# Regional assessment of general education quality in Tomsk region

Polina Mozgaleva
Division for Information Technology
Tomsk Polytechnic University
Tomsk, Russia
m-polina-i@ya.ru

Oxana Zamyatina, Alena Mozgaleva
Institute of Applied Mathematics and Computer Science
Tomsk State University
Tomsk, Russia
zamyatina@tpu.ru, mozgaleva.alena@mail.ru

Pedro da Costa Brito Cabral
Nova Information Management School
Universidade Nova de Lisboa
Lisboa, Portugal
pcabral@novaims.unl.pt

*Abstract*—**From 1998 Tomsk region holds the regional monitoring research with the goal of receiving actual information on the condition and dynamics of the quality of education, and also the liquidation of lacks in the knowledge of school learners (hereinafter learners) of educational institutions of the system of general education in Tomsk region. The article provides information on the stages of organization and provision of the regional monitoring; the model of the analysis and interpretation of the received data is demonstrated for further application of the monitoring research results by educational organizations of Tomsk region.**

*Keywords—regional monitoring of Tomsk region; education quality assessment; control procedures of education quality of Tomsk region.*

## I. INTRODUCTION

Education quality is the crucial feature for the competitiveness of educational organizations. In its turn education quality assessment comprises the assessment of learners' achievements and the assessment of educational process in the organizations. It is important to note that the simultaneous provision of education quality control procedures is not an instrument to work with at different levels of general education system. For this systematization of such procedures as regular provision of education quality control procedures is required [1]. The similar procedures are provided annually in Tomsk region, and are called regional monitoring.

From 1998 Tomsk region holds the regional monitoring research with the goal of receiving actual information and informing all participants of educational relations on the condition and dynamics of the quality of education.

At the preparation stage of organizational procedures and provision of regional monitoring research a number of obstacles arise:

- the absence of codifiers for subjects;

- the absence of specifications; ─ an enormous number of manuals and educational lines;

- the difference in materials delivery in various manuals and educational lines;

- insufficient amount of the qualified personnel;

- the absence of the unified scenario of preparation and provision of monitoring research;

- the absence of software for automated processing of monitoring research results that led to manual data processing;

- the absence of the scheme for the analysis and interpretation of monitoring research results.

Later a number of obstacles was successfully overcome due to the creation of the organized scheme of the development and editing of testing materials; the creation of specialized software enabling to process and analyse the received data [2].

At present the advantage of the regional monitoring held in Tomsk region is in the possibility of collection and systematization of information on the competences and skills of learners, the reveal of lacks of knowledge in course of entry and final examination that enables to take the management decisions and modify the individual educational trajectories of learners. Therefore, the regional monitoring is an effective management means that can be used both by schoolteachers and the heads and specialists of the municipal educational departments [3, 4].

## II. BACKGROUND

The subject for monitoring research of education quality are the results of educational achievements of learners at the stages of initial, basic and general education and the level of metasubject skills acquisition for learners of 4th, 5th and 8th year.

The monitoring research of the quality of educational preparation of learners of the 4th, 5th, 6, 7th, 8th and 10th year are held in educational organizations of Tomsk region two times: at the beginning and at the end of the school year.

The following subjects are considered compulsory assessment activities for all educational organizations of Tomsk region:

- Russian language and Mathematics for learners of the 5th year at the beginning and the end of the school year.

- Russian language and Mathematics for learners of the 10th year at the beginning of the school year.

- Russian language and Mathematics for learners of the 4th year at the end of the school year.

- Mathematics for learners of the 6th and the 8th year at the end of the school year.

Population considers the following subjects are compulsory assessment activities for all educational organizations of Tomsk region:

- Elementary science for learners of the 4th year.

- The assessment of natural science literacy of the learners of the 8th year.

Other assessment activities are considered voluntary and are held after the application of educational organizations on the contractual basis.

