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## COGNITIVE EDUCATION AND R. FEUERSTEIN'S CONCEPT ON MEDIATED LEARNING

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***Abstract** To avoid the exclusion of vulnerable children from the education system and to provide them opportunities for social adaptation, Professor Feuerstein has developed the theory of "mediated learning" and operationalized it in order to be used in the educational practice. Feuerstein's Instrumental Enrichment method (IE) is part of cognitive education category and focuses on that part of education which is highly capable of change: the child and the child's teacher. This method is successfully used in over 30 countries around the world, developing independent living skills and personal autonomy skills for thousands of students.*

In order to ensure progress on the rising curve of civilization, any postmodern society needs high level social and professional skills. Also, the democratization of social life formulates the desire of education for all those called to participate, with equal rights, to the social life decisions.

This social background requires an education that prepares children and teenagers to confront their own limits and conditioning the satisfaction of personal needs in the context of social reciprocity relations. For the children and young persons in difficulty, integration ways and methods are planned into the social flow.

The reality is that in any educational system there are students who do not adapt to the standard curriculum. In Romania, the phenomenon is emphasized by low school grades, low test scores, examination results and

repeated school years, absenteeism and dropout. These events are identified by the concepts of "school difficulties" and "school failure".

The concept of **school failure** has no unified definition as it targets a fact that depends on the organization of the educational system, on the objectives of education and evaluation procedures. In terms of scope, this concept embodies learning difficulties and students' status at the end of a schooling level. In terms of "intensity", failure can be massive or partial. In terms of duration, the failure may be transient or permanent. In terms of direction the failure may be reversible or irreversible. Organizing the underlying causes of school failure the frequently invoked causes to justify the phenomenon can be determined,

namely institutional and individual determinants.

In an educational system focused on the contents of study disciplines, the teachers showed increasingly reduced availability to the particular needs of the children. In such conditions the representative classes of the school population showed learning or habituation difficulties to the program imposed by the school system, difficulties that led to the dissatisfaction of the teachers, of the parents and of the students. The search of the factors that led to this situation and the accusation of the teachers for the failures of the children was born out of the use of medical buffer to monitor the issue of school difficulties, with the idea that those who do not respond adequately to school requirements cannot be considered as normal and deviate from the rule of statistical majority. For mass education, most problems are created by the students with limited intellectual performances and by the students with exceptional performance level. These categories can hardly be included within the limits imposed by the standard curriculum and show specific school difficulties.

The significant proportion of students with school difficulties require the reassessment of the issue and finding new solutions to prevent school failure in underprivileged children in the relationship between institutional environment and their individual and family characteristics. Individual determinants of school difficulties are often backed up by the institutional ones and cause for some children their enrolment on the descending curve of failure or partial achievement of the learning potential. This raises a legitimate question: "Why is the risk of school failure emphasized throughout schooling for some students?"

New educational systems try to answer this question by optimizing child development through education that organizes "inputs", so that "outputs" of the cognitive system to be richer. To ensure children an internal benefit through school

learning, all behavioral acts should become intellectual operations.

The theoretical premises, objectives and methods of a program oriented toward this direction materialized in the content of this study. This study is enlisted in the cognitive current that has been expanding for the last two decades, its core being an advanced psycho-educational intervention tool.

According to I. Manolache, cognitive education programs came into practice about two decades ago, substantiated by older and newer orientations. The precursors of these programs are Jean Piaget and Lev Vigotki. A third author of a learning theory, Reuven Feuerstein, has capitalized his concepts in a worldwide known intervention system under the label "Instrumental Enrichment" with the logo I.E. This program was implemented in about 30 countries and owes its success to the fact that it promotes a pedagogy of success of a large number of people, given the increased demands imposed by insertion media.

## COGNITIVE EDUCATION

As tolerant as the society may be towards people with learning difficulties, it shall always value the intelligence and cognitive performance. Any modern form of education that takes into account the individual genetics, promotes reaching the highest possible level of cognitive performance. Identification, assessment, development and education of cognitive functions question the nature of human capacity, the value of parenting and the opportunities to influence child development as well as the relationship between the concepts of potential and mental functions. These broad topics can hardly be limited to the notion of stimulation or education of intelligence. However, we must note the growing recognition in the literature of the importance of cognitive, motivational and personality factors stimulation – factors such as the ability to pursue a goal, cognitive learning strategies, courage, cooperation, involvement in the task, curiosity, motivation -



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which together influence cognitive performance.

