

INDIVIDUALIZED INTERVENTION PROGRAM FOR LEARNING DISABILITIES AND ADHD

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ABSTRACT. As pedagogical approach presented focused on the intervention for remedial purpose for a student with learning disabilities and ADHD, the integrated conceptual model, the main basis of this study has used many aspects of executive functions with special features in the field of ADHD but in the same time played an important role in solving Romanian language tasks and mathematics tasks.

Keywords: *learning difficulties, ADHD, executive functions*

ZUSAMMENFASSUNG. Wie präsentiert der pädagogischen Ansatz hatte als Objekt die Intervention von Abhilfemaßnahmen, bei einem Schüler mit Lernschwächen und ADHS, das integrierte konzeptionelle Modell die Grundlage dieser Studie war, hat viele Aspekte der exekutiven Funktionen gewertet, die speziellen Eigenschaften in den Aufzeichnung von ADHS eingesetzt haben, aber es hat zur gleichen Zeit eine wichtige Rolle bei der Lösung von Aufgaben der rumänischen Sprache und der Mathematik

Schlüsselwörter: *Lernschwierigkeiten, ADHD, Exekutive Funktionen, das Program 'Antwort zu der Intervention', „Response to intervention“ program*

Conceptual specifications

From the vast field of ADHD, we considered relevant for this study to focus on executive functions, especially since a number of recent studies captured the relationships between cognitive modifications and different types of ADHD (Greenbaum and Markel, 2001; Rief, 2005). Their researches show that the executive functions play an important role in solving various school tasks.

Learning difficulties are often diagnosed using the traditional model, identifying the discrepancies between intellectual ability and academic performance when the child is lagging behind academically or emotionally.

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1. "Response to intervention" program for students with learning difficulties

The response to intervention program identifies the student when the student shows resistance to the intervention programs based on school curriculum. When the students show resistance to the intervention program, based on incorrect responses, are diagnosed with learning disabilities.

Response to intervention is an intervention model used in schools in the U.S. and Israel. It is a multifunctional model used both in mainstream education and special education. Students at risk are identified based on poor school performance, or on the undesirable behavior. Their progress is monitored and the intervention intensity is adjusted according to student responses. The students who show resistance to intervention (they do not show a real progress after the intervention) are diagnosed with learning disabilities (Fuchs, et al. Kovalski 2003, Hoover, 2009).

In South Carolina, US the "Response to Intervention" program is coordinated by the resource teacher who develops individualized intervention programs for students with learning difficulties. Intervention activity takes place in a resource rooms equipped with access technologies and adequate resources allowing effective intervention. The resource teacher collaborates with the regular teachers and together they set the objectives for the intervention program. The resource teacher organizes the schedule for the intervention program and the same person is keeping records of student progress. Every nine weeks the progress report card is sent home to the parents. The period the student is taken out of his regular classroom to benefit from interventions is carefully chosen according to the child's age and its concerns.

2. The experiment

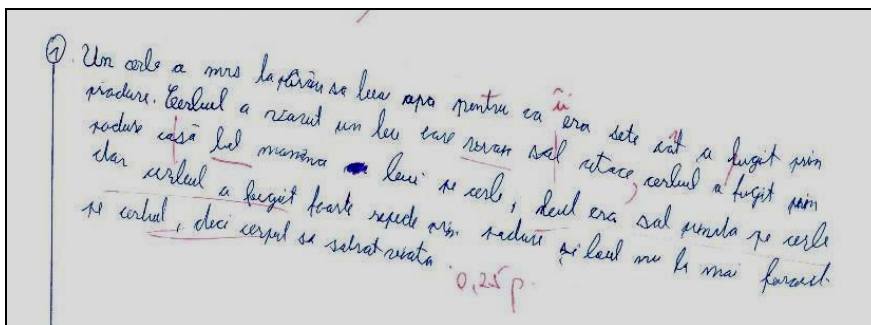
Alex is a 12 year old boy diagnosed with ADHD in autumn 2011. He started first grade in Step-by-Step program, and he was transferred in a traditional classroom in third grade. He tend to hide the truth and to seek all sorts of excuses to avoid school tasks. Alex did not pass fifth grade due to poor results from different disciplines. He is currently enrolled in fifth grade. At the beginning of this school year, he was taken to the doctor and he began the treatment with Strattera. The descriptions for his behavior establish new relationships between ADHD manifestations and learning disabilities.

