



Roma Education Initiative (REI)

ANNUAL RESEARCH AND EVALUATION REPORT
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SUPPORTING ROMA DESEGREGATION PROCESS” PROJECT**

REPORT

**Concerning the results of the psychological and pedagogical research,
conducted in the II term of 2005 school year.**

I. PSYCHOLOGICAL AND PEDAGOGICAL RESEARCH ORGANIZATION

*** Research goals and tasks**

❖ Goals:

- Investigating the academic results of the students
- Establishing the social attitudes towards school institution of the students, students' parents and teachers.
- Investigating the administrative aspects of the students' participation in the academic process.

❖ Tasks:

- Registering the level of the academic results of the students from II, V, and VI grade in Bulgarian language and literature and in mathematics.
- Conducting interviews with the students, their parents and their teachers.
- Analyzing the presence/absence of the students during the II school term, their marks in Bulgarian language and mathematics, as well as the specifics of the interaction between their parents and teachers.
- Investigating the registered statistically significant interdependence and formulating of relevant regularities characteristic of students' school life during the II term.

*** Research hypotheses:**

- The students are expected to meet successfully the academic requirements for II academic term as a result of the established and well-maintained quality education conditions.
- The students are likely to demonstrate high levels of active participation in the learning process and complete involvement in various forms of school and out-of-school activities.

- It is assumed that variables as gender, grade, ethnicity and school will demonstrate statistically significant interdependence in terms of the academic results of the students under research, and in terms of their attitude to school life. It is also assumed that variables such as gender, ethnicity and school exist in significant interdependence with the attitudes of parents and teachers with respect to the key significance of school institution for them, and most of all for the students.
- It is expected that the teachers who have higher qualification and opportunity to participate in alternative programmes like “Step by Step” and “Reading and Writing for Critical Thinking” (RWCT), will work effectively with their students and will be highly professionally motivated and satisfied.

*** Research instruments:**

Didactic tests, measuring the levels of knowledge in Bulgarian language and mathematics are included in the first group. The length of the tests is different depending on the grade of the student being tested. In terms of content the didactic tests meet the requirements of the obligatory academic curriculum, approved by the Ministry of Education. The tests have been changed in their individual forms to the extent the difference is conditioned by the substantially different knowledge, acquired at the different educational levels (II, V, VI grades). Students’ answers are assessed by the help of a **three-degree rating scale**:

Rating “1” indicates that the student cannot orient in the instructions of the task and cannot fulfill it independently.

Rating “2” indicates that the student can fulfill the task after getting some help from the teacher.

Rating “3” indicates that the student can fulfill the task independently and without mistakes.

The second group of methods includes *three different forms of interviews*, designed for students, parents and teachers. Their usage aims at studying the dominant attitudes towards school institution and at registering the changes happening in the classroom as a result of interactions among the individual students in it. **The rating scale** for the answers is a three-degree scale (NO, TO A CERTAIN EXTENT, and YES). The student investigated selects that answer to the question that best corresponds to his/her understanding and experience.

Three different forms are used, in which the specifics of the inclusion of students and parents in school life are registered, and namely:

- A form for registering students' absences/presences (for reason of sickness or other reasons), their number being accounted for monthly – February, March, April, and May 2005.
- A form for the marks in Bulgarian language and mathematics, where only the three most significant and important for the students marks, received during the II term, are given.
- A form for the different types of meetings between teachers and parents (visits to the classroom, participation in parent-teacher meetings, meetings in person with the teacher and other individually initiated forms of cooperation).

*** Statistical and mathematical processing of data:**

The statistical and mathematical processing of data has been carried out through a computer software programme SPSS Version 11.5 and is based on several procedures like: co-relational analysis after Pearson, frequency distributions and cross-tab. By the help of these methods the interrelations between the phenomena under research can be clearly described.

***Object of of the psychological and pedagogical research**

Students from II, V, and VI grades of the schools in Blagoevgrad, Lom and Glozhene participate in the psychological and pedagogical research conducted. They

are distributed by different indicators as follows: (Ref. Table 1, and graph 1; 2, 3 в “Appendices”)

Table 1. Distribution of students (in %)

	<i>II grades</i>	<i>V grades</i>	<i>VI grades</i>
Gender:	41 boys; 59 girls	49 boys; 51 girls	38 boys; 62 girls
Ethnic group:	40 Bulgarian; 60 Roma	25 Bulgarian; 75 Roma	32 Bulgarian; 68 Roma
School:	39 Blagoevgrad; 32 Lom; 29 Glozhene	33 Blagoevgrad; 28 Lom; 39 Glozhene	32 Blagoevgrad; 42 Lom; 36 Glozhene

In the research conducted **parents** have participated, too, and their distribution is as follows (Table 2):

Table 2. Distribution of parents (in %)

<i>Gender</i>	<i>Ethnic group</i>	<i>Grade</i>	<i>School</i>	<i>Parentage</i>	<i>Mothers/Fathers</i>
43 Men; 57 Women	21 Bulgaria; 79 Roma	27 II grade; 36 V grade; 37 VI grade	28 Blagoevgrad; 36 Lom; 36 Glozhene	94 Parents; 6 Guardians	74 Mothers; 26 Fathers

In the research conducted **teachers** have been interviewed, and their distribution is as follows: (Table 3):

Table 3. Distribution of teachers (in %)

<i>Gender</i>	<i>School</i>	<i>Working experience as a teacher</i>	<i>Since when is working in this school</i>	<i>Education</i>	<i>Qualification</i>	<i>Participation in SbS</i>	<i>Participation in “RWCT”</i>
8 Men; 92 Women	40 Blagoevgrad; 40 Lom; 20 Glozhene	5 yrs. – 2; 6-10 yrs. – 18; 11-20 yrs. – 36; more than 20 yrs. – 44	Less than 1 yr. – 2; 1-5 yrs. – 8; 6-10 yrs. – 32; more than 10 yrs. – 58	Primary school pedagogy– 52; Pre-school pedagogy– 2; Педагогика – 44; Psychology – 2	Yes – 22; No – 76; Expecting to start– 2	Yes – 67; No – 33	Yes – 50; No – 46; Interested in - 4

*** Executive summary**

In contradiction to the traditional education that is class-lesson type and directed from the teacher to the student, the modern educational programs accentuate on the active interaction between the teacher and the students. The teachers used different strategies of teaching which help them to present the new knowledge in interactive,

attractive, available and useful way. These practices really help the processes of desegregation through stimulation of higher academic results and through encouraging the adaptation of the students to the school requirements in social, cognitive and behavior way irrespective of their social, cultural and ethnic origin.

In result of this psychological-pedagogical research there are many empiric data that are strong proof that the idea for equal access to quality education of all students really works in Bulgarian circumstances. This is possible because of the active participation and work of the teachers, the parents and the students. In backing of this idea concrete empirical data are presented that show the change of the social adjustments in accordance with the philosophy of the desegregation processes and in direction enhancing of the educational quality and the academic results.

For example, regarding to the **teachers** is registered extremely high statistical interdependence between their participation in Step by Step Program and the really occurred change in their way of teaching on key educational disciplines as Bulgarian language and Mathematics. Sizable part of the teachers is trained in the Program “Reading and writing for critical thinking” that assures them additional professional qualification. The information that teachers shared is from appreciable scientific and practical interest. They say that the things that they learn during the trainings and the practical possibilities for applying of the collected experience lead to increasing of the effectiveness of the work with the students, to positive change of the teaching methods and the final academic results. The received data show that the teachers find out direct connection between the need of quality improvement of their qualification and the quality improvement of the education in school. They also share that the students register and high value the occurred changes in the way of teaching and also approve in high degree the new organization of the classes in Bulgarian language and Mathematics.

The other example is connected with the **parents**. Most of them regardless of their ethnic affiliation think that the school is extremely important educational institution in the life of their children. The parents also indicate that for the children is very substantial to continue their education on the following educational levels

that will make them competitive on the working market; will assure them real possibilities for better social realization and will include them successfully in the desegregation processes that are going on in the Bulgarian society.

And not on the last place the received results from the students' interviews show that they like a lot the possibility to attend the classes where useful educational process is carried out and where they have the possibility to create new contacts and for better communication with their classmates and friends. Most of the students think that is very important to attend the classes regularly. For them is important also the change in the teaching in Bulgarian language and Mathematics because through it the assimilation of new knowledge and the educational activities turn into pleasant and preferable studies that decrease the emotional, cognitive and motivational suspense.

Connected with the **academic achievements of the students** - some striking examples of gained positive results are indicated.

For example, **on level II grade (Bulgarian language)** is visible that in Blagoevgrad school 100 % of the students answers excellent to questions №2 and 6, and 93% on question №3. In Lom school 80 % of the students answer successfully to questions №1 and 2, and 95% to question №6. In Glojene school 90% of the students answer without difficulties to question №2, and 97% to question №6. 94 % of the Bulgarian students answer successfully to question №2, and 100% of them to questions №3 и 6. 90% of the Roma students answer excellent to question №2, and 97% - to question №6.

