

**List of abbreviations**

BSE — Basic State Examination  
EQA — Educational Quality Assessment  
FAI — Fund of assessment instruments  
FL — Foreign languages  
FSES — Federal State Educational Standards  
HEI — Higher Educational Institution  
MI — Measuring instruments  
SSA — State summative assessment  
SSE — State School-leaving examination  
USE — Unified State Examination

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### EDITOR-IN-CHIEF'S COLUMN

*Reshetnikova, O.A.*

**Distinctive feature of all-Russian assessment papers for 11th grade students**

**Abstract:** The article deals with the basic approaches to the content selection and the structure of all-Russian assessment papers for the 11<sup>th</sup> grade students. We underline the thesis that application of unified instruments for final papers solves the problem of reliability and objectivity of achievements assessment on the level of secondary general education and positively influences the internal assessment and raises the trust of society in school marks.

**Keywords:** all-Russian assessment papers, summative assessment, approaches to the content selection, item models, competence and practice based items.

### METHODOLOGY

*Tsybulko, I.P.*

**Oral part of the State summative assessment in Russian language as a pedagogical phenomenon**

**Abstract:** The article describes the conceptual approaches to the administration of the oral part of the State summative assessment in Russian. We describe two organization-technological models: computer based one and the conversation with an interlocutor. We give examples of item models and discuss the problems of marking of reading aloud, monologues and dialogues.

**Keywords:** goal setting, language skills, speaking, emotional-ethical values, methodological approaches, pretesting, assessment criteria

### MEASURING INSTRUMENTS

*Rokhlov, V. S., Skvortsov, P.M.*

**Basic State Examination in Biology: experience analysis and development directions**

**Abstract:** In the article we analyze the experience of construction of the models of testing instruments for the Basic State Examination in Biology and show how the BSE is different from the USE. We note peculiarities of application of different item types, give the examples of actual items and analyze the responses of candidates.

**Keywords:** test model, Basic State Examination, Biology item models, diagnostics of school-leavers' achievements

*Zinin, S.A.*

**Final examination in literature and the teaching methodology of the subject: «interactive relations» strategy**

**Abstract:** In the article we consider the problem of «interactive relations» between the new version of the USE in Literature and the system of school teaching of the subject. We underline the most important directions for the

development of modern Literature teaching methodology in the light of the problems of formative and summative assessment in the subject.

**Keywords:** theoretical knowledge, alternative items, literary analysis in schools, inter-text comparisons, literary context, subject internal relations, historical-literary process, essay genre

*Dryannikh, N.V.*

### **Mini-essays in Social studies: methodological aspects of preparation and marking**

**Abstract:** In the article we analyze the specific features of social studies as an integrative school subject. We consider the marking schemes for the mini-essays in the Social studies USE, paying special attention to types of theoretical and empirical argumentation.

**Keywords:** USE in Social studies, mini-essay, marking schemes, theoretical argumentation, factual argumentation.

*Khlytina, O.M.*

### **Planning the teaching results. How to construct items for a History test?**

**Abstract:** In the article we speak about the difficulties of planning and assessment of the teaching results the modern teacher of History encounters. We share the experience of constructing history test items considering FSES and historical-cultural standard.

**Keywords:** FSES requirements to the results in the subject, planned results of mastering of educational program in History, test, historical-cultural standard

*Shamigulova, O.A.*

### **Is the modern teacher ready to assess educational achievements in the activity paradigm?**

**Abstract:** In the article we demonstrate the typical difficulties a student encounters when doing examination items in comparison with doing classroom tasks in Social studies. We discuss the perspectives of certain USE items in classroom assessment depending on teacher's professional readiness.

**Keywords:** examination items in Social studies, assessment of educational achievements, systematic-activity approach

*Serpova, U.V.*

### **Assessing Physics experimental skills in secondary schools**

**Abstract:** In the article we describe the existing approaches to the assessment of the level of mastering methodological skills in BSE and USE. We look at the FSES requirements to the development of experimental skills and suggest approaches to the assessment of this type of skills in formative assessment.

