DANCE AS A CREATIVE LEARNING TOOL

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Introduction

The popular conventional view of the brain is that, it is rational, logical, ruler of all. The body in this medium has been primarily considered as merely the vehicle that carried the brain from one cerebral task to another. Now, however, current research has revealed that there is no hierarchy, no separation between the body and the brain. What the Greeks knew 2000 years ago that in order to obtain the best performance from the brain, the body and brain need to be tuned together. Formerly, the press and books informed us of physical fitness as a means of increasing mental sharpness and reducing stress, to overall health and well-being. But the story emerging from brain research is amazing. "The body grows the brain" and explained that animals that do not move do not have a brain. Kovalik and Oslen (2002) from the brain research, List the following as key factors for classroom teaching of the relationship between **movement** and **cognition:**

- Movement is fundamental to the very existence of brain. Only an organism that moves from place to place requires a brain.
- The entire front half of the brain, the newest in evolutionary terms is devoted to organizing action such as physical and mental actions. "Higher" brain functions evolve from movement and continue to depend on it.
- Movement is crucial to every brain function including logical organization and executing plans, memory, emotion, language and learning.
- The ability to mimic, one of the young humans' most powerful avenues for learning, is movement based.

The obvious implication is that having students sit quietly for a long period of time without action or movement is a worst case scenario for the brain.

What the brain needs is active participation from its partner, the body. In addition to "*being there*" experiences. (A term used to express the most powerful input to the brain, being in a real world location that activates all 19 senses, increasing learning, identifying patterns and program building). In this partnership are actions, emotions and lots of raw materials for cognitive processes (Kovailk & Oslen, 2002).

Indeed Ratey (2001) points out that "What the brain communicates to the body depends largely on what messages the body is sending to the brain. Together they collaborate for the good of the whole organism." (Kovailk & Oslen, 2002).

He wonders how we think of these traditions of the educational system we inherited, for so long because it is far off the mark, standard, classroom teaching and learning behaviors, and sees it as a recipe for failure to learning.

He concludes:

> The pendulum swings in our school reform over the past century may have failed not because they were inherently flawed but because throughout those reforms, the body-brain partnership remained divided and thus ineffective at learning (Kovailk & Oslen, 2002, p. 2.7).

Further research by Ratey (2001) reveals that "Half the brain" and the newest, most powerful parts of the brain, the frontal cortex learns, routinizes and processes motor and mental functions in parallel. Movement then becomes inextricably tied to cognition". (Kovailk & Oslen, 2002, p. 2.7) The research tells us that; "this feature of the physiology of the brain underscores the importance of defining learning as a two-step process, that is understanding and then using what is understood. It turns out that the brain expects to use what it understands. (Kovailk & Oslen, 2002, p. 2.7)

He writes that:

> our physical movements can directly influence our ability to learn, think and remember."(p. 2.8) Evidence from the various researches indicate that each person's capacity to master new and remember old information is improved by biological changes in the brain brought on by new activity (Kovailk & Oslen, 2002, p. 2.8).

This then should be an eye opener for teachers to integrate movements (dance) into learning activities to activate multiple parts of the brain to enhance learning and by creating movement activity based modules in our methodologies for teaching.

Kovalik and Oslen (2002) further stated that, "a new research is emerging that suggests the presence of "mirror neurons" a subset of movement-related neurons in premotor cortex area F5 that buzz away when we watch someone do something that interests us". According to them whether these neurons merely assist us to understand or to mirror gestures or actions are still uncertain". (p. 2.8)

However, another researcher, Ramachandran ; "believes that mirror neurons play a bigger role than is generally appreciated. Ramachandran believes that not only are they the missing link between gesture and language but they help explain human learning, ingenuity and culture in general. According to him "Languages, imitative learning and mind reading", seemingly unrelated human developments may all have been shown to be "linked through these intriguing nerve cells". (Kovailk & Oslen, 2002, p. 2.8)

Creative Dance in Schools

The idea of teaching creative dance as fundamental in the basic school has been expressed by many dance educators.

Adinku (2003) expressed the view that: "because of the undeveloped consciousness of pupils in the public schools", the artistic and esthetic values of movements must be introduced to pupils through dance. He thinks that the games, dance and music that children perform on their own during their recreational periods, must be organized and directed by dance and movement experts for "full realization of effects". (p. 23)

Russel (1965) even goes further by contending that the various movements of the toddler from the crawling stage right through to the standing position are expressions of communication to learning about the world. It is imperative that the child is given the opportunities to express dance which grows directly from personal movement expression. She considers all that movement as contribution to the aesthetic and creative aspect of education. Dance, she contends "definitely has a place in the primary school". (p. 11)

Movement according to Joyce (1973, p.2) is "closely connected with the mind and the spirit. It is inherent in any kind of growth activity". The act of growing is movement. It helps develop children mentally, spiritually and physically, improving their ability to concentrate on "mental" subjects. For these reasons creative dance can be related to

mathematics, social studies, language, science and other art subjects. Creative dance can effectively help children to learn through experience for better understanding.

All the three authors seem to make a point of how the individual should be guided to acquire aesthetic value of movement. These authors also expressed their view that to study movement we should observe human beings in action, a person's everyday or working actions to be able to make an analysis of some aspects of elements of movements such as body, force, space, time and relationship.