On level V grade (Bulgarian language) 63% of the students in Blagoevgrad and Lom schools answer excellent to questions № 4. In Glojene school 64% of the students answer without difficulties to question № 6, 17, 20 and 21. 77 % of the Bulgarian students answer successfully to question № 4, 17, 19 and 75 % of them to questions № 5. 55 % of the Roma students answer excellent to question № 4.

On level VI grade (Bulgarian language) in Blagoevgrad school 82% of the students answer successfully to questions № 7. 73 % of the students in Lom school and 71% of the students in Glojene school answer without difficulties to question №

9. 77 % of the Bulgarian students answer excellent to question №5 and 73 % of them answer without difficulties to questions № 4 and 17. 85 % of the Bulgarian students answer successfully to questions № 7 и 11 and 63% of the Roma students answer excellent to question № 7.

On level II grade (mathematics) is ascertain that in Blagoevgrad school 100 % of the students answers excellent to questions № 2, 4 and 5, and 97 % on question № 3 and 6. In Lom school 86 % of the students answer successfully to questions № 5. In Glojene school 94 % of the students answer without difficulties to questions № 3 and 5. 100 % of the Bulgarian students answer successfully to question № 2 and 5, and 97 % of them to questions № 3. 90% of the Roma students answer excellent to question № 5, and 85 % - to questions № 3 and 6.

On level V grade (mathematics) 81 % of the students in Blagoevgrad school answer without difficulties to question № 1 and 2. In Lom school 95 % of the students answer excellent to questions № 1, 2 and 3. In Glojene school 51 % of the students answer excellent to questions № 1, 2 and 3. 79 % of the Bulgarian students answer successfully to questions № 1, 2 and 3 and 73 % of the Roma students answer excellent to questions № 1 and 2.

Therefore the particularly selected examples have the role to illustrate the educational progress of the students in Bulgarian language and mathematics. These examples are good proofs that the quality improvement of the teachers, the support of the parents and the favorable interrelations in school are the key factors for achieving of higher academic results from the students.

II. ANALYSIS OF THE RESULTS OBTAINED

1. ACADEMIC RESULTS IN BULGARIAN LANGUAGE AND LITERATURE

1. 1. Academic results for II grade, distributed by schools, ethnic groups and gender.

1.1.1. By schools for all students

The test in Bulgarian language consists of 10 questions aiming at studying the extent to which basic elements of language competence of students, obligatory for that educational level, have been achieved.

For example, the first task checks children's skills to *write under dictation*. The results show that 52 % (ref. table 4) of the students from **Blagoevgrad** write the text under dictation independently and without mistakes. The second task of the test is directly related to the first one, because it requires *choosing the most appropriate title out of several versions for the text written under dictation*. 100% of the students fulfill independently and successfully a similar task, which is a convincing evidence of well-acquired skills of children to write under dictation, without making any mistakes. In the same way the children manage task № 6 (*knowledge and skills for carrying over words*), where 100% of them arrive at the correct answer.

Most of the students do successfully tasks 3, 4, 5 and 10. From the data obtained it could be concluded that they only have some difficulties with tasks 7 (*arranging sentences to get a complete final text*), 8 (*determining the number of the nouns, adjectives and the verbs in the sentence*), and 9 (*making a sentence using definite words, determining person and number of adjectives and number of verbs*). These final results can serve as reliable feedback information for the teachers, to orient better which part of the academic material needs more practice.

At **Lom** school 80% of the students successfully write under dictation and join the written text with the appropriate title without experiencing any difficulties. (tasks №1 and 2). The other successfully fulfilled task is task №6, where 95% of the students do the task independently. Most of the students (81%) fulfill task №10 without having difficulties (*defining the meaning of composition-description*). The students from II grade have more difficulties with task №7, where only 33 % of them reach to the correct solution.

At the school in **Glozhene** 67% of the students write a text under dictation without any mistake. 90 % of them determine correctly the most appropriate title for the text of the dictation. 87% of the students do successfully *task №3 (determining the number of the sounds in given words)*, and 97% of them experience no difficulties with task №6. Half of the students (50%) experience some difficulties with *task №5 (determining the number of the voiced and voiceless consonants in a word)* and probably this is one of the problem areas which require more serious efforts and additional practice.

Table. 4. Distribution of the successful answers to the test in Bulgarian language for II grade by schools (in%)

	BLAGOEVGRAD	LOM	GLOZHENE
<i>Q1-write under dictation</i>	52	80	67
<i>Q2-choosing the most appropriate title out of several versions for the text written under dictation</i>	100	80	90
<i>Q3-determining the number of the sounds in given words</i>	93	75	87
<i>Q4-determining the number of the sounds</i>	86	55	79
<i>Q5-determining the number of the voiced and voiceless consonants in a word</i>	83	71	50
<i>Q6-knowledge and skills for carrying over words</i>	100	95	97
<i>Q7-arranging sentences to get a complete final text</i>	69	33	73
<i>Q8-determining the number of the nouns, adjectives and the verbs in the sentence</i>	48	67	67
<i>Q9-making a sentence using definite words, determining person and number of adjectives and number of verbs</i>	52	56	67
<i>Q10-defining the meaning of composition-description</i>	86	81	57

On the basis of the co-relational analysis made, it has been found out that at school level there are several statistically significant regularities, namely: between the school and the answers to task №5 (-0,359**¹) and №10 (-0,407**) (ref. to graph 6 and graph. 4 respectively in “Appendixes”). The registered co-relational interdependences are moderate in strength and negative. The highest level of correct answers is registered in Blagoevgrad, followed by Lom and Glozhene.

1.1.2. By ethnic groups

¹ The critical values for p for the basic equation of significance are as follows: $p < 0.05^*$; $p < 0.01^{**}$ (respectively 5% and 1 % error risk).

While analyzing the interdependence between the academic results and the ethnic groups of the students under research, it was found out that 100% of the Bulgarian students fulfill tasks №3 и 6 without experiencing any difficulties. A greater part of the students are successful in fulfilling all the rest of the tasks (ref. Table 5 and graph 71), which demonstrates solid knowledge and orientation in the subject matter. A very high percentage of the Roma students manage successfully tasks №2, 3, 4, 5, 7, 8, and 10. These tasks are connected with choosing of suitable title for specific text with correct determination of sounds, of voiced and voiceless consonants; with right arrangement of sentences into whole text; with determination of the nouns, adjectives and verbs in indicated sentences and with right definition of what the essay is.

Table 5. Distribution of correct answers to the test tasks in Bulgarian language for II grade by ethnic groups (in%)

	<i>BULGRIANS</i>	<i>ROMA</i>
<i>Question №1</i>	78	33
<i>Question №2</i>	94	89
<i>Question №3</i>	100	77
<i>Question №4</i>	84	70
<i>Question №5</i>	69	67
<i>Question №6</i>	100	96
<i>Question №7</i>	72	54
<i>Question №8</i>	70	53
<i>Question №9</i>	72	49
<i>Question №10</i>	75	73

On the basis of the co-relational analysis made, the following statistically significant interdependence between the ethnic group and questions № 1, 3, 9 (Ref. Respectively to Graph 8, graph 9, and graph 10) has been identified. According to the received results the Roma students have some difficulties in writing under dictation (question №1); in composing of right sentence from selected at random words (question №9). That's why additional explanations and exercises on these subjects are necessary.

1.1.3. By gender

The representatives of both genders from II grade fulfill without difficulties most of the tasks, with the boys having some difficulties with the correct making of a sentence using words selected at random. (task №9). That shows that the boys have to put more efforts in acquiring more flexible and correct usage of words, united in an interrelated text.

Table 6. Distribution of correct answers to the test tasks in Bulgarian language for II grade by gender (in%)

	<i>GIRLS</i>	<i>BOYS</i>
<i>Question №1</i>	93	88
<i>Question №2</i>	93	88
<i>Question №3</i>	87	85
<i>Question №4</i>	76	76
<i>Question №5</i>	75	58
<i>Question №6</i>	96	100
<i>Question №7</i>	66	54
<i>Question №8</i>	64	53
<i>Question №9</i>	71	42
<i>Question №10</i>	72	76

On the basis of the co-relational analysis made, only one statistically significant co-relational interdependence between gender and question №9 (-0,243*) has been registered (Ref. to graph 13). This interrelation is negative and weak.

The negative mark of the interrelations shows that the girls managed successfully with the given tasks but the boys met some difficulties. The most of the girls and the boys solve the given educational tasks independently without need of additional help from the teachers.

1. 2. Academic results for V grade, distributed by schools, ethnic groups and gender.