**Keywords:** methodology of scientific knowledge, experimental skills, models of experimental items, assessment of methodological skills.

## REGIONAL SYSTEMS OF EDUCATIONAL QUALITY ASSESSMENT

*Popova, V.R.*

### **The analysis of the Mathematics USE results considering administrative-territorial units**

**Abstract:** We analyze the Mathematic basic and advanced level USE results in different administrative units of one of the regions. The experience provides the basis for managerial decisions on regional and municipal levels.

**Keywords:** Mathematics USE, directions of the analysis, test results, administrative-territorial units.

## EDUCATION QUALITY ASSESSMENT PROCEDURES

*Gigolo, A.I.*

### **The methodology of the marking quality assessment for the constructed response items in the USE in Physics**

**Abstract:** We consider approaches to the analysis of agreement between the markers in the Moscow regional examination commission in the assessment of constructed response items and present the methods of revealing the reasons for disagreement between the markers. We propose a procedure for construction of a markers rating which would help to form the markers' teams.

**Keywords:** Physics USE, constructed response items, marking, generalized system of assessment, the analysis of the 3<sup>rd</sup> marking, quality rating.

*Ilyichova, S.A.*

### **The specifics of professional attestation of educationists: Russian and international experience**

**Abstract:** In the article we analyze the existing systems for the attestation of educationists in the Russian Federation regions, we describe the specifics of obligatory attestation for the meeting certain position requirements

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and voluntary attestation for the first and the higher qualification category. We give examples from corresponding models in Chile, England, Portugal, Canada, and Singapore. .

**Keywords:** Attestation of educationists, educational organizations, assessment of professional skills, qualification categories.

### TESTER'S PRACTICUM

*Beloborodov, V.N., Tatur, A.O.*

#### **On predictive value of the BSE results in relation to the USE results**

**Abstract:** In the article we speak about the results of a research on comparison of the individual results in Mathematics and Russian BSE and the results of the same students in Mathematics and Russian USE in Moscow. We show that the BSE results in Mathematics and Russian are of significant predictive value in relation to the USE results in the same subjects.

**Keywords:** BSE, USE, comparison of SSA results, predictive validity

*Bekmukhametova, K.R.*

#### **Relations between the SSA results of 9 and 11 graders**

**Abstract:** In the article we present the comparative analysis of item distribution according to the content domains in BSE and USE in Mathematics. We consider psychometric analysis of test items in the BSE, and the analysis of the ability of the BSE results to predict results in the USE. Regression models are built and the power of relations between the BSE and USE results is shown.

**Keywords:** BSE, USE, content domains of test items, assessed skills and activities, psychometric test analysis, regression models.

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Учредитель ООО «НИИ школьных технологий».  
Свидетельство о регистрации СМИ ПИ №77-15870 от 07.07.2003 г.  
109341, Москва, ул. Люблинская, д. 157, корп. 2  
Тел.: (495) 345-52-00  
E-mail: narob@yandex.ru  
Распространение: no.podpiska@yandex.ru

Отпечатано в типографии НИИ школьных технологий  
Тел. (495) 972-59-62

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 EQA — Educational Quality Assessment  
 FAI — Fund of assessment instruments  
 FL — Foreign languages  
 FSES — Federal State Educational Standards  
 HEI — Higher Educational Institution  
 MI — Measuring instruments  
 SSA — State summative assessment  
 SSE — State School-leaving examination  
 USE — Unified State Examination

**Contents****EDITORIAL COLUMN**

*Reshetnikova, O.A.*

**National examinations in the Russian Federation and the international comparative studies of educational quality: common points**

**Abstract:** In the article we describe the ways in which the measuring instruments for the state summative assessment and all-Russian tests are being improved which is done considering the experience of participation in the international comparative studies of educational quality. We note how the results of the national examinations influence the result of Russian students in the international studies.

**Keywords:** state summative assessment, measuring instruments, international comparative studies, National examinations, item models.

