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The case study of work using Feuerstein method

This case study reports the results of using and application of Feuerstein method, Learning Propensity assessment device LPAD and Feuerstein's Instrumental Enrichment program (FIE) in Educational consultancy center in Lithuania, Vilnius. The case includes information from individual dynamic learning propensity assessment, traditional intellectual abilities assessment and also by review of follow-up progress. In case, the name and certain specific details have been altered to ensure anonymity.

Background information. Julius is 9 years old boy, the 3th grade student. He is the second child in the family of three children. Julius was referred for an assessment by his mother. Mother was concerned about his **impulsivity** and inability to be concentrated in the learning situations.

As mother noticed, development of her son was similar with other two siblings, except the fact that Julius refused day sleep earlier than others and was more impulsive and more prone to be distracted by noise and events around him. Julius often needed short breaks even during his favourite games and videos. His energy level was very high since he started to sit and walk independently. In mother's opinion, Julius's attention and concentration span has been low since early age. Mother noticed weak Julius's organizational skills in learning situations. Julius is quick to perform tasks, fails to check them and leaves a lot of mistakes. He works very fast, but inattentive.

Kindergarten teachers didn't see the problems, just mentioned that Julius was more active and had less attention span during the activities in comparison with others in the group. Teacher in primary school thinks he could learn better. His academic skills and results are on average level for his grade. Julius is easily distracted by noise or other students in classroom. He can't concentrate for a long time, needs a break, misses details or information, when he

has to consider a lot of things during the lesson. He finds it difficult to plan and organize work (doesn't check work after finishing, works very quickly, prefer to finish instead of thinking carefully about the answers, etc.)

Assessment and results. The traditional assessment of intellectual abilities and dynamic assessment of learning propensity were done before starting the FIE program and lessons.

During assessment Julius's attention and concentration span was low, he needed breaks during the assessment. His own behavior control was weak, when he didn't know how to solve problems. Julius could not control his mood changes successfully in case of difficulties. During the assessment and work he was cooperative, ready to learn, communicative. Julius was very happy to receive compliments for his success in tasks.

The traditional assessment of intellectual abilities was done using Weschler intelligence test for children (WISC-LT). WISC, is an individually administered measure of intelligence intended for children aged six years to 16 years and 11 months. The WISC is designed to measure general level of intellectual abilities also verbal and nonverbal (performance) abilities

The WISC-III is organized into three IQ scores (Verbal, Performance, and Full Scale) that are divided into four factorial derived index scores including Verbal Comprehension, Perceptual Organization, Freedom from Distractibility and Processing Speed. Each of the IQ scores and factor indexes yield standard scores with a mean of 100 and a S.D. of 15).

Julius completed WISC test successfully. His Full Scale IQ- 102 (55 percentile rank, score ranges in 95% confidence interval between 93-107), Verbal IQ score- 100 (49 percentile rank, score ranges in 95% confidence interval 93-107), Performance IQ-104 (61 percentile rank, score ranges in 95% confidence interval 96-112), Verbal Comprehension Index- 103 (58 percentile rank, score ranges in 95% confidence interval 96-110), Perceptual Organization Index-101 (53 percentile rank, score ranges in 95% confidence interval 93-109), Freedom from Distractibility Index-85 (16 percentile rank, score ranges in 95% confidence interval 78-97), Processing Speed- 112 (79 percentile rank, score ranges in 95% confidence interval 101-120).

The result of Full Scale IQ score shows that Julius's the level of general intellectual abilities is on average level. There is no significant difference between the Verbal and

Performance scale scores (verbal and performance skills are developed in the same level). There are no significant differences between the mean of the Indexes as well as among Verbal Comprehension Index, Perceptual Organization Index, and Perceptual Organizational Index except **Freedom from Distractibility Index**, which can show possible problems with attention span in Julius's learning and needs for remediation. Julius very good results on Similarity and Comprehension subtests provide opportunities to display good ability for logical abstract thought and ability to differentiate essential from nonessential details. In summarizing, test confirm that Julius's intellectual abilities and performance are at the average level by his age and grade, his main cognitive abilities such as perception, memory, language are are developed according his age and can be used successfully in learning processes. Just low score of Freedom from Distractibility Index confirm possible problems parents and teachers noticed about attention and concentration problems during the learning or activities in everyday life.