1.2.1. By school for all students

While analyzing the results in Bulgarian language of the students from V grade from **Blagoevgrad**, it has been found out that to only a few of the questions (*№2/ finding the main conclusion in a text, №4/finding the meaning of an expression, №5/identifying a word which is not a synonym of another given word, №17/ identifying conjunctions, requiring commas*), a little more than half of the students manage to answer independently and without mistakes (Ref. Table 7) The students have great difficulties with questions *№13/ identifying the spelling mistake, №15/ finding a word by a given root, №20 and 21/identifying sentences with or without punctuation mistakes*). Therefore, additional efforts and practice are necessary for overcoming spelling and punctuation mistakes, commonly made by the students. About the **Lom** students it has been found out that 66 % of them fulfill successfully task №4. The most difficult for the students are the answers to questions *№15/ making a word when the root of the word is given*), 20, 21, 22. The final results obtained show that additional clarification and exercises are needed for improving the spelling of certain words and their appropriate combinations in order to avoid spelling and punctuation mistakes. Besides, additional efforts for making words using the given root are also necessary.

At **Glozhene** school it has been registered that there are more questions to which most of the students answer independently and without mistakes compared to the other schools. These are tasks *№ 5, 6/finding antonyms 9/ finding pairs of words having the same relation to each other as a model pair, 13, 19/use of adverbials*), 20, 21. Certain problem areas emerge around tasks *№ 8/ identifying homonyms*), *11/ use of conjunctions*), 15. Therefore, for the students from V grade at Glozhene school some additional practice for reinforcing their knowledge of making words from a given root, correct usage of conjunctions and clear distinction of homonyms as parts of speech.

Table. 7. Distribution of correct answers to the test tasks in Bulgarian language for V grade by schools (in %)

	BLAGOEVGRAD	LOM	GLOZHENE
<i>Question №1</i>	30	22	44
<i>Question №2</i>	56	29	51

<i>Question №3</i>	33	44	54
<i>Question №4</i>	63	66	54
<i>Question №5</i>	59	39	59
<i>Question №6</i>	44	24	64
<i>Question №7</i>	37	24	36
<i>Question №8</i>	33	24	31
<i>Question №9</i>	26	42	59
<i>Question №10</i>	42	34	36
<i>Question №11</i>	19	32	31
<i>Question №12</i>	33	24	33
<i>Question №13</i>	4	39	62
<i>Question №14</i>	15	15	36
<i>Question №15</i>	4	20	31
<i>Question №16</i>	37	29	59
<i>Question №17</i>	52	27	64
<i>Question №18</i>	26	24	36
<i>Question №19</i>	41	32	62
<i>Question №20</i>	11	20	64
<i>Question №21</i>	11	12	64
<i>Question №22</i>	19	20	33

On the basis of the co-relational analysis made, it has been found out that there is a positive and moderate interrelation between the school and the answers to question №13 (0,319**), №20 (0,335**) and №21 (0,346**) (Ref. To graph 14, graph 15, graph 16 respectively). This means that to questions №13, 20, 21 the students in Glojene answer most correctly followed by the students in Lom and finally those in Blagoevgrad. The questions are connected with finding and correction the mistakes of spelling and punctuation.

1.2.2. By ethnic groups

The analysis of academic results of the students and their interrelation with students' ethnicity shows that the Bulgarian students answer best to questions №4, 5, 17 and 19. More difficult for them are the answers to questions №11, 14, 15, 18 and 22 (Ref. to table 8). This end result helps to identify the problem areas for the Bulgarian students from V grade, namely: the correct usage of conjunctions, making a morpheme analysis of a word, making a word from a given root, finding mistakes in agreement and in general finding intentional mistakes in sentences.

Regarding the Roma students it can be pointed out that their successful answers are to questions №1, 2, 4, 5, 6, 9, 13, and 19. These students have some difficulties

with the answers to tasks №8, 11, 12, 14, 15, 18, 21, and 22, which mean problems in the following areas: determining homonyms, possessive pronouns, conjunctions, morpheme analysis of a word, making words form a root, identifying spelling, punctuation mistakes, and mistakes in agreement. Similar information could be timely and necessary feedback information for the teachers about the need of additional work on a specific language area.

Table 8. Distribution of correct answers to the test questions in Bulgarian language for V grade (in %)

	BULGARIAN	ROMA
<i>Question №1</i>	40	50
<i>Question №2</i>	47	49
<i>Question №3</i>	43	36
<i>Question №4</i>	73	55
<i>Question №5</i>	77	41
<i>Question №6</i>	60	37
<i>Question №7</i>	43	28
<i>Question №8</i>	43	24
<i>Question №9</i>	50	41
<i>Question №10</i>	50	32
<i>Question №11</i>	37	25
<i>Question №12</i>	40	26
<i>Question №13</i>	40	37
<i>Question №14</i>	33	18
<i>Question №15</i>	23	18
<i>Question №16</i>	57	36
<i>Question №17</i>	73	36
<i>Question №18</i>	33	28
<i>Question №19</i>	63	37
<i>Question №20</i>	43	29
<i>Question №21</i>	43	25
<i>Question №22</i>	33	21

The results from the co-relational analysis show that there is a statistically significant interrelation between the ethnic group and the answers to questions №5 (-0,274**) and №17 (-0,290**) (Ref. to graph 17 и graph 18 respectively). The registered interrelations are negative and weak that shows that the most of the Bulgarian students answer successfully to these two questions but comparatively small part of the Roma students gain similar successful results. The questions are connected with finding the synonyms and the conjunctions that need comma to be put.

1.2.3. By gender

The analysis of the results in Bulgarian language for the V grade, considering gender, shows that the boys find questions №4 and 5 comparatively easy (Ref. to Table 9). A comparatively small part of them answer successfully tasks №7, 8, 11, 12, 14, 15, and 22. The registered difficulties for the boys are related to the correct determining of paronyms, homonyms, precise usage of conjunctions and possessive pronouns, making words from a given root, making a morpheme analysis of a word, and finding spelling mistakes.

The results obtained show that as a whole the girls do better with the tasks in Bulgarian language for V grade compared to the boys. Girls have some difficulties with tasks №14, 15, 18, 22, related to making a morpheme analysis of words, making a word with the root given, finding out spelling mistakes and agreement mistakes. The common problem areas for both boys and girls are related to the morpheme analysis of the words, to making words with the root given, and to identifying spelling and agreement mistakes. It is evident that this is the area where teachers' efforts, and of course students' efforts, too, should be directed to, in order to overcome the temporary difficulties in Bulgarian language training.

Table 9. Distribution of correct answers to the test questions in Bulgarian language for V grade by gender (in%)

	<i>BOYS</i>	<i>GIRLS</i>
<i>Question №1</i>	48	46
<i>Question №2</i>	46	49
<i>Question №3</i>	35	40
<i>Question №4</i>	64	58
<i>Question №5</i>	50	53
<i>Question №6</i>	44	44
<i>Question №7</i>	28	35
<i>Question №8</i>	22	35
<i>Question №9</i>	40	47
<i>Question №10</i>	38	36

<i>Question №11</i>	24	32
<i>Question №12</i>	20	39
<i>Question №13</i>	36	40
<i>Question №14</i>	20	25
<i>Question №15</i>	14	25
<i>Question №16</i>	42	42
<i>Question №17</i>	44	49
<i>Question №18</i>	26	32
<i>Question №19</i>	40	49
<i>Question №20</i>	28	39
<i>Question №21</i>	26	35
<i>Question №22</i>	16	32

On the basis of the co-relational analysis made only one statistically significant interdependence between gender and answers of question №12 (0,195*) (Ref. to graph 19), has been registered and it is positive and extremely weak. This means that the girls manage more successfully than the boys in solving of task №12. The question is connected with determining of the possessive pronouns.

1.3. Academic results for VI grade, distributed by schools, ethnic groups and gender

1.3.1. By schools for all students

On the basis of the analysis of the academic results, it can be stated that at **Blagoevgrad** school the students have difficulties to a certain extent with questions related to the exact identifying of verbs and pronouns (№ 1, 2, 3, 4, 6), as well as with the writing of a text-reasoning on a given story (Ref. To table 10). As regards the rest of the questions of the test, it could be pointed out that most of the students manage them successfully and independently.

In relation to **Lom** school it has been found out that the students have achieved relatively high results answering questions № 5, 7, 9, 11, 13. For most of the students tasks № 2, 3, 10 are more difficult.

At **Glozhene** school it has been found out that as a whole most of the students fulfill the tasks successfully, having difficulties only with determining verb forms and pronouns (task № 3). It is evident that at that school, too, the teachers have to

emphasize on that problem area of Bulgarian language training in VI grade and to spare enough time for practice in order to overcome confusion.

Table 10. Distribution of correct answers to the test questions in Bulgarian language for VI grade (in %)

	<i>BAGOEVGRAD</i>	<i>LOM</i>	<i>GLOZHENE</i>
<i>Question №1</i>	33	42	42
<i>Question №2</i>	33	33	40
<i>Question №3</i>	22	22	24
<i>Question №4</i>	33	41	41
<i>Question №5</i>	63	64	46
<i>Question №6</i>	35	38	38
<i>Question №7</i>	82	69	68
<i>Question №8</i>	56	56	58
<i>Question №9</i>	67	73	70
<i>Question №10</i>	58	40	40
<i>Question №11</i>	63	63	68
<i>Question №12</i>	70	55	55
<i>Question №13</i>	63	62	58
<i>Question №14</i>	44	44	63
<i>Question №15</i>	37	50	50

1.3.2. By ethnic groups

On analyzing the academic results distributed by ethnic groups of the students under research, it has been found out that the Bulgarian students have some difficulties only with determining verb forms and pronouns (task № 3). In relation to the rest of the test tasks, it can be pointed out that most of the students fulfill them independently and without making mistakes. (Ref. to table 11). The Roma students also have some difficulties with determining verb forms and pronouns, as well as writing a composition – reasoning on a given story. Most of the Roma students fulfill successfully and without any mistakes tasks № 7 и 9 (related to determining of participles).

