

IFTE 2019

5th International Forum on Teacher Education

TEACHER AND TEXTBOOK: NEW ASPECTS OF INTERACTION (RESULTS OF INTERNATIONAL COMPARATIVE RESEARCH)

Olga Khlebosolova (a)*, Nella Munich (b), Yembuu Butchuluun (c), Fengtao Guo (d),
Anastasia Mashkova (a), Daria Shchedrova (a), Elena Stepanenko (a)

*Corresponding author

(a) Sergo Ordzhonikidze Russian State University for Geological Prospecting, 23 Miklouho-Maklay's Street,
Moscow, Russia, o.khlebosolova@mail.ru

(b) Taras Shevchenko Kyiv National University, 60 Vladimirska Street, Kyiv, Ukraine

(c) Mongolian National University of Education, 14 Baga Toiruu, Ulaanbaatar, Mongolia

(d) School of Geographic Sciences of East China Normal University, 500 Dongchuan Road, Shanghai

Abstract

The quality of a modern textbook largely determines the results of school education. For teachers, it serves as a guide to the organization of the educational process, and for students, it is the source, content, and tool of learning. The aim of the study was to identify the attitude of teachers from different countries to the modern printed (paper) and digital textbook for assessing its quality and analyzing the prospects for further development. The study was conducted in 2018-2019 in Russia, Ukraine, Mongolia, and China under a single program; in total, 718 geography teachers from four countries took part in it. The study actively used a comparative approach to analyze general trends and national characteristics, as well as methods of questionnaires and experts' assessments. Based on the study of the peculiarities of using textbooks in each country and the analysis of the judgments expressed by teachers, common problems have been identified, new aspects of the interaction of teachers and textbooks in the information society have been considered. The results presented in the article show the ways of textbook development on the example of different countries and reveal the authors' point of view on the problems of improving the main educational book.

2357-1330 © 2020 Published by European Publisher.

Keywords: Comparative studies, textbook quality, printed and digital textbook, teacher education, geographical education.



This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 Unported License, permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

1. Introduction

Over the last three centuries, the main teacher's assistant in preparation for the lesson and carrying out the lessons has been a textbook. The modern textbook is a massive educational book, which sets out the main content of education and activities recommended by the standard, curriculum, and program for compulsory assimilation by students (Kuznetsov, Zakharova, & Ogorodnikov, 2011). The textbook is multi-functional: (1) it includes a minimum of information from a specific subject area, necessary and sufficient to achieve the planned learning outcomes; (2) it provides information in the form of educational material, processed with the consideration of the requirements of science, logic, consistency, accessibility, compliance with the age characteristics of students; (3) it provides the ability to control and reflect the process and result of educational activities; (4) it forms interest in the subject, shows the practical application of the studied material, stimulates self-education, promotes the development of attention, memory, thinking of students; (5) it is the main element of the educational-methodical complex, which ensures the connection of the studied material with other areas of human knowledge and sources of information (Munich, 2003).

In the recent years, the position of the textbook as the “main source of knowledge”, “the tool for mastering the content of education”, “a scenario of the educational process” has significantly shaken (Khlebosolova & Tsaryova, 2016). The textbook has never had such a technologically advanced and complex competitive environment in the form of the modern information environment of the pupil (Ministry of Education and Science of Russia, 2010). In the new pedagogical concepts it is proposed not only to actively use the digital textbook, but in general to functionally transform the modern textbook, make it a “guide to the field of science and the information field of the Internet” and gradually “rend the teacher from the textbook” (National Research University Higher School of Economics, 2018).

2. Problem Statement

Topical issues of improving the modern textbook, considered from the position of teachers and experts in the field of geographical education of Russia, Ukraine, Mongolia, China, are in the center of this study. An attempt is made to compare the ways of textbook development in four countries (on the example of geography textbooks) for analyzing general trends, national priorities, problems, and prospects.

3. Research Questions

The study aims at solving the following key issues:

- Assessment of existing textbooks quality on the main structural elements (text, illustrations, etc.), taking into account the demand for textbooks to solve various educational problems and to get an overview of a “perfect” textbook (from the teachers' point of view);
- Comparison of the advantages and disadvantages of printed (paper) and digital textbooks, the study of the prospects of their development;
- Analysis of the features of using various information sources in the teachers' preparation for the lesson and its carrying out;

- Comparison of the ways of textbook development in different countries, analysis of new aspects of the interaction between the teacher and the textbook, discussion of the teacher training prospects;
- The analysis of modern functions of the teacher and the textbook; processes of transformation and their consequences.

4. Purpose of the Study

The purpose of the research is to study the quality of modern textbooks and the prospects of their use based on the analysis of Russian, Ukrainian, Mongolian, and Chinese teachers' opinions.

5. Research Methods

The research used theoretical methods (comparative analysis, generalization), diagnostic and empirical methods (questionnaires, expert evaluation method, the study of regulatory documents), as well as methods of mathematical statistics and graphical display of results.

For conducting comparative research, the opinions of geography teachers and experts in the field of school geographical education from Russia, Ukraine, Mongolia, and China were studied.

