

A cognitive approach applied to teaching

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Abstract

This article reports the results of educational strategies and methods based on Feuerstein's Instrumental Enrichment Programme (FIE) in some schools and consultation centres of the Czech Republic. Beginning with the year 2000, when the first workshop in FIE was realized, about 780 psychologists, teachers, special educators and parents were educated in Reuven Feuerstein's methodology through the ATC (Accredited Training Centre). It is very difficult to say, how many children and adults really benefitted from FIE intervention. The alumni are mostly responsible for a group of children, a class, or at least for a family. Almost each of them becomes an opinion leader in education, so that the number of children who benefit from FIE is about ten times higher than the number of participants. It rises slowly, but continually.

The presented contribution is a collection of case studies, using a qualitative research method.

The first part of the article compares the present work of a teacher in a small school, who applies the concept of Prof. Feuerstein, with the previous way of teaching. The second deals with pupils' self-evaluation in individual subjects (math, mother tongue etc.), the third discusses the application of FIE in

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teaching children with intellectual disability, the fourth is devoted to the use of tables and paradigms in teaching mother tongue and other languages in the seventh grade, the fifth on the application of FIE in teaching physics and the last part (6) on the lesson planning based on the FIE course. Altogether six teachers and 99 pupils were involved.

Keywords

Reuven Feuerstein, Instrumental Enrichment, pupils' self-evaluation, children with intellectual disability, Mediated Learning Experience (MLE), educational planning.

Introduction

The team of the Educational and Psychological Counselling Centre (PPP) in Náchod, a town in the north of the Czech Republic, employed the Feuerstein's method of Instrumental Enrichment (FIE) when working with underperforming pupils in their district. The teachers of these children were later astonished at how much the children had changed. As a result, they wanted to learn more about the method that had helped their pupils. For this reason, the Counselling Centre decided to apply for two EU funding grants due to which two FIE courses for 80 teachers could be organised. Over the period of two years the teachers were attending a series of seminars (once a month) in the Consulting Centre which psychologists and special education teachers analysed, supervised and coached their work. All participants were asked to bring their lesson plans which were assessed by the other teachers and two supervisors. In this way the participants were learning from one another.

This paper describes how individual teachers changed their teaching style, not only in preparing their lesson plans, but also in the process of teaching in the class itself. The other part informs about a successful experiment concerning the self-evaluation of children in different subjects finally gives an account of the approach of a form teacher who involves all her pupils in lesson planning over the whole school year so that they can take more responsibility for what they do.

It follows from the contributions that all the teachers implement individual categories of Mediated Learning Experience (MLE) when interacting with their pupils. Intentionality and reciprocity are clearly demonstrated in the

approaches of the teachers and their pupils. The pupils know why they are working on particular topics, where they will be able to use the knowledge and how it is related to their future learning. The teachers are mediating the new topic's meaning, its relevance to other areas of knowledge or skills as well as its overlap, for instance how to plan work, or when to think about details in the same way as when learning to read and write individual letters. All the teachers also work with the other MLE criteria, by mediating the feeling competence, encouraging pupils to search for optimistic alternatives and to control their behaviour.

Participants and methods

The authors are the alumni of the FIE courses of the Centre of Cognitive Education (COGITO), the children are from Czech primary and secondary schools where the authors are teaching (see the notes 2 – 7 above) . The FIE methodology has been tested in various contexts and settings. The author of part I (M.S.), worked in a Provincial Primary school, with 9 first class children (age 6-8), Part II's author (J.K.) worked with 29 pupils of age 7-9 in a mainstream primary school. Author V.K. (part III) worked in Secondary school for pupils with special educational needs in one class with 10 students, age 16-23 and in the second class with 6 students, age 18-22. Contribution IV is from L.D., who worked in Secondary school in the seventh grade with 20 pupils, age 12-13. Part V's author (V.S.) worked with 25 students, age 12-13 in middle school. And the last part is from P.D., teacher of Primary school, in her class were 29 children in age 12-13.