Assessment for FIE program was done using **Learning Propensity Assessment Device- LPAD**. Dynamic assessment approach designed to assess learning potential, to reveal specific cognitive deficiencies and affective factors that may be affecting performance. LPAD instruments were used to assess abstract thinking, memory, attention and learning skills and behavior. The aim of assessment was to observe and to evaluate samples of change and retention of what was learned to indicate areas for cognitive modifiability and need for mediational intervention. Dynamic assessment allows us to evaluate the „dynamic” of learning, the abilities of learner to be changed , to respond to intervention, to look more for potential than actual performance of the learner, etc. It should be noted that presented scores are not standardized in that they do not compare Julius to his peers but rather refer his performance across the assessed domains.

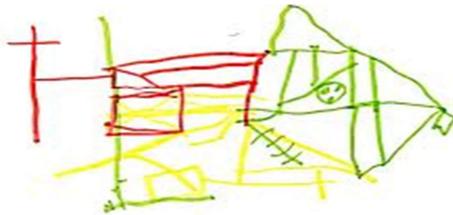
LPAD instruments - Organization of Dots, Complex Figure Drawing test, Raven's Standard Progressive Matrices, 16 word memory and Lahi, Organizer tests were used in this assessment.

Julius completed Organization of Dots, 16 word memory tests quite effectively showing up areas of relative strength in Perception, Language and Memory areas. *Attention and Strategic thinking, systematic planning, organization of information, planning, control of impulsivity* have been the main areas of intervention. Juliu's ability to attend the task was on acceptable level but inconsistent. His impulsivity and emotional arousal impact his ability to establish and maintain focus on the task at hand. The main focus of intervention and mediation, and changes during the assessment was done to teaching and learning strategies to

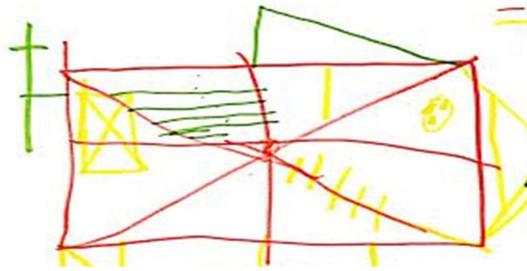
correct blurred and sweeping perception, impulsivity, precise and accurate data gathering, planning behavior.

For example, one of the task presented to Julius during the dynamic assessment *Complex Figure Drawing test* illustrates how Julius can work with complex visual information, organization of the figure, can use systematic exploration, etc. The results of this test (presented bellow) indicate good visual /spatial perception and visual memory.

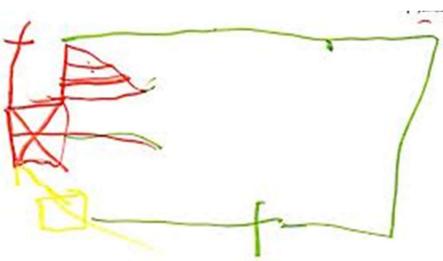
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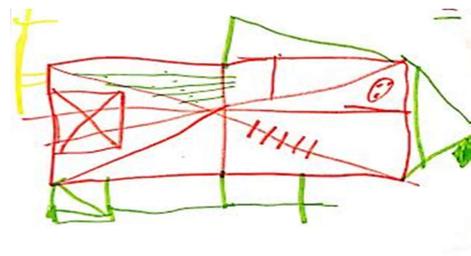
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Julius showed high potential to learn new visual information and strategies to organize, to verbalize, to gather and to retrieve information systematically, to plan how to present his answer to others. Julius gains of mediation of organization of the picture and systematic strategies for coping and memorizing the picture and completed second copy and memory performance with high positive changes in the scores. After mediation to go systematically, search for relations and be accurate his results became significantly better. He noticed the importance of strategy to go systematically, find relations and to be more accurate.

Recommendations for learning and program. During the assessment and educational therapy using Feuerstein method it is important to teach Julius to sustain attention through the systematic organization (a cognitive approach to developing attention), to *develop ability to restrain impulsivity, to encourage metacognition and ability to learn and to solve the problems independently.*

The main focus of recommendations for learning and intervention using Feuerstein instrumental enrichment program was focused on developing abilities to overcome and to correct blurred and sweeping perception, impulsivity, unprecise and inaccurate data gathering, unplanned behavior during the learning process.

It is very important to help Julius to be focused and ready to learn, to develop and practice checking behavior, a need for precision and accuracy, self evaluation, to understand the need to control impulsive behavior and his own emotions, to develop persistence.