The teachers' attitude towards the printed and digital textbooks which they use in their work was clarified on the basis of questionnaires (including online surveys). The content of the questionnaire provided for the identification of the textbooks quality on the basis of studying the degree of teachers' satisfaction with the content and other elements of the textbooks, as well as the features of their use in preparing for the lesson and organizing the students' activities in the classroom and after school hours. Besides, the questionnaire contained questions and tasks for comparing printed and digital textbooks, identifying their advantages and disadvantages, features using other information and references, educational and methodological resources in preparation for the lesson. In addition, teachers had to express their ideas about the "perfect" textbook, which would meet their needs and expectations.

The opinions of experts in the field of school geographical education were studied on the basis of the analysis of publications and reports at scientific conferences on the problems of improving textbooks.

To analyze the teachers' responses and experts' opinions the database containing the following items was created:

- 1) General information about the respondents:
 - a. gender, age;
 - b. region of residence;
 - c. level of education;
 - d. specialty;
 - e. experience in teaching.
- 2) Teachers' choice of certain statements reflecting the degree of their satisfaction with textbooks include:
 - a. theoretical material (concepts, hypotheses, regularity): excessive/enough/not enough; needs to be added or changed / no need to add or change;

- b. empirical material (facts, figures, place names): excessive/optimized/not enough; needs to be added or changed/no need to add or change;
 - c. the presentation of the geographical content: understandable/extremely difficult; logical/illogical; interesting/not interesting; conforms with the age/does not conform with the age;
 - d. illustrations: diverse/same type; qualitative/not qualitative enough (in terms of printing); interesting for schoolchildren/not interesting; need to be added or changed/no need to add or change;
 - e. tasks: extremely difficult for schoolchildren/medium difficulty/too easy; presence of tasks for assessment, revision, preparing for the end-of-course assessment; presence of tasks for working in groups and individual work; presence of tasks for the organization of creative and research activities for pupils; need to be added or changed/no need to add or change;
 - f. system of “navigation”: understandable for schoolchildren/not understandable; comfortable/uncomfortable; needs to be added or changed / no need to add or change;
 - g. mistakes or misprints: yes/no.
- 3) Demand for the textbook (frequency of its use) in solving methodological tasks:
- a. preparing a lesson plan;
 - b. organizing classroom work;
 - c. organizing work at home;
 - d. checking learning outcomes;
 - e. organizing project and research activities;
 - f. forming the skill “teach to learn”;
 - g. developing attention, memory, thinking, imagination;
 - h. forming personal qualities;
 - i. integrating geography with other subjects in order to form a holistic view of the world.
- 4) Features of printed and digital textbooks and their use by respondents:
- a. printed textbooks: advantages, disadvantages, frequency of use;
 - b. digital textbooks: advantages, disadvantages, frequency of use.
- 5) Demand (frequency of use) of other information and reference, educational and methodological resources in preparation for the lesson:
- a. standard and educational program;
 - b. on-line content;
 - c. geography scientific literature (printed books, articles);
 - d. ready-made lesson plans in teacher’s handbooks;
 - e. teacher’s own lesson plans;
 - f. encyclopaedias, reference material;
 - g. popular scientific literature.
- 6) Statements (comments) of respondents about the “perfect” geography textbook on the following aspects:

- a. text: main (theoretical and empirical material), additional (examples), explanatory (notes, dictionary);
 - b. illustration: geo representation (space images, maps, site plans), figures, diagrams;
 - c. headings, charts, graphs, photographs, paintings reproductions; “help” system for the student in learning: questions, tasks, answers; the logic of educational material presentation; the structure of the section, chapter, paragraph, applications; conceptual scheme, generalized tables;
 - d. system of “navigation”: introduction, content; categories; rubricating, signs, indices; fonts, color marking, frames.
- 7) Statements (opinion, assessment) of experts on the following aspects:
- a. features of using geography textbooks in schools: the textbooks variability, the use of printed and digital textbooks, the use of other educational resources; specific problems and difficulties;
 - b. the current situation in the country and prospects for improving textbooks: the quality of textbooks from the experts’ point of view, the aspects of work on creating the “textbook of the future”;
 - c. professional training of teachers in working with printed and digital textbooks: features, necessary changes and their causes.

The study was conducted in three stages and included: (1) development of research program, test materials, data bases; (2) teachers’ questionnaires, study of experts’ opinions (by countries); (3) processing the study results, a single database formation, preparation of reports and recommendations.

6. Findings

The results of the study of Russian, Ukrainian, Mongolian and Chinese teachers’ opinions on the problem of interaction between the teacher and the textbook are presented below in the comparative plan. The common features and differences have been found, the main trends have been pointed out, recommendations on improvement of the teacher’s professional training have been offered.

6.1. Results of the analysis of general information about respondents

In total, the study involved 718 teachers from four countries: 180 respondents from 5 regions of Russia, 100 respondents from 4 regions of Ukraine, 144 respondents from 3 regions of Mongolia and 294 respondents from 7 provinces of China. The data on the distribution of respondents by sex, dominant age category, level of education and teaching experience are presented graphically (Figures 01, 02 & 03).

