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EXPERT ASSESSMENT OF TEXTBOOKS AS AN IMPORTANT ELEMENT IN QUALITY MANAGEMENT OF THE TRAINING OF GIFTED STUDENTS

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Expert assessment of textbooks is an important component of quality management of the training of gifted students. This evaluation may include a review and analysis of the textbooks, used in working with gifted students and provide a reliable source of information about the quality of the content of the educational materials.

Expert assessment can reflect which topics and concepts meet the needs of gifted students, which methods and approaches can be effective for teaching this category of students, and which resources can be useful for developing their abilities. This data can be used by administrators and educators to improve the preparation of gifted students.

In addition, expert assessment of textbooks can be an important quality management tool when it comes to selecting textbooks and other instructional materials for gifted students. According to the results of the assessment, decisions can be made regarding the selection of the most suitable textbooks and teaching aids, which will help to ensure high-quality and effective training of gifted students.

However, expert assessment of textbooks has its limitations. It can be very expensive and time-consuming. In addition, its results may be limited and not consider students' individual needs.

It is important to note, that the expert assessment of textbooks is significant not only for gifted students but for the entire education system as a whole. Quality textbooks develop students' skills and knowledge, allowing them to successfully adapt to the demands of the modern world. Additionally, quality textbooks can reduce the level of differentiation in the quality of education between different regions and educational institutions.

Therefore, expert assessment of textbooks can be an important quality management tool for training gifted students, which will help ensure that they are adequately prepared and develop their abilities

Keywords: expert assessment, textbook, gifted child, quality management, gifted children

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1. Introduction

Management of the quality of training of gifted students is an important element of the educational system, since gifted children can make a significant contribution to the development of science, technology, economy and other spheres of society. For example, gifted students can become famous scientists, engineers, architects, artists, doctors, politicians and other professionals that require a high level of knowledge and creative thinking.

Management of the quality of training of gifted students consists in creating conditions for developing their potential and revealing creative abilities. For this, it is necessary to provide quality education that will meet the needs of gifted students, their interests and abilities. This can be achieved by developing special programs and textbooks for gifted students, creating classes with in-depth study of subjects, conducting scientific research and other activities.

Managing the quality of gifted students' education also helps ensure social justice and equal opportunities

for all children. Giftedness can be a natural thing, but its potential can only be realized if there are favorable conditions and opportunities. Management of the quality of training of gifted students makes it possible to ensure these conditions and help each gifted student realize his/her potential.

The legislative aspect of expert assessment of textbooks plays an important role in ensuring the quality of education. In Ukraine, expert assessment of textbooks is carried out in accordance with the Law of Ukraine "On Education" [1] and the Procedure for State Expertise of Educational and Methodical Materials, approved by the order of the Ministry of Education and Science of Ukraine [2].

According to these documents, the expertise of textbooks is carried out in order to check the compliance of educational materials with regulatory and legal acts and requirements for the content of education, as well as to assess their scientific and methodical validity, pedagogical expediency and appropriateness of the selected illustrative material.

The legislation also stipulates that the results of the expertise of textbooks must be published by information and analytical centers for education, which ensures the availability of information for teaching staff, students, parents and the public (in Ukraine, this function is performed by the Institute for the Modernization of the Content of Education - hereinafter IMCE).

In addition, expert assessment of textbooks can take place at different levels - state, regional, local and school. This allows to provide interaction between different levels of education management and to improve the quality of educational materials, used in educational institutions.

Therefore, the legislative aspect of the expert assessment of textbooks determines the legal basis for the expertise and ensures control over the quality of educational materials.

2. Literary review

Research in the expert assessment of textbooks was conducted by scientists from various fields of knowledge. Among the foreign scientists, the following can be distinguished: Richard Anderson - professor of psychology and computer science, who researches reading and comprehension of text, including textbooks [3]; Michael G. Watt – a researcher of pedagogy who conducted a study of the process of selecting textbooks in the USA [4]; Daniel Willingham is a professor of psychology who researches issues of cognitive science and its application in teaching and evaluation of textbooks [5]; John Hattie is a professor of education who studies the influence of various factors on the quality of education, including the use of textbooks and their effectiveness [6]; Robin Kay is a pedagogy and education researcher who conducts research on textbook evaluation and improvement [7].