Results

The FIE methodology has been successfully tested in various contexts and settings.

Application of Feuerstein's approach in the first grade of primary school

The teacher's (M.S.) objective was to teach children to read accurately and with comprehension, write, count up to twenty, and develop number sense.

The teacher found working with instruments and the principle of the method that focuses on the teaching process as well as the content so inspiring that she decided to use the method in her own teaching.

At the beginning of the school year, the teacher started working with the instrument Organization of Dots (which is one exercise book of FIE). The procedures she used in her lessons were the same as those the teacher had opted in the FIE courses. However, she felt that she needed to incorporate elements of the method into her teaching in general. Therefore she concentrated on mediating the information in such a way that children could think and speak a lot, make their observations and comments, discuss things, voice their conclusions, explain how they reached them, and why they think the conclusions are correct. She started using this approach in all her lessons. The children have done well when reading and there has been a considerable change in writing. It has been checked by Czech comparative tests.

Previously, the teacher was giving instructions and advice so that the children could learn to write the correct letter shapes without mistakes in spelling. She now let the children to apply the instruction based on Feuerstein main Guidelines and to give reasons for the way they have to sit, to hold the pencil and slant their exercise book. She encouraged them to observe and describe the letters, their size, shape, beginning and end, their connection to other letters. She asked them to talk about what they already knew about the letter, where they had used it before, what was new about the letter, what the new element looked like, and what was crucial for the correct shape of the letter.

At the beginning, the teacher found this working style demanding. The children needed a lot of time to observe, describe and explain things themselves. There are so many things that children have to learn in the first form,

so as in the forms to come, and the teachers are very busy trying to cover everything that is required. The teacher felt that the pace of progress was too slow and that the method would not work. Fortunately, it did not happen. The children gradually learnt to observe the letters so fast and correctly that the teacher was simply astonished. They were able to observe and describe the letter clearly using terms such as horizontal, vertical, slanted or parallel line, upper, lower and sharp bend. Due to work with instruments, they have become familiar with the concepts of direction and location. The teacher's task is to make a summary and write the sample letter which the children try to copy on the board. Most of them can write the letter correctly the first time they try.

Apart from writing, the teacher tried to apply the same principle in reading and mathematics. When reading, the children try to explain the meaning of the words they are not familiar with. The children think about these words, infer related words, and think about their meaning. Their vocabulary is thus expanded and most importantly they are learning to express themselves more promptly and accurately. In mathematics, the children learn to better understand the concept of a number, they can visualise the number, they do not count one by one but in larger units, and they are faster and more confident when counting.

Along with the changes in the children's work, there has been a change in teacher's own approaches and thinking. She viewed a child, around whom her work is centred, from a different angle, in an increasingly kind and open way. There is nothing that would prompt her to pigeonhole the children, she does not label them as excellent, average or struggling learners, as she sometimes used to. She started to regard each child as an individual who has the potential to grow and evolve and whose progress is obvious to her. By accepting the FIE method she became less anxious that she might not meet the requirements of the syllabus. Owing to the fact that the teacher constantly encourages the children to think, to discover things themselves, to relate their discoveries to other areas, the children know that what they are working on is important for their lives and that they will need it in the future. It is evident that in this way their scope of knowledge and experience based on that knowledge is expanding.

In conclusion, the teacher says that she needs to spend more time thinking about and planning her FIE lessons so as her lessons in general. However,

she can now see how interconnected things are, they seem clearer, her work is more relaxed and makes her feel happier.

This teacher said: “I dare say that with professor Feuerstein I feel happier and more satisfied with what I am doing. After a longer period of time I found once again how rewarding my job can be. I do not provide children with information to learn but I offer guidance on their way of learning.” (from the discussion in the seminary).

Experience with FIE in the second form – pupils’ self-evaluation

The teacher (one of the co-authors) took her first FIE course in the spring of 2013. At first she only absorbed new information, but later she started to comprehend its full meaning. From the very start she tried to include the new findings in her lessons. She has always inclined to the alternative way of teaching. To her astonishment, the first-form pupils reacted very well to her inquisitive questions. This happened at the end of the school year.