Confidence in intellectual processes capacities changeability does not mean underestimating genetic influences on intelligence. On the contrary, we start from considering genetics as a factual situation. Theoretical explanations of the cognitive activation phenomenon are provided traditionally in terms of the relationship between genetics and the environment. The eternal issue of the relationship innate-acquired, important for both the human, social and health sciences, was resumed at the end of the last millennium and now, at the beginning of the new millennium, in the hope that the place of general principles will be taken by specific data and methods. The genetics, however important it may be, and however relevant are genetic research data on twins, adoption or otherwise, does not explain the great variability of human nature.

Psychological research of environmental influences and their relevance to the field of education tries to respond increasingly more to the challenge launched by Piaget, to avoid generalizations on valuation of family and environmental influences and finding concrete ways to change the cognitive development progress of a child.

### **The concept of cognitive education**

From the theoretical perspective, cognitive education is linked to the concepts of intellectual potential and of the proximal development area (*Vygotski, 1971*), plasticity and adaptability of the brain (*Luria, 1961, Cohen, 1982, Changeux, 1983*), mediation and changeability (*Vygotsky, 1978, Feuerstein, 1980, Nyborg, 1983*). In Vygotsky's view, cognitive mediation means the acquisition by

children, in their own social context, the cognitive tools needed to solve problems (primarily of the problems related to school). Thus, higher process cognitive development is based on mediated collaboration by verbal interaction. Based on these concepts, we can assert that cognitive education is a facilitating intervention, intentional, from the learning environment, intervention that leads to intellectual development and cognitive changeability in the child. *Cognitive education is led by a teacher interested in improving some aspects of cognitive functioning systematically, by virtue of a methodology based on the learning psychology.*

### **R. Feuerstein's mediated learning theory**

Feuerstein said that: *„the person who mediates the learning process enriches the interaction between the child and the environment with elements that do not belong to the actual situation, but are part of a world of meanings and intentions derived from a variety of attitudes, values, goals and means transmitted through culture.“*

Feuerstein's Instrumental Enrichment method (IE), is part of the category of cognitive education and focuses on that part of the education that is highly capable of change: the child and the child's teacher. The main objectives of this method are:

- To increase the skills of teachers that can provide children life experiences significant for their cognitive growth.
- The development of main cognitive skills by: promoting notional language development of children and adolescents with learning difficulties; provision and acquisition by children of the instrumental conceptual systems with which they can understand the world and can adapt to it better, can

acquire and operate new knowledge and can show creativity in their entire activity.

Teacher awareness of its power to drive the learning capacity of students.

The specificity of Feuerstein's concept and method is the emphasis on the adult role in the emergence of progress in children thinking and learning abilities. The parent, the teacher or other intervening person thus becomes the organizer of such life experiences that lead to cognitive training and its structural changes. Mediated learning experiences explain the diversity of human nature and its ability to change.

Although he emphasizes rather quite enough the *cognitive* aspects of changeability, Feuerstein does not ignore at all the *affective-motivational* and social aspects. Cognition and emotion are two sides of the same coin, says Piaget. Feuerstein considers cognition as the "royal road" of changing the function of the individual. Once the individual has been provided with an adequate vocabulary, with accuracy and comparative behavior, with good hypothetical thinking and correct ways to draw conclusions, it shall be able to gain more emotional insight and other experiences. Cognition must reach motivation. Due to mediation and acquisition of mediated learning experience "difficult children" often completely change their behavior. The Instrumental Enrichment Program (namely IE) is a set of instruments systemically composed that create mediated learning experiences.

The application of the Instrumental enrichment method may be an answer to issues raised by the necessary changes in the content and aims of education. As the European Commission asserts in "*Towards a cognitive society*" (1995) – the White Paper of education for European societies in transition now, at the beginning of the 3<sup>rd</sup> millennium - a deep transformation of the education system, of the teachers' way of thinking and working is required, but also a concern for improving the learning ability of children. These changes are necessary given that a significant number of children are not provided with the educational needs in the existing system of education. The recommendations of the said

White Paper, target *inter alia*, the development of children learning capacity, through development of the learning to learn skills. As a result, some governments like Spain and Belgium have introduced explicitly the "learning to learn skills" and the "learning social skills" in their educational programs.

