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MEDIATED LEARNING

Part 5: Mediated learning experience in practice

Feuerstein stated that “the aim of FIE as a remediation program to change the overall cognitive structure of individuals with special needs by transforming their passive and dependent cognitive style into that characteristic of an active, autonomous and independent learner.”¹ “Mediational processes are complex, circular, and depend not only on mediator characteristics but also on children’s cognitive strengths and deficits, motivational orientation, emotional needs, behavioural tendencies, stimulus characteristics, and situational conditions. The human (brain) is elastic; it expands (i.e., mediation is enhanced) or shrinks (i.e., withdrawal of mediation) as a function of the child’s level of understanding and of situational variables that determine task difficulty.”² By omitting any of the key parameters (intentionality and reciprocity, transcendence and meaning) there is no mediated learning. The use of additional elements of mediated learning can be chosen based on the needs of an individual learner.

A parent as a mediator

Many parents can intuitively mediate. A parent:

- Selects, emphasizes, and exaggerates, groups, plans, divides or rhythms the stimuli that affect (impact) the child.
- Attracts the child's attention by different questions (“*Who is this? Who is here?*”) or shows the child interesting items (“*What interesting thing do we have here?*”). The parent has the child in his/her angle of view and has eye contact with the child.

¹ Feuerstein, R.: Creating and Enhancing Cognitive Modifiability: The Feuerstein Instrumental Enrichment Program. (2006). ICELP Publications, p. 1

² Tzuriel, D.: Mediated Learning Experience and Cognitive Modifiability. (2013). Journal of Cognitive Education and Psychology, Volume 12, Number 1, Springer Publishing Company, p. 61 (<http://dx.doi.org/10.1891/1945-8959.12.1.59>)



- Verbally describes the child's condition (*"You look like you want to sleep."*).
- Captures and maintains the child's attention (for example, he offers him a toy or takes it from him while observing when the child will show interest in the toy).
- Responds to the child's vocal manifestations (for example, if a child makes some sounds, he mimics or repeats them).
- Watches where the child looks and predicts what interests him / her (giving him a toy that the child had ignored).
- Repeats a certain order of movements with the intention to attract the child's attention and encourages the child to imitate these movements (places cubes one on the other one, that do not belong together and therefore they fall and when it happens, he laughs and offers this game to the child).
- Places objects at a distance from the child, or at a place so that the child can reach them if he/she wishes to.
- During eating, the parent talks with the child about the quality of the food, describes what is it, why the particular food is good.
- During feeding he/she talks using rhymes or short stories, thus extending the original goal feeding by enlarging the child's interests, including the joy of listening to fairy tales and anticipating the order and sequences of events in the rhyme, etc..
- During changing diapers or bathing, s/he offers him plenty of pleasant feelings (touching, smoothing) and develops his experience (commenting on what he is doing – taking soap, pouring the water, talking about the water's temperature, naming the child's body parts).
- Encourages the child to spontaneously compare objects around and to find out what they have in common or are different.
- Explains the relationship between objects and phenomena to the child.
- Connects past, present and future events, creates a relationship with the past and the future, and sets targets for upcoming activities.
- Signals to the child simple deductive thinking (for example: if the father's car parks in front of the house, he will probably be at home).
- Expresses critical or doubtful comments, summarizes the information asks questions based on his previous experience.



- When describing a familiar environment helps the child to orient himself to stable landmarks, indicates a time sequence (we will see the bedtime cartoons in TV and then go to sleep).
- Offers a child a strategy to remember things.
- Expresses emotions towards phenomena, objects, situations, works with gestures, and shows enthusiasm, changes intonation, repeats words, vocalizes astonishment.
- Appreciates cultural values.
- Identifies something by non-verbal expression (for example looks at some object, points to something to attract the child's attention).
- Mediates the relationship between cause and effect.
- Demonstrates the joy of learning (*"Is it fun to learn new things, isn't it?"*).

Teacher as a mediator

- He/she thinks about the pupils when he is preparing a lesson. He asks what they know about the subject, what they can know and how and where they could encounter it for the first time (*"Have you ever cooked with your mom? Did any of you help your father to repair a car? Have you ever been to a museum?"*).
- Thinks about the suitable activity and which aids, items or materials will be useful for the pupils.
- Awakens the curiosity in pupils by choosing aids and materials. Offers them everything that appeals to them, is close to them, and can help them gain new knowledge.
- At the beginning of each learning activity, makes clear what he/she will require from the pupils, provides them with clear instructions, and uses as many explanations as necessary (*"I want you to understand what multiplication is, so let's show this example ... you can see that multiplication is actually really quick addition ... "*)
- Makes clear that it is in his/her interest that the pupils acquire knowledge and skills, and reminds them with how much interest he prepared the lessons and also how important the pupils' work is for him.
- Leads pupils to know why the learning activity is important and shows them what they can use in the future.