In Russia, the questionnaire participants were mostly geography teachers with higher education (83.9%), as well as University professors with a Master's or PhD degree (16.1%). Among the Russian participants of the questionnaire, women dominate (82.3%). Age of the respondents varies from 27 to 76 (61.1% of them aged 40 – 59), teaching experience – from 3 to 52 years.

In Ukraine, the majority of respondents are geography teachers with higher education (in total 80%), as well as teachers with a Master's or PhD degree (18%). It should be noted that besides geography, the respondents often teach Economics, Biology and other disciplines. The vast majority of

them are women (92%). The age of the questionnaire participants varies from 20 to 63, the dominant age group is from 40 to 59, the average teaching experience is 28 years (from 2 to 42 years).

In Mongolia, geography teachers with higher education (70.8%) and with a Master's or PhD degree (29.2%) took part in the questionnaire. Among them, men were present in high numbers (41.7%). This high percentage of men reflects the special situation in Mongolian schools, where men teach geography more often than other subjects. The maximum age of the survey participants does not exceed 49 years, 95% of them are under the age of 40. The minimum teaching experience is from 1 to 5 years (51% of respondents), the maximum teaching experience is 11 – 20 years (33%).

In China, teachers (84.7%) and students (15.3%), most of whom teach geography (95.2%), took part in the questionnaire. The majority of respondents have higher education (73.1%) and a Master's or PhD degree (26.5%). The proportion of men is significant (32.6%), which is a true reflection of the situation in China's school geographical education. The predominant age category of the questionnaire participants is up to 45 years (93.8%). The average teaching experience is 9 years, the maximum one is 40 years.

According to the data obtained, all questionnaires used for the analysis contain complete information about the respondents as well as the answers to the questions. According to the authors, the sampling by countries adequately reflects the situation in the field of school geographical education.