With the start of the following school year, in the second form, the teacher was quite clear that the FIE philosophy is the right approach. It appealed to her and she started to use this approach in her work. At last she knew precisely how to make her weekly plans and started preparing them in this way. Every week the pupils were given the topics for the main subjects, assignments, short projects etc. And they gradually started with self-evaluation. At the end of the lesson the pupils orally evaluate their work (random choice), or use colour cards (all pupils). At the end of the week, the pupils recorded in their plans their progress and successes, but also their failures. They were aware of their mistakes and knew that there is nothing wrong in making mistakes. On the other hand, it reveals something new. Also the parents became more interested in information about the teaching process, the topics, their children’s work and their ability to cope with the curriculum. When a certain topic has been taught and practised, the pupils assessed their achievements. Each of them worked according to their abilities, and thereby the teaching process was individualised.

When the teacher compared her present work with what she did at the start of her career, she can see a substantial change. Earlier, though in an amusing way, she offered information to the pupils, and they processed it in different ways. Now she instructs the children to seek information and sub-

sequently process it. She builds on the acquired knowledge of the children which she expands with new bits of information. The pupils work in different size groups, in pairs, but also individually. They even can, according to their abilities, choose the way of working. At the beginning many of them were shy to evaluate their own work in the class, but gradually more and more of them were joining. The teacher thinks that the main reason is the friendly atmosphere in the class. They talked a lot about the necessity of getting calm to be able to concentrate on their work. Today the children themselves say "There's peace and quietness in the class". The teacher gets the impression that there is a working atmosphere in the class based on communication between the children when they are working on their assignments.

The children often hear: "Why did you work well? Explain how you proceeded? Why did you find this way easier? Why did you make the mistake? Can you improve it? What pleased you most? Which new findings will you use later? Can you find yourself in such a situation in your daily life? What will you do first? How will you proceed? How did you arrive at this?" For several years, the teacher had such questions in mind and did not know how to apply them in class. It was the FIE course that helped her to find the way how to express them. Now there are ten months of hard work behind her. It was a year of numerous questions and answers. She is happy that she made a big step to a better quality of teaching. Towards the end of the school year, she paid attention to evaluation of work in the second form with the pupils. She was pleasantly surprised to hear their views and observations. They assessed not only the mastering of the curriculum, but also the applied ways and forms of work. They also recalled who and in which way influenced them, and who was influenced by their knowledge and skills. They highly evaluated their meetings with parents where they talked about their education and the methods then applied, and compared them with their own. On the whole, these meetings were positively reflected.

Table 1

Example of self-assessment mastering of curriculum

Mathematics	master	master partially	master with help	do not master
can add through a tens barrier up to 100				
can subtract through a tens barrier up to 100				
can use mathematical operations in solving verbal problems				
can measure in centimetres				
Subject classification:	pupil:	teacher:		
Man and his world	master	master partially	master with help	do not master
can distinguish and characterise seasons				
can name the months of the year				
can distinguish diseases and injuries				
can name the basic parts of human body				
can describe human senses				
can characterise the past, present and future				
listen to the teacher and classmates when they talk				
can behave properly in different situations				
Subject classification:	pupil:	teacher:		

Czech language	master	master partially	master with help	do not master
can find a simple sentence in the text				
can find a compound sentence in the text				
can find a verb in the text				
can find a noun in the text				
can find a conjunction in the text				
can find a preposition in the text				
can write neatly and legibly				
check my written text				
Classification of this curriculum:	pupil:		teacher:	

Using FIE in a practical school (a two-year programme for auxiliary workers in various professions)

The Practical School belongs to the system of secondary schools and is designated for pupils with special needs of education.

The preparation for future employment and life means: to acquire the basic knowledge, skills and habits for execution of practical activities. The successful participants may be trained in some trade or crafts to get the certificate of apprenticeship. Our intention is to build up Practical School as reliable background for development of pupils' personality.

