



"HENRI COANDA"
AIR FORCE ACADEMY
ROMANIA



"GENERAL M.R. STEFANIK"
ARMED FORCES ACADEMY
SLOVAK REPUBLIC

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

THE ROLE OF THE FEUERSTEIN INSTRUMENTAL ENRICHMENT PROGRAM IN THE SOCIO-EMOTIONAL DEVELOPMENT OF CHILDREN

Otilia Anca TODOR *

*Faculty of Psychology and Pedagogy, Spiru Haret University, Brasov, Romania,

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.**

1. INTRODUCTION

Objective: The socio-emotional development of children in the experimental group through the Instrumental Enrichment Program.

Hypothesis: It is assumed that the application of the Instrumental Enrichment Program will lead to significant differences in terms of socio - emotional development in children in the experimental group.

Research group: This research was conducted on a total of 200 school children, aged between 8 and 10 years, enrolled in regular schools in Brasov. The research group consists of 100 children with Special Educational Needs and 100 nonSEN children,

each category being divided, at its turn, into two groups, i.e. the experimental group (50 subjects) and the control group (50 subjects).

Experimental design: This experiment consisted of three phases: ascertaining experiment, formative experiment and evaluative experiment and was conducted over a period of 24 months. The initial and final evaluation were performed using the "I am" test, and the intervention was conducted with five tools from Feuerstein's Instrumental Enrichment Program. The formative experiment was conducted over a period of one school year and ended with the final evaluation period. The intervention with the IEP instruments was conducted in two weekly sessions of 1 hour and 30 minutes each.

The formative phase of the experiment was conducted in the Elementary school no. 3 of Braşov.

“I AM...” PERSONALITY TEST

Adapted by Ursula Şchiopu and Mielu Zlate (M. Zlate, 2002), useful in comparative studies by age, profession etc., the test reveals the representation of various features and sides of personality, emphasizing its structures.

„In essence, the test consists of an essay that the subjects have to write about themselves. The students are required to consider as many topics of self-knowledge as possible, the teacher drawing the attention of the students that knowing themselves means not only writing down the name, age, gender, some personality traits, or some favorite activities, but infinitely more. On this occasion other self-knowledge topics can be listed and discussed as well, suggesting that the reference in self-portrayals to as many of them as possible, mentioning the personal way of being in relation to them, avoiding the reductions to one to two subjects, which equals to poor self-image, represent important criteria of self-knowledge depth and authenticity.

The primary analysis of essays written by children was based on *Self-knowledge Grid* that contains 17 topics listed below with the name and meaning.

1. **Identity**
2. **Physical appearance**
3. **Psychical traits.**
4. **Performance in school and at work**
5. **Preferences, desires**
6. **Relationship system**
7. **Views and experiences**
8. **Searching for self.**
9. **Isolation and self-confidence.**
10. **Adaptation and social integration.**
11. **Need for self-help and self-improvement**
12. **Attitude toward self.**
13. **Table of values.**
14. **Conflicts and contradictions.**
15. **Self-ideal.**
16. **Reflected self.**
17. **Status of the person.**

In its personalized form, the **Instrumental Enrichment Program (IEP)**

appears as a set of exercises focused on the use of 14 instruments, with controllable valences in mental capacity development. The instruments as creativity exercise software modules (Guilford, Torrance, Parnes and Nicola) are relatively neutral to the study disciplines; they do not target the acquisition of specific knowledge, but the building of mental skills, cognitive orientation “engines” in different situations.

In presenting the Instrumental Enrichment Program reference is made commonly to class-group, as the recipient of its application, but the Instrumental Enrichment Program can be used in various situations. Each instrument focuses on a specific cognitive function with utility in a wider range with more difficult levels of abstraction.

