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SLOVAK REPUBLIC

INTERNATIONAL CONFERENCE of SCIENTIFIC PAPER
AFASES 2013
Brasov, 23-25 May 2013

FEUERSTEIN INSTRUMENTAL ENRICHMENT PROGRAM - instrumental learning method -

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***Abstract:** Mediated learning theory was operationalized through the 14 instruments of Feuerstein's method which in their turn were articulated in a so-called "instrumental enrichment program" (Instrumental Enrichment, or IE). The program aims directly at some cognitive functions, often short in people with learning difficulties: the ability to compare structures, to find analogies and differences, the ability to model and materialize, to generalize, to plan, to abstract, to orient in space and time, the capacity to establish analogic, serial numeric relationships, etc., visual and numeric memory, graphical representation capacity. By the attractive, unconventional presentation method, the instruments motivate both children and adults to perform exercises and overcome thinking difficulties. The instrumentation of child's thinking with elements helping to mobilize and adjust its own thinking will aim to create its intrinsic need to use higher intellectual ways in solving its school and social problems. Child's strive to make autonomous intellectual activity will increase its degree of independence and will change its own perception of itself as autonomous cognitive personality.*

***Key words:** mediated learning, cognitive modifiability, mediation criteria, learning potential.*

Mediated learning theory and the instruments developed by Feuerstein's team help to increase cognitive abilities on the one hand by increasing motivation for problem solving and on the other hand by providing a sense of expertise to persons who are subject to learning. They lead to structural cognitive changes - which appear by educating the cognitive functions, including the poor ones, and creating a system of significance and meanings specific to higher intellectual levels - as well as to some progress in intelligence.

The program proposed by Feuerstein, „Instrumental Enrichment” (IE), is based on the theory of cognitive structure modifiability, according to which a great part of person's modifiability is directly related to the quantity and quality of mediated learning experiences (MLE) to which that person was exposed (Feuerstein et al., 1986). The ability to benefit

from direct exposure to stimuli, no matter how many or few they are, is contingent upon the nature of mediated learning the person was exposed to. The longer a person is exposed to MLE, the more he/she will be able to benefit from direct exposure to stimuli and become proficient.

MLE are not random, either in terms of content or in that of language. Only by organizing and structuring a set of events, thus making the child aware of sequencing and programming, we shall be able to influence how the child will interact with stimuli.

Based on the theories of Piaget and Vîgotski, Feuerstein is not only interested in analysing the operation of intelligence itself, but also in intelligence as a human resource that can be enriched and improved. He examines in particular how cognitive retardation might be overcome, emphasizing that the presence of a good mediator able to

develop in full the capacity of the subject could significantly reduce (sometimes even cancel) disability. The concepts of *learning potential*, *cognitive modifiability* and *mediation* represent the foundations of psychological theory of Reuven Feuerstein (D. Mara, 2009).

Learning potential represents a sum of virtual latent behaviours, which require a degree of involvement in order to be transformed into acts. However, the human mind is not limited to having a latent potential, prebuilt anyway, that may become manifest, its possibilities being far superior. By means of educator's action (mediator, as defined by Feuerstein) abilities can be formed that otherwise would not have existed.

Cognitive modifiability refers to the ability of human beings to change their own cognitive functioning structure in order to adapt to situations that occur throughout their life. Modifiability is not a simple reflex act to external stimuli, but it is a response to internal changes that, such as growth, is the result of a series of voluntary and conscious acts that can - and sometimes should - be guided by someone from outside.