Therefore, the teachers' attention should be directed to the problem areas in Bulgarian language for the students from VI grade. They need to work additionally on verb forms and pronouns, and on improving students' skills for writing compositions-reasoning.

Table 11. Distribution of correct answers to the test questions in Bulgarian language for VI grade by ethnic groups (in%)

	BULGARIAN	ROMA
<i>Question №1</i>	50	24
<i>Question №2</i>	46	27
<i>Question №3</i>	25	20
<i>Question №4</i>	44	30
<i>Question №5</i>	59	47
<i>Question №6</i>	45	27
<i>Question №7</i>	85	63
<i>Question №8</i>	70	43
<i>Question №9</i>	79	59
<i>Question №10</i>	58	35
<i>Question №11</i>	85	47
<i>Question №12</i>	76	47
<i>Question №13</i>	79	40
<i>Question №14</i>	67	47
<i>Question №15</i>	61	30

On the basis of the co-relational analysis made, the following statistically significant interdependence between ethnic groups and the answers to questions № 12 (-0,396**), 13 (-0,469**), 15 (-0,377**) (Ref. To graph 25, graph 26, graph 27 respectively) have been registered. This means that the Bulgarian students answer successfully but most of the Roma students have difficulties in formulating of independent and right answers to the indicated tasks. The questions are connected with determination of participles and with composing of essay.

1.3.3. By gender

On the basis of the analysis made on the academic results in Bulgarian language for VI grade, distributed by gender of the students under research, it has been registered that most of the girls are doing better compared to the boys (Ref. To table 12). The boys have difficulties with tasks, related to determining verb forms, pronouns, participles and writing of composition-reasoning (№ 3, 6, 10, 11, 15). The girls only need additional practice on a more precise determining of verb forms and pronouns.

Table 12. Distribution of correct answers to test questions in Bulgarian language for VI grade by gender (in%)

	BOYS	GIRLS
<i>Question №1</i>	39	38
<i>Question №2</i>	36	38
<i>Question №3</i>	24	23
<i>Question №4</i>	36	39
<i>Question №5</i>	46	61
<i>Question №6</i>	28	45
<i>Question №7</i>	61	88
<i>Question №8</i>	46	69
<i>Question №9</i>	70	68
<i>Question №10</i>	30	65
<i>Question №11</i>	30	65
<i>Question №12</i>	54	78
<i>Question №13</i>	52	72
<i>Question №14</i>	55	56
<i>Question №15</i>	39	50

As a result of the co-relational analysis made, only one statistically significant co-relational interdependence between the gender of the students under research and the answers to question № 10 (0,301*) (Ref. To graph. 38) has been registered. This shows that the most of the girls answer excellent to this question but the boys meet some difficulties in solving the given task independently. The given task is connected with the precise determining of the participles as a part of the speech.

2. ACADEMIC RESULTS IN MATHEMATICS

2. 1. Academic results for II grade, distributed by schools, ethnic groups, and gender

2.1.1. By schools for all students

On the basis of the analysis of the academic results distributed by schools, it has been found out that as a whole the students are coping with all problems. A very

great part of the students from **Blagoevgrad** solve problems №1, 2, 3, 4, 5, 6, 7 without any difficulties, (Ref. to table 13). Some, but not very big part of the students, experience difficulties with the text problems (№ 8, 9) and evidently need additional practice on that problem area.

As a whole, the academic results of the students from **Lom** are worse than those of the students from **Blagoevgrad** (Ref. to table 13). Most of the students solve independently and without mistakes problems № 1, 3, 4, 5, 9. Some difficulties have been registered with the answers to questions № 2 and 8 (solving of numeric expressions and text problems).

At **Glozhene** school the registered academic results in mathematics are relatively high. Most of the students manage successfully questions № 1, 2, 3, 4, 5, 6, and 7. The problem areas of the training in mathematics are evidently related to correct understanding and independent solving of text problems.

Table13. Distribution of correct answers to test questions in mathematics for II grade by schools (in %)

	BLAGOEVGRAD	LOM	GLOZHENE
<i>Question №1</i>	93	67	80
<i>Question №2</i>	100	52	87
<i>Question №3</i>	97	76	93
<i>Question №4</i>	100	81	73
<i>Question №5</i>	100	86	93
<i>Question №6</i>	97	52	83
<i>Question №7</i>	86	52	63
<i>Question №8</i>	69	52	60
<i>Question №9</i>	66	62	70

On the basis of the co-relational analysis made it has been found out that there are two statistically significant correlations between the school and the answers of questions №4 (-0,311) and 6 (-0,264*) (Ref. to graph 5 and graph 6 respectively). The results obtained emphasize the higher academic achievements of the students from Blagoevgrad, followed by the students of Lom and Glozhene. The solving of similar tasks requires knowledge for solving of numerical expressions.

2.1.2. By ethnic groups

On processing of the results distributed by ethnic groups, it has been found out that both Bulgarian and Roma students as a whole do the mathematical problems very well. A great part of the Bulgarian students do independently problems № 1, 2, 3, 4, 5, 6, 7, 9 (Ref. to table 14), and the smaller part of them has some difficulties with problem №8 (with text). A big part of the Roma students do without mistakes problems №1, 2, 3, 4, 5, and 6. The difficulties emerging are related to doing specific numeric expressions (problem №7), and to the text problems.

Table 14. Distribution of correct answers to test questions for II grade by ethnic groups (in%)

	BULGARIAN	ROMA
<i>Question №1</i>	91	75
<i>Question №2</i>	100	71
<i>Question №3</i>	97	85
<i>Question №4</i>	88	83
<i>Question №5</i>	100	90
<i>Question №6</i>	94	85
<i>Question №7</i>	88	59
<i>Question №8</i>	69	56
<i>Question №9</i>	88	52

On the basis of the co-relational analysis made two statistically significant interrelations have been registered between the ethnic groups of the students under research and the answers to question №2 (-0,352**) (Ref. to graph 11), №7 (-0,317*), №9 (-0,365**) (Ref to graph 12). The obtained co-relational values are negative and moderate, which means that the academic results of the Bulgarian students are higher compared to those of their Roma peers. The tasks are connected with solving of numerical expressions.

2.1.3. By gender

As a result of the academic results processing, it has been found out that both boys and girls as a whole, do mathematics problems very well. (Ref. to table 15). For the representatives of both genders the only difficult problems are those having text (problems №8 and 9).

Table 15. Distribution of correct answers to test questions in mathematics by gender (in %)

	BOYS	GIRLS
<i>Question №1</i>	85	79
<i>Question №2</i>	88	79
<i>Question №3</i>	88	92
<i>Question №4</i>	79	89
<i>Question №5</i>	97	92
<i>Question №6</i>	93	88
<i>Question №7</i>	78	72
<i>Question №8</i>	49	70
<i>Question №9</i>	67	66

On the statistical and mathematical processing of the academic results obtained no statistically significant co-relational interdependence between the gender of the students under research and the answers to the problems in mathematics for II grade has been registered.

2.2. Academic results for V grade, distributed by schools, ethnic groups and gender

2.2.1. By schools for all students

The final processing of the academic results obtained, show relatively high achievements of the students from **Lom**, most of whom do successfully problems №1, 2, 3, 4, 5, 6, 7, 8, 11 (Ref. to table 16). Almost half of these students solve problems №9, 10, and 12 without mistakes and without experiencing any difficulty. Some difficulties have been registered in relation to problems №13, 14, 15 (problems with texts).

At **Glozhene** school half of the students solve successfully only problems №1, 2, 3 and partly 4. The most common difficulties are related to the problems having textual parts.

At **Blagoevgrad** school the most successful are the students with problems №1 and 2. Half of the students do without mistakes problems №3, 4, and 6. The students have serious problems with solving of problems №10 and 12. None of the students

can solve the text problems. Evidently this is a very serious problem for the students from V grade in Blagoevgrad.