In recent times, society has been putting demands on the secondary education sector for a better educational process of the younger generation, equipping it with modern knowledge through the use of information technologies, perfect command of the languages of the peoples of the world in order to be competitive in future professional activities. The main figure is the teacher, his/her competence, professionalism, dedication, conscientiousness, decency, love for the chosen profession, etc., and the main lever in the teacher's professional activity is effectiveness or the final result.

According to N.F. Fedorova, the concept of "expertise" is borrowed from criminal practice, which broadly covers three aspects:

- 1) research in accordance with the rules of the social field of knowledge;
- 2) submission to the court of a report on the results of the study;
- 3) a statement of conclusions about the purpose of the researched features found.

So, of the previously mentioned features of the expertise, the first and third were left for the pedagogical one – conducting research and reporting the results, and the second – was changed, so that the roles of experts and judges were assigned to colleagues. In some cases, the expertise should determine the suitability or unsuitability of the educational material for the activity. Let's

call the first feature of expertise – ordinary expertise, the second – special expertise [8].

Among the legal documents, expert groups and commissions use the following:

1. Resolution of the Cabinet of Ministers of Ukraine dated September 30, 2020 No. 898 "On some issues of state standards of comprehensive general secondary education".

2. Order of the Ministry of Education, Culture and Sports No. 235 dated February 19, 2021 "On approval of a standard educational program for grades 5-9 of general secondary education institutions."

3. Letter of the Ministry of Education, Culture and Sports dated March 24, 2021 No. 4.5/637-21 "To potential authors/compiler of model curricula for basic secondary education."

4. Methodological recommendations "On the implementation of a comprehensive expertise of the objects of marking (except for electronic ones) and their evaluation criteria for the purpose of providing an assessment of the feasibility of providing the appropriate marking of the Ministry of Education and Science of Ukraine."

5. Methodological recommendations "On the implementation of a comprehensive expertise of the objects of marking - model educational programs, and their evaluation criteria for the purpose of preparing a conclusion on the feasibility of providing the appropriate marking of the Ministry of Education and Science of Ukraine."

6. Order of the Ministry of Education and Science of Ukraine dated August 17, 2021 No. 912 "On Amendments to the Addendum to Order No. 95 of the Ministry of Education and Science of Ukraine dated January 22, 2021."

7. Order of the Ministry of Education, Culture and Sports No. 95 dated January 22, 2021 "On the formation of subject (industry) expert commissions and expert groups."

8. Instructional and methodical recommendations for evaluating textbooks (except for electronic ones) for students of complete general secondary education and teaching staff during the comprehensive expertise.

9. Order of the Ministry of Education, Culture, Sports and Science dated August 5, 2022 No. 700 "On the formation of subject (industry) expert commissions and expert groups."

10. Methodological recommendations for the implementation of anti-discrimination expertise of the objects of marking for the further granting of the stamp of the Ministry of Education and Science of Ukraine.

11. Methodological recommendations for conducting an expertise of the program and technical components of electronic textbooks/electronic teaching aids for students of complete general secondary education, specialized and professional (vocational and technical) education.

Therefore, the issue of expert assessment of educational literature is relevant among researchers of Ukraine and the world. However, the main disadvantages are the chaotic nature of the regulatory documentation and the lack of clear evaluation criteria, according to which this or that educational product can be recommended or sent for revision.

3. Research aim and tasks

The aim of the study is to investigate the influence of expert assessment of textbooks on the quality of training of gifted students and to propose recommendations for the use of this tool in the educational process.

To achieve the goal, the following tasks were set:

1. to determine the criteria, used to assess the quality of textbooks in the educational process and their compliance with the needs of gifted students;

2. to investigate the impact of expert assessment of textbooks on the effectiveness of training gifted students in comparison with the traditional approach to using textbooks.

4. Materials and methods

The research material is a textbook for the 5th grade of the integrated course "Getting to know nature" by O. O. Yankavets, O. D. Dubchak, G. V. Ilchenko and the manuscript of the 6th grade of the author's collective O. O. Yankavets, O. D. Dubchak

To achieve the goal, the following methods were used: *analysis* (theoretical), which involved the review of scientific works and assessment methods, definition of key concepts, criteria for conducting expert assessment of textbooks, formulation of conclusions and recommendations, comparison with other studies, and putting forward hypotheses and directions for further research; *empirical* (survey) that was conducted among employees of the Vinnitsa region who teach the integrated course "Getting to know nature" in 5th grades in the 2022-2023 academic year. The list and content of the questions was the same as that of the experts during the expert assess-

ment and was divided into 4 blocks: *analysis of the content of the textbook; assessment of the quality of the didactic material; assessment of methods and forms of education; assessment of textbook compliance with state standards*. The survey was closed and conducted on a voluntary basis.