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- Is interested whether the pupils show their interest about the task encourages their motivation to work and asks them if they understand the importance of the activity.
- When the pupils work independently, he asks them whether they understand well what they are supposed to do and whether they have all the information, tools and knowledge needed to successfully complete the task.

From the casuistry of a pupil attending the FIE school club:

She was very active in cleaning the classroom, wiping the board, handing out the worksheets. All the activities she wanted to do alone. If more children were asked to do the same, she could not bear the situations when she was not the first one. When drawing, she had significant difficulties. One day her job was only to draw what she knows and what she wants. Anastasia has not had enough courage to take a pencil in her hand and draw something independently. She didn't even write a dot or a comma on the paper. She was very insecure. Encouragement and advice from classmates who tried to help her did not do any good. One could see how she fights with herself, but the fear of failure was winning. Similar situations have repeated many times when she was asked to read letters and numbers. Anastasia defended herself by arguing that she knew that it would be bad and we should leave her in peace.

- Using auxiliary questions helps the pupils to formulate answers; he/she leads them to be aware of the relationship between the assignment and their answer so that the answer really contains what the assignment is asking for.
- Encourages pupils to read the assignment several times and repeatedly clarifies what are they supposed to do, what the task is and how to answer it.
- He works openly with his emotions, shows his interest in pupils and their work including in a non-verbal form.



- As part of the discussion, he systematically links the acquired knowledge with everyday life



situations.

- Encourages the pupils to search for examples from their life.
- Connects the past knowledge with the present.
- Provides the pupils with the opportunity not only to correctly answer the task, but also to think about the procedures they have used to reach the right solution.
- Gives the pupils an opportunity to clearly understand what are the reasons, why something is happening during the lesson, where the activities lead, where their value is.
- Learning situations and information that passes on to the pupils enriches personal, social and cultural meanings so that they are not neutral and unimportant for the pupils.
- He shows his positive attitude to the lesson's/subject's content, thus attracting pupils' interest.
- Supports and appreciates the activities, thus giving them a positive value.
- He reveals the importance of activities and knowledge in the context of the current curriculum, as well as from the perspective of future events.
- Uses intonation and voice intensity to indicate important information and the meaning contained in it.
- Shows that he has noticed progress or positive changes in his pupils' skills and knowledge.
- Shares his observations with the pupils. It is important that he/she knows what their change or shift is what surprised them in their work, what made them happy and so on. This strengthens their motivation and sense of competence.

Complementary elements of the mediated learning

Complementary elements of the mediated learning may not be part of mediation. However, they significantly influence individual differences in the creation of the pupil's own cognitive style, their



ability to think, his/her attitudes towards learning and cognition, as well as the development of self-knowledge of the pupil and his/her perception of other people. Málková³ divides these elements into two groups:

- Elements related with the control of the learning process,
- Elements related to promoting the pupil's social development.

A. Elements related with the control of the learning process

In order to support the development of thinking among pupils, the teacher needs to deliberately create opportunities for them to help them:

1. Gain a sense of competence,
2. Regulate and control their actions and behaviour in the teaching process so that these are beneficial to them,
3. Search for and recognize the goals of learning and problem-solving,
4. Accept the learning as a challenge to solve new and more complex issues, or to answer the questions,
5. Be aware of themselves as human beings capable of transformation,
6. Strengthen the belief in the availability of positive alternatives in tackling difficult or new tasks.

1. Sense of the competence

People who feel competent and able to achieve something and who learn how to succeed are particularly successful in life. Feuerstein believes that a person's sense of his/her own competence is created only through mediated interactions with other people, due to positive feedback from others, the so-called important/significant persons. To feel competent is not the same as to be truly competent. Children often do not appreciate their skills. Because, despite the fact that they do some very good work, without recognition and positive assessments by other people, they do not have a

³ Málková, G.: Sprostředkované učení (Mediated Learning. How to teach pupils think and learn). (2009). Portál, p. 116



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proper idea about themselves and their competences. In order for our successes to help us to build a sense of competence, we need positive feedback from people around us. The authors of several studies consider positive self-esteem to be an important factor influencing the school success of pupils. Therefore, creating opportunities for building a sense of competence should be part of teaching methods as well as teacher's approach to the pupils.

