

Mediated learning. Psihopedagogical implications

Daniel Mara⁹

Abstract: In this article are presented some important aspects of the mediated learning and their pedagogical implications. Feuerstein Method aims to improve the cognitive abilities of each person and it is based on the belief that there is always a gap between the potential of an individual and the actual achievement of this potential, so there is always the possibility of a further development of a person, over whom it can be a great influence in a constructive way. Feuerstein method is applied in various fields and at various levels, starting from the recovery of people with severe mental retardation to the continuing education of the staff from various companies.

Keywords: mediated learning, structural cognitive modificability, cognitive functions, instrumental enrichment program, potential.

1. The role of the Feuerstein Method

Feuerstein Method intends to form and to develop cognitive strategies of a person, in order to reach to his intrinsic motivation, to be able to solve a task, or a problem by changing the way of thinking with regard to the actions that a person should undertake in difficult situations and also to be able to accept the cognitive challenges.

Through this system the teacher manages to learn student various concepts and mental operations necessary for them in order to become proficient in solving general problems, to correct their poor cognitive functions. It also encourages the metacognitive reflection on the cognitive functions and on the mental processes, it contributes to the development of the perspective on the conditions of success or failure causes, at school and in the vocational training, but also in everyday situations. The teacher is able to offer the students the opportunity to experience and understand their cognitive abilities and, mostly important, this method helps teacher to get out from the cognitive passivity, what makes the students becoming aware of their capacity of regarding the production of ideas, the extrapolation of information, the formulation and the verification of various hypotheses. Feuerstein method is based on the concept of „Structural Cognitive Modificability” which supports the hypothesis that human beings can be modelled after some educational interventions made by the mediators.

According to Feuerstein, intelligence is a good that all men have and which develops due to the plasticity and malleability of human brain structures. The intelligence is not static. So, it can be developed, enhanced through various interventions tailored to each person by the mediators.

⁹ University „Lucian Blaga” of Sibiu

Throughout life, according to the experiences a man lives, he suffers some changes in response to the stimuli which are acting on him continuously. Thus, the man modifies his own performances and he tends to adapt to the environment. What he learns acquires a meaning, a value only if there is an intervention of other human beings, who act as „mediators”, organizing them and presenting them the stimuli, so that they generate positive changes at the cognitive level, which means „the mediated learning experience”.

Feuerstein’s method aims to develop the cognitive functions of each person, of those with learning disabilities, with mental retardation or living in an unfavorable cultural environment, thus stimulating the creation of new capacities of thinking, of development of concepts, of reflection, of organization and also selecting the data. It aims to develop the mental flexibility, the deductive and inductive reasoning, the hypothetical and inferential thinking, and also transforming the individual into a person who generates ideas and information. Underlying all these goals the confidence stands in modifying the cognitive structure of every human being (Feuerstein, 1995).

Feuerstein method developed by the Romanian psychologist Reuven Feuerstein represents a reference point for the pedagogical intervention programs applied in different contexts.

2. Historical aspects of the Feuerstein’s Theory

Immediately after the Second World War, the State of Israel, still in formation, faced the problem of integration into the social and cultural life of hundreds of people (including many children and teenagers) who came from different countries, speaking different languages and most of them suffered important emotional and cultural frustrations: family separation, removal from the group where they belonged. Many of them came from the concentration camps, being deprived of the most basic cultural necessities, were also psychologically marked by their traumatic experiences they have lived. Feuerstein being convinced that human beings are modifiable, through his position of psychologist sworn by Israeli government in order to interfere in solving the complex social problem existing in the country, he wanted to overcome that situation of social and cultural disadvantage felt by many young people (Kopciowski Camerini, 2002, p. 7-8).

Feuerstein’s theory based on the concepts of *learning potential* and of *cognitive structural modification* was followed by a dynamic practice intervention. After a first analysis of the behavior, of the problems of relational and cognitive possibilities, he shows that young people who had certain learning and relational difficulties (young people who usually were considered impossible to be educated) were placed in an intensive program of training, which had as a result their integration into school and society. They were divided into groups and they had contact with youngsters of the same age, they attended the activities in a relaxed atmosphere, rich in affective and cultural stimuli, which led them feel useful and efficient.

