MOVEMENT TRAINING - AN EVALUATION.

by

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In this paper I intend, briefly to trace the development of Movement Training or Educational Gymnastics as it is sometimes called, to its present position in schools. I intend to discuss some of the difficulties encountered in trying to evaluate the claims of Movement Training, and I shall dwell for some time on the claim that Movement Training Contributes to a general pool of skill. Finally I intend to put forward the theory discussed by Eleanor Metheny and Lois Ellfeldt in which they suggest that Movement Training or Movement Education is one of the significant forms of human experience which enriches man's comprehension of reality as he knows it; and that Movement Education develops kinaesthetic intelligence which is one of the significant forms of human intelligence.

The traditional physical training lesson was based primarily on Swedish Gymnastics which was introduced into this country many years ago as an alternative, in the State Schools, to the games system of the Public Schools. Its educational aims were limited to the remedial effects of systematized exercises devised along anatomical lines to develop strength, endurance and mobility. Suffice to say that the claims made of this system were often exaggerated and unjustified and it was this air of dissatisfaction that prompted the female gymnast to develop a new system of gymnastics called Movement Training or Educational Gymnastics.

The pioneering work was largely done by Ruth Morison who devised a method of gymnastics based on the work of Rudolph Faban who earlier had devised a new system of movement based on the fundamental principles of movement. To the layman, and still to many teachers, his work and results appear rather vague but this is due not to his vagueness of terms but to a lack of understanding or to an incomplete study of his work.

The new system of gymnastics was devised to try to give each individual mastery over his body and develop his movement potential to its highest possible level, using his own inventive and creative powers, under the guidance of the teacher, to develop movements and series of movements which are natural to him and of which he alone is capable.

The first part of the lesson is called floor-work and the class explore its powers of movement in many different ways:- running, jumping, landing, rolling, cart-wheeling, hopping etc. The progression of the lesson depends upon the teacher's observation of the needs of the children. This first part is used as a preparation for the second in which the previous movements are practised on apparatus. The objectives of this part are only limited by the ability of the child and by the placing of the apparatus, namely ropes, beams, bucks, horses, benches etc. The experienced teacher can so arrange this part of the lesson by skilful placing of the apparatus to direct and develop the needs of the class. From periods of free play, the child freely explores his movement possibilities firstly at floor level then on the apparatus, and is expected to develop movements and series of movements to be repeated and practised to the highest possible level.

There is a place for the fat and the timid as well as the muscular and the fearless. A balance is always sought so that each child tries not only to develop his strong qualities, but also to strengthen his weaknesses.

Movement training is, therefore, of true educational value in that it provides the opportunity for every child to contribute to and to take part in skilful exercises which depend upon their own natural ability. Psychologically this is sound, for the sense of achievement which it develops produces a sense of satisfaction.

From this description of movement training and from the justified claim that it is of true educational value I come to the controversial claim that movement training probably contributes to a general pool of skill. That is it develops body awareness or kinaesthetic sense.

One of the difficulties of evaluating the process of movement training is the use of technical language. An evaluation would be worthless unless the terminology used is understood by the audience. The written word is a symbolic representation of a thought piece and since words and of course concepts described by these words, are universally significant and capable of apprehension, it would seem sensible that the terminology of movement training too should be universal to describe movement and movement processes.

In this talk, I have tried, wherever possible, to explain the meanings of the terms used to promote an understanding of my subject and if my process of thought is logical I should be able to put forward some reasonable conclusions.

In the world of movement it has so far been impossible to suggest a universal language of movement that is symbolic representation of movement qualities, for several reasons.

Firstly response to a stimulus does not always reach the threshold of consciousness and there is no need to verbalize movement experiences. Secondly, movement can be verbalized or represented as mechanical forces, magnitudes, efforts etc., but the analysis of the movement might be of little significance to the performer to whom it is unnecessary to explain the meaning. And thirdly, the use of words carries different connotations in different circumstances.

The language difficulty of movement training has made it difficult to evaluate whether or not there is a universality of movement experience and that movement training develops body awareness or kinaesthetic sense.

No experimenter has yet managed to isolate a general skill factor. In fact it is now generally accepted on the available evidence that skill is highly specific and what we term kinaesthetic sense is in fact composed of a complex of constituents, none of which appears to be significantly linked together.