In a synthetic formula, the program involves three fundamental elements of mental structure:

- cohesion between the parts of total; to use in a wide and broad way the experiences acquired in specific situations;
- structural plasticity in adapting and strengthening own mental activities;
- self-reproduction - the ability to change for an act of autonomous will; the symmetric or the hard drive self-regulation (self-fulfillment) in personology.

In this research the formative intervention was achieved by using five instruments from IEP¹:

- a. **Organization of points**
- b. **Spatial orientation I**
- c. **Comparisons**
- d. **Images**
- e. **Family relationships**

Table 1 Frequency of answers in the test “Who am I?” posttest phase

Topics/su	SEN	SEN	Non	NonSE
-----------	-----	-----	-----	-------

¹ The instruments have been described based on the Internal use manual, created by Reuven Feuerstein and adapted by Jael Kopciowski



"HENRI COANDA"
AIR FORCE ACADEMY
ROMANIA



"GENERAL M.R. STEFANIK"
ARMED FORCES ACADEMY
SLOVAK REPUBLIC

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

btopics of self-knowledge	Control	Experimental	SEN Control	N Experimental	beliefs and faiths				
Identity	50	50	35	46	Conflicts and contradictions	10	23	26	47
Physical appearance	48	40	38	29	Self-ideal	15	29	31	49
Performance in school/at work	27	39	34	47	Reflected self	4	16	18	37
Preferences, desires	22	31	35	49	Status of the person	9	21	25	42
Relationship system	16	24	31	47					
Views and opinions	5	17	19	32					
Searching for self	2	14	18	39					
Isolation and self-confidence	43	22	15	4					
Adaptation and social integration	7	18	23	46					
Need for self-help and self-improvement	5	12	19	33					
Attitude toward self	3	11	22	39					
Table of values,	8	19	21	43					

From the analysis of Table 1, which presents the frequency of occurrence of self-knowledge topics contained by socio-emotional development level assessment, information can be extracted on the subject's degree of familiarity with the self-knowledge process and its ability to convert subjective states into clear and lucid thoughts, on the level of awareness of their strengths and weaknesses and the intention of correction of negative traits.

The IEP intervention between the pretest and posttest phases of the experiment led to increasing socio-emotional adaptability and involvement in self-knowledge process, moving from cautious and reserved attitude in expressing feelings, thoughts, feelings to the description without omissions, consistent and diversified of subjects' dimensions and dominants. Thereby it is highlighted the fact that the intervention on the cognitive system leads to development of self-knowledge and self-evaluation, insight and critical thinking.

We note that the frequency of *identity* criterion increased in children's essays, which highlights a greater need for display, thus strengthening the identity as a prerequisite that will ensure uniqueness of the individual, the

need for affiliation and identification with a group of age, gender or employment.

The decrease, in the posttest phase, of the frequency of the information on *physical appearance* and how it is perceived by the subject, reflects the decrease of egocentric trends or those of exaggeration to concrete. Related to the same feature, original essays reflected an expansion of the physical ego and inferiority complexes with or without coverage in physical ego. Initially, this topic of the scale has been frequently shown in the answers listed briefly, in a single sentence, which reveals that subjects showed uncertainty and, therefore, self-display. The same criterion is found in essays in the posttest phase, this time expressed in ample sentences, which include detailed descriptions, highlighting the desire for self-knowledge.

The third topic in the scale concerns the *performance in school or at work*. Compared to the initial phase, the frequency of occurrence of this criterion in the posttest phase is increased, demonstrating the increased availability of subjects to learn and work, adopting positive attitudes towards performances obtained, the latter reflected in personality traits such as honesty, self-acceptance, need for self-improvement, etc.

Regarding the *preferences and desires* of the subjects, only those related to leisure time or close in terms of time to the moment of the discussion, were present in the initial phase, highlighting poverty and shallowness of interests, unilaterality of concerns and low level of involvement in their practical realization. Posttest phase highlights the frequent occurrence of vocational preferences and deep desires, with a greater perspective, revealing an increase in the level of intellectual development, proved by the extension and depth of listed interests.

