Modern Journal of Language Teaching Methods (MJLTM)
ISSN: 2251-6204
www.mjltm.org

Didactic Approaches To The Projection Of Teaching Facilities: Problem Statement And The Ways Of Its Solution

Rustam Alfirovich Aydarov
Kazan Federal University, Naberezhnye Chelny Institute
Irina Gennadievna Kalina
Kazan Federal University, Naberezhnye Chelny Institute

Abstract

The transition to a competence-oriented model of the education system requires bringing all the elements of the didactic system in operation (the goals of education, content, methods and means of instruction) in accordance with it. The teaching facilities (educational publications, on electronic or paper medium) as a component of the implemented didactic system are important tools of pedagogical technologies which must be prepared in such a way as to guarantee the given quality of education.
At the present stage of the development of the problem of the teaching facilities didactic projection we can say that it is not enough that the educational information should be presented in them clearly, completely and consistently. In addition, they must organize its effective mastering. Moreover, teaching facilities based on the general didactic, competence, personality-oriented and activity-oriented approaches should be prepared in such a way as to guarantee in advance the effective mastering of the subject methods of personally significant productive activity.
The results of analysis and generalization of scientific and methodological literature show that at present the educational system has faced a difficult and ambiguously solved problem of not only didactic projection in accordance with its requirements, but also with the definition of the pedagogical essence and the classification of teaching facilities. To create them, different researchers, unlike the traditional knowledge-oriented approach, different didactic approaches are used. In the purest form it is possible to single out a competence-oriented, activity-oriented, personality-oriented, and general didactic approaches. Some authors express the idea of a possible combination of these approaches to solve this problem (combined approach).

Keywords: teaching facilities, didactic system, personality-oriented approach, activity approach, general didactic approach, competence approach.

Introduction

The transition to a competency-based model of education requires the bringing of all the elements of the implemented didactic system (the goals of education, the content, the methods and the means of education) in accordance with it. The teaching aids (educational publications on electronic or paper medium) as a component of an implemented didactic system are important pedagogical tools that must be prepared in such a way as to guarantee a given quality of education.
Therefore, in order to realize the modern content of education, it becomes necessary to solve the problem of effective teaching aid design. First of all, there is a need to find the answers to the following questions. What is the state and the ways of solution concerning the problem of modern teaching aid didactic design? The presented article is devoted to the revealing of the answers to these questions, the results of which should be taken into account

during the designing of teaching aids.

Materials and methods

The main method of research was the theoretical analysis and the generalization of scientific and methodological literature. At that the preference was given to the sources, revealing the problem under study in the course of modern education problem solution. In order to provide a sufficiently wide and in-depth analysis of the problem under study, the materials of the scientific works of the following authors were used in the following areas:

1) The works disclosing the general theory of the didactic approach to a textbook creation and use [1, 2, 3]; 2) The works revealing the peculiarities of teaching aid didactic design use to achieve various educational goals during the study of school subjects [4-7]; 3) Scientific articles of the authors, raising the issue of a university textbook didactic design in the light of competence-oriented education of bachelors [8-11]; 4) The works devoted to the didactic design of textbooks on technical education [12, 13]; 5) The publications of the authors in the form of articles touching on the issues of the didactic design for electronic textbooks and multimedia program-pedagogical teaching aids to solve various problems [14-19]; 6) The works of a general nature, representing the views and opinions of the authors concerning a place, a function, the approaches to the creation of a textbook to ensure a student-centered didactic process [20-22].

Results and their discussion. We present an assessment of the problem state concerning the didactic design of teaching aids (educational publications on paper or electronic media).

Z.A. Mendubaeva [9] notes the following problems of a university textbook design. The quality problem of a university textbook is studied poorly, the scientific and pedagogical foundations for a modern high school textbook design are not fully developed, the monographic type of a textbook prevails at a university, fulfilling only the role of educational information carrier.

E.I. Varaksina [4] draws attention to the fact that the theoretical information presented in a textbook does not provide an effective guide to the assimilation of project activities among schoolchildren.

According to [1-2], the overwhelming majority of educational literature, performs only informational and systematizing function and has a weak potential for a motivating function implementation and the mastering of subject activity methods.

A.A. Dorofeev [12] notes that in recent years a lot of educational literature on technical professions has been published, but its quality does not fully correspond to modern pedagogical requirements. This problem is studied poorly and requires systematic research.

Vasileva N.O. [8] notes the following: the scientific theory, and the practice of a university textbook creation are not developed almost. The scientific and pedagogical works devoted to this problem are not enough. The educational literature published by them differs by high-tech content. However, the didactic component of textbooks remains a "weak" side, an insufficient attention is paid to it.

V.P. Bespalko [1-2] notes that textbooks continue to demonstrate pedagogical primitiveness due to the lack of a complete understanding of their pedagogical nature, the most important product of pedagogy is produced without pedagogy, such a sad reality nowadays.