**ANALYTICS**

*Kravtsov, S.S.*

**Participation of the Russian Federation in the international comparative studies of educational quality**

**Abstract:** We describe specific features of the international comparative studies of educational quality in which the Russian Federation takes part and analyze the results of Russian students in TIMSS and PISA. The role of the international studies in the formation of the unified system of educational quality assessment in the Russian Federation is marked.

**Keywords:** international comparative studies of educational quality, unified system of educational quality assessment, monitoring research, results of the assessment procedures.

*Kovaleva, G.S., E.L. Rutkovskaya, A.V. Poloznikova*

**Financial literacy of Russian students: status and the dynamics of changes (based on PISA 2015 results)**

**Abstract:** In the article we present the results of the second round of the international survey PISA-2015 of the 15 year old students' financial literacy. We look at the features of the international test; analyze the results of Russian students in different areas of financial literacy. We present factors related to the rising level of financial literacy of Russian students and give recommendations for the improvement of financial education in the system of general education.

**Keywords:** financial literacy, financial education, international survey PISA

*Rydze, O.A.*

**Mathematics achievements of Russian primary school students: the characteristics of achievements based on the international study TIMSS-2015 results**

**Abstract:** In the article we present methodological analysis of achievements and of some difficulties the Russian fourth graders met doing TIMSS items in all parts of a mathematics primary school course. We describe the potential of the international study to raise the quality of primary school students' education

in the subject of mathematics and give recommendations to the teachers on the development of subject and universal skills of the students.

**Keywords:** international comparative study, mathematics achievements, primary school student, subject skills, universal learning activities, achievements, difficulties

*Demidova, M.Y.*

### **The main results in Natural Science part in TIMSS for primary schools**

**Abstract:** In the article we analyse the main results in Natural Science part of the comparative study TIMSS for primary schools. We compare the Russian programs «Our environment» and the program of the international study, analyse the results in different content blocks and activities.

**Keywords:** TIMSS study, Natural Science, subject «Our environment», item samples, analysis of the results

*Kuznetsova, M.I.*

### **The international comparative study of literacy achievement of primary school students PIRLS: the concept, main results and tendencies**

**Abstract:** In the article we describe the basic approaches to the assessment of reading literacy of the primary school students in the international comparative study PIRLS, we look at the main results of Russian students, describe the methodology of the study results analysis which allowed us to make the recommendations for the improvement of teaching Reading in primary schools.

**Keywords:** reading literacy, PIRLS study, monitoring research, groups of reading skills, fiction and informative texts, methodology of the study results analysis.

*Denischeva, L.O., Krasnyanskaya, K.A.*

### **Approaches to the assessment and main results of the 8<sup>th</sup> graders in mathematics within the frame of the international comparative study TIMSS-2015**

**Abstract:** In the article we present approaches to the development of TIMSS instruments, the results of the latest round and tendencies in the changes in the achievements during the last twenty years. We make a comparative analysis of the content and the requirements of the international study and Russian standards of Mathematics education and give recommendations for the preparation of Russian students in the light of international priorities.

**Keywords:** international comparative study, mathematical training, educational achievements, general success, types of cognitive activities, achievements and difficulties of students.

*Kamzeeva, E.E.*

### **Specifics of Natural Science items for Russian 8<sup>th</sup> graders in TIMSS**

**Abstract:** In the article we present main approaches to the assessment of Natural Science achievements in TIMSS, characterize the main results of the study's last round, and look at the peculiarities of the performance of students of different ability levels. We compare the program of the study's Natural Science part to that of Basic State Examination in Physics.

**Keywords:** international study TIMSS, Natural Science, thematic parts of the content, cognitive areas, results of Russian students, comparison of TIMSS and BSE contents.

*Roslova, L.O.*

### **In search of the ways for the students' Mathematical literacy development**

**Abstract:** In the article we describe the approaches to the assessment of mathematical literacy in the international comparative study PISA. We analyse achievements and deficits demonstrated by Russian students in doing different groups of items of the international study. We give recommendations for the improvement of mathematics teaching methodology for better building of mathematical literacy.