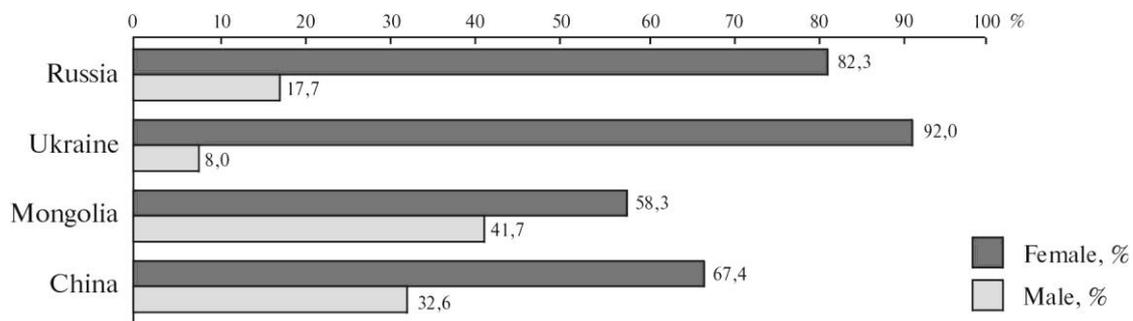


Figure 01. Information on respondents: sex

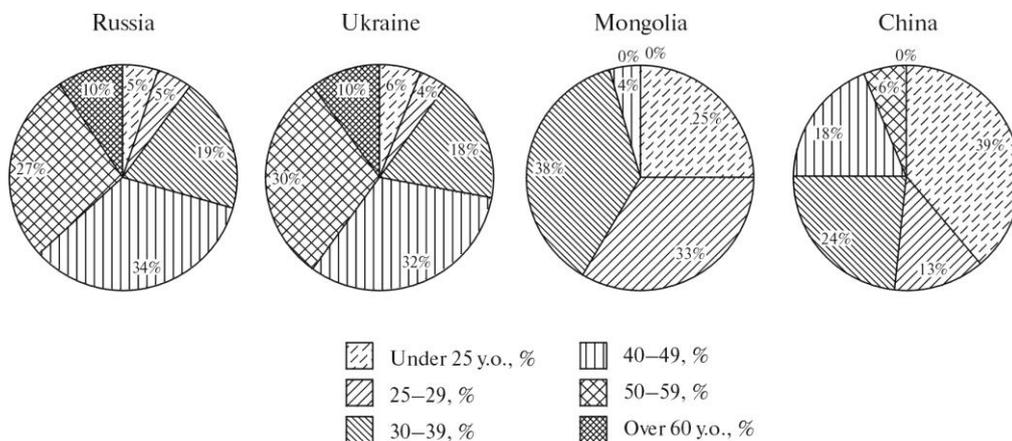


Figure 02. Information on respondents: age

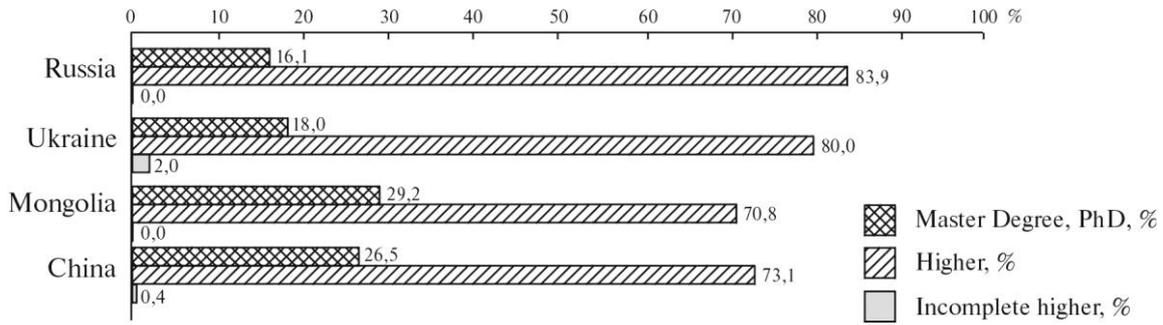


Figure 03. Information on respondents: education

6.2. Teachers' opinions on the quality of textbooks

Respondents from all four countries expressed their attitude to modern textbooks: in general, teachers positively assess textbooks and talk about the need to improve them in some aspects.

It should be noted that the questionnaire offered to Chinese teachers provided only an overall assessment of their satisfaction or dissatisfaction with the quality of textbooks. In particular, they point out that textbooks help them “organize their thoughts, identify difficulties and organize the activities of schoolchildren”. However, the basis of teaching and the content of the exam is not a textbook, but a standard. Students read textbooks mainly in secondary school. In high school, textbooks do not reflect the content of the exam, so in fact, they are used rarely. The average period of updating textbooks in the country is 10 years, so the statistics, some maps, examples are outdated (or are not typological).

The answers of Russian, Ukrainian and Mongolian respondents allowed giving a more detailed idea of which textbook elements meet their requirements, and which ones need to be improved. The analysis of the data obtained showed that the statements of teachers from Russia, Ukraine and Mongolia were very close (differences were noted in 5 – 10 % of questionnaires), which allowed us to present them in the scheme, indicating some differences in assessment (Figure 4).

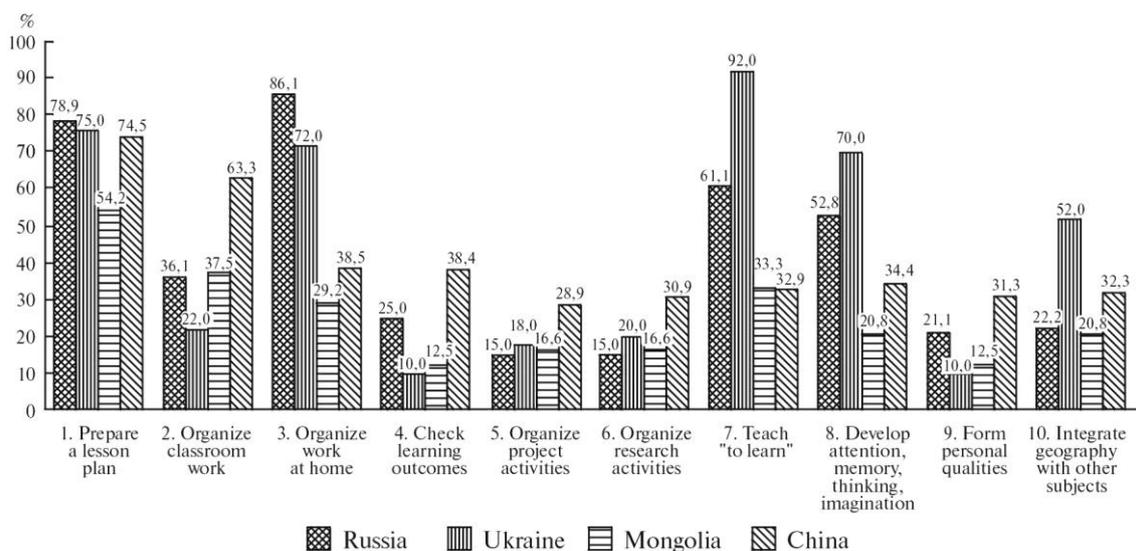


Figure 04. The characteristics of the main elements of a geography textbook from Russian, Ukrainian and Mongolian teachers' point of view

The aggregate opinion of the teachers from the three countries on the quality of textbooks can be expressed by the following statements:

- the text in the book contains a description of regularities, hypotheses, theories and concepts, the text volume is sufficient and requires no cuts or additions;
- the text which includes description of facts, statistics and names of geographical objects is given in the textbook in the optimal volume, but needs constant updating and addition;
- the material in the text is very understandable and logical;
- questions and tasks in the textbook help students learn and test the educational material; they have an average level of complexity and can be used for different educational purposes; they can be supplemented by tasks that focus on solving practical issues and require the situational application of the acquired knowledge;
- illustrations of the textbook are diverse and interesting for students, but some pictures and photographs can be printed in a higher quality and replaced by more meaningful infographics;
- the textbooks use a very clear and convenient system of headings, symbols, pointers, fonts and other “navigation” elements;
- almost every textbook contains misprints and errors.