Табл. 16. Distribution of correct answers to test questions in mathematics for V grade by schools (in %)

	BLAGOEVGRAD	LOM	GLOZHENE
<i>Question №1</i>	81	95	51
<i>Question №2</i>	81	95	51
<i>Question №3</i>	54	95	51
<i>Question №4</i>	50	88	49
<i>Question №5</i>	41	85	39
<i>Question №6</i>	59	88	39
<i>Question №7</i>	41	78	34
<i>Question №8</i>	30	81	24
<i>Question №9</i>	26	54	12
<i>Question №10</i>	7	51	20
<i>Question №11</i>	33	61	17
<i>Question №12</i>	4	54	12
<i>Question №13</i>	0	34	10
<i>Question №14</i>	0	37	10
<i>Question №15</i>	0	37	12

On the basis of the co-relational analysis made some statistically significant interdependences between the school and the answers to questions №9 (-0,211*) and №11 (-0,205*) (Ref. to graph 24 and graph 23 respectively) have been registered. The interrelations registered are negative and weak. This shows that to the indicated questions (calculating of numerical expressions and text mathematical problem) the most successful answers give the students in Lom followed by the students in Blagoevgrad and finally those in Glojene.

2.2.2. By ethnic groups

The results distributed by ethnic groups show that most of the Bulgarian and Roma students manage successfully problems № 1, 2, 3, 4, 5, 6, 7 (Ref. to table 17). It can be seen that the registered difficulties in the training process regardless of their ethnic group are related mainly to understanding and correct solving of text problems (№8-15). Also is possible to be seen that to some tasks (№10, 12, 13, 14, 15) the Roma students answer more successfully than their Bulgarian peers.

Table 17. Distribution of correct answers to test questions in mathematics by ethnic group (in %)

	BULGARIAN	ROMA
<i>Question №1</i>	79	73
<i>Question №2</i>	79	73
<i>Question №3</i>	79	65
<i>Question №4</i>	76	59
<i>Question №5</i>	62	55
<i>Question №6</i>	69	60
<i>Question №7</i>	62	49
<i>Question №8</i>	48	46
<i>Question №9</i>	34	30
<i>Question №10</i>	21	31
<i>Question №11</i>	45	35
<i>Question №12</i>	14	30
<i>Question №13</i>	10	19
<i>Question №14</i>	10	20
<i>Question №15</i>	10	21

On the statistical and mathematical processing of the results no statistically significant interrelation between the ethnic group of the students under research and their academic results has been registered.

2.2.3. By gender

The analysis of the academic results showed that as a whole the girls are doing mathematical problems much better than the boys (Ref. to table 18). The difficulties the boys experience are related to problems №10, 12, 13, 14, 15 (problems with text), and the girls have most difficulties with problems №13, 14, 15. Therefore, for the representatives of both genders, the most frustrating are problems with text, which requires additional explanations and practice.

Table18. Distribution of correct answers to test questions in mathematics for V grade by gender (in %)

	BOYS	GIRLS
<i>Question №1</i>	54	60
<i>Question №2</i>	79	71
<i>Question №3</i>	71	66
<i>Question №4</i>	62	66

<i>Question №5</i>	54	60
<i>Question №6</i>	56	68
<i>Question №7</i>	48	56
<i>Question №8</i>	39	54
<i>Question №9</i>	29	33
<i>Question №10</i>	21	35
<i>Question №11</i>	35	40
<i>Question №12</i>	23	28
<i>Question №13</i>	17	16
<i>Question №14</i>	15	19
<i>Question №15</i>	17	19

The statistical processing of the end results does not show presence of statistically significant co-relational interdependence between students' gender and their academic achievements in mathematics at V grade level.

2. 3. Academic results for VI grade, distributed by schools, ethnic groups and gender

2.3.1. By schools for all students

The analysis of the academic results distributed by schools shows that most of the VI grade students from **Blagoevgrad** manage the problems more successfully compared to their peers from **Glozhene** and **Lom**.

At **Blagoevgrad** school a great part of the students do independently and without mistakes problems № 4, 5, and 7. None of the students can do problems № 2, 3, 4, and a comparatively small part of them manage to reach to the final correct solution of problems № 1 and 5. At **Glozhene** fewer than 40% of the students do problems №1, 2, 3, 6, and 8. A comparatively small part of them can do problems № 4, 5, 7 (solving equations and text problems) without mistakes.

Table 19. Distribution of correct answers to test questions in mathematics for VI grade by schools (in %)

	<i>BLAGOEVGRAD</i>	<i>LOM</i>	<i>GLOZHENE</i>
<i>Question №1</i>	44,4	5,3	35,1
<i>Question №2</i>	33,3	19,5	33,8
<i>Question №3</i>	22,2	23,1	35,1

<i>Question №4</i>	51,9	16,5	29,7
<i>Question №5</i>	77,8	5,3	18,9
<i>Question №6</i>	81,5	31,6	37,8
<i>Question №7</i>	85,2	31,6	27
<i>Question №8</i>	85,2	10,5	43,2

On the basis of the co-relational analysis made four statistically significant interdependences between school and students' answers to questions №5 (-0,495**), №6 (-0,361**), №7 (-0,415**) and №8 (-0,307**) have been registered, all of them being negative and moderate (Ref. graph 20, graph 21, graph 35 and graph 37 respectively). The data obtained show that the leading results belong to the students from **Blagoevgrad**, followed by those of **Glozhene** and finally – **Lom**. The tasks are connected with solving of equations and inequalities.

2.3.2. By ethnic groups

From the analysis of the academic results, distributed by ethnic groups, it becomes clear that the Bulgarian students do more successfully the maths problems for VI grade, compared to their Roma classmates. A big part of the Bulgarian students do independently problems №1, 4, 5, 6, 7, 8 (Ref. to table 20), and almost half of them experience difficulties with problems №2 and 3. A comparatively small part of the Roma students do problems № 6, 7, and 8 without mistakes. The difficulties emerging in the process of training in mathematics require additional work with the text problems.

Table 20. Distribution of correct answers to test questions in mathematics for VI grade by ethnic groups (in%)

	BULGARIAN	ROMA
<i>Question №1</i>	56	13
<i>Question №2</i>	47	11
<i>Question №3</i>	38	10
<i>Question №4</i>	56	10
<i>Question №5</i>	63	14
<i>Question №6</i>	81	31
<i>Question №7</i>	72	31
<i>Question №8</i>	72	29

With the co-relational analysis made, several statistically significant co-relational interrelations have been registered, namely: between the ethnic group of the students under research and the answers to questions №1 (-0,472**), №2 (-0,513**), №3 (-0,517**), №4 (-0,587**), №5 (-0,443**), №6 (-0,354**), №7 (-0,362**) and №8 (-0,307**) (Ref. to graph 28, graph 29, graph 30, graph 31, graph 32, graph 33, graph 34, graph 36 respectively). The obtained interdependences are negative, mostly big and moderate. This shows that most of the Bulgarian students give successful answers to the tasks (tasks with text or connected with solving of equations and inequalities) but the Roma students don't understand well the initial meaning of the tasks and they can't solve them independently to the end.

2.3.3. By gender

The analysis of the results obtained shows that the academic achievements in mathematics of both boys and girls are not very high. The boys as a whole have higher academic results in mathematics compared to the girls. The boys solve fairly well problems №6, 7, 8 (Ref. to table 21), also the girls who solve problems № 6 and 7 almost without mistakes.

Table 21. Distribution of correct answers to test questions in mathematics by gender (in %)

	BOYS	GIRLS
<i>Question №1</i>	32	32
<i>Question №2</i>	32	16
<i>Question №3</i>	24	15
<i>Question №4</i>	29	21
<i>Question №5</i>	27	31
<i>Question №6</i>	39	53
<i>Question №7</i>	42	46
<i>Question №8</i>	46	39

No statistically significant interrelation has been registered between the gender of the students and their academic results.

3. ANALYSIS OF THE MARKS IN BULGARIAN LANGUAGE AND MATHEMATICS, RECEIVED DURING II SCHOOL TERM

Statistical and mathematical processing of students' marks in Bulgarian language and mathematics during II term shows the following distributions. 27% of the examined students are in II grade, 37% are those in V grade and 37% are in VI grade. Most of the tested students are from **Glozhene** — 37%, followed by those from **Lom** – 35% , and finally from **Blagoevgrad**– 28%. 43% of all tested students are boys, and 57% are girls. 32% of the Bulgarian students and 68% of the Roma students were examined in the II term, which demonstrates increased academic monitoring and control on Roma students' knowledge. With the help of the correlational analysis made, several statistically significant interdependences have emerged, all of them being negative and weak to moderate. Interesting is the fact that all marks, both in Bulgarian language and in mathematics, correlate to a very high degree between themselves, which means that the receiving of every next academic results is closely related to the previous. An interrelation has been registered between the school of the students under research and respectively: the second marks in Bulgarian language (-0,119*); the first mark in mathematics (-0,155**); the second mark in mathematics (-0,140*); the third mark in mathematics (-0,182**) (Ref. graph 40, graph 39, graph 41, graph 42 respectively).

An interrelation is established between the school of the research persons and the second mark in Bulgarian language (-0,119*). This means that the most excellent marks as second mark in Bulgarian language are received in Blagoevgrad, followed by Glojene and Lom. The worst marks as second mark in Bulgarian language are received in Lom, Glojene and finally in Blagoevgrad (graph. 84).

There is interrelation between the school and the first mark in Mathematics. This means that the most excellent marks as first mark in Mathematics are received in Blagoevgrad, followed by Glojene and finally in Lom. The worst marks as first mark in Mathematics are received in Lom, Blagoevgrad and finally in Glojene (graph. 85).

