org/10.3389/fpsyg.2019.01825>

This article offers a historical background for embodied cognition, defines key concepts associated with it, and describes conflicting views among scholars concerning theories of embodiment. This will serve as an important source for the introduction section of my paper.

2. Schiavio, A., Gesbert, V., Reybrouck, M., Hauw, D., & Parncutt, R. (2019). Optimizing performative skills in social interaction: Insights from embodied cognition, music education, and sport psychology. *Frontiers in Psychology*, 10(July), 1-14. <https://doi.org/10.3389/fpsyg.2019.01542>

This article discusses the internal and external influences on performance in music and sports engagement, such as bodily factors, activity patterns present in the environment, and social and cultural influences. It specifically examines the feeling of being a part of a collective whole during performances, the need to be able to adapt in these contexts, and the use of distributed forms of bodily memory as it pertains to music and sports. This source provides some foundational concepts and terminologies associated with the field of embodied cognition, which will aid in my understanding of embodied cognition.

3. Cappuccio, M. L. (2015). Introduction: When embodied cognition and sport psychology team-up. *Phenomenology and the Cognitive Sciences*, 14(2), 213–225. <https://doi.org/10.1007/s11097-015-9415-1>

This article describes the key elements of embodied cognition, differentiating this perspective from other more traditional cognitive approaches to understanding intelligent

function. It offers insight into how the body inspires the mind's capabilities in many ways, and it specifically describes this phenomenon from a sports psychology perspective.

4. Illundáin-Agurruza, J. (2013). Moving wisdom: Explaining cognition through movement. *Fair Play*, 1(1), 58–87. <https://doi.org/10.1038/nrn1285>

This article provides an overview of embodied cognition and the foundational figures in its development as a field of study, including elements from historical pieces that hint at more of an embodied approach to understanding human intelligence. This article will also be beneficial to me in that it gives extensive background information that will aid in my understanding of embodied cognition.

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5. Wilson, M. (2008). How did we get from there to here? An evolutionary perspective on embodied cognition. In P. Calvo and A. Gomila (Eds.), *Handbook of Cognitive Science: An Embodied Approach* (p. 375–393). Academic Press.
<https://people.ucsc.edu/~mlwilson/publications/EvolEmbodChapt.pdf>

This article describes the origins of embodied cognition as being primarily evolutionary, in which cognitive abilities were achieved from the structure of the physical human body, causing the brain to develop and evolve in response to the body's actions and existing needs over time. Rather than claiming that cognition is strictly a direct result of the body's immediate physical environment like some articles on embodied cognition claim, Wilson states that the embodied cognition perspective also encompasses more abstract, de-contextualized thoughts, which resulted from these sensorimotor abilities that were present beforehand. This article will be used in one of the body sections (exploring embodied cognition from an evolutionary perspective) of my paper.

6. Garbarini, F. & Adenzato, M. (2004). At the root of embodied cognition: Cognitive science meets neurophysiology. *Brain and Cognition*, 56(1), 100–106.
[http://comphacker.org/pdfs/631/Brain_and_Cognition_2004%20\(1\).pdf](http://comphacker.org/pdfs/631/Brain_and_Cognition_2004%20(1).pdf)

This article reflects on James Gibson's theory of affordances and Eleanor Rosch's principles of categorization and explains these concepts from an embodied cognition perspective. The authors use neurophysiological and neuroscientific evidence (namely using research findings from canonical neurons and mirror neurons) in support of their embodied approach to cognition. In particular, they investigate how action and simulation influence cognitive processes, object recognition via perception, and the categorization of concepts in the mind.

7. Robinson, J. (2007). *Deeper than reason: Emotion and its role in literature, music, and art*. Oxford University Press.
<https://www.amazon.com/Deeper-than-Reason-Emotion-Literature/dp/0199204268?asin=0199204268&revisionId=&format=4&depth=1>

This book examines the role that emotions play in the arts, namely arts and aesthetics, arts and emotional expression, art forms and emotional experience, and artistic interpretation. Historical and theoretical contexts of emotions and current research in the study of emotions are explored. This source offers additional insight concerning embodiment in other forms of art, such as poetry, plays, and novels, and provides other examples of emotional and artistic expression (film-making, painting, choreographing, and composing). Its exploration of emotional reactions and expressions in music and elements of embodiment (physiological changes and action tendencies induced by emotion) are particularly relevant.

8. Spatz, B. (2017). Embodied research: A methodology. *Liminalities: A Journal of Performance Studies*, 13(2), 1–31. <http://liminalities.net/13-2/embodied.pdf>

This article describes what is encompassed by embodied research and how it can be applied to artistic performance, expression, and practice. It offers suggestions as to how to construct an effective research project with a topic encompassed in embodied cognition. This article will be used as a model during the development of this research project.