The organization and provision scheme of regional monitoring includes 3 stages (Fig.1).
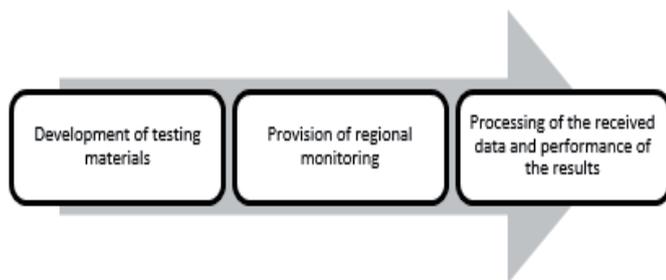


Fig. 1. 3 stages of regional monitoring.

### III. THE DEVELOPMENT OF TESTING MATERIALS

The development of testing materials id organized by the Center of education quality assessment, Tomsk Regional Institute of teachers training in cooperation with the interested specialists who was previously trained in the development program 'The requirements to the content and form of testing materials for the assessment of education quality in frames of Federal state educational standard (FSES) (in subjects)'. The trained specialists create workgroups in subject areas for the development of testing materials.

The testing materials to hold the monitoring research are created in correspondence with basic requirements of pedagogical measurements documented in 'The procedure for development and expertise of testing materials' approved by Tomsk Regional Institute of teachers training. The testing materials are a special combination of knowledge that enable to provide the objective, comparable or quantitative assessment of the quality of learners preparation in the given educational field; they are developed on the basis of FSESs [5].

The instruments developed by workgroups include [6]:

- Codifier – a number of content elements (skills, the planned results) on the subject in which each element has a unique code.

- Specification of measurement activities – a document that contains information on the goals, objectives, plan and the structure of measurement activities; it also includes the basic requirements towards the rules of monitoring research provision, processing of results and their interpretation.

- The versions of testing materials to provide the monitoring research in subjects and grades.

- The answer sheets corresponding to the amount and type of testing tasks.

- Keys for subjects and grades.

- Instruction materials: for learners, organization staff that hold the monitoring in educational organization; guidelines for the administration of educational organization and school coordinator.

During the meetings the workgroup participants analyze the results of testing materials application (the analysis of already existing testing materials and the assessment of their application results), taking as the basis the solution reports in tasks, in variants, the combined report, and the answer sheets. On the basis of this analysis the members of workgroups develop the codifier on the subject, analyzing and improving the existing one, or create a new one.

After the creation and approval of codifier a group of developers deals with specification on the subject. The specification is developed on the basis of the results analysis for the previous assessment activities, and on the basis of educational lines analysis, methodological kits, taking into account the time frameworks of testing materials application; taking into account the changed codifiers (in case the changes took place); the specification is approved during the meeting of the workgroup. It is worth mentioning that the codifier is approved by the workgroup only once, and the specification may undergo changes annually.

During the creation of instruments the basic procedures of pedagogical measurements are followed. The creation of the variants of testing materials comprises a number of stages:

1. The creation of pretest tasks (the surplus amount of tasks for each didactic unit from which the best are selected).

2. The selection of tasks for the variants and their ranking in accordance with the selected strategy of presentation on the basis of apriori author assessment of tasks complexity.

3. Double testological expertise of each variant.

4. Triple subject expertise of variants.

5. Reprocessing of the content and the form of tasks based on the expertise results.

6. The provision of approbation testing.

7. The collection of empirical results.

8. Statistical processing of the results of tasks completion.

9. Interpretation of processing results in order to improve the quality of instruments.

On the basis of specifications the surplus amount of tasks is created. In relation to the set goals each task of the work is intended to check the level of learner awareness in particular knowledge and skills. The correct answer at each task implies the knowledge of substantial elements of subject content. The advantage of pretest tasks is provided by their strict logical structure. During the instruments development the optimal forms of tasks are selected for each didactic unit. Pretest tasks are presented in the following forms:

- The tasks of the closed type (to select one answer or multiple choice) in which the learners select one correct answer from the given set of answers.