Dr. Gladys Scott defined kinaesthetic sense as "the sense which enables us to determine the position of segments of the body, their rate, extent and direction of movement, and the position of the entire body and the characteristics of total body motion." She tested this hypothesis against six hypothetical constituents of kinaesthesia and found that none of these was a satisfactory or valid test of kinaesthetic sense. There is no single test. It was interesting to note that one of the tests "the ability to watch a simple co-ordination demonstrated and then to imitate it" showed most validity in her tests of motor ability. This was the type of co-ordination incorporated in Swedish gymnastics.

Henry in his "Motor Drum Theory of Neuromotor Reaction" casts doubt too, on the fact that motor ability is general. He suggests that the multi-winner may well depend more on motivation and numerous motor experiences than to a carrying over of acquired skills from one sport to another. It is interesting to note that in old people where there is a loss of movement, the loss is not general but the patterned movement rather reverts back to separate skills. There is some evidence that in the pre-adolescent group movement training does to some extent increase general motor ability but so too would a programme based on the teaching of a wide variety of skills. Motor ability he defines as "the immediate capacity for the individual to perform in many stunts or athletic events".

What might transfer would be attitude, the approach to learning. Movement training and its problem solving approach may well give some insight into learning how to learn, the ability to judge and select movements for new situations. That is learning how to learn; answering verbal questions in movement, the movements not depending upon a verbalized answer. Munrow suggests that where non-end gaining or personal skill factor is emphasised that is where the environmental factors are more consistent and/or more restricted in range, and where, if a more general approach rather than specific skill is stressed, the child will learn about learning. In the second part of the film, the environment was an area uncomplicated by apparatus and the children were expected to experiment and explore, and become aware of the movement possibilities of their bodies. It was a problem solving situation. The transfer may be one of attitude.

Personal observation had left me in no doubt that there is transfer from one skill to another, especially where the skills have common elements. Lashley in his work "In search of the engram" suggests that there is little evidence of the localization of memories in association areas of the brain. Although limited areas are essential for learning, in some way the whole brain appears to be involved in learning and retention. In experiment, rats which had had their cerebellum removed could still complete a maze run, even although their co-ordination was impaired. The Gestalt School of Psychology appears to come to this same conclusion. It is interesting to note that Lashley started out as a confirmed behaviourist, fully believing the evidence of the conditioned reflex and the conditioned response.

Finally, I come to this interesting theory regarding kinaesthetic intelligence. My observations are a precis of the work of Metheny and Ellfeldt and I would advise you later to read their paper for a more complete argument.

Man experiences his life through his senses, his receptor organs providing information regarding his environment which is transmitted to the brain where by symbolic transformation experiences are turned into abstracts or mental thought stuff. Man's use of words is an obvious manifestation of this. There are mental/emotional experiences in which man finds significance and which add significance to his life which cannot be explained in words. For example, appreciation of music or art, or a move on the football field for that matter. These are a source of essentially unique kinds of meanings which can be conceptualized by the mind.

They needed words to refer to three distinct aspects of movement experiences.

Most obvious was the physical manifestation which is the patterned whole of a movement called a KINESTRUCT. The observation of a kinestruct evokes a reaction called a KINECEPT which is the form in which the mover experiences his own movements. Now the kinecept informs the mover about a kinestruct and if he seeks to repeat it we must assume conceptualization of the movement which is called a KINESYMBOL - conceptualization of his experiences. This KINESYMBOL is non-verbal and since it is a unique source of meaning which may not be consciously formulated, is identified as a kinesymbolic formulation of personal experience which adds one more trace to human life.

In conclusion, I would like to put forward one of the theories of Metheny and Ellfeldt: "the mind uses kinesymbols in the process of thought in the same way that it uses all other kinds of symbols, incorporating them into the everchanging organisation of concepts, ideas and meanings that constitute a person's personal interpretation of reality. Kinesymbolic intelligence is one of the significant forms of human knowledge.

For further reading:-

- A.D. Munrow - Pure and Applied Gymnastics (Edward Arnold Ltd.)
- M.D. Vernon - Psychology of Perception (Penguin)
- R. Faban - Modern Educational Dance (Macdonald & Evans)
- M. Randall - Basic Movement (Bell and Sons.)
- P. Morison - Educational Gymnastics for Secondary Schools (Liverpool 1960)
- B.N. Knapp - Skill in Sport (Routledge & Kegan Paul) 1963.

R.S. Lashley - In search of the Engram, Symposia of Soc. for Exper. Biol. (No. 1V)

D. Katz - Gestalt Psychology (Methuen)

Metheny & Ellfeldt - Dynamics of Human Performance - Health & Fitness
in the Modern World (The athletic Institute)