The content of the lessons, teaching materials and aids should be adequate for the pupil's level of thinking. Only then he will have the opportunity to experience success. At the same time, the teacher should be able to create the opportunity to face difficulties appropriate to the developmental level of the pupil. The importance of mediated learning is particularly evident in situations where a child cannot master a given task, but he or she can handle it with the support of a teacher. The role of the teacher is to offer the pupil the opportunity to acquire general prerequisites to cope with hard tasks. The pupil thus gets the opportunity to learn strategies useful or necessary to master almost every task. For example, the ability to distinguish essential and non-essential information, read the task carefully, recognize the problem, and so on.

Another role of the teacher during mediated learning is to provide the pupil with concrete reasons why he/she has succeeded in solving the task, as well as to describe the steps of the applied solutions and strategies. In particular, the mediator emphasizes mostly those strategies and solutions that have contributed most to complete the task. Learning by conveying a sense of competence gives pupils the opportunity to experience that success in a certain type of task can become a prerequisite for mastering more and more challenging tasks. Therefore, it is important that the teacher is able to adequately identify, describe and explain the facts that lead to the successful completion of the task. The feedback should not be of an indeterminate type (e.g.: *you did it well; you did it wrong*). Rather, the effective assessment of the pupil is such that precisely identifies the steps that the pupil has taken to solve the problem (e.g.: *you made this line very precisely; I noticed how he carefully you read the assignment; I found out how thoroughly you looked at the picture, you did not hurry* etc.). Precise names and terms are the basis for the pupil's future independent work on other tasks or in other situations.



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The teacher can also convey a sense of competence also by the following ways:

- the appreciation of the pupil verbally ("*Great! Fantastic! You did ... Skilfully done ...*");
- nonverbal manifestations of joy;
- by asking the pupil to repeat in what he has succeeded ("*You have succeeded, we can do it again ...*");
- by a precise description of the steps leading to success ("*You used a great variety of colours in the picture, and you used the whole space nicely...*");
- *Positive assessment of learner's acquired competence ("You read the assignment carefully...").*

If a sense of competence becomes part of the pupil's self-perception, it creates a positive, optimistic attitude towards learning and awakens curiosity in the pupil.

2. Teaching pupils to check, control and master their own learning process

The essence of creating the preconditions for developing this skill is to teach pupils to use a systematic and logical approach to solving new or complex tasks. By developing this skill, the pupil will learn:



- to read carefully, look through the assignment and perceive all its parts (*"Have you noticed that a picture is a part of the assignment? Can we look at it and think about what the picture tells us ...?"*);
- to identify a problem in the assignment and name it, that is to say what we are supposed to do (*"Do we know what to do? What do they want from us? Does this task remind us of something else we have already solved?"*);
- to collect and search for information (*"What do we need to know to solve the task? Do we have any information, which will help us?"*);
- to master strategies for systematic search and exploration (*"Which image are we going to look at first so that we don't miss any of them? The one in the middle or the last one? Or are we going to start from the beginning, step by step?"*);
- to choose from the amount of information that which we need to solve the task (*"Which information will help us the most? Which information is useless for us to solve the task?"*);
- to develop plans for the solution process, to plan the individual steps (*"Try to tell us how you are going to proceed, what steps you are going to take to solve the problem?"*);
- to reduce impulsiveness and temerity at work (*"If we work too fast, we may overlook something important."*);
- to present solutions in a way that is understandable to other people, to use precise and clear names (instead of using pronouns, use the meaningful words: *"The book is up there/The book is on the upper shelf on the right."*).

Feuerstein's opinion is that this element of mediated learning is particularly important when working with restless, nervous children. He claims that the absent-mindedness and lack of concentration of some children is mostly the result of adult's approach, because they only emphasize and appreciate the learners' skills and speed. If we praise the child's speed at the expense of his attempt to think through the solution first, and only then apply the selected process, we support rash and unreasonable learning behaviour.

If a teacher is able to regulate and control his or her own behaviour, the pupils will also gradually adopt it. They will start to understand that the self-regulation as part of the ability to reflect on one's own thinking and behaviour, and in a certain situation to rightly assess our own thinking and behaviour



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("What have I done differently to solve the task now? Was my behaviour appropriate for this situation?").