<p>4. Efectuati: $5 + 3 \times [2 + 3 \times (6 \times 4 - 20 : 2) + 5] =$</p> $5 + 3 \times [2 + 3 + (6 \times 4 - 20 : 2) + 5] =$ $= 5 + 3 \times [2 + 3 + (24 - 10) + 5]$ $= 5 + 3 \times [2 + 3 \times 2 + 5]$	$= 5 + 3 [26 + 28] = 8$ $= 5 + 3 - 16$ $= 8 - 16$
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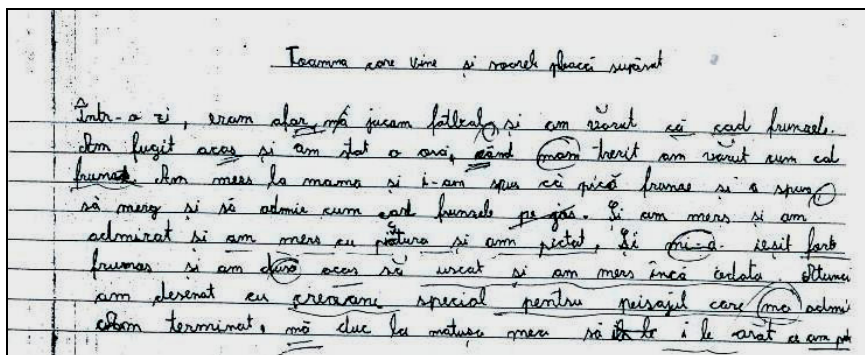
Initial assessments at the beginning of fifth grade took place in September, 2011. The results of these evaluations combined with information on student behavior in the class were the basis for the individualized intervention plan.

Example 1. Exercise - The order of operations. Initial assessment. Date: 09/27/2012.

The student correctly solves the first operation of this exercise but he shows difficulties solving a simple division, omitting a 0. We notice poor spatial organization of the whole approach of computing, the symbols are sometimes +, sometimes x, sometimes the symbols are written inside the parentheses, sometimes the symbols are written outside the parentheses. He solved the exercise on two columns, he copies the exercise on the first column, then on the second column where the answer for $(2 + 3)$ is wrong because of the symbol confusion for addition and multiplication. Finally he writes a number (16) and a sign of operation (-) no longer corresponding to the solving procedure.



Example 2. Writing a text about the favorite season. Initial Assessment, Romanian language 2011.



The sample writing of a text about the favorite contains the following errors, combined with the difficulties mentioned above in Example 2.

- Omissions (ex. „afar” instead of „afară”, „acas” instead of „acasă”, „creoane” instead of „creioane”).
- Spelling mistakes (ex. „mam” instead of „m-am” „mia” instead of „mi-a”).

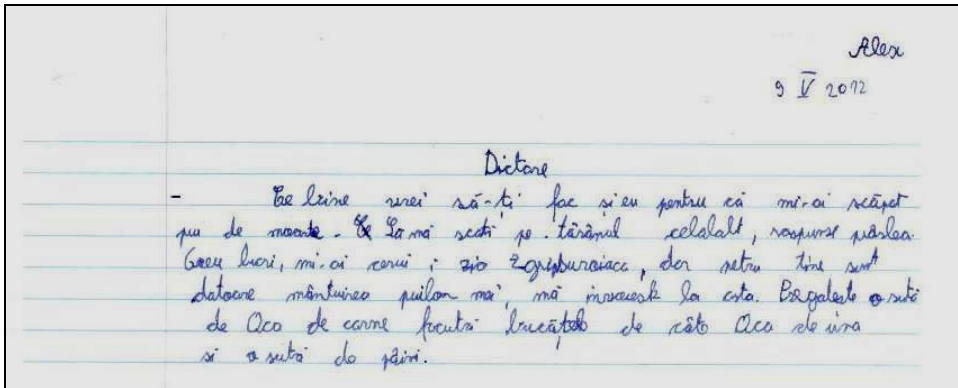
The poverty of ideas presented in these tasks is related to the low level of development of verbal language, to the difficulties of expression, speaking style resulted from the repetitive nature of sentences. The student has difficulty using verbal modes and achieving subject-verb agreement.

The behavioral intervention plan and the personalized education intervention plan were developed based on the data from the initial assessment.

The progress was evaluated in May 2012. This complex evaluation was concerned not only academic performance and, but a number of other aspects of verbal language and communication. These data will determine specific learning difficulties as dyslexia-dysgraphia, dyscalculia. Also, a student interest inventory questionnaire was administered also. A student interest inventory questionnaire was administered in order to have a true understanding of a student's needs as he perceives himself in relation to school-related tasks and interpersonal relations.

The main aim for the evaluation, conducted in May was to modify and to adjust the personalized educational intervention plan and to adapt the educational objectives and the intervention.

Example 3. Dictation. Date: 05/09/2012



The most common mistakes that occur in dictation are:

- Spelling mistakes (eg: „pui” instead of „puii”, „prâslea” instead of „Prâslea”)
- Replacements (eg: „raspunde” instead of „răspunde”, „lucri” instead of „lucru”, „invoiesk”)
- Omissions (eg: „petru” instead of „pentru”).

Writing is more readable than previous samples, graphic-motor structures are more regular and some ortogrames and punctuation are used correctly.