- Open tasks, requiring the individual answer of a learner.

- Correspondence tasks (with multiple choice), aiming at revealing the relevance between elements of the two varieties.

- The tasks aiming at setting the correct sequence requiring from the learner to show the order of actions or processes given by the teacher.

These requirements are briefly provided below:

- The presence of a ordinal number of the task, approved in accordance with apriori assessment of the task complexity and the selected strategy of tasks presentation.

- The presence of a standard instruction, relevant to the form of pretest task.

- The distribution of the task elements and the instruction in particular places unchangable in frames of the selected form.

- The presence of the sample of the correct answer to the task and the rules for the assessment of the results of its performance.

- The pretest task must be sufficiently brief in the form of presentation and the time of performance, that normally not exceeds 3–5 minutes.

To identify the quality of pretest tasks the empirical verification on the basis of which a particular part of pretest tasks undergoes changes, and the rest part is depeted. The testing activity in each subject and each grade includes 2 or 4 parallel variants. Parallelism of the variants is provided at the development stage due to:

— the selection of tasks of particular content and complexity level for each work;

— inclusion of tasks that are interchangeable, monotype, approximately identical at complexity level, situated at the same places in all variants.

Each testing set includes a particular amount of tasks corresponding to the specification (with answer choice or the brief answer) and FSES requirements, and the keys. The correspondence of measuring materials for learners of the 4th and 5th years is provided due to the inclusion of tasks created on the basis of the material of particular units of the curricular for the primary general education. The tasks for testing sets are primarily aimed at the ability of school learners to solve inquisitive and practical problems on the basis of the received subject knowledge and skills, and universal study actions performed by FSES.

The standard (FSES) implies the application of the level approach at the assessment of formation of educational results [7]. Therefore, on the basis of work performance results the identification of the basic level as the starting point to build the system of assessment and organization of further individual work with learners. The following achievement levels of the planned results in relation to the starting point can be identified: lower, basic, relatively high, and higher.

The achievement level of the planned results is identified based on the combined performance assessment for the tasks of basic and higher levels.

The recommended distribution of learners according to the achievement level of the planned results is presented below (Table I).

TABLE I. Distribution of learners according to the achievement level of the planned results.

| Achievement level of the planned results | Percentage of performed tasks of basic complexity level | Percentage of performed tasks of higher complexity level |
|---|---|---|
| Lower | $0-49$ | $0-100$ |
| Basic | $50-64$ | $0-100$ |
| | $65-100$ | $0-49$ |
| Relatively high | $65-85$ | $50-100$ |
| | $86-100$ | $50-70$ |
| Higher | $86-100$ | $71-100$ |

The lower level demonstrates the fragmentary acquisition level of metasubject skills. Normally, the achievement of this level witnesses the absence of regular basic training, proving that that the learner failed to fulfill even one half of the planned results covered by the majority of learners. The learner who failed to achieve the basic training level can face serious challenges in further training, he/she will need compensating classes to master the whole range of metasubject skills.

The basic level proves that the learner has mastered a range of basic metasubject skills required for further training. At the achievement of this level the analysis of performance for each group of tasks aiming at revealing the difficulties in fulfilling particular skills. Based on the analysis the planning and correction activities are required. At further training these learners are recommended to pay special attention to the formation and the creation of study planning actions, training control, the search of various solutions for the problem, the use of information presented at different form.

Relatively high level shows the learners' free awareness of universal study actions. For the learners who demonstrated

relatively high level of metasubject skills acquisition for the development of individual training strategies are required, including the work on further development of competences. These learners can be involved into project activities in different subjects, and the solution of research problems.

The high level enables to reveal the best trained learners who possessed the universal study actions at the level of deliberate spontaneous application, and possess a wide outlook; they are able to apply the context information to solve the set tasks. Such learners are oriented at the profound learning of various subjects, therefore it is important to continue work with them to support their interest to the learning process in class and non-class activities.