**Keywords:** PISA study, assessment of mathematical literacy, analysis of the results, types of cognitive activities, levels of mathematical literacy

*Kovaleva, G.S., Loginova, O.B.*

### **Successful school and effective system of education: which factors help to approach the ideal? (Based on PISA-2015)**

**Abstract:** In the article we present the main results in Natural Science literacy in PISA-2015 and describe the factors related to the level of Natural Science literacy. We pay special attention to the teaching practices and the investments into education (financial, personal and time resources). We define the ways for raising the effectivity of Natural Science education.

**Keywords:** PISA international study, natural Science literacy, models of factors relations, Natural Science education, teaching practices, investments into education

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*Gvozdev, E.N., Nikulin, N.N., Rodnevsкая, M.A.*

### **The specifics of the international comparative study ICILS**

**Abstract:** In the article we describe general approaches to the assessment of the information and computer literacy in the international study ICILS, we describe the instruments used in the study, and demonstrate the skills which are assessed in the study showing the item samples.

**Keywords:** ICILS, international study, computer literacy, information literacy, item samples

## INSTRUMENTS

*Zinina, E.A., Braga, T.V.*

### **Organization and methodological approaches to the administration and analysis of the final essay in the Russian Federation subjects**

**Abstract:** In the article the organization and administration of the final essay in the Russian Federation subjects is described. We look at the final essay as a form of assessment, demonstrate approaches to the development of assessment criteria and marking schemes, we discuss the approaches to the results analysis and their use at the institutional and regional levels.

**Keywords:** final essay, form of admittance to the State Final Attestation, forms of organization, principles for the final essay marking commission formation, approaches to the results analysis

*Kaverina, A.A., Molchanova, G.N., Sviridenkova, N.V., Snastina, M.G.*

### **The experience of item development for the assessment of Natural Science literacy of students in teaching Chemistry**

**Abstract:** In the article we classify the skills necessary for the formation of the Natural Science literacy in the course of Chemistry. We suggest methodological approaches to the development of chemistry items aimed at the assessment of an ability to make calculations with chemical formulas and chemical equations, and mastering modelling as a cognitive activity.

**Keywords:** Natural Science literacy, practical tasks, practice referenced items, models of chemistry items, cognitive skills

*Nikishova, E.A.*

### **Using study assignments for improvement of the students' achievements in mastering theoretical material in the course of general Biology**

**Abstract:** In the article we describe the specifics of the general Biology study in the senior grades. We look at the cell theory, its tenets, development and its place in science. We show the exceptional role of test items in illustration of the cell theory, in the development of the cell notion, in the formation of cross-subjects results.

**Keywords:** theoretical and empirical knowledge, facts, study assignments, test items, cell theory tenets

*Pozdnyakova, E.V.*

### **The assessment of writing skills in the course of English**

**Abstract:** In the article we discuss approaches to the assessment of writing skills at the lessons of English. We analyse the requirements of the educational standard and the experience of the international language exams. We look at some assignment samples aimed at the assessment of certain writing skills.

**Keywords:** assessment of writing skills, assignment samples, measuring instruments in English BSE and English USE, international language exams, PET, FCE, TOEFL.

## REGIONAL SYSTEMS OF EDUCATIONAL QUALITY ASSESSMENT

*Kuzmin, P.V.*

### **Renewal of the content of the USE in foreign languages – «I am a citizen of Russia» and «I am a patriot of my city»**

**Abstract:** In the article we suggest the ways for the renewal of the USE items context which consider the national-cultural context. We suggest possible topics for the items based on the materials related to Moscow.

**Keywords:** USE, measuring instruments, foreign language, examinations, test items, experts, MCEQ, teaching materials

*Kuznetsova, N.M.*

**Methods of application of the results of educational diagnostics and possibilities in interpreting the result of assessment procedures**

**Abstract:** In the article we analyse the possibilities in interpretation of educational diagnostics data, give the examples of the application of the methods of direct educational impact and indirect educational impact, prognosis, recommendation and suggestion. We look at how the results may be used in teachers' practice, in methodological services, in educational institutions.