It should be noted that teachers in Mongolia assess the textbooks’ quality to be higher than in Russia and Ukraine (Figure 4).

6.3. Teachers’ views on the main functions of the textbook

The data suggests that the textbook is widely used by teachers in all four countries and is a multifunctional teaching tool.

Differences in the use of the textbook occur due to the traditions and new requirements for the teacher. In Russia, Ukraine and Mongolia, the textbook serves as the main means of teaching: it is a sort of a “script” of the educational process. In China, when preparing for the lesson, the teacher, first of all, relies on the standard, where all the mandatory elements of the content are indicated, and only then refers to the textbook and Internet resources (this trend is especially evident in high school).

Analysis of the data obtained shows that the most often teachers in all four countries use the textbook during the preparation for the lesson, the organization of school activities in the classroom and at home, for the development of mental cognitive processes (attention, memory, thinking, imagination) and basic learning competencies (Figure 5).

More rarely the textbook is used by the teacher in solving the problems of checking the training results, organization of research and project activities, developing of personal qualities and by the introduction of an integrative approach to training. To implement these tasks, they actively use other textbooks that are part of the teaching complexes. In Russia they include workbooks, notebooks for preparation for final exams, notebooks for creative works, contour maps and atlases, manuals for teachers. Teachers in Ukraine, in addition to the textbook, actively use atlases, contour maps, workbooks, notebooks for knowledge control, anthologies and methodological manuals. The “Teacher’s Guide”, which includes a large number of theoretical texts, maps and other materials, sample lesson plans, assessment tests, answers to questions included in the textbook for schoolchildren, provides great

assistance to Mongolian teachers. Moreover, school textbooks, atlases and maps are widely used. In China, teachers actively use workbooks, CDs to the textbooks, manuals for teachers.

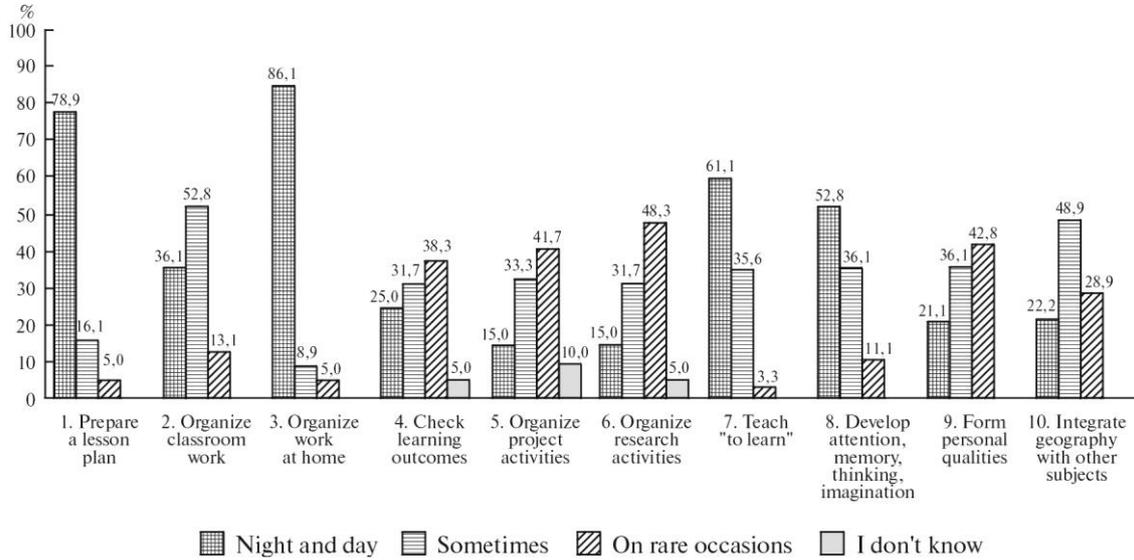


Figure 05. Features of using textbook by preparing and carrying out the lesson according to Russian, Ukrainian, Mongolian and Chinese teachers' assessment

The analysis of respondents' answers in each country shows the relevance of the textbook for the solution of various educational issues (Figure 6). For example, 96.7% of Russian teachers use textbooks (often or occasionally) to teach students to "learn", but the vast majority of teachers (78.9%) hardly use textbooks to develop personal qualities.