Various studies conducted by scholars and students on creative dance and its usage as a teaching tool have concluded that creative dance can be used as a tool for teaching subjects such as mathematics, language, science and fine art.

The following models are perfect examples

Models For Creative Dance Exercises

Exercise 1

Agriculture

Topic	-	Growth and Change.
Aim	-	To demonstrate sequence by linking composition to another curriculum area.
Skills	-	careful selection and control of movements
Concepts	-	Sequence
Organization	-	Groups
Equipments	-	Seeds, containers, soils, card, felt pens, percussion, instruments and recorded sounds.

Introduction

Put children into five groups. Ask each group to plant some seeds in a plastic container full of soil. Over a period of time, ask them to frequently observe the set up. They watch as the seeds grow into plants. Let children observe similar plants in the school farm or garden as the plants grow into strong plants, bear fruits and die off.

Use the theme Growth and Change for simple creative dance.

Presentation

Group 1

During the planting of seeds, ask group one to imagine what the seeds feel like in the soil? (You may have answers such as "dark" "warm" and 'wet' etc) from the children.

Group 2

As the plants grow, ask group two to observe and create movements on growth, or growing idea.

Group 3

As the shoots appear above the soil, ask group three to observe and show how the shoots appear gradually and how they change shape once they are above the soil in movements.

Group 4

Let group four know there is uneven growth, not all plants grow fast as each other. Let children use a combination of movements which start at different times and at different speeds. (You may ask children to create movements for harvesting).

Group 5

As the plants die, group five observes the dying plants, ask them to explore movements that give the idea of the plants slowly dying and a feeling of sadness.

Exercise 2.

Creative Dance Exercise on Language Arts

Syllables / Vocabulary

Students put the same number of body parts on the floor or desk as the number of syllables in a word.

1. (ca ter pi llar) – ca ter pi llar

(four parts on desk) (stretch, turn, twist, drop)

Put groups of words together to form movement combinations. Say the syllables as accompaniment for the children's movement. For example,

(Fall quickly…….rise slowly, contract……stretch slowly…….turn slowly …..faster…… slower,……. fast……. slow…. expand slowly ….. reach in any direction) Add any other words you like for children to perform movements.

2. Parts of Speech

In pairs children act out nouns and verbs. The noun dancer makes a frozen shape (cutlass) while the verb dancer does self space movement to describe the verb (weeding). The class guesses the noun and verb.

Exercise 3

Creative Dance Exercise on Mathematics

Division

Count the total number of children in your class. Have all the children dance around through general space. Pause the music, or give a signal, and ask dancers or to get into groups of seven, forming a group statue. Count the number of status. If there are students left over, they are the remainder. Write the problem on the board to reinforce the process; 30 divided by 7= 4 with a remainder of 2. Try other divisors. Alter the total number of students and practice other division problems.

3 B. Geometry

Form geometric shapes with body parts or props (stretchy bands, elastics, string, streamers). Simple shapes such as circles, triangles and squares can be formed by young dancers while more complicated shapes like pentagons, parallelograms and equilateral triangles can be formed by older dancers. Have trios form right triangles and ask the hypotenuse to dance away. Then ask the right angle dancers to form an acute angle and have the hypotenuse bisect the angle.

Using music for eight jumps, have the dancers dance during the music as they draw shapes and lines through space with their bodies. During the "hums" the dancers can form specific geometric shapes in groups.

Creative Dance Exercise on Science

Machines:

Each person makes a shape with one body part moving to describe a simple machine (pulley, wheel, screw, lever, etc.). The shapes connect one to another to form a big or small machine. Try adding sounds. Try a smooth machine and sharp machine, a fast and slow machine.

Scholars such as Laban (1963) Russel (1965), smith (1976) Adinku (1994) Joyce (1973) Ablordey (2006) and others from observation expressed their views on the usage of creative dance or movement as a tool for teaching other subjects. According to Russel (1965), comparing a painter who uses canvas and colours to a musician who uses an instrument and sound and a dancer who uses his body and space, so dance becomes a total personal expression whereby the body, mind and spirit engage in a non-functional expression and communication of self. There is no other area of study that this kind of expression can be developed. And again children's perceptions of life of new technology of themselves grow through dance training. They see the elements of dance in the world and they find they can relate to and communicate about what they see and hear and feel. Children develop and use their kinesthetic sense; they know their size, their strength, their training and what they perceive of themselves. They are aware of movement control and flow. They can speak "body language" and can read it in others. (p. 12)

So if children are able to acquire the knowledge discussed above then it shows clearly that creative dance makes children learn. It is a learning process, a process of teaching and learning which can be based on what brain research is telling us of the relationship between movement and cognition.

In conclusion emphasis that can be laid on the challenge facing students, teachers and administrators are greater than ever before and are not likely to be solved until we change our ways of thinking about learning and teaching. As Einstein commented "problems cannot be solved by the same thinking that created them" this is 21st century. Traditional ways of teaching and the habits of mind that go with them must give way to using best knowledge. (Kovailk & Oslen, 2002, p. A.2)

And again movement in this context means using body brain partnership fully and joyously to learn the concepts and skills of the curriculum in science, social studies, art language, art and technology. Movement for sports, the traditional view of Physical Education (PE) is not included in this discussion.

References

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