The research object is the textbook of the integrated course "Getting to know nature" for the 5th grade [9] and the manuscript for the 6th grade with expert conclusions of the author's team O.O. Yankavets and O.D. Dubchak, which was written according to the program of T.V. Korshevnyuk (order of the Ministry of Education and Science of Ukraine dated 12.07.2021 No. 795 and received the stamp "Recommended by the Ministry of Education and Science of Ukraine") [10].

The research subject includes various aspects of the textbook, such as the structure, logic and sequence of the presentation of the material, the quality of the didactic material, the effectiveness of the use of teaching methods and forms, compliance with state standards, etc.

5. Research results and their discussion

In order to create a high-quality educational product (model curriculum, textbook), in addition to knowledge of the subject and teaching methods, experts, editors, etc., are an important factor.

Fig. 1 shows the quantitative indicator by the qualification level of the employees who made an expert opinion and by the areas of assessment (Fig. 2) for the textbook "Getting to know nature 5th grade", authored by G. V. Ilchenko, O. D. Dubchak, O. O. Yankavets according to the model curriculum by T. V. Korshevniuk.

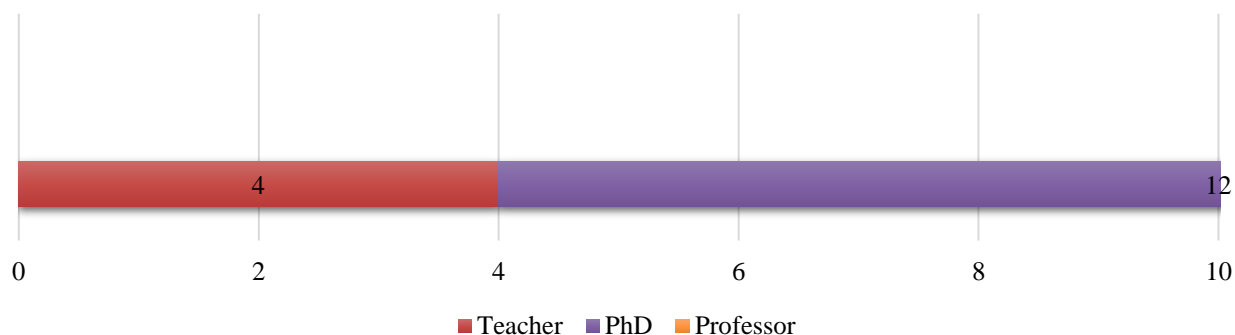


Fig. 1. Quantitative indicator of experts by qualification level

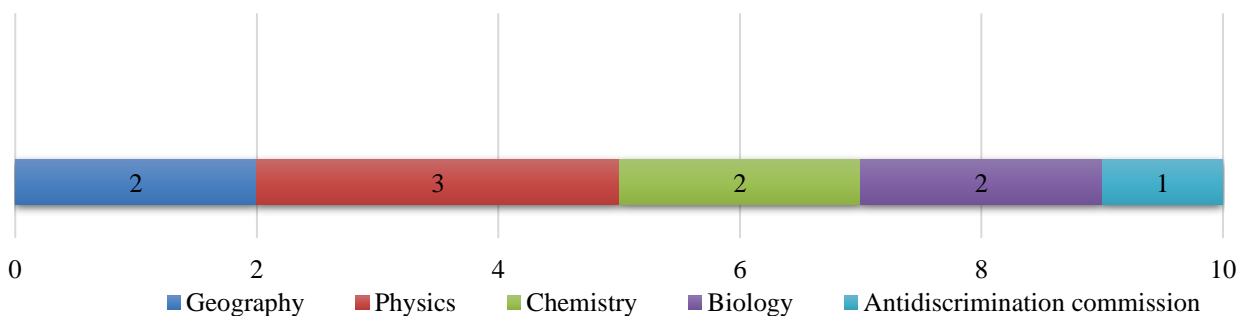


Fig. 2. Quantitative indicator of experts by areas of assessment

As the results show, in most cases, the expert opinion was formed by employees of higher educational institutions, which caused certain difficulties during the writing of the textbook.