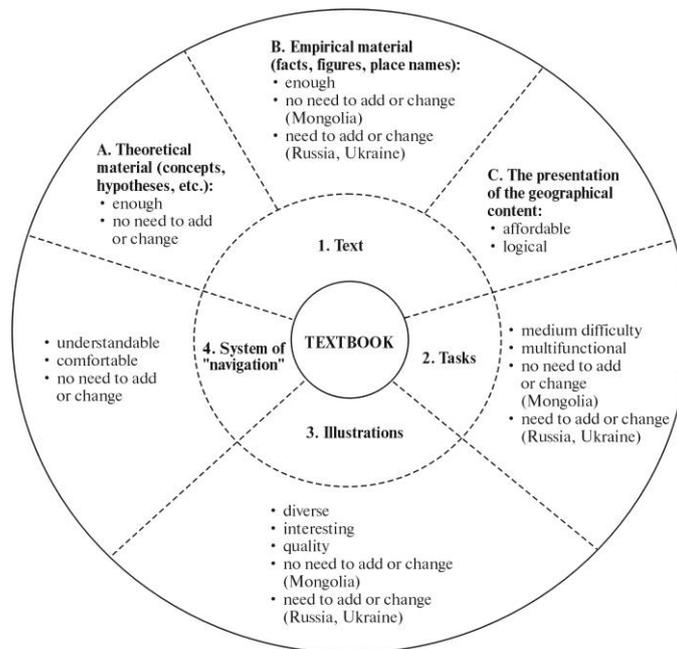


Figure 06. Demand for the textbook in solving methodological tasks (according to Russian teachers' assessment)

6.4. Features of using printed and digital textbooks

Comparing the printed and digital textbooks, teachers and experts from all four countries note that today they are almost identical. It means that the digital textbook is in most cases a *.pdf version of the printed textbook: it is rarely used or used in special cases. For example, according to the questionnaire, only 14% of Russian teachers use a digital textbook by preparing for the lesson and for organizing work with pupils. Ukrainian teachers use *.pdf versions of textbooks, downloading them at the beginning of the school year from the official website, as printed textbooks are delivered to schools with a delay due to the annual programs update and textbooks reissue.

Nowadays, all countries develop new digital textbooks, which include more information and visual aspects, have additional opportunities for analyzing geo-images. They are more interesting for pupils. For example, when developing a new digital textbook in China, the characters of their favorite movies and books are used, they include interesting life stories, and additional practical tasks are offered (MESC, 2016).

The analysis of the results of the questionnaire shows that comparing the available printed and digital textbooks teachers from all four countries express similar judgments about their advantages and disadvantages:

- most teachers and pupils are used to printed textbooks, they like the smell of the book, the possibility of its use in the absence of the Internet and additional technical means; however, a digital textbook is expensive, its production expands valuable natural resources, some data (e.g., statistics) quickly become outdated, illustrations are small;
- information in digital textbooks is more visual (it can be scaled, compared with different images, one can use video, 3D or VR), it is quickly updated; however, the constant presence of pupils in the digital environment harms their health, the use of digital sources is limited by Internet access and the availability of necessary technical means, requires appropriate skills from the teacher.

6.5. Sources rate in preparation for the lesson (apart from the textbook)

Analysis of the teachers' responses in the four countries shows that, along with the textbook, they actively use different sources of information while preparing for the lesson. The rate of the sources used by teachers to a large extent depends not on the features of a particular country, but on internal differences (access to the digital environment, teacher's special skills presence, methodological support of teachers). This explains the general nature of using information sources and their rate. For example, in Russia the use of Internet resources (95.2%) is in the first place, the second place is occupied by the program (66.6%) and manuals with the development of lessons (57.1%), and finally, reference books, scientific, popular science and art books (23.8-28.6%) rank third. In China, the rate of the applied sources looks almost the same: (1) information Internet resources, (2) standard, (3) ready-made and their own lesson plans, (4) scientific literature on geography, (5) encyclopedias, (6) fiction and popular scientific literature. In addition, there is an increase in the popularity of social networks for professional communication and exchange of best pedagogical experience among teachers.

6.6. Vision of the “perfect” textbook

The issue of the “perfect” (best for teachers and pupils) textbook in all countries has different relevance and degree of discussion.

In Russia, the constant education reforming is associated with the systematic revision of textbooks, the development of alternative versions (from 4 to 7 for each class), their annual reissue. This affects teachers’ responses. Half of them are “tired of continuous modernization”: they want to work using standard textbooks, the modern quality of which generally meets their needs. The second half of teachers believes that “the perfect textbook has not been created yet”, that is why it is necessary to continue working on its improvement in all aspects (text, tasks, illustrations, etc.).

In Ukraine, the situation is also ambiguous. It is connected with the high variability of textbooks (for each class 8-9 alternative versions are published) and their constant updating due to changes in programs and some other reasons. Most teachers believe that modern textbooks require improvement in the following aspects: it is necessary to simplify their content, improve the printing quality, offer interesting and relevant facts, and develop applied tasks.

In Mongolia, there is one geography textbook for each class (after testing three alternative textbooks in 2006-2008). In general, teachers are satisfied with their quality, but they point out the need to include new data and maps, replace some illustrations, and expand the theoretical part (in the section on social geography) and tasks for the practical knowledge application, research, and development of motivation.

In China, 4 – 7 alternative versions of the textbook on the subject are published for secondary and high school. However, the core of learning is not the textbook, but the standard, so teachers do not offer any special changes. In their questionnaires, they indicate the importance of updating the content of textbooks (according to statistics, the average update period is 10 years), first of all, by including interesting examples in the additional text, so that “pupils do not get bored”. They write that they have no time to think about the future of the textbook because of the great employment and reporting at work, as well as because “they become lazy after they get married”.