A correlative interrelation between the school and second mark in Mathematics is established (-0,140*). This means that the most excellent marks as second mark in Mathematics are received in Blagoevgrad, followed by Glojene and Lom. The worst marks as second mark in Mathematics are received in Lom, Blagoevgrad and finally in Glojene (graph. 86).

A correlative interrelation between the school and third mark in Mathematics is established (-0,182**). This means that the most excellent marks as third mark in Mathematics are received in Blagoevgrad, followed by Lom and Glojene. The worst marks as third mark in Mathematics are received in Lom, Glojene and finally in Blagoevgrad (graph. 87).

There are significant interrelations between the ethnic affiliation of the research students and the received marks in Bulgarian language and Mathematics. There is interrelation between the ethnic group and the first mark in Bulgarian language (-0,344**). More excellent marks as first mark in Bulgarian language are received by the Bulgarian students followed by the Roma students. It is interesting that the Bulgarian students and the Roma students have equal number of very good marks as first mark in Bulgarian language. Roma students have bigger quantity of worst marks as first mark compared to their Bulgarian peers (graph. 72).

It is registered an interrelation between the ethnic group and the second mark in Bulgarian language (-0,356**). This means that Bulgarian students receive more excellent marks as second mark than their Roma peers. The Bulgarian students and the Roma students have equal number of very good marks as second mark in Mathematics. The tendency bigger quantity of worst marks as second mark to be received by the Roma students compared to their Bulgarian peers is retained (graph 73).

Interrelation between the ethnic group and the third mark in Bulgarian language (-0,356**) is established. The Bulgarian students have much more excellent marks than the Roma students. The number of the very good marks is almost equal for the Roma and for the Bulgarian students (graph 74).

There is registered interrelation between the ethnic group and the first mark in Mathematics (-0,432**). The number of the received excellent marks as first mark in Mathematics is bigger for the Bulgarian students than the Roma. The number of the received worst marks as first mark in Mathematics is bigger for the Roma students than the Bulgarian (graph 75).

Interrelation between the ethnic group and the second mark in Mathematics (-0,373**) is established. The number of the received excellent marks as second mark in Mathematics is bigger for the Bulgarian students than the Roma. The number of the received worst marks as second mark in Mathematics is bigger for the Roma students than the Bulgarian (graph 76).

There is registered interrelation between the ethnic group and the third mark in Mathematics (-0,432**). The number of the received excellent marks as third mark in Mathematics is bigger for the Bulgarian students than the Roma. The number of the received worst marks as third mark in Mathematics is bigger for the Roma students than the Bulgarian (graph 77).

All of the received final results of the processing the data with correlative analysis are negative and moderate.

Some statistically significant co-relational interdependence between the students' class and their academic achievements has been registered. There is an interrelation between the grade and the first mark in mathematics (-0,456**). This means that the number of the received excellent marks as first mark in Mathematics is the biggest in II grade followed by the IV grade and finally in V grade. The number of the received worst marks as first mark in Mathematics is the biggest in VI grade followed by the V grade and finally in II grade (graph. 81).

It is registered a significant interrelation between the grade and the second mark in Mathematics (-0,482**). The number of the received excellent marks as second

mark in Mathematics is the biggest in II grade followed by the V grade and finally in VI grade. The number of the received worst marks as second mark in Mathematics is the biggest in V grade followed by the VI grade and finally in II grade (graph. 82).

There is interrelation between the grade and the third mark in Mathematics (-0,444**). The number of the received excellent marks as third mark in Mathematics is the biggest in II grade followed by the V grade and finally in VI grade. The number of the received worst marks as third mark in Mathematics is the biggest in V grade followed by the VI grade and finally in II grade (graph. 83).

All of the received final correlative results are negative and moderate.

Significant interrelations between the gender and the achieved educational results in Bulgarian language and Mathematics are not found.

4. SPECIFICS OF STUDENTS' PRESENCES/ABSENCES DURING II TERM

On the basis of the frequency distribution done it becomes clear that 42% of the students from **Blagoevgrad** and 58% of those studying in **Glozhene** were absent during II school term (there is no information about **Lom**). The students that were absent from classes from the II grade are 30%, from V grade – 36% and from VI grade – 34%. 49% of the boys and 51% of the girls were absent from classes. 49% of the Bulgarian students and 51% of the Roma students were absent from classes for different reasons during the II term. The distribution of the absences by months and reasons and by ethnic affiliation can be seen in table 22 and graph 88 where the comparison between the absences of Bulgarian and Roma students is well shown.

On the basis of the co-relational analysis made the following statistically significant interdependences have been registered. Between the school and the absences for reasons of sickness in February 2005 (-0,579**) there is strong and

negative co-relational interrelation. In practice that means that if in the school of **Blagoevgrad** there is no student having one absence, but 50% of them have 5 absences each, then in the school of **Glozhene** 39% of the students have one absence, and 8% of them have 5 absences each. Or another tendency: in **Glozhene** there are no students with 5 or 6 absences, but 60% of them have 1 absence each, while in **Blagoevgrad** 18% have 1 absence, and 24% of them 5 absences each.

***Table 22. Distribution of absences of students during the II school term
(6%)***

<i>Number of absences</i>	<i>February</i>		<i>March</i>		<i>April</i>	
	<i>Sickness</i>	<i>Other reasons</i>	<i>Sickness</i>	<i>Other reasons</i>	<i>Sickness</i>	<i>Other reasons</i>
<i>1 absence</i>	26,3	78,9	20	46,7	33,3	42,9
<i>2 absences</i>	26,3	21,1	20	13,3	22,2	28,6
<i>3 absences</i>	15,8	X	30	26,7	18,5	28,6
<i>4 absences</i>	10,5	X	10	6,7	47,4	X
<i>5 absences</i>	21,1	X	15	X	14,8	X
<i>6 absences</i>	X	X	5	X	3,7	X
<i>7 absences</i>	X	X	X	X	X	X
<i>8 absences</i>	X	X	X	6,7	X	X

5. SPECIFICS OF THE MEETINGS OF THE TEACHERS WITH THE PARENTS

On the basis of the frequency distribution done it is found out that 43% of the boys' parents and 57% of the girls' parents have met the teachers during the II school term. 32% of the parents are Bulgarians, and 68% of them are Roma. The parents of the II grade students are 27%, of the V grade – 37%, and of VI grade– 37%. The number and kind of the meetings between the teachers and the parents are given in detail in Table 23.

On the basis of the co-relational analysis made, several statistically significant co-relational interdependences have been registered. There is an interrelation between the school and the meetings in person with the teachers (-0,126*) (Ref. also to graph 47), parent-teacher meetings (0,243**) (graph 48) and other kinds of meetings with the teacher (-0,226*) (graph. 46), being rather weak.

There is an identified interdependence between the ethnic group of the students under research and the meetings in person with the teacher (0,146*) (Ref. to graph 49), and the parent-teacher meetings as well (-0,150*) (Ref. to graph 50), with values being weak. This means that regardless of their ethnic affiliation all of the parents show almost equal interest to the meetings with the teachers of their kids and they visit the teachers mostly one or twice. The Bulgarian parents visit three parent-teacher meetings but the most of the Roma parents participate only in one parent-teacher meeting.

A statistically significant interrelation has been registered between the gender and the other kinds of meetings with the teacher (-0,243*) (graph 51), which is weak and negative, too. This shows that the mothers visit the teachers more often than the fathers of the students.

Significant interdependences have been registered between the grade of the students and the visits of their parents to the classroom (-0,474**) (graph 52); between the grade and the parents' meetings in person with the teachers (-0,485**) (graph 54); between the grade and the parents' meetings (-0,568**) (graph 55); between the grade and the other kinds of meetings with the teacher (-0,207*) (graph 53). These results show that with one visit mostly are the parents of the students from V grade, followed by those from VI grade and finally – II grade. With two visits mostly are the parents of the students from VI grade, followed by those from V grade and finally – II grade. The teachers are visited three times mostly from the parents of the students from II grade, followed by those from V grade and finally – VI grade.

The most of the parents of the students from V grade, followed by those from VI grade and finally – II grade have one meeting of other kinds with the teachers. Two

meetings of other kinds mostly provide the parents of the students from VI grade, followed by those from V grade and finally – II grade.

Mostly the parents of the students from V grade have one personal meeting with the teachers, followed by those from VI grade and finally – II grade. The parents of the students from V and VI grades equally want two personal meetings with the teachers during the school term.

At three parents' meetings are only the parents of the students from II grade. At one parents' meeting are the parents of the students from VI grade, followed by those of V grade. At two parents' meetings come the parents of the students from V grade, followed by those from VI grade and finally – II grade.

The registered statistically significant interrelations are characteristic with their being negative and strong. From the data obtained, it could be seen that the biggest activity and interest in the school lessons and their children's presence in class are demonstrated by the parents of V grade students, followed by the parents of VI grade, and finally of II grade. One of the possible explanation is that the students from II grade very carefully, eagerly and studious take part in the lessons. They also fulfill very well the educational requirements that teachers ask them in the educational process. The students from II grade are in the beginning of their academic path and the influence of the teachers over them is very strong and motivating.