The objective of the lesson in the second year of the practical school was to introduce the concept of a *logo*. Inferring, reinforcing and bridging the concept.



Lead-in conversation

The teacher put up textile logos on the board and encouraged the children to examine and describe them. She marked all the answers on the board next to the logos: “*we know it from the corridor, it is on our exercise books, on the website, it is a sign, emblem, title, symbol.*” The teacher concluded the conversation by saying that the word used for these pictures is LOGO.

Working with the term “logo”

The pupils were given dictionaries and notebooks with access to the internet and were asked to look up the terms “**logo**”, “**symbol**”, and “**sign**”. They write the information they found on the board: *logo – a word, speech, sign that means something, a graphic sign of organisations, companies. Logo can be found on goods.* The teacher asks the pupils if they could find any logos in the classroom. The pupils then walk around to complete the task. Again, they write the answers on the board: *on books (publishing house), on a school bag (BMW), on a T-shirt, pencil (company logo).* The teacher then asks: “Where else can you see a logo?” And the pupils answer: *in the street, on a shop, on goods sold in the shop, in the shop window, on cars, on information boards.* The teacher who wants the pupils to give clear and concrete answers, continues to have a dialogue with the children, and writes all their ideas and suggestions on the board.

Worksheet 1 showing different logos

“Do you know the logos in the worksheet? Are they simple, easy to remember, are they imaginative, funny, or original?” The pupils are quick to identify some of the logos. The teacher asks: “How did you proceed? How did you reach the conclusion? What were you thinking about? How do you know this is a Face book logo?”



Conclusion of lesson one

In conversation with the teacher, the pupils summarise what they learnt, what they were doing, what they know now, and what new information they discovered. At the end of the lesson, the pupils are informed that they will come back to this topic in their next lesson.

Lesson two – logos of the school's study programmes

The school's logo remains on the board. The pupils now know what the word *logo* means. They revise what they learnt in the previous lesson. They go on to examine what they can see on the board. They immediately answer that it is the logo of the programme they are studying, the logo of their class. They are then encouraged to study the details and to describe the logo. They divide it into two parts.

Analysing the first part of the programme's logo

The teacher asks: "What can we see?" And she again writes the answers on the board. The pupils answer: *red letters, the letters N and M, the colour black, a crossed circle, a symbol of a hand.*" The teacher wants them to expand on their answers: "What kind of letters? What do they mean? Why N and M (the town of Nové Město) "The symbol of the hand was complicated. Everyone imitated the position of the hand. "What could it mean? Why is it there? The answers were: *"it means we're good, cool, excellent, super, it is a telescope, it is looking somewhere, peeping into somewhere, into our class, our study programme, maybe into the future."* The teacher then encourages the children to concentrate on the colours. The colours are white, black and red. Why? Answers: *"They look good when they are used together, it stands out. The white is used in the background so one can see the black and red clearly."*

Analysing the second part of the programme's logo

The teacher asks: "What can you see in the second part of the logo?" *"A key, letters, the title of our programme, that's what we're called, the word two-year is not there."* Further questions for the pupils: "Why is there a key in our logo, what could it stand for? What do we need a key for? *It opens something, a door, a door to the classroom, to the school, it opens the school, it opens the door for everyone. It is a key to a gate, to a door, a key to a school, a key to a gate that opens our lives. We can go ahead, to the world, go on to a different study, it is a key to happiness and to success."*

Working with other programmes' logos

The teacher puts up on board another programme's logo next to the logo of the school. The pupils compare them. The teacher asks: "Are the logos the same? In what way are they the same? In what way are they different?" The teacher writes the answers down and then she hands out worksheet 2 with more examples of the logos of the school's programmes. The pupils identify the logos, describe them, and infer the programmes' titles. "Examine the logo. What can you see? Describe what you can see. What do the individual parts of a given logo mean? Why is there a pot in the logo of the cooks?"