**Keywords:** educational diagnostics, methods of application of the results of educational diagnostics, educational diagnostics procedures, monitoring achievements, corrections.

*Tanshina, N.A.*

**Social Studies USE: myths and reality**

**Abstract:** We present the characteristics of social stereotypes on Social Studies USE and attempt to assess their justification analyzing the Social Studies course and the content and structure of the USE measuring instruments as well as the results of students on certain items.

**Keywords:** Unified State Examination, social stereotypes on Social Studies USE, educational results.

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Учредитель ООО «НИИ школьных технологий».  
Свидетельство о регистрации СМИ ПИ №77-15870 от 07.07.2003 г.  
109341, Москва, ул. Люблинская, д. 157, корп. 2  
Тел.: (495) 345-52-00  
E-mail: narob@yandex.ru  
Распространение: no.podpiska@yandex.ru

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Тел. (495) 972-59-62

## Contents

Reshetnikova, O.A.

### The main directions of the analysis and the interpretation of the assessment procedures results

**Abstract:** In the article we describe the specifics of the analysis of the SFA results at different levels of achievement and possibilities to interpret those results on the level of the subjects of the RF. We also discuss the results of all-Russian diagnostic tests and how to interpret them in the educational institutions.

**Keywords:** assessment products, analysis of the results on the level of the subjects of the RF, FIPI's methodological recommendations, educational quality management.

## ANALYSIS

Tsybulko, I.P.

### Methodological recommendations for the teachers based on the analysis of typical mistakes made by the 2017 Russian USE participants

**Abstract:** The Brief description of the 2017 Russian USE is presented as well as its main results. The results are analyzed with the reference to the groups with different levels of achievement. We provide recommendations for the organization of formative assessment and describe the changes in the examination model for 2018.

**Keywords:** Russian USE, 2017 Russian USE main results, analysis based on the candidates' ability levels, formative assessment, development of the teaching process

Zinin, S.A., Novikova, L.V., Gorokhovskaya L.N.

### Methodological recommendations for the teachers based on the analysis of typical mistakes made by the 2017 Literature USE participants

**Abstract:** The Brief description of the 2017 Russian USE is presented as well as its main results according to the thematic blocs: «XVIII century literature», «Literature of the first half of the XIX century», «Literature of the second half of the XIX century», «XX century literature». We analyze the achievements and drawbacks of the candidates with different ability levels and give recommendations for the improvement of the teaching methodology. We describe the changes in 2018 examination and justify the changes in the marking scheme for the extended response items.

**Keywords:** Literature USE, USE results according to the thematic blocs, analysis based on the candidates' ability levels, development of the teaching process, marking of the extended response items.

Artasov, I.A.

### Methodological recommendations for the teachers based on the analysis of typical mistakes made by the 2017 History USE participants

**Abstract:** The Brief description of the 2017 History USE is presented as well as its main results according to the thematic blocs. We analyze the achievements and drawbacks of the candidates with different ability levels and give recommendations for the application of the effective methodological techniques.

**Keywords:** History USE, main History USE results, results analysis based on groups of items, results analysis based on the candidates' ability levels, methodological techniques

Liskova, T.E.

### Methodological recommendations for the teachers based on the analysis of typical mistakes made by the 2017 Social Studies USE participants

**Abstract:** The Brief description of the 2017 Social Studies USE is presented as well as its main results. We present the detailed analysis of how the candidates with different ability levels cope with different groups of items. We justify the changes in the marking scheme for the extended response items and describe the changes in 2018 Social Studies examination.