Significant statistical interrelations have been registered between visits of parents to the students' classrooms and the meetings in person between parents and teachers (0,870**) (positive and very strong); between the visits to the classroom and the parent-teacher meetings (0,583**) (positive and very strong); between the visits to the classroom and other kinds of meetings of parents and teachers (0,261*). Some significant interrelations between the parents' meetings in person with the teacher and the parent-teacher meetings have been registered (0,573**) (positive and strong); between the meetings in person with the teacher and the other kind of meetings with him/her (0,301**) (positive and moderate). This shows that the personal parent-teacher meetings stimulate the parents to visit more often the class-

rooms of their children, to search frequent contacts with the teachers, to participate regularly in the parents-teachers meetings.

Table 23. Distribution of meetings between parents and teachers
(in %)

<i>Number of meetings</i>	<i>Visits to the classroom</i>	<i>Individual meetings with the teacher</i>	<i>Attendance at parent-teacher meetings</i>	<i>Other type of meetings with the teacher</i>
<i>1</i>	35	39	32	54
<i>2</i>	27	28	32	30
<i>3</i>	17	10	27	12
<i>4</i>	5	7	8	4
<i>5</i>	4	6	2	X
<i>6</i>	X	2	X	X
<i>7</i>		2	X	X

6. RESULTS FROM THE INTERVIEWS

6. 1. Students

On the basis of the frequency distribution it has been found out that 43% boys and 57% girls, have been interviewed; of them 32% are Bulgarians, and 68% are Roma. 27% of the interviewed people are from II grade, 36% are from V grade, and 37% are from VI grade. 28% of the students under research are from **Blagoevgrad**, 36% are from **Lom** and 36% are from **Glozhene**.

On the basis of the co-relational analysis, a great number of statistically significant interdependences, distributed in the following way have been registered. At the first place, *between the school and* : question №5 (0,177**) (graph 69), №6 (0,127*) (graph 70), №12 (-0,254**) (graph 62), №15 (0,194**), №16 (0,203**), №17 (0,151**), №20 (-0,132*) (graph 63), №22 (0,117*) (graph 64), №26 (0,115*), №29 (0,115*) (graph 65), №30 (-0,135*), №32 (-0,224**), №35 (0,312**) (graph 66), №37 (-0,191**) (graph 67) and №38 (0,289**) (graph 68).

There are interesting interdependences between the *ethnic group* of the students under research and: question №6 (-0,178**) (graph 61), №8 (0,147*), №10 (-0,146*), №17 (-0,144*), №18 (0,128*) (graph 59), №41 (0,176**) (graph 60).

Interrelations have been registered between *the grade* of the students and: question №1 (-0,145*), №2 (-0,160**), №3 (-0,263**), №4 (-0,125*), №5 – 0,173**), №6 (-0,280**) (graph 58), №10 (-0,146*), №12 (-0,203**), №15 (-0,324**), №16 (-0,241**), №17 (-0,338**), №19 (-0,151**), №25 (-0,208**), №27 (0,152**), №30 (0,139*), №31 (0,214**), №33 (-0,268**), №34 (-0,269**), №37 (-0,285**), №38 (0,188**), №40 (-0,126*) and №41 (-0,309**) (graph 57).

There are some interesting interrelations between the individual questions of the interview. Here are some of them. Question №1 correlates with №2 (0,330**) and with №3 (0,318**). Question №5 interacts with №6 (0,304**). Question №10 correlates with №11 (0,309**); question №13 with №14 (0,343**); question №15 with №16 (0,473**), with №17 (0,357**). Question №25 interacts with №26 (-0,136*) and with №27 (-0,235**); question №28 is interrelated to the answers to question №29 (-0,249**); question №30 correlates with question №31 (0,447**) and №33 (-0,346**). Question №31 interacts with №33 (-0,246**) and with №34 (0,138**). Question №34 is related to №35 (-0,163**) and with №37 (-0,153**). Interrelations between question №38 and №39 (-0,159**); between question №39 and №40 (0,286**); between question №39 and №41 (-0,141**); between question №39 and №42 (0,12**) have been registered.

Very interesting objectives can be outlined based on the above shown results. It becomes clear that the students like to a great extent the possibility to be at school with their friends, to communicate with their classmates and talk to their teachers. They like very much having Bulgarian language and mathematics lessons, and also all the opportunities provided out of the classroom, drawing activities and learning new things. Besides, the children like very much notice boards, tables, graphs, drawings, any teaching materials, which clearly and attractively visualize the academic learning process. The students are happy with the opportunity to use additional books, handbooks, and dictionaries in class. The results show that they want to do more at school - reading, writing, and mathematics - which is an especially important and promising fact. The answers to the question related to

whether they want to study and play only with their friends or with their classmates at school, or to be all together, are interesting.

There are co-relational interdependences negative and weak, which means that, 55% of the Bulgarian students and 48% of the Roma students play with all their classmates at school; 40% of the Bulgarian students and 36% of the Roma students play only with their friends; 49% of the Bulgarian students and 50% of the Roma students say that there are children with whom they would not like to play or study. Very indicative are the co-relational interrelations between the questions to the students whether the children at school are polite to each other and whether there are arguments and conflicts at school. The received values are negative by sign and low by strength. 30% of the Bulgarian students and 24% of the Roma students think that the children at school are not polite to one another. 52% of the Bulgarian students and 50% of the Roma students think that there are conflicts and stress at school.

Regarding the academic workload the students think that the academic lessons are not long and that the curriculum is not difficult, but the time for rest during the breaks is relatively short and cannot compensate the accumulated tiredness. There is a very interesting interrelation between the way in which the students judge whether their school is clean, and the degree to which the school needs repairs. If they see the school as comparatively clean, they don't think it needs repairs and vice versa, repair is very important to the children in the cases when hygiene is not up to the required level. Besides, the data shows that the children who like their school do not think that it needs repair. Vice versa, those children who have indicated that they don't like their school say that the school needs urgent repair.

Students, who think that it is important to go to school, do not want to go and study in another school. Statistically significant results have been registered in those cases when students think that it is important not only to go to school, but they themselves are willing to be in class regularly. Besides, to the children who consider going to school important, the change in teaching Bulgarian language and mathematics is extremely valuable. Vice versa, students who think that it is not so important to go to school have not noticed any change in the way of teaching.

6. 2. Parents

On the basis of the frequency distribution, various indicators distribute the students' parents. (Ref. to table 2 for details) On the basis of the co-relational analysis made some interesting interdependences between various variables have been observed. Between *the school* and questions №1 (0,336**), №2 (0,187**), №3 (0,278**), №4 (0,202**), №5 (0,315**), №6 (0,141*), №7 (0,362**), №11 (0,218**), №12 (0,280**), №13 (0,294**), №14 (0,260**), №15 (0,359**) and №16 (0,225).

There exist significant interrelations between *the ethnic group* of the students under research and questions: №2 (-0,188**), №4 (0,153*), №11 (0,146*), №12 (0,237**), №13 (0,202**).

Statistically significant interdependences have been registered between *the grade* of the students and questions: №3 (-0,116*), №4 (-0,264**), №8 (-0,259**), №9 (-0,173**), №10 (-0,248**), №14 (0,165**).

There are also interrelations between question №2 and: №1 (0,542**), №7 (0,325**), №14 (0,564**); between question №7 and: №1 (0,296**), №14 (0,306**); between question №1 and №14 (0,532**).

Very interesting objectives can be outlined based on the above shown results. For the most of the parents, regardless of their ethnic group, it is important to help their children with doing their lessons. Those of them who often do that point out that they encourage their children to go to school regularly, and this fact matches the personal attitude of the children to be in class regularly. Besides, almost all the parents think that school is an especially important educational institution in their children's lives and it is vital for them to continue their education at the next educational levels.

6. 3. Teachers

The distribution of the teachers who have been interviewed can be seen in details in table 3.

After a co-relational analysis made several statistically significant interrelations have been registered. For instance, there is an interrelation between *the school* and the education of the teachers (-0,306*), between the school and the teachers' training in the "Step by Step" programme (-0,371*); between their job as a teacher and the fact that this happens at the respective school (0,441**). There are strong and positive interrelations between the education of the teachers and the opportunity for them to be additionally qualified in programmes like "Step by Step" (0,686**) and "Reading Writing for Critical Thinking" (WRCT) (0,771**). A positive and strong interdependence has been registered between the training of the teachers in one or the other of the above mentioned programmes (0,650**).

There exist interdependence between question №2 and questions: №3 (0,803**), №4 (0,510**), №7 (0,373*). There is interdependence between question №3 and №7 (0,495**); between question №4 and №5 (0,688**); between question №6 and №7 (0,363*), and between question №6 and №20 (0,368**); between question №7 and №20 (0,338*); between question №8 и №9 (0,438**), and finally between question №8 and №10 (0,364*).

