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How to help to parents and teachers with children with learning challenges

Case study

The role of dynamic assessment in general is:

- to identify obstacles to more effective learning and performance,
- to find ways to overcome those obstacles,
- and to assess the effects of removal of obstacles on subsequent learning and performance effectiveness.

The aim is to give suggestions to parents, teachers, educators regarding what can be done to defeat the pessimistic predictions based on normative tests, what kinds and amount of intervention will be necessary to produce significant improvement and the probable effects of such intervention.

Dynamic assessment looks for samples of change and retention of what is learned to indicate areas for cognitive modifiability and need for mediational intervention.

Karel

Karel was turning 12 when we met him. He was very good looking, friendly, smart and well-mannered boy. During the assessment he was motivated, he participated throughout the assessment and completed the tasks he was asked to do. He was very happy about his results. He has responded, thought about his answers and checked himself while controlling his behavior and his answers. He was, however, hesitant when he was asked to change his strategies or accepting new ways in solving tasks when he could not succeed with his own established strategies. When the task was too difficult or unfamiliar to him, Karel showed signs of blocking and had to be asked different questions to help him to overcome the difficulty and to move on with the task.

Karel was referred by school psychologist due to low academic achievements and a threat of repeating the same grade for the second time. According to his class teacher, his intrinsic motivation is very low and he has difficulties to connect with his peers. His favorite subjects at school are math and P.E. He doesn't like History and Crafts. He likes cooking and creating video clips with his friends in his free time.



From the previous report that was written a year ago it can be seen that Karel's working pace is slow and he has difficulties to keep the same level of concentration and attention for a long period of time. As per the previous assessor, Karel's psychomotor skills are weak and his auditory short-term memory is low. His retrieval of words is below average. His self-confidence is low when solving unfamiliar tasks and he becomes blocked.

The tests we worked on during the three days assessment:

- Organization of Dots
- Complex Figure Drawing
- Variations of Progressive Matrices
- Tri-modal analogies
- Numerical progressions
- Associative Recall: Functional reduction
- 16 Words Memory Test
- Positional learning
- Attention - LAHY
- Representational Stencil Design

Organization of Dots

Although Karel was familiar with the task from IE program, he still required verbal mediation to identify the characteristics of the figures, to apply strategies in order to succeed. He, however shown good perception of shapes, remembered the characteristics, projected virtual relationships. **Mediation for meaning and need for precision is helpful for him to be more efficient.**

Complex Figure Drawing Test

Karel got overwhelmed by the task, which is quite a common reaction. The task appeared very difficult to him. He worked impulsively and in an unorganized manner, at the beginning.

The following mediation focused on developing and adopting a strategy – structuring the figure, finding relationships between elements, organizing the space and planning.

After this learning phase, Karel worked more efficiently, systematically, still there was no need for precision. Karel is hesitant accepting new strategies and desires to finish the tasks without effort. **As soon as he has an opportunity to analyze the task thoroughly, develops a plan, he works more efficiently.**

Raven's Progressive Matrices – Standard

Karel proved to have very good perceptual vision, figural analogical thinking and good "Gestalt". Difficulties with dealing with more sources of information and with permutations occurred in complex tasks. He used



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superordinate concepts only after being asked to do so. He was able to concentrate for a long period of time. He needed to be reminded to apply newly learned strategies.

Mediation for meaning and self-competence seems to be very important for him to internalize and implement the newly gained strategies.

Tri-modal analogies

Karel can work in all modalities, it is sometimes difficult for him to verbalize his thoughts to check his analogy (difficulty in dealing with few sources of information as it was in previous tests).

Numerical Progressions

There was a good ability seen in this abstraction test that is dealing with numerical modality. He got mediated in the learning phase with the necessary strategies as how to look for the rule in a progression and how to apply it. During the test, he could solve the first six problems by creating relationships between the numbers. In task seven, he needed mediation to see and project relationships using visual support (graphic strategies). In the complex tasks, Karel needed ***mediation of meaning*** to be able to create relationships in the progression.

Associative Recall: Functional reduction

Karel understood the task and needed only very low mediation. He was able to use proper names, needed help only with two words and was able to recognize referential pictures due to functional-associative links presented below.

Karel's associative memory is well developed. If he is ***presented with visual clues***, associations and repetitions, he can increase his efficiency in learning processes.

16 Words Memory Test

Karel remembered all words using categorization after 7th reading. This result shows average auditory memory. He received verbal mediation to internalize the words according the specific groups. He was mediated the numeric aspect of the four groups with four words, in order to re-check his work. Eventually, he was able to recall all words at the end of the day. Karel demonstrated his internalization of this newly acquired strategies during the assessment of the associative recall. ***Mediation of feeling of competence can help Karel to overcome his low self-esteem.***

Positional learning

After the first trial, Karel showed very good results when he could repeat all the spaces indicated to him. It represents a good capacity of orientation without getting special instruction.