The central idea of the program was to create the possibility in order to benefit from the experience of the mediated learning proposed by Reuven Feuerstein. The success of this training program was extraordinarily high, because almost all of the young people have managed to overcome their initial difficulties and proved that they can

be integrated into the society and they are also able to develop their cognitive potential to the optimum level. The results obtained by them to certain tests after a period of time when they benefited from a sustained psychological support demonstrated remarkable progress (effective cognitive functioning, cognitive modification, personal balance). These results were close to normal values and were significantly higher than those achieved by young people considered normal.

Reuven Feuerstein's theory, like other theories arose from the need to support people who are in difficulty, proved to be useful for the entire population. Therefore, the principle of mediated learning has proven effectiveness for improving mental abilities of young normal adults, professionally speaking.

3. The impact of the Feuerstein Method

Today, the method is used in various environments: in formal education environment (in schools and universities), in the field of special education (the recovery of persons with socio-cultural problems of integration), in the area of adult education (maintaining mental abilities of older people) and in lifelong learning (professional qualifications of a staff in the production field) (Vanini, 2003).

The success reached by Feuerstein method can be attributed to several factors. One of them is represented by the *flexibility* of the method, which made possible its application in various fields. The method, designed to meet the educational demands of young people disadvantaged from a socio-cultural point of view, it proved to be effective for persons with disabilities. The method was applied gradually in both special education and general education, and it aims to develop the cognitive abilities of young normal people. Recently this method was also applied in the production sector, namely in staff training programs of some multinational companies (Mara, 2009, p. 46).

Another important factor that explains the success of this method refers to the *precision* of the program, both in terms of developing cognitive skills, and also improving the cognitive intervention. Feuerstein method provides well-defined tools and materials, as well as precise strategies for their use in order to ensure consistency in the action carried out by the specialists. Feuerstein stresses out the fact that the superficial and mechanical use of the materials proposed by him could lead to bottlenecks when applying his method. Hence, it is necessary a well-known understanding of the theoretical and conceptual part of this program.

The basic ideas grounded by the whole theory of Reuven Feuerstein are (Mara, 2009, p. 46-47):

- a. the priority of the cognitive sphere;
- b. the modification of the intelligence;
- c. not accepting the disability;
- d. educational optimism.

Further on, we intend to detail these fundamental ideas with the goal of identifying the complexity of the theoretical and practical dimensions of Feuerstein's theory.

- a. The priority of the cognitive sphere

The program of research and intervention suggested by Feuerstein focuses on the individual's cognitive sphere: attention, memory, logical reasoning, abstract thinking. This approach can be explained by the fact that he worked with Jean Piaget, he was his student, but it is supported by a number of other reasons, such as:

- cognitive abilities are considered to be the main instruments through which the individual is able to control himself and to adapt himself to the surrounding reality;

- current society is characterized by increasingly rapid changes, requiring to each individual to develop certain capacities in order to adapt to new and complex contexts. In this regard, only a well-developed cognitive competence enables an efficient interaction with certain rapidly changing environments. At the same time, in schools are required more complex and sophisticated cognitive skills from the students. So it is obvious that in the absence of some cognitive development programs like the one developed by Feuerstein, the children with learning difficulties or with cognitive disabilities are more likely to be disadvantaged.

- the cognitive sphere presents a higher degree of modification than the physical sphere (often limited by severe neuromuscular deficiencies) or the emotional area. The latter represents for the subject an intimate part, therefore it is less available to external intervention. The intervention at the cognitive level has significant implications for all the other spheres (of motricity, emotional, motivational) so that the development of some cognitive abilities leads to an increased self-esteem and to a self-control student.

The cognitive subsystem can be considered as being the main means in order to reach to the other systems: from a behavioral and an emotional point of view.