According to the results of the monitoring, published on the website of the Ministry of Education and Science of Ukraine and developed in the ITS system "DISO" [11], and the information request to the scientific

institution "Institute of Modernization of the Content of Education", registered under No. 25-3G dated 09.03.2023, the number of educators who chose the textbook from the integrated course "Getting to know nature" 5th grade, authored by O. D. Dubchak, G. V. Ilchenko, O. O. Yankavets – 12,624. The results of the survey among employees of educational institutions show an unchanged indicator for the 6th grade (Table 1)

Table 1

The results of the selection of textbooks by the author team Dubchak O. D., Ilchenko G. V., O. O. Yankavets

No.	Region	chose 5th grade 22/23 (number of copies)	chose 5th grade after other authors 22/23 (teachers)	chose 6th grade 23/24 (number of copies)	chose 6th grade after other authors 23/24 (teachers)	chose 6th grade after other authors 23/24 (teachers)
		1	2	3	4	5
1	Odesa	4 723	155	3927	131	7
2	Dnipro	745	25	682	23	1
3	Chernihiv	32	1	67	2	2
4	Kharkiv	3 723	124	4537	151	3
5	Zhitomir	28	1	46	2	1
6	Poltava	54	2	68	2	5
7	Kherson	0	0	0	0	0
8	Kyiv	117	3	169	5	1
9	Zaporizhzhia	64	2	79	3	2
10	Lugansk	0	0	0	0	0
11	Donetsk	0	0	0	0	0
12	Vinnitsa	512	17	489	16	6
13	Autonomic Republic of Crimea	0	0	0	0	0
14	Mykolaiv	105	3	111	3	4
15	Kropivnitsky	918	30	782	26	3
16	Sumy	643	20	690	23	5
17	Lviv	201	6	267	9	4
18	Cherkasy	105	3	83	3	2
19	Khmelnitsky	53	2	96	3	3
20	Volyn	28	1	32	1	1
21	Rivne	32	1	51	2	2
22	Ivano-Frankivsk	43	1	43	1	1
23	Ternopil	236	7	260	9	4
24	Transcarpathian	111	3	72	2	2
25	Chernivtsi	39	1	53	2	2
26	Sevastopol city	0	0	0	0	0
27	Kyiv city	112	3	169	5	3
Totally		12 624	411	12 773	424	64

So, the results of table 1 show the high demand in Kharkiv and Odesa regions in both 5th and 6th grades. The fact that the number of teachers who would like to choose the textbook for the 6th grade by changing the author or author team has increased is positive.

A survey was conducted among educators (506 respondents), the content of which questions coincided with those given to experts during the analysis of the textbook from the integrated course "Getting to know nature" (grade 5).

Most of them agree that the material, content, methodical, methodological and Ukrainian studies components meet the requirements. The respondents also follow interdisciplinary connections, integrated tasks, the possibility of use during distance learning.

However, it is interesting to note that most respondents hesitated to answer the following questions:

– "Is the content of the textbook optimal for students to achieve the expected results?" – 16.4 % (84 respondents);

– "Is the competency-based approach implemented in teaching by means of the textbook?" – 35.2 % (178 respondents);

– "Is an integrated approach and interdisciplinary connections implemented in the content of the textbook?" – 29.6 % (150 respondents);

– "Is there an opportunity in the textbook for students to carry out independent educational activities, to develop the ability to learn throughout life?" – 37.9 % (192 respondents);

– "Do the texts of the textbook comply with the norms of the literary language?" – 42.3 % (214 respondents).

In our opinion, these difficulties were caused by the fact that most respondents do not understand how to work with students of the New Ukrainian School, and this is primarily due to:

– a large amount of theoretical material, provided by continuing education academies, and the lack of practical classes in the courses;

– impossibility and/or reluctance to attend classes in primary school graduation years;

– insufficient amount of knowledge on digital literacy;

– material and technical base of the institution;

– financial support of educators.

So, in modern conditions, school textbooks must undergo significant changes and transformations compared to previous years, which can be explained by the integration of educational programs, which make it possible to provide a wide selection of them. But a school textbook is a book, in which the basics of knowledge from a certain educational discipline (subject) are systematically explained at the level of modern achievements of science and culture, taking into account the age capabilities of students and the requirements of the school program.