Although *cognitive* aspects of modifiability are highly emphasized, Feuerstein is not ignoring at all *affective-motivational* and social aspects. Cognition and emotion are two sides of the same coin, says Piaget. Feuerstein presents cognition as "the royal road" to change individual function. Once the individual has been provided with an adequate vocabulary, accuracy and comparative behaviour, with a good hypothetical thinking and proper ways of deduction, it will be able to gain more emotional insight and other experiences. Cognition should lead to motivation. Due to mediation and mediated learning experience acquisition, "difficult children" often change their behaviour completely. Feuerstein considers that there are two ways of learning – a direct approach and a mediated one (M. Skuy, 2002):

The direct approach is based on Piaget's formula:

S – O – R,

meaning that the learning organism (O) or individual interacts directly with the stimuli

(S) of the surrounding world and issues responses (R). In such an interaction with the environment, learning occurs incidentally, being considered by Feuerstein - although fundamental and necessary - not sufficient to ensure effective learning.

Mediated approach, the second type of approach, is essential, guaranteeing the efficiency of learning. Therefore, Feuerstein develops the **S-O-R** formula proposed by Piaget, interposing a human mediator between the stimuli, organism and its responses. The new formula obtained for mediated learning is:

S – H – O – H – R,

where **H** represents the human mediator. The mediator interferes in the relationship between the learning organism and the stimuli universe to interpret, guide and give them meaning. In such an interaction, learning becomes intentional.

Both types of relationships – direct and mediated – are necessary for optimal development.

Mediation means the intentional and active intervention provided by the teacher to people he/she interacts with, aiming at the best possible way to develop their abilities and for the persons to reach, gradually, a level of autonomy as full as possible.

In the past, a number of factors were considered responsible for the poor intellectual level of children. These included cultural differences, low socioeconomic level, poverty and other endogenous and exogenous factors. The question is, nevertheless, whether cognitive functions, pre-acquisitions for learning are impaired only when these determinants are combined with the lack of interactions of mediated learning experiences (MLE). Reuven Feuerstein (Feuerstein et al., 1986) called the phenomenon of "media deprivation", "cultural deprivation" because, in essence, the child which is not exposed to mediation is deprived of its own culture.

In mediated learning experience it is important for people dealing with children to be aware of their role and to act according to mediation criteria that positively determine the child's abilities to modify the structure of its cognitive potential. Here are the main criteria of mediation (M. Skuy, 2002):



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a. Mediation of intentionality and reciprocity

Intentionality and reciprocity are key conditions for achieving mediated learning experience.

The mediator implements intentionality when guiding interaction toward a goal, selecting, organizing and interpreting certain stimuli; Reciprocity is checked when there is a good response from the subject and it is demonstrated that it is responsive and involved in learning process; reciprocity is a key issue in child development because the child realizes that its actions can be decisive in action with the world;

The three elements influencing and involved in intentionality and reciprocity are:

- the mediator – whose language, rhythm, tone of voice and body language can be exploited to increase the intentionality,
- the mediated person – whose attention, interest level and availability influence reciprocity,
- the stimulus – (presentation of ideas and material) which may show variations in terms of amplitude, repeated presentation and exposure method, to facilitate both intentionality and reciprocity.

b. Mediation of meaning

The meaning is the emotional and energy principle which requires mediators to ensure that the stimuli presented to children reach them. Mediation of meaning occurs when the mediator communicates the other person the meaning and purpose of an activity.

Meaning is mediated by assigning signification, both at cognitive / intellectual and affective / emotional levels: the values and beliefs are communicated at cognitive level, the

energy and enthusiasm are communicated at emotional level.

c. Mediation of transcendence occurs when the mediator acts so that the mediated learning experience emerges from the context in which it occurred and goes beyond its limits, expanding and diversifying the needs of the mediated person. Its purpose is to promote acquisition of principles, concepts and strategies that can be generalized and used in new or similar situations;

This involves:

- association of present events with events from the past or with future events,
- engaging in reflective thinking to reach deep understanding of the situation,
- collateral thinking on experience and problems.

The implementation of instrumental enrichment method may be a solution to issues raised by changes required regarding the content and aim of education. As a result, some governments like those of Spain and Belgium have introduced explicitly the "learning the skills to learn" and "learning social skills" in their educational syllabus.

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