The testing sets for learners of 6th, 8th, and 10th years correspond to the norms and requirements than define the compulsory minimum of the content for basic curriculi of general education which is the core component of the state standard of general education. It is compulsory for all state, municipal, non-government educational institutions of the Russian Federation that realize the educational curriculi of general education and have the state accreditation. The correspondence of content of tasks to the compulsory minimum of content for basic general education (for learners of 6th, 8th, and 10th years) and Federal standard of primary education (for learners of 4th and 5th years) provide the content validity of the testing sets.

The sustainability of work is provided by the stability of performance results of the included tasks that should be stated at their application in frames of approbation.

The workgroup also creates the learners answersheets corresponding to the amount and the type of tasks of testing materials in all learning groups and subjects. In case the testing set didn't imply the separate answersheet, the places for answers are defined in the tests.

Later all testing sets take place undergo the expertise of testologist according to the previously developed form of testological expertise that include:

- Specification assessment (relevance of the characteristic to the type of activities).

- Assessment of instructions and tasks at numerous parameters (grammar mistakes, misprints; non-uniform wording, inaccuracy, ambiguity, factual mistakes, bulky wordings, non-working distractors, etc).

The testological expertise of each testing set is accomplished by the two experts that have qualification 'Testologist – a specialist in the field of pedagogical measurings' and have the work experience in educational organizations more than 3 years.

The assessment of the quality of testing materials content is held according to the particular methodology by independent experts in subjects who didn't participate in the development of testing materials. The testing materials for all learner groups and subjects undergo the subject expertise according to the previously developed form. The form for the subject expertise include:

1. Specification assessment (relevance of the characteristic to the type of activities);

2. Assessment of tasks in the following parameters:
   - the relevance of the task to the requirements of FSES/SES for general education, the relevance of task content to the specification, the importance of task content,
   - grammar mistakes, misprints, non-uniform wording, inaccuracy, ambiguity, factual mistakes, bulky wordings or the use of complicated schemes, drawings,
   - non-working distractor, the expected performance time, the task complexity level, the approximate performance time in minutes.

The amount of experts in subjects for each testing set is two. The subject expertise involves the experienced teachers who have the work experience in educational organizations more than 3 years. All pedagogues were trained in teacher development program 'The requirements to the content and form of testing materials for the assessment of education quality in frames of Federal state educational standard (FSES) (in subjects)'.

The experts fill out the conclusion report of the subject expertises, then the instruments are corrected by the developers taking into account the comments and offers from the expert conclusion report. After this the final proof-reading, scale modelling of final variants of testing materials, and their approval with the developer's signature.

Later the testing materials undergo approbation for which the population meeting representation requirements is created. Therefore, approbation is normally held in educational organizations of different types (schools, lyceums, gymnasigums), situated in different types of settlements: village, city.

The anasysis and interpretation of the results of testing materials approbation enables to reveal a range of tasks deficiencies that were skipped during the content expertise: incorrect distractors, non-working distractors, inclusion of non-valuable didactic units. On the basis of the performed analysis the final corrections to the instruments are made [8, 9].

The timeframes for the development and expertise of testing materials are established by the Center of education quality assessment due to the calendar schedule of the assessment procedures for the study year. The approximate timeframes of testing materials preparation are the following:

- The development of testing materials – 1–2 months.

- The subject expertise – 2–3 weeks.

- The testological expertise – 5–7 working days.

- Final processing of testing materials after the subject expertise – 5–7 working days.

- Final processing of testing materials after the testological expertise – 5–7 working days.

## IV. PROVISION OF REGIONAL MONITORING

In order to automate information exchange processes directly with the Center of education quality assessment, Tomsk Regional Institute of teachers training, namely for the primary data collection from educational organizations the special software 'School client 2.3, network version' is installed. It enables to share the learners lists, learners answers, assignment of learners of educational organizations as the participants of monitoring activities, the organization of learners' answers input and sending the collected information on the results of monitoring research.