Bridging

The teacher then asks where else we could apply the technique used in the lesson. The pupils try to transfer what they learnt in the class to everyday life. They come up with miscellaneous answers: *“I can identify any logo, I’ll know what it means, when I pay attention to all its details.”*

Conclusion

The teacher talks with all her pupils about what they learnt in the lesson and what they should be aware of. When are details important? Could they explain to their friends or parents what a logo is and what it says?

A Czech lesson in the seventh grade

The lesson’s objective was to explain the syntax, i.e. the rules and principles of the sentence structure and its elements. It is the most demanding part of Czech grammar. The pupils need to learn a variety of rules about sentence elements, and then be able to apply them for practical examples. Moreover, it is necessary to consider other rules of grammar, such as the case and the word class.

The teacher decided to use a different approach to teach the topic in the seventh form by comparing the individual sentence elements in a table. She first focused on the basic sentence elements – the subject and the object. The children proposed what the table might look like and eventually they chose a table in which the elements’ features were either confirmed or excluded. The resulting table clearly demonstrated the difference between the subject and the object – the difference in the case and the fact whether it is the agent or the patient.

The course of the lesson in which the subject and object were compared

Using the definitions in their workbooks and the notes they made in their exercise books the pupils suggest designing a comparative table. It is important that the table clearly shows the difference between the sentence elements. The pupils choose to design a table where they are going to state whether the elements' features are true or false.

Table 2
Criteria for comparison between the sentence elements

	stands for a person, animal, thing	stands for the agent	stands for the patient	is usually in 1, 3, infinitive	is in 1 case	is in other than 1 and 5 case
Subject	√	√	x	√	√	x
Object	√	x	√	√	x	√

Bridging: The pupils were looking for other real life examples where a table is or could be used: A table is the school schedule, the menu in restaurant, football (soccer) results, timetables of trains or busses, weather forecast (increasing and decreasing of temperatures) and a table is also the face of a clock or watch. The pupils discover, how useful are the tables for comparison, orientation in space and time and for general overviews.

Applying the table forming skills in the following lesson

In the following lesson of the Czech language, the pupils designed their own tables. This time they used the procedure to analyse the features of the modifier. It was evident that the pupils worked faster due to their previous experience.

This time they also discussed where and why it is appropriate to use tables.

When dealing with the adverbial of cause, purpose and condition, the teacher focused on the understanding of these concepts as children usually

confuse and do not understand them. The pupils were asked to look the terms up in the dictionaries and discuss where in everyday communication we use them. After that they moved on to search for the elements in a text. They wrote down example sentences where adverbials were used, made up their own sentences and finally did some exercises in their workbooks.

The dictionaries and real life examples helped pupils to understand the temporal relations of cause and purpose and comprehend the idea of a condition.

FIE method in lessons of Physics

This is the second year the teacher has been trying to apply the ideas of professor Feuerstein into her physics lessons at the junior high school. In her opinion, instruction of physics can be innovated in two possible ways: either by changing the overall approach including the expected outcomes or by incorporating FIE instruments into the current form of instruction.

The teacher admits that she had to overcome certain initial problems; she needed to change the teaching strategy, deal with the delay in covering the topics given by the curriculum, the pupil's pauses for thought made her feel a little anxious, and she worried that unexpected questions might be asked. Nevertheless, she says that she and her pupils have benefited greatly from the method.

The children's questions were particularly revealing. They helped her understand that she used to base her lesson plans on the presumed knowledge and skills of her pupils. By hypothesising about "what the children can see or imagine" she drew conclusions based on her own rather than the children's experience.

Quite frequently she observed that a child managed to give a correct answer to a question, but was not able, often shortly after, to repeat the answer or to answer the same question expressed in a slightly different way.

As a result, she realized that the children have not fixed, or internalized, new pieces of knowledge properly and have not incorporated them into the knowledge and skills acquired previously. Hardly ever were the children able to relate the topics covered in the class to their life experience and to realize that there was a connection between other subjects. In many cases, it was not difficult for the children to memorize information but they found the learn-

ing process itself, thinking in context and defending their hypotheses really challenging.