Reuven Feuerstein believes that there are two main learning ways: the first by direct approach and the second by mediated experiences. The differences in cognitive development cannot be explained only by genetics differences, nor by environmental influences by factors such as socioeconomic status of parents, cultural differences or family origin. Without denying the existence and relevance of the mentioned factors, Feuerstein refers to these conditions as "distal" factors of differential cognitive development. What really produces a difference is the "proximate" factor which Feuerstein called the *Mediated learning experience*. This is defined as the quality of interaction between the person who learns and develops and the persons that provide support in development (Fig. 1), such as teachers, parents, caretakers that interpose between a stimulus from the environment and the individual, to ensure that the stimulus is perceived, mastered and integrated accurately. **Changeability** is a natural feature of the body: "*the connections network (nerve) is constantly changed internally by hormonal changes and other physiological changes that occur during growth, and externally, by learning experiences. This feature of the human psyche is not only a prerequisite for development, but also a result of external influences on the individual. According to Feuerstein (1998), changeability depends on the quality of interactions between children and adults that surround them and educate them, quality that can be characterized by intentionality, transcendence, meaning mediation, reciprocity, responsibility etc.*

Led by their own intentions and based on their own cultural background, mediators filter and select specific mediation stimuli, organize and classify the selected stimuli within a particular context, adjust the reactions of the mediated person, interpret stimuli and give them meaning and get motivation and



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interest - all in a way to increase efficiency of learning.

Children learn much through direct exposure to the stimuli. They learn much by imitation and identification. But mediated learning is a different way of learning than direct exposure to stimuli. *Basic cognitive functions are created through mediated learning experiences that manifest as a means of adapting to a changing world.*

The European Commission has made some important suggestions in its White Paper, called "Towards a cognitive society" (1995). This charter states that: in order to avoid exclusion and provide optimal opportunities for all students, especially to those who are on the verge of elimination from mainstream schools as they were not able to meet the demands of the curriculum, schools should not be limited to teaching skills and knowledge, but should invest more in the *development of general cognitive learning skills*. This involves changing the goals of education. For adaptation, *children must learn how to learn*. This requires the *development of appropriate cognitive skills*, for example information identification and development and for communication own solutions must be found. Children must also learn how to work together.

### **Cultural deprivation and cognitive functions**

Mediation is the main method by which *culture is transmitted from one generation to another*. The natural trend of each generation of all ethnic groups is mediating the cultural wealth of the younger generation, a fundamental necessity and a generally valid phenomenon. This tradition is threatened by the current technological, industrial and urban culture. By lack of

availability, of time, of energy, many adults fail to convey values, cultural meanings, history and tradition to their children. They no longer explain their children what they know about the world, they do not transmit them their own experiences, they tell them fewer stories, but let the TV to fulfill this mission; they no longer sing enough, they don't answer their children questions. Several factors are involved: socio-economic poverty, single-parent families, and the domination of electronic media. In addition, the alienation of extended family members in large cities due to mobility and migration, or the temporary or permanent abandonment of children in childcare institutions. The result is that many children are left to learn directly from environmental stimuli, in the absence of adult mediation. According to Feuerstein, this lack of mediation endangers the cognitive development of children. Thus the most common cause of learning deficits is, according to R. Feuerstein, *poor mediation experience received by the children from the adults*.

### **Mediated learning experience and learning processes (Mediational Learning Experience - EML)**

Child's independent learning ability depends on adequate experience for mediated learning. Only "those best equipped children" learn on their own. These "well equipped" children benefited from mediated learning experience and therefore they have developed all cognitive functions required for autonomous production of information. This is not the case for most children; they must learn how to think and analyze problems. *Therefore the teacher must become a mediator rather than an instructor skilled at teaching specific content and skills training.*

It's never too late to change the teaching method. All human beings can benefit from the forms of mediated learning experiences, experiences adapted to each individual.

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