Educational organizations create the conditions and provide the observance of monitoring research provision:

– appoint the school coordinators responsible for monitoring at schools;

– organize the timely acquaintance with regulatory and executive documents, with information on the provision dates;

– provide training of the organization staff who hold monitoring at learning groups;

– take management decisions on the basis of the results of education quality control procedures.

For organization and provision of monitoring research with the specialists of municipal educational departments that coordinate the related issues the training seminars are held. In 2015–2016 the seminar 'Realisation of the procedure for regional monitoring research in 2015–2016 academic years in Tomsk region'.

During the regional monitoring the hotline for monitoring organization and provision issues is available. In 2015–2016 academic years in autumn and spring 40 measuring sets were developed:

• For learners of the 4th year – Russian language, Mathematics, Elementary science, assessment of the level of metasubject skills acquisition, English language.

• For learners of the 5th year – Russian language, Mathematics, assessment of the level of metasubject skills acquisition.

• For learners of the 6th year – Russian language, Mathematics, Geography, English language.

• For learners of the 7th year – Russian language, Mathematics, Physics, History, Biology, Geography, English language.

• For learners of the 8th year – Russian language, Mathematics, Chemistry, Physics, History, Social science, Biology, Geography, English language, Fundamentals of Health and Safety.

• For learners of the 8th year – Russian language, Mathematics (basic and profile levels), Chemistry, Physics, History, Social science, Biology, Geography, English language, Computer Science.

Monitoring research procedures in different subjects are held in the set timeframes in accordance with order of the Department of general education of Tomsk region, they are set annually at the beginning of academic year.

24 hours before the monitoring research provision the educational organizations receive the authorized access to the activity in automated system 'Monitoring'. This enables schools to download and print the testing materials for the provision of monitoring research.

The procedure of the assessment activity implies the 3 stages:

1. Organizational stage: distribution of testing materials, provision of instructions, answers at learners questions. Its duration is 10–15 minutes.

2. The basic stage. Performance of testing tasks by learners. Test duration is defined in its instruction. The learners write down their answers in registration sheets or at particular spaces for answers in testing set (for primary school learners the answer sheets are not predefined, they write down answers inside the test).

3. Technical stage: answers input to 'The School Client' software. The procedure of answers input depends [10].

## V. PROCESSING OF THE RECEIVED DATA AND RESULTS PRESENTATION

After all answers are uploaded into the system the staff from the Center of education quality assessment, Tomsk Regional Institute of teachers training perform the automated processing and present the results [11]. For the analysis and interpretation of results the presentation forms were previously developed:

• Individual results of the participants.

• Individual performance at the codifier elements

• Statistics of tasks solvability.

• Deciphering of the results inside the learning group.

Therefore, the educational organizations can download the generated reports and follow them at taking the management decisions, planning individual work with children. The data received in frames of the monitoring research enable to make up an overview about the learners awareness level for particular metasubject manner of actions (for learners of the 4th and the 5th years), required to continue education. The monitoring results can be applied for the organization of further individual work with learners, and enable to define the lines to enhance the study process in educational organizations [12].

In order to clearly demonstrate the analysis and data interpretation stage received on the results of regional monitoring, the results received after the monitoring research on the assessment of the level of metasubject skills acquisition for learners of the 4th year in educational organizations of the Tomsk region in April, 2016.

The participation in monitoring for learners of the 4th year was compulsory. The total amount a participants was 8904 from 275 educational organizations of Tomsk region (Table II).

