CHILDREN'S MOTOR SPACE IN THE LIGHT OF ITS DEVELOPMENT AS A WHOLE CONVERGENCIES BETWEEN MOTOR ACTIVITIES AND EARLY TEACHING OF FOREIGN LANGUAGES –

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Introduction

Our basic interest was to present the dimensions of the development of the child as a ıole with emphasis on the characteristics of the motor development of the child: latent nensions defining a child's psycho-somatic status and their mutual relations. In this way : child's extremely complex nature, which on the outside functions as a whole, has been alysed on the basis of cybernetic models. A child's psycho-somatic status is thus represented an organized, open and dynamic system composed of subsystems interwoven in constant erdependency (Šturm, Strojnik, 1994).

The peculiarities shown in the child's development demand a special teaching approach, ıich in many respects differs from the one adopted in the teaching of adults. Through the ıtinuous development, the course of which follows certain patterns, the child passes through ferent ages i.e. different stages of development. Individual development stages usually appear ıpproximately the same age and cover approximately equal time spans. The sequence in ich different development stages appear is the same with all children, only the time when y appear can vary. Different stimuli can bring about an increase or decrease in the velocity he transition from a lower into a higher development stage. Each stage is in a way founded the former one and condition for the establishment of the next, higher stage. In every child nsion exists between the tendency for development and the tendency to preserve the existent e. This inner dissonance is a necessary motive power of development. The child constantly ıblishes equilibrium and adapts to new needs and possibilities more mature stages bring h the development. Its active accommodation, which accompanies man on the path of elopment is called adaptation (Praper, 1992). The process of adoption of symbolic functions ıe continuation of development, enrichment and upgrading of what has been achieved. transfer of psychical functions takes place in the psychical space, when the child's izations move between what he or she is already capable of (the existent development :l) and what he or she could achieve (the potential development level). The space between ı is called the zone of proximal development (Vygotsky, The Zone of Proximal Development fallet, 1991).

The child achieves what he or she can achieve with the help of the adult. The intellectual elopment and the outcome of the child's learning are connected with the dynamics of this rmediate phase. The quality and the kind of the carriers of the transfer of learning depend t as well. Suitable conditions of learning and the help of a trained adult are therefore ial. The adult contribute to the success and in this way prevent the child from looking for ething without knowing what he or she is to find.

The development of the child takes the course of qualitative and quantitative changes, :h are permanent and represent the change in the structure of the psychosomatic status. ntitative changes are reflected mainly through the growth of the body on the basis of omic and functional varieties. In the first two years the growth is extremely rapid, later it

gets a little more moderate, but in the age of adolescence it becomes more turbulent again. The changes occurring in the bodily growth can be perceived in the proportions between different parts of the body and in their structure as well.

The development of the child, on which qualitative changes in the psychosomatic status depend, is founded on the maturing of the nervous system, which enables the child to progress to a higher stage of functioning, but because the ripening is conditioned hereditarily, the sequence in which capabilities and readiness for action appear cannot be interfered with. Yet an environment rich in experiences can influence the velocity and intensity with which the individual forms of activities appear.

The progresses in the nervous system of a child E.g. between the fifth and the seventh years of age is extremely dynamic. Accelerated growth of cerebellum and increase in the quantity of white matter is characteristic of this age. New connections between the cerebellum and the cortex grow rapidly. Intense interrelations between sensor and motor processes and the influence of emotions and cognitive functions (cognitive dimension) in their realization proves high degree of interdependency of the whole system. Co-ordinated functioning of these processes makes it possible for the child to be effectively included into the environment. The sensor area covers the development of the differentiation of kinaesthetic, tactile, visual and aural receptors and the corresponding centres in the central nervous system. The multiply interwoven network of nervous cells makes possible a complex processing of data, which travel simultaneously on different sensor systems, their comparison with the experience stored and a quite rich scope of motor responses makes the adaptation to environment the more successful.

The child's motor development progresses according to the rules of the cephalo-caudal (first the child controls the movement of the head, then the trunk and finally the lower extremities) and proximo-distal development (first he or she can control the parts of the body closer to the spine and later the more distant ones) (Horvat,1986).