**Keywords:** Social Studies USE, main Social Studies USE results, results analysis based on the candidates' ability levels, methodological techniques, marking of the extended response items

Verbitskaya, M.V., K.S. Makhmurian, V.N. Simkin

### Methodological recommendations for the teachers based on the analysis of typical mistakes made by the 2017 Foreign languages USEs participants

**Abstract:** The Brief description of the 2017 Foreign languages USE is presented as well as the main results in English, German, French and Spanish. We analyze the results in different skills: Listening, Reading, Vocabulary Use, Writing and Speaking. We analyze the achievements and drawbacks of the candidates with different ability levels and give recommendations for the improvement of the FL teaching methodology.

**Keywords:** Foreign languages USE, main Foreign languages 2017 USE results, English, German, French, Spanish, results analysis based on the candidates' ability levels, improvement of the teaching process.

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Demidova, M.Y.

### Methodological recommendations for the teachers based on the analysis of typical mistakes made by the 2017 Physics USE participants

**Abstract:** The Brief description of the 2017 Physics USE is presented as well as its main results. The achievements and deficits of the candidates with different ability levels are described. Methodological recommendations towards the improvement of teaching solving qualitative tasks are given. The changes in 2018 examination are described.

**Keywords:** Physics USE, 2017 Physics USE main results, analysis according to the groups of items and activities, analysis based on the candidates' ability levels, examination improvement.

Rokhlov, V.S., R.A. Petrosova and T.V. Maziarkina

### Methodological recommendations for the teachers based on the analysis of typical mistakes made by the 2017 Biology USE participants

**Abstract:** The Brief description of the 2017 Biology USE is presented as well as its main results. The results are analyzed according to the separate content blocks: "Methodology of scientific cognition", "Cell as a biological system", "Organism as a biological system", "System and diversity of the organic world", "Health of a human being", "The evolution of live nature", etc. The methodological recommendations towards the improvement of teaching are given.

**Keywords:** Biology USE, results analysis according to the thematic blocs, analysis based on the candidates' ability levels, improvement of teaching.

Dobrotin, D.Y.

### Methodological recommendations for the teachers based on the analysis of typical mistakes made by the 2017 Chemistry USE participants

**Abstract:** The Brief description of the 2017 Chemistry USE is presented as well as its main results. The results are analyzed according to the separate content blocks: «Atomic structure. Periodic law», «Inorganic chemistry», «Organic chemistry», «Chemical reaction. Cognition methods in Chemistry. We justify the changes in the mark scheme for 2018 exam

**Keywords:** Chemistry USE, main results of 2017 Chemistry USE, results analysis according to the thematic blocs, analysis based on the candidates' ability levels, assessment system

Barabanov, V.V.

### Methodological recommendations for the teachers based on the analysis of typical mistakes made by the 2017 Geography USE participants

**Abstract:** The Brief description of the 2017 Geography USE is presented as well as its main results. The achievements and deficits of the different level candidates are analyzed and methodological recommendations towards the improvement of text based work in geography lessons are given.

**Keywords:** Geography USE, 2017 Geography USE results, analysis according to the thematic blocs, analysis based on the candidates' ability levels, text based work

Krylov, S.S.

### Methodological recommendations for the teachers based on the analysis of typical mistakes made by the 2016 Informatics and ICT USE participants

**Abstract:** The Brief description of the 2017 Informatics and ICT USE is presented as well as its main results. The results are analyzed according to the different candidates' ability levels. We analyze the typical mistakes the participant make in polytomous items.

**Keywords:** Informatics and ICT USE, 2017 Informatics and ICT USE results, analysis based on the candidates' ability levels, polytomous items.

Yaschenko I.V., A.V. Semenov, I.R. Vysotskiy

### Methodological recommendations for the teachers based on the analysis of typical mistakes made by the 2017 mathematics USE participants

**Abstract:** The Brief description of the 2017 mathematics USE of the advanced and basic levels is presented as well as their main results. We give the content analysis of the results. The results are also analyzed according to the different candidates' ability levels.

**Keywords:** Mathematics USE, basic level, advanced level, 2017 mathematics USE results, analysis according to the content blocs, analysis based on the candidates' ability levels