TABLE II.    Distribution of monitoring participant in municipal organizations of Tomsk region.

| Municipal entity | Amount of educational organizations | Amount of participants |
|---|---|---|
| Aleksandrovskiy district | 5 | 78 |
| Asinovskiy district | 11 | 316 |
| Bakcharskiy district | 8 | 115 |
| Verkhneketskiy district | 8 | 150 |
| Kedroviy city | 2 | 33 |
| ZATO Seversk | 17 | 833 |
| Strezhevoy city | 7 | 415 |
| Tomsk city | 47 | 4454 |
| Ziryanskiy district | 8 | 113 |
| Kargasokskiy district | 18 | 233 |
| Kozhevnikovskiy district | 16 | 157 |
| Kolpashevskiy district | 19 | 480 |
| Krivosheinskiy district | 9 | 107 |
| Molchanovskiy district | 8 | 117 |
| Parabelskiy district | 7 | 111 |
| Pervomaiskiy district | 13 | 173 |
| Teguldetskiy district | 8 | 66 |
| Tomskiy district | 34 | 708 |
| Chainskiy district | 8 | 104 |
| Shegarskiy district | 13 | 142 |

Processing of results for monitoring research in 2016 was automated, including the assessment of the level of metasubject skills acquisition for learners: the primary data received at verification of works of learners of the 4th year were uploaded into 'The School Client'.

Below the brief characteristic of the research instruments at the assessment of the level of metasubject skills acquisition of learners is presented:

- Codifier of metasubject results for primary school.

- Specification for testing set.

- Two variants of testing set.

- Assessment criteria for testing tasks.

The test was composed of the text and the system of tasks connected by the text topic. The test duration was 60 minutes (30+30), excluding the instruction time.

The tasks of different complexity level and type were included into the test.

The following types of tasks were presented:

- Tasks with answer choice.

- Tasks with brief answer.

- Tasks with detailed answer.

On the whole, the test contained 14 tasks, including 3 tasks with the choice of one or several answers, 4 tasks with brief answer, 7 tasks with detailed answer.

In correspondence with FSES requirements the metasubject results of performance for educational curricula of primary general education stand for the learner's awareness of the following basic groups of study actions: inquisitive universal actions, regulative universal actions, communicative universal actions. A separate part is denoted information processing skills.

During the test the level of acquisition for inquisitive (including skills to work with information) and in the limited amount – communicative universal actions – were checked.

The learners needed to demonstrate the acquisition level for the following skills in frames of the inquisitive study actions:

- to build up the speech utterance in oral and written form;

- to highlight the substantial information from texts of various types;

- to hold the comparison and classification in predefined criteria;

- to accomplish the approximation to the notion on the basis of objects distribution, identifying the substantial characteristics and to synthesize them;

- to set analogies;

- to build up the reasoning in the form of the connection of simple reasonings about the object, its structure, properties and connections;

- to possess the general method for the solution of tasks;

A part of information processing skills is presented by the following skills:

- to work with information presented in different formats (text, drawing, table, diagram, scheme);

- to divide a text into semantic parts, to make up a simple text plan;

- to index information alphabetically, in accordance with numerical parameters;

- to analyse and assess the content, linguistic issues and text structure;

- to find information, facts given in the text in obvious form;

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– understand information presented in the implicit form, interpret and generalize information, formulate simple conclusions on the basis of the text;

– to transform information from the bulk text into the table (to complete the table with information from the text).

A part 'Communicative universal actions' the ability to formulate the independent opinion and the position was selected.

In the test the acquisition level of solely the results from the part 'A graduate will learn' was checked. The results were assessed at basic and higher levels.

The tasks of basic level checked the acquisition level of skills and manners for study actions required for the successful study at the next stage, the ability to apply the skills for the solution of simple study and practical problems. The assessment for the achievement of this level was accomplished with the help of standard tasks in which the performance manner is evident [13].

The tasks of higher level checked the ability of a learner to perform the study or practical tasks that do not have the evident method of performance. To accomplish such task a learner was required to select one of the well-known method or to create a new method, having combined the already studied ones, or transforming them.

