Stimulating the Brain with Creative Movement in the Classroom

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The Project

Research Paper

- Explores and discusses the use of creative movement in the normal classroom setting as a means of stimulating the brain to be active in learning and to elicit emotional responses in children.

- Creative methods of pedagogy are explored through involvement of the Multiple Intelligences, defined by Howard Gardner, right and left brain integration, 21st Century skills, and movement as a mode of learning.

- Serves as an introduction and rationale for the kindergarten unit plan.
Kindergarten Unit Plan

- Designed to demonstrate how educators can use creative movement to effectively teach the content areas while yielding evidence of learning.
Teaching for understanding in subject areas.

Creative movement gives ways to engage the children with effective strategies that stimulate the brain to process and retain information.

Educators need to understand development and functions of left and right hemispheres of the brain.

Creative movement is integration of the mind, body, emotions, and spirit which stimulates learning in students with different intelligences and brain hemisphere dominances. It is a method of communication that entails using elements of dance which involve the human body, movement, space, time, energy and dynamics, and visual relationships.
The Multiple Intelligences

- Linguistic, logical-mathematical, spatial, bodily-kinesthetic, music, interpersonal, intrapersonal, and naturalist.

- Easy to identify in children since they will use the intelligence most natural to them.

- All human beings have a natural preference to the side of the brain used most frequently and comfortably. Also need to help students develop their less preferred brain hemisphere.

- A child’s dominant intelligence(s) can tell educators how they best receive and process information.

- Creative movement can involve the use of strategies that stimulates all eight intelligences, thus activating the innate learning sensibility of each student.
Left and Right Brain Characteristics

**LEFT BRAIN**
- Logic
- Analysis
- Sequencing
- Linear
- Mathematics
- Language
- Facts
- Think in words
- Words of songs
- Computation

**RIGHT BRAIN**
- Creativity
- Imagination
- Holistic thinking
- Intuition
- Arts (Motor skill)
- Rhythm (Beats)
- Non-verbal
- Feelings
- Visualisation
- Tune of songs
- Daydreaming
Both sides of the brain do not function completely separate from each other.

When both sides of the brain are stimulated and are working together, connections are made and critical thinking and processing to promote retention occur.

Integrating ways to teach for all learning styles and hemisphere preferences helps to establish a community where students are valued and respected.

Classroom community becomes one of exploration and risk-taking as students develop a sense of self-efficacy in working to develop preferred as well as less-natural modes of learning.
Why Creative Movement?

Movement involves all of the natural behaviors of the left and right hemispheres of the brain.

Manipulating dance elements with creative movement naturally involves verbal communication, sequence with organized steps of a process to accomplish a movement or movement phrase, specific details which involves processing information in pieces, as well as perceiving information as a whole.

Musicality: Using the body includes natural rhythms and patterns when sequence or consecutive movement are involved.

- Instrumental in higher level learning.
- Stimulates the brain to retain and recall information, have elevated levels of concentration, and develop visual imagery and dexterity.

- Visual and oral aspects of learning: Students use their eyes to perceive what the teacher is doing and apply it to their own body; brain must take in verbal and visual cues to execute a movement and therefore a connection is directly made when an action is performed that embodies the meaning of the verbal or visual cue.

- Movement is intuitive: it allows for students to engage in spontaneous aesthetic experiences while learning important content area knowledge.

- Using creative movement is a method deeply rooted in cognitive engagement since the entirety of the person is involved in the task.

- Hands-on activities means brains are activated.

- Oxygenation: Movement “increases the number of capillaries in the brain thus facilitating blood transport”; “studies confirm that higher concentrations of oxygen in the blood significantly enhanced cognitive performance...” (Sousa, 2006, p.232)
Cross-lateral movements: “Improve the nerve communication between the two sides of the brain” (Hannaford, 1997, p.121).

The vestibular system: the sensory-motor system that “regulates our equilibrium and our sensation of movement” (Hannaford, 1997, p.121).

Creative movement allows for cross-lateral connections and the vestibular system to be developed and explored further as they are the foundation for the connection of the mind to the body and stimulate the body to react in primal and natural ways.

Emotional responses: Research shows that when the brain is stimulated and an emotional response takes place, the brain stores the information and can recall it virtually forever.
Why Creative Movement? cont.

- Daily Life Skills: Coordination; balance; awareness of one’s body, space, and other people; concentration; self-control; social skills of etiquette and respect for individual space and ideas.

- Inclusive: Every student regardless of their mental, emotional, and physical capabilities and social or cultural background can be fully involved.
Creative Processing & 21st Century Skills

- Digital Age Literacy (scientific, economic, and technological literacies; visual and information literacies; and multicultural literacy and global awareness)

- Inventive thinking (managing complexity; self-direction, curiosity, creativity, and risk taking; and high-order thinking)

- Effective communication (teaming, collaboration, interpersonal skills; personal, social, and civic responsibility; and interactive communication)

- High productivity (prioritizing, planning, and managing for results; effective use of real-world tools; and ability to produce relevant, high-quality products)

(Boss, Krauss 2007, p.48)
Creative movement is an anchor for learning experiences that promote and develop these 21\textsuperscript{st} Century skills.

The purpose of kinesthetic learning is to make everything and anything physical.
The Unit Plan

Demonstrate that teachers can use creative movement to teach the subject areas in creative, enjoyable, and effective ways.

Lessons align with Michigan Grade Level Content Expectations, Michigan Merit Curriculum, Common Core State Standards, Professional Standards for Michigan Teachers.

Differentiation included for varying developmental levels and physical, mental, or emotional challenges and different cultural backgrounds.

Multiple entry points for inclusion of all students no matter their prior knowledge with content or creative movement or their personal capabilities in any of the multiple intelligences.
# Teaching a Lesson

### Subject & Title of Lesson

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Movement merges both sides of the brain in learning by stimulating the eyes with a visual representation of a topic, the ears with musical or linguistic representation, and the muscular system with physical representation.

Creative movement spurs emotional investment on the part of the students.

Puts power into the hands of teachers and students to engage actively in encountering information, processing, analyzing, and ultimately synthesizing knowledge.

Immediate and future benefits for students as they develop into articulate, innovative, and expressive high-level thinkers.

Teachers see students in new ways and develop their own intellect and creativity.
References