This is where the teacher found bridging very useful. It helped her understand what the children already knew about a problem, in what circumstances they had encountered it, and how it related to their life experience and situations that might seem quite unrelated.

Only after this introduction was it possible to start dealing with new information. The teacher admits that nowadays she tries not the “push” her pupils to give her the correct answers, she tries to pause more often and give the children enough space for thinking. She talks less and asks more *Why*-questions.

It was quite surprising for her to find how quickly the children adapted to the new approach and how her own work gradually became more efficient.

The FIE approach made her profoundly transform the way she worked with Laboratory Assignments (LA).

In LA lessons there is much more space for the children to relate to their own experience, to plan and organise their work, and to elaborate their own working procedures. (The teacher admits that the children can often surprise her and make her understand more about her own way of thinking.) Moreover, LA lessons make it possible to work with mistakes, look for their causes and reduce anxiety about making them. Self-assessment, identifying and analysing the causes of problems are also an important part of LA lessons.

In addition, the teacher tries to apply the FIE method by using her own worksheets based on individual instruments Orientation in Space. She uses the worksheets not only to practise new topics, but she has also successfully used them to make pupils infer physical laws themselves.

Table 3:
Determining density based on volume and mass

Number	Substance	Density ρ [kg/m ³]	Volume V [m ³]	Mass m [kg]
1	CONCRETE	2100 kg/m ³	1 m ³	2100 kg
2		700 kg/m ³	1 m ³	700 kg
3		1500 kg/m ³	2 m ³	3000 kg
4	ASBESTOS		2 m ³	4000 kg
5	PORCELAIN		2 m ³	
6	DIAMOND		2 m ³	
7	BUTTER			930 kg
8		500 kg/m ³		1000 kg
9	GRANITE		0,5 m ³	
10		30 kg/m ³	0,5 m ³	
11	AIR		1 m ³	1,29 kg
12			1 m ³	250 kg
13			4 m ³	2000 kg
14	WATER			
15			3 m ³	
16				
17	GOLD		1 m ³	

Talking about her approach to teaching with instruments the teacher says: “To sum up how Feuerstein’s Instrumental Enrichment influenced my teaching, I’d say: I teach children to learn effectively. And it has enriched both the children and me.”

Lesson planning based on the FIE course

After taking the course, the teacher was so inspired by the ideas, approach and overall philosophy of R. Feuerstein that she decided to apply some of the method’s elements into her teaching. The course enabled her to understand how good it felt when the participants were encouraged to elaborate their own strategy and plan their own course of actions.

Consequently, she started preparing weekly lesson plans with her pupils. At that time, she was teaching in the fifth form and she had already been working with the same class for two years, which made things easier. There were 27 pupils in the class, 18 boys and 9 girls. Most of them were very creative and communicative, appreciated new things, liked to engage in discussions, and to work in pairs or small groups. The pupils welcomed the opportunity to engage in the weekly lesson planning. Working together with her pupils, the teacher first explained what the point of the planning was, what can be planned and why. The teacher was quite surprised when a pupil who had been following an individual plan due to his reading disorder told her that he was now planning when to learn and prepare for school. This made the work of all the pupils much easier, they had a better idea of what they were working on and what comes next in the course of the week. The planning was not a problem for socially disadvantaged pupils or those who had some learning disorders. However, there were some problems when it came to evaluation. The pupils either did not evaluate the process at all, or in one word only: “super, boring, cool, great fun, nightmare.” Later on, some of them expressed their evaluation more clearly depending on their ability to do so. They kept discussing things together. The teacher’s objective was not to get a uniform sentence as an answer, but to let the children spontaneously express themselves and she found their ideas really revealing. They talked about the evaluation together, how they did, what was more difficult for them, what was causing problems, so that everyone could learn in this process.

The teacher made sure the planning did not divert from the curriculum while the children could express their ideas and suggestions. They had their own exercise book called PLANNING. Every Monday in their first lesson they were working on the plan for the whole week proposing their ideas and discussing them. The first time, this took the whole lesson. The next week, due to their experience, it took only about 15 minutes.