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Attention - LAHY

Karel was presented the task, understood it quickly and started working without extensive mediation. He started working on a high speed. His good working pace varied every minute, but he had a high number of omissions. Despite time being an important variable in this task, Karel never referred to the model on the top to check his work. This reflects his good working memory.

The next day, Karel was presented with three variations of the test, each part took 5 minutes. He could recall that the first part was identical to the previous test. He worked again with high speed and was happy about his performance. In the next part, Karel understood the concept of direction, but did not name the models and their positions. He also refused to develop a strategy before starting. During the third minutes of the test, he realized his low level of accuracy. His working pace dropped by 50 % and he had many errors and omission because he still looked for the old models and not the new ones. Despite the need for new strategies Karel was not very attentive during the mediation of the third part. He verbalized the shapes and directions, but refused to show the direction of the models with his hands (to add a new modality to his learning).

Karel could improve his performance by developing and adopting efficient strategies.

Representational Stencil Design

At the beginning, Karel was mediated to stencils and mental manipulation with them. During the learning phase he was able to integrate few sources of information. He received a high level of mediation for possible strategies and knowing the stencils well. Several times on the test page we made him to focus to evoke his awareness of a mistake and to help him to correct his errors. He was able to search systematically for the correct stencils and eliminate what was unnecessary for the figure. Karel showed potential to use given strategies, but needed the mediation of meaning to use these. After the tenth figure his tiredness became very obvious. He appeared blocked and lost concentration. Despite mediating focus and giving verbal clues, he wasn't able to continue after figure 13. He perceived this task, however, as challenging and enjoyed it until the end.

As this was his last test, we could see some progress in using different strategies, analysing the problem and planning behaviour.

Summary

Karel is a smart, attentive and well-mannered 11 years old boy. Throughout the process his interactions with the mediators increased. He was interested in the process and benefited from the mediators' attention, and his self-competence improved as a result.



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There was a difference in his attitude comparing the beginning and the end of the assessment. In the beginning of the assessment, he was reluctant and nervous. During the second day, he relaxed and became more involved in the process. His engagement increased and his feeling of competence became more visible. During the three days of assessment, he became aware of his potential for learning.

TO MEDIATE EFFECTIVELY, PARENTS AND EDUCATORS MUST BELIEVE THAT CHILDREN CAN LEARN
EVEN IF THEY APPEAR TO HAVE COGNITIVE CHALLENGES MAKING THE LEARNING MORE DIFFICULT. IT
IS IMPORTANT TO INTERACT WITH THESE CHILDREN WITH ENTHUSIASM, JOY AND OPTIMISM.

Recommendations

To Teachers

It is important that teachers see the result of this assessment and how much Karel can achieve with mediation and with feedback for his good work.

In order to achieve higher results, Karel should be presented with visual clues on learning or encouraged to make visual clues by himself for learning strategies (e.g. mind-mapping, graphs and diagrams) and rely on them. Finding relevant clues would help him to proceed and internalize information.

Karel listens to mediation, but only uses his own mediation. He explains and uses elimination as a strategy, so tasks with multiple choice answers could improve his effectiveness. He needs to be supported to develop new and various strategies and apply them to his work. Strategies should be put down in written form, in order for Karel to choose the appropriate one, when needed. Reminding Karel to use strategies and be more precise, would increase his ability to produce work of higher standard.

When the task is complex and there is too much data, Karel needs to narrow the field to simplify the task in order to be able to gather the relevant information. Furthermore, Karel gets easily distracted by noise. We recommend to let him write tests in a separate room. Giving Karel little breaks could avoid, that he gets tired and slow.

Mentioning and showing Karel his improvements since starting the task and while working on it, could enhance his self-confidence and his achievements.

To Parents

Karel would benefit from continuing with IE lessons in order to improve his learning ability further, strengthen his self-confidence and be more resilient under time pressure.

The Family could assist him to improve his verbal skills. Karel finds it hard to verbalize his answers. His lack of vocabulary affects the retrieval of words and concepts knowledge. He should be encouraged to read more and be involved in talks about what he has read, seen or experienced.

Karel needs to be checked for his eye sight through and occupational therapist, behavioral optometrist (if it is possible) or an ophthalmologist. He is leaning towards the right side when he works and when he wants to focus, he leans back. The hand, Karel is not using for his writing is forming a fist, instead of holding the page. While writing, he moves the page and not his hand.

The family needs to support him and respect his intrinsic motivation and learning abilities.



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A few words from the LPAD assessor

The benefits for parents and teachers are highlighted throughout this case study. However, I need to stress that Karel is not a stupid boy, not at all. Nor is he sloppy, or in puberty, but if he does not know, what and why and how should he do, he does nothing. He was very uncertain, the assessment showed it as an uncertainty about the task and thus about his right answer. When he felt more certain, surer, he was easier to accept a new strategy and he worked better. It was essential, that he felt accepted and respected by us, he felt that we do not grade him, we do not judge him and very importantly he realized that there are not only right answers. Both, his parents and teachers were surprised.