The test includes 11 tasks of basic level and 3 tasks of higher complexity level. Table III provides the distribution of tasks according to their complexity.

TABLE III. Distribution of tasks according to their complexity

| Tasks complexity level | Amount of tasks | Percentage of tasks of the given complexity level from the total amount of tasks in the test | Maximum primary score |
|---|---|---|---|
| Basic | 11 | 65 | 13 |
| Higher | 4 | 35 | 7 |

Therefore, the content of tasks for this test enables, from the one hand, to provide the completeness of learners' preparation check at the basic level, and the possibility to document the achievement for the learner of this level. From the other hand, due to the inclusion of tasks of the higher complexity level, created on the basis of the planned results from the part 'A graduate will learn' the test enables to perform more detailed differentiation of learners in accordance to their preparation level and to document the learner's achievements at basic and higher levels.

The basic approaches towards the assessment and interpretation of the received results are presented below. For each correct answer 1 or 2 points were put in relation to the criteria. The criteria work assessment was performed by the primary school teachers at the level of educational organizations. The points for metasubject work are not transformed into grades. At the assessment the following parameters should be followed:

• The performance percentage of the whole range of tasks. This parameter is the general indicator of the level of

acquisition of metasubject method of actions necessary to continue the study.

• The performance percentage of each group of tasks.

Besides, it is recommended to view the correct performance of the task with the aim of revealing the non-developing skills.

The analysis and interpretation should be individually relevant for each learner for the construction of the individual educational trajectory, and on the whole for the grade – to define the directions for further work.

On the whole, the optimal criteria for the acquisition level of skills can be the percentage of tasks performance not lower than 65%. The performance results for the whole test, its separate parts or separate tasks lower than 50% can indicate the problems in acquisition of general academic skills [14]. The low level of acquisition for the whole set of tasks and the separate skills can considerably influence the further successful training in secondary school. Therefore, it is necessary to organize the specialized work both with teachers and learners in this field [15].

## VI. THE BASIC RESULTS OF THE PERFORMANCE OF THE MEASUREMENT ACTIVITIES

The summarized results of work on the assessment of the acquisition level of metasubject skills of learners are presented at Fig. 2.
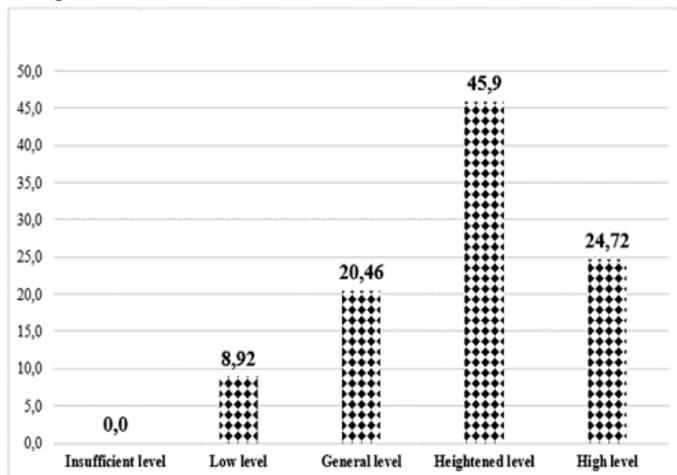


Fig. 2. The learners distribution according to the achievement levels of the planned results.

The majority of primary school graduates (91,08%) fulfill FSES requirements in terms of metasubject results. Metasubject skills are formed at lower level in 8,92% of learners, the basic acquisition level of metasubject skills is demonstrated in 20,46% learners, relatively high level – 45,9%; higher level – 24,72% (Fig.3).

However, the learners distribution of in levels for different educational organizations considerably differs; at particular schools the 100%learners fail to achieve the base; at other schools all children fulfilled the tasks at relatively high and higher levels.