The works of authors express the idea of the need to create a new generation of educational literature [9, 22] more and more often, which is associated with the modernization of education, with the need to address its new goals and landmarks.

During the analysis of publications on the role of teaching aids it was found that all authors consider that the indicator of their effectiveness is when they are directed not so much to the assimilation of theoretical knowledge as to the development of competencies that allow to solve the practical problems of different nature with the use of available knowledge.

So, in the work [9] the designed didactic potential of a modern textbook is used to develop general professional competences, due to the inclusion of practical tasks on task basis.

In the studies by E.I. Varaksina, M.L. Isakova [4] the role of educational resources is associated with the possibility

of their use for the organization of project activities.

According to N.O. Vasylieva [8] didactic resources should be directed to the training of competent graduates who can solve various practical problems.

The solution of the problem concerning the didactic design of teaching aids is carried out on the basis of the personality-oriented approach. So the monograph by M.A. Dubik [21] points out that "a textbook will become the means of educational practice informational provision if and only if it is one of the tools of the student's personality-oriented activity.

The theoretical statements of a personality-oriented textbook design are substantiated in the work by A.V. Khutorsky [20]. The author designates, it is necessary to create such a textbook structure which facilitates the organization of personally significant productive activity development in the studied subject area. The design of a textbook structure is seen in the form of paragraphs that provide for the implementation of the educational process holistic model (the motivational unit, the self-determination and goal setting unit, the unit which reveals the content of educational material, and the unit reflecting the educational achievements). In the general structure of a textbook, a compulsory and a variable component are distinguished. A variable component is aimed at creative self-expression promotion in the studied area.

An important area of research in the field of teaching aid didactic design is the use of modern information technologies for their creation. Almost all researchers are unanimous in their opinion on the possibilities of teaching aid didactic potential increase based on the use of modern software and pedagogical technologies (for example, multimedia technologies, etc.). For example, the article by Shabalin Yu.E. [11] notes that a didactically designed electronic textbook is a powerful didactic tool that can really transform the educational process. This is achieved by the design of two structural components at least in the content of electronic learning aids. The first one is represented by educational information (text, graphic, video, sound), the second one simulates the educational process scenario for the assimilation of education content, usually based on the application of the programmed study methodology. Researchers emphasize the important role of the second component for further improvement of e-learning tools. Thus, Petrov P.K. [14] expresses the following idea: today the improvement of teaching aids consists not so much in the applied information technologies as in the awareness and the disclosure of the didactic and methodical principles of their use.

The analysis of these works [14-19] on the problem of e-learning shows that, without the reduction of their contribution significance to the education quality improvement using electronic teaching tools, it is also necessary to take into account the possibility of further didactic improvement based on a more complete and integrated implementation of the requirements for the didactic design of a textbook.

Encouraging prospects to solve the problem of teaching aid didactic design, make it possible to increase the effectiveness of teaching aid creation and application, introduces a general approach to the creation of teaching tools by V.P. Bespalko [1-2]. The researcher developed a modern theory of a textbook creation and application. The use of this methodology during the creation of teaching aids allows a stage-by-stage design of training means belonging to any didactic system (competence, personality-oriented, etc.). A textbook in his understanding appears as a comprehensive information model of a corresponding pedagogical system. Not only the educational information is disclosed in this model, but the didactic process itself is modeled for its assimilation. The specificity of a textbook is explained by this precisely, according to the scholar. The author reveals such a concept as textbook. This is an autonomous technical training tool designed for individual management of a student's cognitive activity in accordance with the diagnosed goals and ensuring the achievement of these goals within a set training time.

In the most general form the methodology of V.P. Bespalko's textbook design [1-2] includes the following stages: 1) The stage of setting the diagnostic purpose of a textbook use; 2) The stage of didactic study concerning the content of training included in the textbook; 3) The stage of the task in the textbook of the didactic process for content assimilation; 4) The stage of learning material level evaluation.

Conclusions

In the course of the study important results were revealed that characterize the state of the problem. It was noted that it was poorly studied, the level of correspondence of instruction means to modern pedagogical requirements is insufficient, the representation of their pedagogical essence is not full enough, most of the teaching aids perform only information function.

To solve the problem of modern teaching aid design didactic approaches are used unlike the traditional knowledge-oriented one. In the purest form, it is possible to single out a competence-oriented, activity-oriented, personality-oriented and general didactic approaches. The electronic didactic tools prepared in accordance with these approaches have a great didactic potential.

Summary

The problem of teaching aid didactic design needs to be solved in accordance with modern requirements for education results. The researchers comprehended sufficient theoretical and methodological material on the use of teaching aid design in practice. Further solution of the problem is seen in the creation and the testing of modern teaching aids based on the application of an integrated approach. In accordance with it, the teaching aids should be designed in such a way as to guarantee the mastering of subject methods for personally significant productive activity in advance.