In order for mediation of the regulation and mastering the learning process to be fulfilled, the teacher is required to:

- clearly explain the reasons why he used some restrictions to regulate the pupil's behaviour (*"I want you to think before you start drawing, so I'll take the rubber and I just give you only one paper. So you should think about the drawing in advance because you won't be able to fix it."*);
- create room for pupils to self-assess their work and performance independently so that they can see for themselves whether they have resolved the task *correctly* (*"Please re-read your assignment and make sure your solution meets what they wanted from us in the assignment"* *"How do you know that your answer is correct?"*).

For eager and impatient pupils who start working even before they read the assignment, the teacher can purposefully prepare tasks that cannot be solved without systematic training and preparation. Then it is appropriate to discuss with the pupils their failure and to engage them in a dialogue so that they understand the benefits of systematic search during the solving of the unknown tasks (*"What can we do to save time and not to fix the wrong answer in the future?"*). Alternatively, the teacher can use specific examples of learning from his/her own mistakes.

3. Searching for and recognizing the learning objectives

If we can convey to the pupils the skill to search and identify the learning objectives, they will later be able to set goals in their own lives and plan ways how to achieve them. But in the standard teaching process, it is the teachers who decide what are the objectives of learning and how to approach them. The teacher himself assesses how well the objective has been achieved and how successfully it has been achieved. However, for the development of thinking, it is very important that the pupils participate in the selection of objectives as well as in choosing the ways to achieve them. Pupils who have this option are far more likely to achieve their goals than when someone else, such as their teacher, determines their goals. In this way, we also create the pupil's personal responsibility.



4. Learning as a challenge

The essence of mediated learning's challenge is to create such situations that bring some new obstacles, or more complex situations, to the process of learning, but for it to still to be possible for it to be overcome by the learner. Feuerstein claims that *learning as a challenge* is the precondition, based on which it is later possible to build strategies to adapt to changing life conditions. The adults help to develop the ability of pupils to adapt to changes by creating such situations for the pupils, in which they find something new and unknown. However, the level of novelty and difficulty must not prevent the pupil to handle the situation successfully and with pleasure.

The teacher is supposed to create such tasks for the pupils that are new and interesting enough to challenge obstacles but are not too demanding to discourage them. It is very difficult to estimate the level of difficulty for an individual learner. For this reason, it is appropriate to involve the pupils in the process so that they can jointly assess their assumptions and opportunities.

Deliberate positive work with a mistake also supports mediating the challenge. The teacher also supports the pupil's willingness to seek new solutions. He/she supports the pupil not becoming discouraged after the first failure and the pupil tries to achieve the goal another way. As an example, we can provide the pupils with the information about the initial failures of some famous people:

- The name "Einstein" has always been associated with intelligence and is a synonym for a genius. We already know that this pioneer of the theory of relativity, Albert Einstein himself, could not speak fluently until he was nine years old. His rebellious attitudes led him to be thrown out of school and his transfer to Zurich Polytechnic School was rejected. His early failures did not prevent him from winning the Nobel Prize in Physics in 1921. He believed that *"success is actually a failure in the process"*. To date, his discovery has had an impact on almost all aspects of life, including culture, religion, art and TV broadcasting. Just because you have not been successful in anything yet, it doesn't mean you can't be successful⁴.

⁴ <https://svetbohatych.com/5-slavných-zlyhání-ktore-vas-inspiruju-k-uspechu/>



- Thomas Alva Edison was one of the most important inventors in the world. Several inventions are attributed to him. Did you know that he failed up to 1000 times while inventing the bulb?⁵
- Bill Gates is an American entrepreneur, co-founder of Microsoft, and today the board chairman and the chief software architect. Did you know that his first business plan went bankrupt before he made a profit?⁶
- The famous Vincent Van Gogh is one of the most important painters in history. Did you know that he only sold one single picture during his lifetime?⁷
- Simon Cowell is the founder of a number of talent competitions that have been discovered by several singing stars. Did you know that one of his record companies went bankrupt in the past?⁸

5. The ability of a learner to change and develop

This element leads pupils to realize changes in their behaviour, in their skills and performances, thereby reinforcing their beliefs about the possibility to change. A child's belief that he has the opportunity to change for the better is a distinctive activating element in his learning. An important factor in conveying this belief is the ability of the teacher to show the learner the positive changes present in specific learning activities or in life events. A key factor is to identify and record these changes. In addition, it is equally important to draw attention of the pupil to these positive changes and allow them to follow the progress.