% of students who haven't reached the basic level of education | % of students who have reached the basic level of education

Aleksandrovskiy district
Asinovskiy district
Bakcharskiy district
Verkhneketskiy district
Kedroviy city
ZATO Seversk
Strezhevoy city
Tomsk city
Ziryanskiy district
Kargasokskiy district
Kozhevnikovskiy district
Kolpashevskiy district
Krivosheinskiy district
Molchanovskiy district
Parabelskiy district
Pervomaiskiy district
Teguldetskiy district
Tomskiy district
Chainskiy district
Shegarskiy district

■ Low level  ■ General level  ■ Heightened level  ■ High level
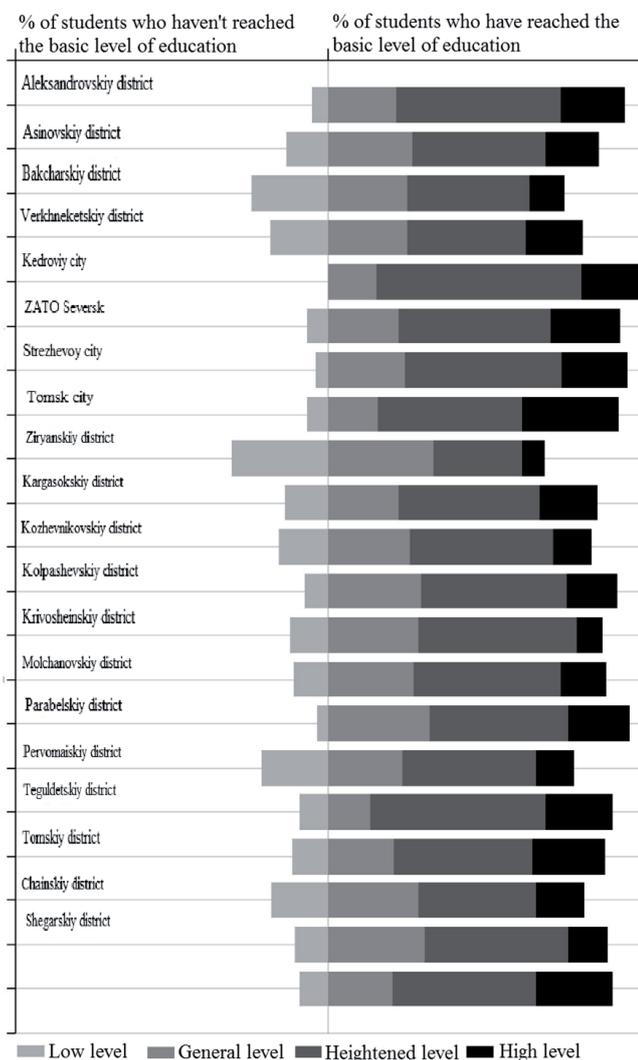
Fig. 3. The learners distribution according to the preparation level (metasubject work)

At results analysis it's worth mentioning that in 2016 monitoring the scale recommended for the initial stage of FSES introduction was applied, where the lower border begins from 50%, and the higher level – from 65%.

On the average, the primary school learners of Tomsk region mastered more than 70% of the planned results in work with information, and around 70% of inquisitive skills. The part 'Comminucative skills' is mastered worse: only 62% of learners mastered the skills of this part. At the same time the separate skills inside the groups that are insufficiently mastered, can also be identified.

## VII. Highlights.

The results of monitoring research:

- Formation and updating of database on the dynamics of quality general education.

- Completeness of verification of training of students at basic and advanced levels.

- Reflection of dynamics of results general educational achievements of students.

- The possibility of designing an individual and general educational trajectory of students in terms of the level of preparation.

## VIII. Conclusions

As a result of the automated system application 'The school client' the educational organizations can independently generate the reports in the program and interpret the received data. Therefore, the teacher can modify the individual learners trajectories depending on their preparation level, applying the individual deciphering's of codifier elements. School management at its level can take management decisions, enhance the academic process in the educational organization.

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