Regarding the relational system described in the children's essays, the posttest phase presents an increased frequency of its occurrence, revealing socio – relational availability, the need for affiliation and social integration, increased inter-relational potential, selective relationships, deep and stable, based on personal criteria.

The opinions and personal experiences occurred rarely or never (SEN group children)

in the initial essays of children, and later, in the posttest phase, their frequency increased, especially in the experimental groups (SEN, nonSEN), resulting therefrom, as Zlate M. (2002) says, the need for privacy, for fulfillment and achievement through another, for protecting privacy. From here emerges also the insecurity of emotional experiences and a certain mental tension in some difficult moments in the existence of subjects that require an effort to adapt and adjust.

Regarding the *search for self*, the frequency of occurrence in the initial phase is very low in both groups of subjects, then in the posttest phase, this significantly increases in nonSEN children, especially in the experimental group, which leads to say that after mediated learning activities, children show tendencies towards self-knowledge and self-discovery, they become aware of the complexity and difficulty of self-knowledge process.

The criterion *isolation and self-confidence*, which provides information on the introspection and self-confidence trend, but also on the difficulties of adaptation and social integration, recorded decreases in gross frequencies between the observational and the evaluative phase of the experiment. This highlights that initially children were hiding increased tensions in adaptive plan and a low potential for social networking.

The *adaptation and social integration* criterion is closely related to two of the criteria mentioned above: the *relational system* and *search for self*. This shows availability for learning and playing social roles, the desire to join social groups and to participate in social life. Low frequencies of occurrence in the initial essays, indicate some difficulties of social integration and their growth in the posttest phase becomes significant for assessment attitudes, support and understanding of the behaviors of others. The cooperation spirit, both on horizontal, with colleagues and friends, and on vertical, in the relations with adults is also asserted.

For the criterion *Need for self-help and self-improvement* an increase in the frequency of occurrence in the posttest phase is noticed, highlighting the necessity of change for the better the personality. Initially, the utterances



"HENRI COANDA"
AIR FORCE ACADEMY
ROMANIA



"GENERAL M.R. STEFANIK"
ARMED FORCES ACADEMY
SLOVAK REPUBLIC

INTERNATIONAL CONFERENCE of SCIENTIFIC PAPER
AFASES 2013

Brasov, 23-25 May 2013

expressing this need emanated strength, nonconformity and a trend for mental encapsulation, subsequently they turned into statements that rendered the need for qualitative, content and tinge change of personality.

For the *attitudes towards themselves*, the increase of gross frequencies in the two phases, the initial and the final one of our experiment, expresses a shift towards self, becoming comfortable with insight, with subjective analysis - based on criteria systems, the need for genuine self-knowledge. Superlative adjectives impregnated expressions illustrate the existence of slight excitement and overstatement trends.

The *table of values, beliefs and faiths* as the topic of socio-emotional evaluation grid, recorded significant increases in posttest phase, especially in the experimental groups (SEN and nonSEN). If initially the topic was frequently expressed by conditional sentences (I am ... if ...), demonstrating a certain degree of mental immaturity and low frustration tolerance, subsequently the same topic is expressed in extended sentences, which demonstrates the existence of superior motivating agents of behavior, intellectual flexibility and increased opportunities in achieving own generalization arising from own experiences.

Inner *conflicts and contradictions* of the individual, important for the development and future of the personality, increase in frequency in the posttest phase, demonstrating the engagement of personality in the process of development.

Ideal self, closely related to the topic *preferences and desires*, recorded significant increases for all subjects included in the experiment, which entitles us to conclude that at this age the individual develops by reference

to a model or ideal prototype, the individual becoming able to orient and focus in one direction even if it is transient, modifying to suit personal or influence group preferences.

The criterion *Reflected self* highlights the capacity of self-knowledge and the need for self-definition in relation to others. Increased frequencies between the initial moment and the final one of the experiment highlights an increase in the capacity of self-assessment from others points of view, but also to be dependent on the opinions of others.