One of the most important contributions made by Feuerstein is that he turned his attention from the cognitive functions toward their control processes. So, the goal of the educational intervention is not to provide new knowledge or skills to the child, but to develop him the capacity of autonomous learning and self-learning.

We find in Feuerstein's theory a concept met to other authors, too, namely that the student must *learn to learn*, in such a manner that he should not be dependent on an external aid, in the process of a continuous adaptation to the surrounding reality.

On a practical level there are two objectives:

- helping pupil to reflect and to become aware of the cognitive processes that he activates when he needs to solve a problem;

- acquiring a precise methodology of learning and a problem solving algorithm in order to enable students to successfully overcome new and unexpected problem situations.

The approach of the cognitive operation conducted by Feuerstein is centered on the process and not on the product or on the results of the activity found in the paradigm of the classical evaluation (of the traditional intelligence tests).

b. The modification of the intelligence

The whole theory of Feuerstein is considered as a broad debate about intelligence, as a confrontation between the ambientalist theory (which emphasizes the importance of social factors in determining the cognitive benefits of the subject) and the hereditarist theory (which offers a special importance to the genetics). Feuerstein's theory is placed within the first theory. However Feuerstein recognizes the importance of the hereditary factor but he gives more confidence to social and cultural influences or to mediation (term proposed by him).

The intellectual level of the individual is mostly the result of the interaction with social environment, due to the experience of the mediated learning. In this sense, Feuerstein differs from Piaget, not being agree with the cognitive development in successive and fixed stages for all individuals. The connection between the two authors is that they both consider intelligence as a process and not a product which can be measured by psychometric tests. The intelligence is defined as a modifiable capacity which allows achieving some levels of adaptation in a bigger and complex way. From these experiences Feuerstein built his theory of *Structural Cognitive Modificability*. Feuerstein explains the difference between "change" and "structural change". The first term refers to changes limited in time which do not become part of the cognitive structure of the subject. Instead, the change involves a evolution of the entire cognitive system that leads to new structures and new connections between the existing ones. In other words a structural change involves new ways of thinking and they are much more flexible. A characteristic of humans is the intrinsic tendency towards evolution and continuous change. In this sense, the cognitive system is considered to be as an open system, a system that can not achieve a stable and a definitive status, but it interacts with the surrounding reality.

Concerning the maximum level of development that an individual can achieve, Feuerstein states that it is not possible to predict the maximum degree of the cognitive development that can be achieved by the student individually, even if he receives external support.

c. Non-acceptance of the disability

The conviction on human modificability is directly accompanied by a different attitude characterized by not accepting the disability, regardless of its degree. In this respect, it should be mentioned the fact that non-acceptance does not cover the emotional relationship of the trainer with the subject in difficulty, a relationship based on empathy, respect, but it refers to the risk of a passive attitude and of a renunciation to foreign intervention. It often happens that the parents of a child with disabilities to have the tendency to avoid stressful situations for him, the result being that of a static, not exigent, artificial environment which does not stimulate the child towards the change and evolution of his cognitive skills.

Feuerstein has stressed many times that man is able to change himself even if he has a deficiency. Culturally disadvantaged people or those with disabilities are not capable of a spontaneous change. In their case it is required a systematic and an intensive intervention.

d. Educational Optimism

Feuerstein considers that human beings represent a system of components that are closely interrelated. The change occurred in one of these components has important effects on the other system components. For instance, a child's development of the motivation improves his mnemonic performance which will have an impact on his self-esteem and on his self-control.

The changes suggested by The Instrumental Enrichment Program (a set of pedagogical intervention tools) occur at the level of cognitive structure, being in favor of the development of certain cognitive new schemas through which the individual interacts with reality, in a flexible manner.

Feuerstein cognitive method requires that the subject's cognitive reorganization should be the primary means through which he achieves changes in all the other subsystems: behavioral, emotional, motivational and so on and so forth. These changes are possible to be reached only when the subject is involved in certain specific behavioral exercises, such as phobic intervention, in cases when a cognitive reorganization is not sufficient without a direct exposure of the subject to that specific situation.

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