In the first years mainly the crude motorics is developed and after the third year gradually finer one. This development progresses in accordance with the effectiveness of the functioning of individual centres in the central nervous system and the mechanisms that control and co-ordinate the functioning of the peripheral system. The control of the peripheral system in turn is an outcome of the processes of learning, which coincide with the child's susceptibility and stage of the development of the whole organism. As the whole development, however, does not always proceed continuously, the processes of acceleration and retardation must be taken into consideration as well when examining it. In addition to lack of movement stimuli, irregular growth, inadequate development of the nervous system, various emotional and social factors or belated intellectual development are the main causes for retarded and unbalanced motor development. As all subsystems of the psychosomatic status are closely connected, the development and the transformation connected with it in one of them affects the formation and transformation of the others. It has been defined by the authors of the theory of integrated development (Ismail, 1976) that the child's personality develops as a unique, inseparable whole.

An adequate motor reaction in a given situation means adequate adaptation in the sense of functioning of all the other, non-motor systems. In the adult a number of fixed models of motor activities has been formed for adequate behaviour in definite situations. In its final stage this means a higher or a lower degree of automation of the corresponding movements and thus a lower degree of intellectual strain. For behaviour in definite circumstances and for their control in the child the models have not been formed, so his or her functioning depends to a great extent on creative skills, these in turn include to a large extent systems responsible for cognitive activities (Vauhnik, 1984).

On the basis of physiological, psychological and neurological findings Q.R.Lurija (1976) eloped the theory of functional organization of the brain and its systems. He divided the in in three basic blocks: the block for the regulation of tonus and the state of alertness, the ck for the reception, processing and storing information and the block for programming, ılating and control of complex operations. Each human activity demands co-ordinated ctioning of all the three blocks. In each of the three brain blocks there is a hierarchic cture of three zones – from the simplest to the most complicated one. They are: the primary)jection) zone, the secondary (projection-associative) zone and the tertiary (associative) e. The tertiary zone plays the most important role in the creation of the most demanding ns of activities and makes possible the co-ordinated work of the cortical analyzers, so its ction is to integrate the cortex of the cerebrum. These most developed areas of the cortex the last to mature. The mielinization ("ripening" of the nervous paths) of the primary es is accomplished relatively early, while the mielinization of the secondary and more so of tertiary zones takes longer – it is accomplished as late as approximately at the age of seven ven later.

THE PROBLEM

The child perceives and experiences the world in different ways. In this specific motor vity is an irreplaceable source of experience for normal development and for the formation mature personality. Of special importance is the learning and adoption of various methods ıovement, most of which are conditioned phyllogenetically (walking, running, creeping, vling, climbing ...). Some of them are specific from the point of view of space or way in ch they are carried out (ball games, swimming, skiing, skating ... and other more difficult ıplex tasks) and for this reason equally important. The former activities are innate ıditioned phyllogenetically, movement patterns) and will appear sooner or alter (every d will walk, run, creep or climb), the latter (ontogenetically conditioned - movement eotypes) must be learnt (E.J.Kiphard 1989, D. Rajtmajer 1991). For this reason the ortance of including these contents into the work with the child is obvious and one could of vital importance. Elementary movements based on movement patterns are the basis for levelopment of movement stereotypes. Motor development progresses from the first reflex 'ement patterns that only make possible to keep the body in a position to erect poise and cing (locomotion) and finally to the adoption of wanted, complex tasks set as problems to olved according to certain rules. The progress from crude movement patterns to demanding 'ement stereotypes, accompanied with numerous corrections and unsuccessful attempts, ıly possible through numerous experiences graded in a sensible way. One must not forget crucial role of motor transfer – vertical, lateral and bilateral – in psychomotor learning. transfer of information in adopting new movement tasks from those that have already ı adopted to other similar movement tasks enables the child to progress faster and to ch the motor memory.