ACKNOWLEDGEMENTS

The work is performed according to the Russian Government Program of Competitive Growth of Kazan Federal University.

References

1. Bespalko V.P. Textbook. Theory of creation and application / V.P. Bespalko // M.: Research Institute of School Technologies, 2006. - 192 p.
2. Bespalko V.P. Natural pedagogy / V.P. Bespalko // Moscow: People's Education, 2008. - 512 p.
3. Varaksina E.I. Structure, content and methodology of student studies organization in hydrodynamics / E.I. Varaksina, M.L. Isakova // Fundamental research. - 2013. No. 10 (part 12). - pp. 2768-2772.
4. Vasilyeva N.O. Textbook in the system of a competence model development for a graduate of a higher professional education / N.O. Vasilyeva // Historical and Social-Educational Thought. - 2012. № 1. - pp. 104-112.
5. Dubik M.A. Personally oriented textbook of physics as an individual educational trajectory of a technical university student study. Dubik // Scientific and methodical electronic journal. Concept. 2014. No. 9. - pp. 91-95.
6. Dorofeev A.A. Educational literature on engineering disciplines: systemic didactics, methodology and design practice / A.A. Dorofeev // M.: The publishing house of MSTU named after N.E. Bauman, 2012. - 398 p.
7. Ivanova E.I. Osmolovskaya I.M. Didactic bases of educational material selection in the textbooks of new generation / Ivanova E.I., Osmolovskaya I.M. // New in psychological and pedagogical research. - 2015. № 3. - pp. 82-91.
8. Mendubaeva Z.A. The modern educational book in the system of the educational and methodical complex of general vocational training of students of a medical university / Z.A. Mendubaeva // News of the Russian State Pedagogical University named after A.I. Herzen. - No. 2013. No. 162. - pp. 244-249.
9. Petrov P.K. Theoretical and methodical bases of expert training in physical culture and sport using modern information and communication technologies: monograph. / P.K. Petrov // Izhevsk: Publishing House "Udmurt University", 2003. - 447 p.
10. Khutorskoy A.V. The place of a textbook in the didactic system / A.V. Khutorskoy // Pedagogy. - 2005. № 4. - pp. 10-18.
11. Shabalin Yu.E. Didactic model of an electronic school textbook / Yu.E. Shabalin // Council of rectors. - 2014. No. 10. - pp. 68-74.
12. Gimaliev V.G., Kryukova N.I., Fatkhutdinova A. M., Shagiev B. V., Krasnenkova E. V., Goncharuk A. Ju. Scientific-methodical Priorities of University Educational Process: Didactic Prototype of the Electronic Textbook // Man In India, 97 (3): 12, p. 1-138
13. Ivanova E. O., Osmolovskaya I. M. Electronic Textbooks: Didactic Aspect // SHS Web of Conferences 29, 01055 (2016). DOI: 10.1051/shsconf/20162901055
14. Kmecová I., Bajtoš J. Didactic Effeciency of the Textbooks of Technical Education // Joint International IGIP-SEFI Annual Conference 2010, 19th - 22nd September 2010, Trnava, Slovakia.
15. Korol A.D. The Dialogue-Based Principles of a Textbook Projection in a Higher School Distance Learning // Roczniki Akademii Medycznej w Białymstoku. Vol. 50, 2005. Suppl. 2. Annales Academiae Medicae Bialostocensis. P. 48-50.
16. O'Keeffe L., O'Donoghue J. A Review of School Textbooks for Project Maths. NCE-MSTL University of Limerick Limerick, July 2011, 90 p .
17. Seoane C. D. Á., Rodríguez J. R.Characteristics and Properties of the Didactic Materials Developed by Local Governments. Empirical Papers. Orbis Scholae, 2014, 8 (2). P. 23−41.
18. Temirgazina Z.K., Kaparov C.E., Abramova A., Khamitova G. A. Scientific and Methodological Bases of Creating Electronic Textbooks on Biology in the English Language // Biosciences Biotechnology Research Asia, December 2015. Vol. 12(3). P. 2747-2756.

19. Tufekčić A. Basic Determinants of Producing a Modern Textbook // Metodički obzori, 7 (2012), 2. P. 119-126.

20. Kang W., Kilpatrick J. Didactic Transposition in Mathematics Textbooks // For the Learning of Mathematics 12, 1 (February 1992). FLM Publishing Association, White Rock, British Columbia, Canada. P. 2-7.

21. Novosel D. Didactic Design of Multimedia Textbooks in Music Education // Doctoral thesis, 2017, Zagreb. 354 pp.

22. Slobodanka A. How to Design Textbook to Improve Students' Learning? There is No Single and Easy Solution // ECER 2014, The Past, the Present and the Future of Educational Research. URL. – Available at: http://www.eera-ecer.de/ecer-programmes/conference/19/network/470.