The processing of the results from the interviews conducted with the teachers points to several interesting regularities. An extremely strong co-relational interdependence between the training of the teachers in the "Step by Step" programme, and the real change occurred in the teaching strategies in Bulgarian language and mathematics. The values obtained are statistically significant (0,803**), positive and very strong. These results show the strong interrelation between the additional training and qualification of the teachers within the "Step by Step" programme and the real benefits brought by the new knowledge applied in concrete lessons with concrete students. Besides, most of the teachers, working in the "Step by Step" programme have been trained in the implementation of effective strategies of teaching in RWCT programme, and this interrelation is strong and positive (0,51**). The teachers share the opinion that the things learned in the "Step by Step" programme and their putting into practice has improved the effectiveness of their work with the students. The teachers who have participated in the RWCT

programme point out that the training has changed to a very great extent their teaching strategies. All the teachers who have participated in these two programmes say that the programmes offer enough knowledge and skills the implementation of which can really help the students to learn better. On analyzing the results obtained it has been found out that the teachers see direct relation between the use of qualifying teachers in practice and the improvement of teaching quality. Besides, the teachers share that the students feel the changes in the methods of teaching and like the new organization of the lessons in Bulgarian language and mathematics very much. This, in turn, significantly improves the academic results of the children. Therefore, the teachers, who have participated in the “Step by Step” and “Reading Writing for Critical Thinking” programmes emphasize on the exceptional benefits of that type of education which improves their personal professional qualification and is beneficial to students’ training, who in their turn approve wholeheartedly the changes occurring in the teachers’ teaching.

CONCLUSIONS AND RECOMMENDATIONS

The results received from the implementation of this psychological and pedagogical research outline several interesting and reciprocally connected tendencies. On the one side is the good basic professional preparation of the teachers in Bulgarian language and Mathematics combined with modern practices for innovation of their professional competences including programs as “Step by Step Program” and “Critical thinking” on the other. The participation in trainings like this gives possibility for improving of the teaching and for generation of new ideas how the teaching process to be better organized interruptedly to increase and support it’s quality and in the same time to stimulate the self evaluation and the professional contentment of the well-done teaching job. On the other hand the new knowledge and skills of the teachers and their direct practical implementation in the real class rooms reflect favorably to the intellectual and academic development of the students and they show bigger aspiration for achieving of high academic results. The dynamic and interactive organization of the school hours in Bulgarian language and

in Mathematics motivate also the students to put efforts in continuing their education on higher educational levels and assure them actual knowledge and skills that are making them competitive and completely responsible to the official requirements of every Bulgarian school.

The obtained results also show that the interesting educational work and the equal opportunities for all the students to participate in the educational process lead to decreasing of the unmotivated absences. The students visit the school classes with desire encouraged from their parents. The parents help them in their self dependent preparation and stimulate them to put bigger efforts in obtaining higher valuation in Bulgarian language and Mathematics. In this connection it has to be underlined the important and even key role of the parents in the process of achieving of high level of educational success and better social integration of the young people. From the positive self example and the good two-way interaction between the teachers and the parents depends the successful intellectual development of the students, their strong self prosperity and their good adaptation to the high requirement of the educational and the social environment.

Therefore, it is important to be worked with the students and with the teachers by creating of optimal school environment and by improving the access to quality education. It is also that much important to be worked with the parents by giving them information about the situation in school and in the classroom and by building their trust and their willingness to cooperate in resolving the problems of the students and the school. In this connection it has to be underlined the good results that the pedagogical teams in the lead of the directors achieve in the researched schools, exerting multiple efforts and huge work for the successful integration of the all students, in assuring and supporting of high quality in the education. For assuagement of this process and in the name of its optimal functioning is necessary other countries and nongovernmental organizations to be attracted and to work actively because the erudition of the young people today is a successful guarantee for better social progress and it is also a key state preoccupation.

It is hopeful also the registered unanimous between all the researched people (as students and parents without difference in their ethnical origin as the teacher's community) about the key role of regular attendance in the school classes, the achievement of high results and the compulsory successful transition in higher educational level. All the participants in the psychological-pedagogical research approve the organization of the school life and think that it is worth to invest time, efforts and means in the education. Similar adjustments and practices help the young people to be more successful in the social contacts, sufficiently well orientated and adequate to the actual needs of the educational market.

In result of this research and the achieved concrete results and with the aim improving the organization and the conducting of the educational process is necessary some recommendations to be made which is possible to be a direct profit of the educational practice:

- Extremely important for the professional qualification of the teachers is they actively to participate in educational programs as “Step by Step” and “Development of the critical thinking through reading and writing”. This is necessary because the teachers gain knowledge and skills for implementation of effective strategies of teaching and interaction with the students that render auspicious influence to the intellectual development and to the academic achievements of the young people. Also after trainings like these the teachers feel themselves professionally satisfied by the possibilities for positive change in the ways of teaching new knowledge and communication with the students. This stimulates the self confidence, the desire for persistent, dedicated, variable and quality work, helps for easier overcoming of the moments of professional burning (burn-out) and another school and social difficulties.
- It is necessary the school boards to work extra on the question for the organization of the teaching process and for the maintenance of high level of discipline by all the participants in the school life because this will assure tranquility and possibilities for creative and complete educational and personal contributions.

- The school board and the pedagogical teams have to continue their persistent and dedicated work in direction for more active involving and participation as the parents, as the representatives of Roma/nonRoma organizations and the local authority too in different initiatives.
- The searching and the assuring of other financial resources (besides the official ones) for assuring of additional educational materials in the working process: educational, reference, and other kind of literature, computer technique, illustrative tables, graphics, etc. will be of a great benefit. Additional means for improving of the quality and the ergonomic of the working environment for the students and the teachers in the classrooms are necessary.

6. EVALUATOR REFLECTIONS

For the successful evaluation of the quality of the academic achievements of the students and the adequate running of the desegregation processes are necessary several important things:

About the learnt lessons:

✚ *Methodological part:*

The correct choice of a team of specialists that can plan, lead and analyze the results of similar activities. For this aim is necessary serious work in several directions:

- ✚ actual research of the official documentation and directions of MES about the leading of the compulsory educational process;
- ✚ reliable analyze of the learning practices in particular schools that will be an objective for research;
- ✚ research of the concrete educational content of the key disciplines as Bulgarian language and Mathematics because the results of the students in this context are determining for the characteristics and the level of their academic development;
- ✚ composing of adequate scientific-research instruments completely suitable with the cognitive and social characteristics of the researched persons;

- ✚ flexible planning of the organization of the psychological-pedagogical research with aim its successful implementation into practice;
- ✚ On this stage is necessary also a precise formulation of program for accomplishment of the necessary types of analyses of the collected data in the light of the preliminary formulated research targets, problems and hypotheses.
- ✚ Organizational part:

For the successful practical implementation of the psychological-pedagogical research is necessary the help of other people that are not directly represented in the research team. Usually these are the teachers in the schools that are directly included in the research. They help in the quality of well trained interviewers. Their help to be effective is needed accessible and enough informational instructions for the work that have to be done and knowledge that exists a realization of strict observation and control is exercised on their interactions with the researched persons with the aim avoiding of discrepancies, cognitive distortion, eventual abuses and by full preservation of the human rights.

With aim the successful avoiding or preservation of difficulties or provocations in the methodological and organizational part is necessary the elaboration of clear conception and vision of the research team in connection with how the definite theoretical questions and hypotheses may find their adequate and useful resolution in the direct educational practice. In the concrete case the methodology of the psychological-pedagogical research is completely suitable with the philosophy of the project in searching of these specific and individual resources and mechanisms with whose help is investigated to which stage it will be useful, adequate and working in the Bulgarian circumstances.

Regarding to the **used researched methods**, techniques, instruments and additional informational resources it is possible to be indicated that the concrete data that are received from the direct research of the academic results of the students and their actual participation in the school life are extremely useful. The school activity is leading for the students in the age in which the research persons are and that's why the final results of its doing are key indicators for the academic development of

the young people. From great importance are also the answers that the researched persons give during the implemented interviews because this is the way the information for their experience of life, way of thinking and perception of valuable social and academic events that running in the educational environment and also the dominated adjustments toward the influence of the school to the students, the teachers and the parents to be collected.

Regarding to eventual **recommendations** about the building of valuation system in future project it is possible to be indicated that is extremely important how the basic ideas and philosophy in its conception will be operated in practice in the way to be empirically researched. From great importance are the instructions that received not only the people helping to the research team but also the researched persons because the incorrectly understand information may lead to serious deformation of the received answers that may worsen the quality of the scientific analyze and the reliability of the conclusions that are made at the end. Another essential moment is connected with the correct and adequate choice of analytical techniques because with their help different regularity is possible to be analyzed – distribution, interdependences, causal-effective connections, factor weights, etc. That's why it is necessary to be made direct analytical connection between the formulated research hypotheses and the concrete mechanisms that help they to be empirically confirmed or cast out.

7. APPENDICES: graphics and tables