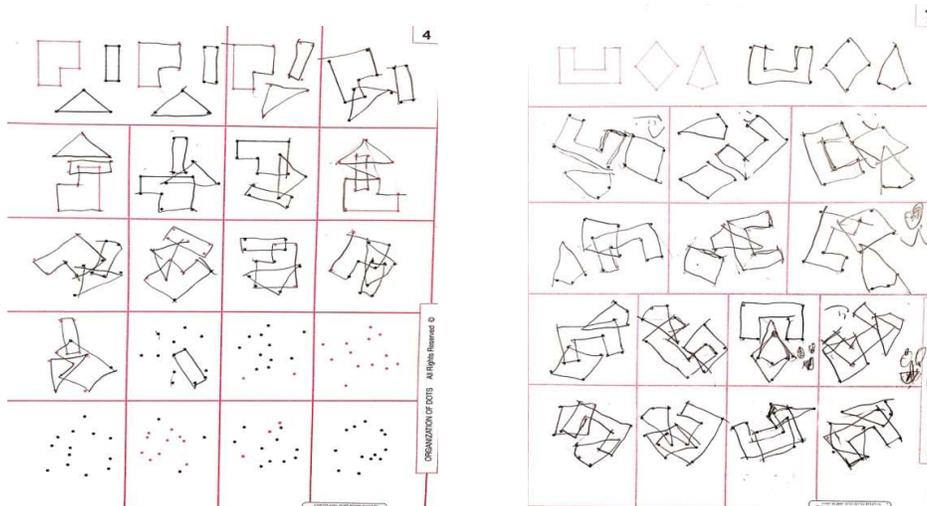
Educational consulting using Feuerstein method. Julius attended individual lessons for 14 months once per week. Various FIE instruments (mainly *Organization of Dots, Comparisons, and Analytic perception*) were used during the educational therapy. These instruments develops the main learning prerequisites of the successful learning and the most of deficient cognitive functions needed to be developed and corrected. Through the instruments Julius had learned to plan, organize, to integrate information, to generalize learning from one situation to another, to use appropriate descriptive language and to develop precise and accurate expressive verbal tools.

Mediation of self regulation and control of behavior was the most important part of the learning during the lessons and program- to intervene in order to make Julius conscious of the need to self -monitor and adjust behavior appropriately. Mediation of self-regulation and

control behavior was combined with mediating competence to take responsibility for his own learning and goal planning.

The work during the FIE lessons was focused on mediating, inspiring that boy could think and speak a lot, make his observations and comments, discuss things, conclusions, explain how he reached them, and why he thinks the conclusions are correct. Apart in instruments mediator applied the same principle in reading, mathematics and other learning situations.

For example, at the beginning of the lessons Julius was prone to refuse to finish his work if task needed attention and persistence. FIE instruments, especially FIE instrument „*Organization of dots*” was the effective way to mediate self regulation, to work and to discuss with Julius about his lack of organization, the meaning of efforts during the task, persistence and ability to cope with his impulsivity and emotions during the tasks and learning in general (see pictures below).



Evaluation and results

The most important start of change in work with Julius was his understanding about his own behavior, learning strengths and difficulties, emotions. During the FIE lessons Julius started reflect his own behavior, to check his work independently, started to correct his work without mediator (he started to draw smiles and ticks checking all task completed). Very important aspect of work with Julius was the change in his own reflection about his work and motivational aspects of learning. He started to reflect and to speak more about his behavior, about his feelings together with efforts to control his own behavior and emotions during the tasks and learning. During the all period of learning Julius had the possibility to work in the

group of 2-3 boys. Julius had very good experience to see and to perceive himself as student in compare with other's behavior, in communication with others and in the group work during the learning, various tasks and games.

It was quite surprising how quickly Julius adapted to the new approach and how his own work gradually became more efficient. WISC-III was done during the evaluation of student's progress. **Freedom from Distractibility Index has changed in 10 scores** (37 percentile rank, score ranges in 95% confidence interval 86-105). Juliu's learning behavior changed a lot. Julius still find it hard to sit still for a long time, but he started to understand it's meaning and to control his own behavior, impulsivity and emotions. Julius started to think before the task, to think about the consequences. Juliu's deeper understanding of this own learning behavior and emotions, changes in metacognition become the most important change and success in the work of psychologist as mediator.

Julius was more careful before starting the task, before choosing answers, started to explore various ways of solution, started to check work after he has finished. Teacher noticed that Julius gets easily distracted by noise or other students, but started to pay attention at his own behavior and he is more willing to control himself. Before the lessons Julius often missed things if a lot of them were presented at the same time. He started to pay more attention in information presented to him. The most important change in Juliu's work mentioned by the teacher - Julius started try to see and seek to find other ways to solve the task if he can't find the answer or has difficulties.

Mother noticed changes during the homework and activities at home. Julius became more organized in everyday activities, and spend less time for home. Julius continued to play football as he did before, but also s he started piano lessons after the school activities. So, skills learned during the FIE lessons, the changes in his thinking, learning and behavior helped a lot not only in the school, but in after school activities and everyday life situations too.