Example 4. Fractions. Test. Date: 05/07/2012

Text

6

1 Transformati

1/3

$0,7 = \frac{7}{10}$ ✓

$3,(\underline{0}) = \frac{39-3}{9} = \frac{36}{9}$ ✓

$1,(\underline{3}) = \frac{13-3}{9} = \frac{10}{9}$ ✓

$2,2(\underline{0}) = \frac{22-2}{9} = \frac{20}{9}$ ✓

$3,(\underline{7}) = \frac{37-3}{9} = \frac{34}{9}$ ✓

$0,2(\underline{2}) = \frac{22-2}{90} = \frac{20}{90}$ ✓

$5,7(\underline{3}) = \frac{573-57}{900} = \frac{516}{900}$ ✓

$1,4(\underline{3}) = \frac{143-14}{900} = \frac{129}{900}$ ✓

$7,(\underline{2}) = \frac{72-7}{900} = \frac{65}{900}$ ✓

$6,3(\underline{00}) = \frac{6300-63}{990} = \frac{6237}{990}$ ✓

$\frac{224-22}{90}$

$\frac{578-5}{90}$

$\frac{332-33}{90}$

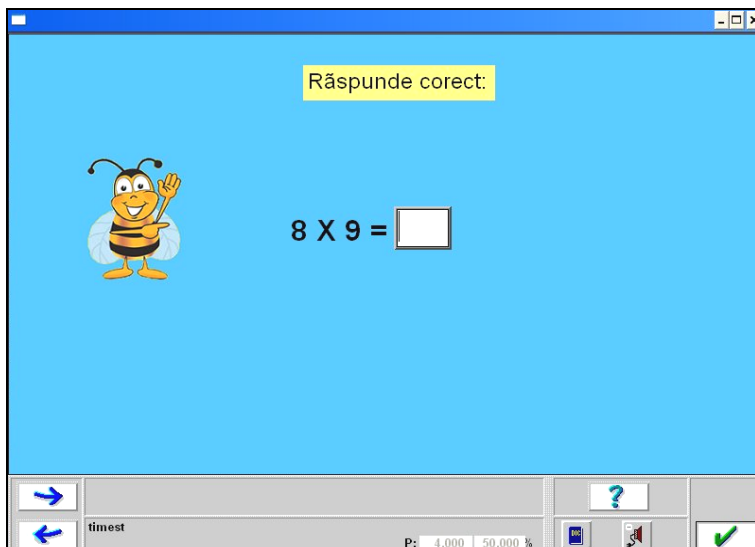
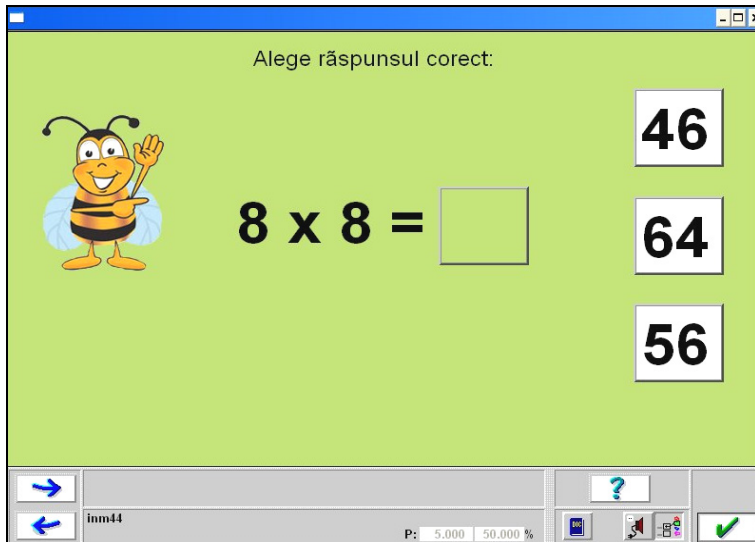
$\frac{1432-143}{90}$

$\frac{63900-63}{990}$

The student demonstrates a real progress in terms of operations with fractions since the beginning of this school year. Thus he solves correctly 6 of 10 exercises converting ordinary fractions into decimal fractions.

The computer has been used as a reward for desirable behavior during classes and as a motivational lever to reduce undesirable behaviors, as we provided in the behavioral intervention plan.

Example 5 shows a screen capture of SIAC educational software illustrating two types of exercises: choosing the correct answer or typing the answer.



Conclusions and perspectives of the study

The new point of view of this study is the correlation between the personalized education intervention plan and the behavioral intervention plan, according to the complex diagnosis of this case. There are many transfers and adjustments arising from personalized education intervention plan and behavior intervention plan according to the documents we attached and the interpretation of the results. The complexity of these relationships can be managed only in the context of multidisciplinary team, monitoring the effects of the intervention and the results the student achieved in specific learning tasks and behavior.

There is correlation between the interventions recorded in the PEPI and the intervention model with methodological character "response to intervention program". This correlation is reflected in the intensity of support interventions necessary and in proper accommodations such as the number of hours spent in resource room and the number of our spent in partnership interventions. The multidisciplinary team time and effort investment (we do not want to neglect the role of parent) reflects the progress recorded and illustrated using different assessment tasks.

At this point the evaluation process is in progress, the tests that will match with the initial assessment tests administered (fractions, math problems, dictation, composition, etc.) and also, there will be administered some tests to identify the specific learning disabilities such as dyslexia, dyscalculia and dysgraphia. Specifying certain elements of these arrays will allow more precise intervention and therefore can positively influence school performance.

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