The *Status of the person* reveals the necessity to stabilize statutes, to acquire new ones or to overcome the old ones. Again frequencies change upward in posttest phase, providing information on the nature of the statute, its certainty or uncertainty.

The objective of this research aimed at evaluating the socio-emotional development of children, after applying IEP and led us to produce the following two ideas:

- by increasing the cognitive capacities socio-emotional self-control was strengthened, namely the voluntary inhibition;
- the increase of self-esteem and involvement are expressed in epistemic curiosity of children and inferential-hypothetic thinking;

The objective aims at evaluating socio-emotional development in children after IEP intervention, associated to the hypothesis based on which: *the application of IEP will lead to recording significant differences in terms of socio-emotional development between the two groups* was reached, and the hypothesis was confirmed.

REFERENCES

1. Feuerstein, R., (1980), *Instrumental enrichment and the concept of cognitive modifiability*, University Park Press, Baltimore
2. Feuerstein, R., Feuerstein, R., Kozulin, A., (1997), *The ontogeny of cognitive modifiability*, ICELP, Jerusalem
3. Feuerstein, R., Klein, P.S., & Tannenbaum, A. (1991), *Mediated learning Experience (MLE). Theoretical, psychological and learning implications*, Freund Publishing House, London
4. Feuerstein, R., Rand, Y., Feuerstein, S.R., (2006), *You love me!!... Don't accept me as I am*, ICELP, Jerusalem
5. Feuerstein, R., Martinez Beltran, J.M., (1998), *The theory of structural cognitive modifiability*, Bruno, Madrid
6. Feuerstein, R.S., Falik, L., Rand, Y., (2006), *Creating and Enhancing Cognitive Modifiability: The Feuerstein Instrumental Enrichment Program*, ICELP Publications, Jerusalem
7. Feuerstein, R., (1996), *Mediated Learning in and out of the Classroom*, Pearson Education, Inc. Stylight
8. Feuerstein, R., et al., (2005), *La teoria di Feuerstein i suoi sistemi applicativi una raccolta di contributi*, Milano, trad. it. a cura di Associazione Conessioni
9. Feuerstein, R., Falik, L., Rand, Y., Feuerstein, R.S., (2002), *The dynamic assessment of cognitive modifiability*, ICELP, Jerusalem
10. Feuerstein, R., Hoffman, M., (1995), *Instrumental Enrichment Teacher's Manuals*, ICELP, Jerusalem
11. Feuerstein, R., Rand, Y., Feuerstein, R.S., (2005), *La disabilità non è un limite. Se mi ami costringimi a cambiare*, Firentze, Libriliberi
12. Feuerstein, R., Rand, Y., Hazwood, C., Jensen, M.B., et al., (1985), *LPAD - Learning Potential Assessment Device Manual*, HWCRI, Jerusalem
13. Feuerstein, R., Rand, Y., Hoffman, M., (1979), *The dynamic assessment of retarded performers: the learning potential assessment device (LPAD)*, Baltimore, University Park Press
14. Gouzman, R., (1997), *Major problems of blind learners using tactile graphic materials and how to overcome them with help of the FIE Braille program*, ICELP, Jerusalem
15. Mara, D., (2004), *Strategii didactice în educația inclusivă*, Ed. Didactică și Pedagogică, București
16. Minuto, M., Capra, A., Rossi, C., (2009), *La mediazione nei processi di apprendimento il metodo Feurestein nel mondo*, Otto, Torino
17. Minuto, M., Ravizza, R., (2008), *Migliorare i processi di apprendimento*, Erickson, Gardolo
18. Todor Otilia,(2014) "Feuerstein Method", Editura Universității Transilvania, Brașov.
19. Todor Otilia,(2014) "Feuerstein program, experimental research design", Editura Universității Transilvania, Brașov .