Procedure

A sheet of paper was put up on the board where the teacher listed the seven tasks they had to complete during the week. The children copied this list into their exercise books. Then they made their own suggestions, such as a dicta-

tion in the Czech language, or a didactic game in mathematics. All the children could comment on the suggestions, which was a new thing for them. Later on, they even tried not to use the same activities repeatedly in the upcoming weeks. The tasks did not relate to instruction only, the children started to check on their work as well. For example, they decided that everything they write down will be 100% legible and they will try to concentrate on keeping the layout nice and neat the whole week. On a different occasion, they focused on the relationships in the class and decided they will try to agree on things together. They noted down their personal tasks separately. It was quite interesting to see how more and more children got involved in the planning over time. The children had the 'PLANNING' book with them all the time, they noted things down and every Thursday their homework was to evaluate the planning for the week. The pupils paid a lot of attention to sticking to the plan. For example on Wednesday, if no didactic game was played in a lesson of mathematics, they wanted to know when the teacher was going to prepare one.

The weekly plan was always posted in the classroom and on the website so that the parents could see what the children planned to do. If they failed to complete some tasks, they noted it down and analysed why it had happened (e.g. the school went to a concert).

Some pupils started planning the way they were preparing for school. The teacher said it was very interesting that the pupils wanted to plan their week when spending a week together in an 'outdoor school'. On Monday they planned their learning, trips and afternoon activities. The children appreciated the fact that they participated in the process of their schooling, that they could make their own suggestions and that the teacher explained to them whether they were realistic or not. It was surprising that the children did not suggest anything that would not be related to instruction and they did not refuse to do their homework either. The suggestions usually included activities that could animate the lesson and improve discipline when working on a task. They often voluntarily committed themselves to maintain order in their books, exercise books, homework, etc. Then they evaluated themselves openly admitting that they may have forgotten about something. They took responsibility for their own work. The parents could again see this evaluation. The teacher signed everyone's evaluation and added her own comments and assessment.

Preparing weekly plans with a new class

The following school year, the teacher was working with a new class in the fourth form. They started preparing their plans in October. First, they talked about what planning was, where and why it was important and what its purpose was. The children set up their PLANNING books, where they wrote down tasks for the week. They got used to doing this fairly quickly. The plan was put up in the classroom. Every Thursday the children evaluated the plan giving the teacher valuable feedback. They talked about how they understood the things they were learning at the moment, often demonstrating how they learnt things, giving examples. Before the evaluation itself, they agreed on what form the evaluation or self-evaluation should have because it can be done in different ways. The teacher made suggestions: "Try to evaluate your work in a short sentence, in a longer sentence, explain why you evaluated the work the way you did." The children enjoyed the activity a lot.

Again, some of the pupils were planning at home as well. A pupil, an artistically gifted one, used not only bullet points when preparing her plans, but she would also add pictograms, which was really original. The class also wanted to prepare a weekly plan for their one week outdoor schooling activities. Planning has thus become an inseparable part of the children's schooling and also the parents' reactions were very positive. It gave everyone a very good idea of what was going on at school.

Conclusion about planning

- a) Planning gives a better idea of what is going to be covered in the week.
- b) Planning provides feedback on the depth of understanding
- c) Pupils and parents know exactly what to expect in the week, what is going to be covered.
- d) If a pupil falls ill, they can check the online weekly plan and keep track of what is being covered at school.
- e) The pupils are aware of the fact that they are taking part in the planning of their schooling and can influence it.
- f) Planning enables all those involved to keep track of what has been covered.

Some tasks are related to what is going on in the class at a particular moment. That is truly helpful. The activities are very dynamic and can reveal a lot about the current atmosphere in the class.

Conclusion

The contributions this paper presents illustrate how the approach to teaching has changed and how it has been influenced by the mediated learning experience as defined by R. Feuerstein, which the teachers have applied in their classes. It follows from the teachers' accounts that the method is fundamentally new not only in its approach to teaching in general but to pupils as well.

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