6.7. Experts’ opinion on the quality of textbooks, the prospect of their improvement and a teacher’s training

The experts’ opinions were analyzed by the authors of the article separately for each country: they reflect the differences in national priorities in the field of education and the existing problems, as well as a variety of views on the functions of teachers and textbooks in modern schools.

In Russia, a qualitative textbook is considered as the main condition for the formation of high educational results in schools, that is why the textbook improvement is given special attention (Ministry of Education and Science of Russia, 2010, 2015). Improving the textbook involves updating the system of geographical concepts and facts, introducing pupils to the methods of geographical research, expanding the practical orientation of training, the development of authored versions of programs and relevant versions of textbooks, and finally, the publication of an extensive “tail of the textbook” (a set of training and teaching aids for each class). Traditionally in Russia, the geography textbook is considered to be the “main source of knowledge” and “a scenario of educational process”, and the teacher is the “main

monitor” and “inspirer” of the educational activity for school children.

In Ukraine, a great amount of money is allocated from the state budget for the publication of textbooks, but constant changes in the vector of state policy, borrowing the experience of educational practice from other countries (sometimes without taking into account the realities of the modern situation), constant programs changes and the desire for variability greatly complicate the creation of a qualitative textbook (Ministry of Education and Science of Ukraine, 2017; The Cabinet of Ministers of Ukraine, 2011, 2016). The main conditions for its creation are coordination of efforts of all interested parties, preparation of balanced and stable basic documents (concepts, programs), textbooks supplement with other elements of the educational and methodical complex. Hence the textbook is considered as “the main source of knowledge”, “the basis for the design of the lesson scenario”, and the teacher is “the organizer of pupils’ effective educational activities”.

In Mongolia, the key to the quality of school education is a stable single textbook. However, unsustainable governance and policy many questions about the availability of textbooks, maps and atlases arise (Batchuluun, 2017a, 2017b). Teacher’s training is of particular importance since only well-trained teachers can achieve the modern goals of education, work with new printed and digital textbooks (MESC, 2016, 2017, 2019). The textbook is considered as “the main source of scientific information”, “the center of teaching and learning”, and the teacher is “the main mediator of knowledge and values”, who helps to create a “knowledge-based society”.

In China, after the 2001 reform, the textbook ceased to be the basis for teaching, learning and examination. Various activities to the detriment of the systematic presentation of the scientific content were introduced in the textbook (Fan & Wei, 2008; Fan, 2013; Guo, Stoltman, Duan, & Bourke, 2016). A comparison of content standards documents for geographical tuition in China 2016. The focus today is not on the textbook, but on the standard: it clearly defines the content that should be given in the classroom and will be checked during the exam (MOE&PRC, 2011, 2017). The transfer of the training center from the textbook to the standard has significantly affected its use by the teachers: for them, the textbook is “one of the many educational resources that help to orientate themselves in the educational material.” The functions of the teacher are gradually transformed: the teacher becomes an “organizer, guide and facilitator” who presents the educational material and facilitates the process of its assimilation.

Besides the differences mentioned above, the experts note the obvious general trends:

- the irreversibility of the transition to more active use of digital textbooks and information Internet resources by the teacher is associated with the appearance of a new generation of “digital natives”;
- the importance of creating a “digital textbook standard”, testing new approaches to its content and design requires special pedagogical research;
- “authority” of the textbook depends on the compliance of its content with the final exams, consistent and systematic knowledge presentation, reflecting the latest achievements of science and the realities of life in a changing world;
- the importance of combining visibility and information in the textbook can be achieved through the use of complex infographics, which combines schemes, maps, photographs, diagrams, GIS, as well as through the inclusion tasks for living and active knowledge of the world in the

textbook;

- the difficulties in the development of the “perfect textbook” largely depend on the limited volume (in average 160 pages) and focus on solving the problems of teaching, development and education of pupils;
- teachers’ professional training for working with printed and digital textbooks needs to be changed, due to the scale of “digitalization” of education and the need to develop teachers’ special.

7. Conclusion

The results of the comparative study allow us to identify common trends for Russia, Ukraine, Mongolia and China characterizing various aspects of teacher interaction with the textbook:

The modern textbook is generally characterized by respondents as a qualitative educational resource, which is actively used by them in preparing for the lesson, organizing the work of students in the classroom and at home, as well as to “teach students to learn.” Teachers believe that the texts, questions, tasks, illustrations, the “navigation” system in the textbook are appropriate in terms of volume, content and presentation consistency. At the same time, they note that the textbook is not focused on solving the problems of control training results, the organization of research and project activity, education of personal qualities of school children. According to respondents, the facts and statistics in the textbook need to be updated, it is necessary to give more interesting infographics and tasks to study real life problems and situational application of knowledge.