For example, it is useful for the pupils who are learning to read, to provide them with the same text at different times during the school year. Their changes in reading should be recorded to show the pupils specifically how they have improved and to positively motivate them. Alternatively, it is recommended to set up portfolios for each learner with his/her work that will be freely available to the learners, so that they can see their own changes.

⁵ <http://mysliinak.sk/5-spravani-ktore-mozu-zabit-tvoje-sebavedomie/>

⁶ <https://klocher.sk/7-slavnych-ludi-ktorych-neodradil-ani-prvotny-neuspech-a-dnes-patria-medzi-tych-najuspesnejsich-na-svete/>

⁷ <https://www.interez.sk/blog/vincent-van-gogh-vyroky-a-citaty/>

⁸ <https://klocher.sk/7-slavnych-ludi-ktorych-neodradil-ani-prvotny-neuspech-a-dnes-patria-medzi-tych-najuspesnejsich-na-svete/>



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6. Positive alternatives

An essential element of mediated learning is the creation of opportunities in which the learner can realize that there are different positive options for solving the same task. We can often find ourselves in a situation where we are not sure if we can handle it. Feuerstein works with a theory that if we make a decision that we are not able to overcome a certain obstacle, we automatically give up trying to look for ways how to cope with it. Then we look for reasons why the solution cannot be found, instead of looking for a way to overcome the obstacle.

Teachers and parents should encourage the children to believe that the majority of problems have their solutions and show them the importance of perseverance and being courageous not to give up even in difficult situations. The adult's attitude is an important model for the child. The key role of the adult is their belief that there are positive possibilities. If a teacher believes that his pupils are able to develop and be successful, he will still be willing to look for all possible ways how to help them.

B. Elements related with promoting the social development of the pupil

The following components of mediated learning are related to the development of the pupil's individuality and his relationships with other people:

- Mediation of sharing,
- Mediating the perception of individuality and psychological differences,
- Mediating of a sense of belonging.

1. Mediation of sharing

This element is an expression of the human's natural need to cooperate with certain people on certain activities. This need forms a significant part of human social life. Its absence can lead to difficulties or abnormalities in the individual's intellectual and personal development.

The current school environment, more than sharing and collaborating, favours competition and rivalry. However, it is also very important to support systematic ability/willingness to co-operate with



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classmates. A good example is teamwork in pairs or in groups, during which the pupils have the opportunity to experience this feeling.

2. Mediation of perception of individuality and psychological differences

To mediate the perception of individuality and uniqueness of each one of us, it is of great benefit to offer the pupils activities that enable them to realize the differences between people, whether in their values, opinions, wishes or ways of thinking. For example, we can discuss with children how to deal with a given task. The pupils can better understand the differences and understand that other people and their actions can only be judged if we understand their motives. Searching for sources of differences is a valuable experience for the pupils, helping them to strengthen their self-perception through understanding the other people.

A child in a community centre encounters a variety of tasks that he has to solve in collaboration with other children. He experiences various attitudes, opinions and solutions, but also different ways of acting, considering and thinking. A wide range of options is identified, which contribute to solving the task. Children are encouraged to perceive and accept the differences of their friends; they learn to process these differences. The outcome of a common discussion and collaborative work is raised awareness of one's own identity and one's own value.

3. Mediating the sense of belonging

One human need is to belong to a certain community of people, to share, to create and to convey values, habits and opinions. A class teacher helps to create an atmosphere of belonging. The joint planning and implementation of various social events or a class project, the publication of a class magazine, the organization of events for parents, younger classmates, a charity and so on are very good examples for creating the atmosphere of belonging. The content of an activity is not important and not a priority from the point of view of mediated learning. The form is the most important and essential. The teacher's role is to involve every pupil in the activity so that everyone can accept the activity and can plan the steps together after mutual discussion and an agreement.



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When we were planning a visit to the Andy Warhol Museum in Medzilaborce, children from the FIE Club in Rankovce were involved in the preparatory activities. Some of them were given the task to find out the museum's visiting hours and the admission price, while the others had the task to propose a route and a time schedule. The result of the joint work was a successful trip to the museum and the time spent together exploring and walking around Medzilaborce and nice lunch in the local restaurant. In



this way, the participants of the trip were involved in joint planning and felt responsibility for the trip.