Too little motor activity or complete absence of it in education of growing up youth ıot be completely replaced in later periods as with the progress of growth and maturing nfluence of motor stimuli weakens. The lack of experience and opportunities to take part ıotor activities can make the motor as well as the intellectual development of a child 'er (N.T.Kelly 1985, J:H:Humphrey 1991). In early childhood the child is very susceptible he impulses from the environment. The influence of motor activities on his or her entire lopment is strongest at this age (by the age of 5), after that it gradually decreases and gets ter. For a young child motor activity is of crucial importance as it includes all areas of ession: motor, cognitive, connative, emotional and social ones. All these areas have (as

reinforcement) very important role in the learning process itself (H. Gardner 1995, E.J. Kipha 1997, D. Rajtmajer 1994, R. Pišot 1998) as well as in forming the entire personality of the child (Z. Zalokar–Divjak 1996, D. Goleman 1997, Shapiro 1998).

To perform motion structures effectively co-ordinate functioning of the systems for reception, processing and analysis of afferent and reafferent information in the central nervous system is necessary, but also the functioning of the inner and of the outer regulatory circuits and of the highest cortical structures in both hemispheres. The hierarchy of the above mechanisms co-defines the components of creativity, which in a child is manifested in different areas. In mental development of a child, however, motor activity has an extremely important role. The aim of motor education is not only physical activity - activity of the body, but aesthetic experience, communication and transmission of information. The quality of movement is the proportion between the inner objective and the motor activity. Both kinesiologists and linguists are interested in detecting the points of contact between a child's motor activity and its becoming aware of linguistic meaning.

Semiotic processing of information, such as e.g. understanding of verbal information, defines the child's relationship to its contents. The signs that make it possible for the child to acquire information can be heard, seen and touched. The child will understand them, analyse them and respond to them. In doing this the child will be helped or hindered by its abilities, character, temper, attitudes towards the contents being learnt, motives, interests and experience. The child will try to verbalise what it understands, but also what it doesn't. The child includes itself into the imitation (simulation), aimed at e.g. acquiring information, into the similar or the different: in the transition from the similar, analogue, to the tangible, original, new knowledge and original experience emerge. In the game of verbal connections between the movement and verbal meaning verbalisation of a foreign language can be triggered. The verbalisation of linguistic meaning is performed on the logical level, in grammatical and semantic frameworks. It is accompanied by feelings, evaluating and experiencing at the moment of its coming into existence. Movements and gestures, sight, body language, drawing, artistic production, disordered voices, the harmony of singing, can be parts of the verbalised content.

Dance and movement belong to the areas of visible reality, but their connection with music classifies them into the field of emotional experience. Musical elements such as rhythm, tempo, harmony, release emotions in the child, that make the experience of dancing activities more profound. Motive games make it possible for the child to gain knowledge and experience of its own body in space, they develop motor skills of the child and stimulate acquiring social habits.

Methods

Play has a decisive role in the development and education of a child. As a unique activity it is closest to the child's nature and to the laws of growing up. For the child the play is a fundamental learning experience and the basis of its acquirement process. The verbalisation of a new notion, for example, is the setting up of a new mental and verbal game. As a development and educational activity as well as a method of learning it contains peculiarities that contribute to the formation of the child's personality and its intellect. *Movement* in playing helps the child discover the world and is a constituent part of its activity from the very first weeks in its life. It prevails in the play of the pre-school and school periods, it gives play dynamics and diversity. *Co-operation and competition* is part of motion games. In group games the child discusses the rules and the way of performing the games, thus creating situations in which it wishes to ascertain and prove itself. It learns to win and to lose, to accept rules and to act according to them. *Learning* by playing is automatic and connected with a practical motive to acquire new knowledge and experience.

A great majority of games is connected with expressing verbally. The word and the movement are the most frequent activities in playing, but also word and music, or word, music and movement. The rules of play can be different, but all of them know some basic principles of co-operation, entering the game and changing the roles of the players. Some aspects of the communication relationship are constituent parts of playing. The language and playing both are similarly designed. The language is a system of symbols, game is a system of more or less concrete rules. Both language and playing are directed by human activity. Both represent content (linguistic, playing) in interaction with participants (in communicative position, in playing procedure). In communicative and in playing positions the roles are chosen and defined, the influence of an individual participant defines the aim or the outcome of the game

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Every child is born into this world with certain dispositions that are innate to him or her. To what extent these dispositions are to develop later depends on the influence of the environment and on the child's own activities. All areas of development (cognitive, emotional, social and motor) are closely interdependent, through the development of a child they combine with and complement each other. The changes and progress in one area influence those in all other areas of the child's development.