The wide use of printed (paper) textbooks by teachers is explained not only by the influence of traditions and the lack of appropriate technical equipment of schools but mainly by the fact that the digital textbook is almost identical to the paper one (it is a *.pdf version). However, examples of new digital textbooks indicate that their use will steadily increase (not only among “digital natives”) due to the special advantages: a variety of additional information, the opportunity to compare the geo representation, the presence of interesting tasks and other “motivational” items. According to experts, in the foreseeable future, printed and digital versions will coexist harmoniously, if the standards of textbooks and teachers’ relevant competencies are clearly defined.

The increasing use of Internet resources, standards and programs by teachers in preparation for the lesson demonstrates the gradual weakening of the textbook and the desire to use authentic sources.

The teacher’s attitude to the textbook is largely determined by the priorities of national educational policy: in Russia, Ukraine and Mongolia, the textbook is “the core of teaching and learning”, but in the first two countries it is constantly being upgraded and has several versions for each class, and in Mongolia, one stable version of the textbook is used; in China, “the core of teaching” is the standard, so the textbook is rarely updated, but has several versions.

Nowadays, there is a weakening of the textbook role and its functions changing: the textbook can be considered as (1) “the main source of knowledge”, “a tool of knowledge”, “ a scenario of the educational process”, (2) “the guide to the study of the subject area”, (3) “ the navigator in the information field of the Internet”. The transformation of the textbook functions is accompanied by a change in the role of the teacher: it can act as (1) “mentor, coordinator, inspirer of the educational

process”, (2) “guide and facilitator”, (3) “mediator of knowledge and values”, (4) “commentator and organizer of pupils’ self-learning.” The choice of the path depends on the priorities of the state educational policy and the active position of all members of the professional pedagogical community.

References

- Batchuluun, Y. (2017a). *Geography 10. School textbook Ulaanbaatar, Best Color International*. Ulaanbaatar: LLT.
- Batchuluun, Y. (2017b). *Guidelines for the Implementation of Geography Curricula for Secondary and Upper Education. Mongolian Institute of Educational Research*. Retrieved from www.mier.mn/wp-content/uploads/2017/09/geography-XI.pdf.
- Fan, J. (2013). *Geography Textbooks for Compulsory Education*. Beijing: People's Education Press.
- Fan, J., & Wei, Z. R. (2008). *Geography Textbooks for High School*. Beijing: People's Education Press.
- Guo, F. T., Stoltman, J. P., Duan, Y. S., & Bourke, T. (2016). A comparison of content standards documents for geographical tuition in China and the USA. *Mitteilungen Der Osterreichischen Geographischen Gesellschaft*, 158, 289-308.
- Khlebosolova, O. A., & Tsaryova, L. A. (2016). *Standard and sample program on the evaluation of school geographical education results: what is required of the teacher?* Moscow: Geography in school.
- Kuznetsov, A. A., Zakharova, E. B., & Ogorodnikov, E. V. (2011). *Conceptual problems of creating and improving school textbooks*. Astana: APress.
- MESC. (2016). *National Curricula for Secondary Education of Mongolia: Geography. Ministry of Education, Science and Culture of Mongolia*. Retrieved from <https://mecss.gov.mn/news/102/>
- MESC. (2017). *National Curriculum of Geography for Secondary and Upper Secondary Education. Ministry of Education, Science and Culture of Mongolia*. Retrieved from <https://mecss.gov.mn/news/102/>
- MESC. (2019). *E-textbooks and Interactive Lessons: Geography Textbooks*. Retrieved from www.econtent.edu.mn/book/9rangi
- Ministry of Education and Science of Russia. (2010). *Federal State Education Standard of a basic general education. (Publication No. 1897)*. Moscow: Government Printing Office.
- Ministry of Education and Science of Russia. (2015). *Sample principal educational program of basic general education. Basic school. (Publication No. 1/15)*. Moscow: Government Printing Office.
- Ministry of Education and Science of Ukraine. (2017). *Geography. Curriculum for general educational institutions (6-9 grades). (Publication No. 804)*. Kiev: Geography and Economics in a native school.
- MOE&PRC. (2011). *Geography Curriculum Standards for Compulsory Education*. Beijing: Beijing Normal University Press.
- MOE&PRC. (2017). *Geography Curriculum Standards for Senior Middle School*. Beijing: People's Education Press.
- Munich, N. V. (2003). *Textbook and map as a basis for the formation of geographical culture. Problems of a modern textbook*. Moscow: Pedagogicheskaya mysl'.
- National Research University Higher School of Economics. (2018). *Education as a change of oneself: The concept of transition of schools of the university-school cluster from didactic to authentic (cultural and activity) model and to the embodiment of a new FSES in it*. Moscow: Educational Studies.
- The Cabinet of Ministers of Ukraine. (2011). *Approval of the State standard of basic and complete general secondary education*. Retrieved from [https://zakon2.rada.gov.ua/laws/show/1392-2011-
II](https://zakon2.rada.gov.ua/laws/show/1392-2011-%D0%90%D0%92%D0%94)
- The Cabinet of Ministers of Ukraine. (2016). *Approval of the concept of implementation of the state policy in the field of reforming of the general secondary education "New Ukrainian school" for the period till 2029*. Retrieved from <https://zakon2.rada.gov.ua/laws/show/988-2016-p>