In our opinion, a shortcoming and the main problem when writing textbooks are the partial inconsistency of the model curriculum with the age category and non-observance of the principle of continuity.

If you compare the opinions of respondents and authors with experts, you can notice a significant difference in some issues. Thus, in the expert opinion of June 24, 2022, expert O.O. Tsygank the following observations were made:

– "... leiden bank is not a proper name, it is written with a lowercase letter" – according to the authors, this is a violation of Ukrainian spelling;

– "in this case, the non-scientific terms, used by the authors, and not their correction to scientific ones, are the source of confusion for the students of education; discussions that take place among chemical scientists regarding terminology have nothing to do with the current standard that defines the correct spelling of terms, as well as with the terms, used in the textbook. Yes, among geographers there can also still be debates about whether the Earth is flat, spherical or has the shape of a geoid, which does not prevent us from writing a scientific definition in textbooks; dear expert chemists can provide such an analysis as they deem necessary, but I, as an expert physicist, am guided exclusively by the current standard https://uk.wikipedia.org/wiki/ДСТУ_2439-94, which is a single and comprehensive document, by which the issues are regulated by law, on which comments are provided. It should not be assumed, that the law is not written for the authors of the textbook - it exists and it must be implemented" – according to the authors, the expert assessment should be carried out exclusively in the direction, in which the expert acts as a specialist, and in no case interfere with the conclusions of experts from other fields;

– "The textbook does not contain answers to the tasks" – according to the authors, the textbook for the integrated course of the 5th grade should contain tasks that do not need to be checked;

– "The terms, used on pages 29, 30, 89, 94 of the textbook, are non-scientific, the name standard effective since 2019 provides for the use of the terms "oxygen", "hydrogen", etc. (see: https://uk.wikipedia.org/wiki/ДСТУ_2439-94). The use of outdated non-scientific names of chemical elements in a modern textbook is unequivocally unacceptable" – the authors note that the issue of nomenclature is open, due to the fact that all state final papers (EIT, SSA), as well as textbooks contain Ukrainian nomenclature, not Russian, which does not correspond to the Ukrainian spelling.

However, these and other "errors" were indicated only by experts in physics, but in no case were they indicated during the expertise by experts in chemistry.

In this article, only some comments are indicated, which, according to the authors, are unacceptable during the expert assessment of educational literature. However, beyond the scope of the study, there are expert opinions on model training programs that have been approved and implemented.

The study of expert assessment of textbooks as an important element in the management of quality education for gifted students has opened many avenues for further research. Here are some potential perspectives for future research:

1. Comparison of the impact of expert assessment on different types of textbooks – the effectiveness of expert assessment may vary depending on the subject and level of the textbook. Future research could compare the impact of expert assessment on different types of textbooks and test whether certain subjects or levels benefit more from it.

2. Integration of technology in expert assessment - the use of technology allows to significantly reduce the time and costs of expert assessment. Future research could explore the potential of integrating technology into expert assessment and the impact it may have on the quality of the review.

3. Evaluation of the influence of expert assessment on the results of student learning. Although the use of expert assessment results has been hypothesized to improve student learning outcomes, there is limited empirical evidence to support this claim. Future research could examine the impact of expert assessment on student learning outcomes and identify specific areas where it may have the greatest impact.

6. Conclusions

1. One of the main criteria, used when evaluating the quality of textbooks, is expert assessment not only by higher school specialists, but also by educators working in general secondary education institutions, which is confirmed by the results of the survey among teachers who teach in different regions of Ukraine. However, the choice of literature is not the only criterion that would meet the needs of the development of giftedness.

2. Expert assessment of textbooks is a subjective criterion, therefore it cannot influence the effectiveness of the training of gifted students in any way. In addition

to educational literature (textbook, additional sources), the teacher during the educational process, in the opinion of the author, also has a model curriculum that does not always meet both age criteria and continuity.

However, the main criterion for the development of giftedness is the perseverance and desire of the student him/herself, where the teacher acts as an instrument that helps, supports and organizes the educational process in accordance with the needs and capabilities of its participants.

Conflict of interests

The authors declare that they have no conflict of interest in relation to this research, whether financial, personal, authorship or otherwise, that could affect the research and its results, presented in this article.

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Data availability

Data will be made available on reasonable request

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