



# EFFECTIVENESS OF THE MODULE SYSTEM IN FORMING STUDENTS' TECHNOLOGICAL COMPETENCES IN TECHNOLOGY LESSONS

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## ANNOTATION

*In the article, the effectiveness of the module system in the formation of technological competences of students in technology classes, the structure of the module system, the purpose, content, process, mechanisms of the model implementation, including pedagogical conditions, the expected result and the technological competence of students the form of an ordered scheme reflecting the levels of formation, the tasks that must be performed to achieve this goal are discussed.*

**KEYWORDS:** *technological, competence, module, integrated education, content block, procedural block, visual, printed, audiovisual, electronic, including interactive whiteboard, electronic educational resources, didactic materials, mannequins, equipment of educational workshops, interest, independence, creative activity, forms, methods, psychological, pedagogical.*

## INTRODUCTIONS

The problem of forming students' technological competences in technology lessons at school should be considered as one of the priorities of education modernization.

Today, the technological competences formed in the school do not adequately meet the demands placed on them.

## MATERIALS AND METHODS

If we analyze the readiness of schoolchildren to acquire technological competences, then there is a lack of evidence-based recommendations for the formation of technological competence, by directly involving them in the transformative activity that is the basis of these competences, and then with clear ideas about its nature and structure.

This, in turn, shows the relevance of the problem of solving the contradiction between the requirements for the student and the lack of an educational model that helps to form technological competencies[1].

Since competencies are complex, integrated education, their formation cannot be carried out without comprehensive planning of the activities of teachers and students, without choosing the most suitable tools and methods for the implementation of this process.

In fact, the development of the competence formation methodology will be ineffective without a clear idea of the process of its formation, taking into account many factors. One way to solve this problem is to model the educational process, the purpose of which is to create a general idea of how to more effectively form the competences of students in the subject in basic general education.



A model is a replica of any object, process or phenomenon in real, enlarged or reduced form.

In addition, the use of such a research method guarantees a purposeful, consistent and comprehensive study of the studied object or process, helps to analyze options for effective work with a good result.

Based on the goals and tasks of the article, we believe that it is appropriate to implement the content-procedural model of the process of formation of technological competencies in students. According to the method of implementation, this model belongs to the real situation and is a system that combines the components that are purposeful, meaningful, legal and evaluation-effective, and each of the components is represented by a separate block in the structure[2].

The model is in the form of an ordered scheme that reflects the purpose, content, process, mechanisms of the implementation of the model, including pedagogical conditions, the expected result and the levels of formation of the students' technological competence, and all the blocks are mutually proportional. If it works successfully, i.e. the model actually becomes a system.

The analysis of psychological, pedagogical and special literature shows that considering the technological competence of schoolchildren as an integral part of professional competence gives a positive result[3].

The target blocks of the model should include the formation of real technological competence (motivational, organizational and control) skills from the point of view.

To achieve the goal, it is necessary to solve the following tasks:

- Formation of interest in the educational process and positive motivation, which is expressed in the person's desire to have a large amount of information on the studied subject, for this he uses a set of forms and teaching methods;
- Increase the level of formation of students' technological competencies;
- Development of working procedure for formation of technological competences in technology classes at school based on modern pedagogical work experiences.

For the implementation of these tasks, it is good to divide the module into blocks and form technological competencies based on these blocks[4].

The content block reflects the content of technological competencies and the content of training, during which the possibility of forming these competencies expands. Technological competencies include knowledge, skills, technologically important human qualities, value relationships (these qualities are grouped according to the components of technological competence that we have identified)

Having these qualities allows students to organize their activities in any field of science according to technological principles[5].

The procedural block of the model includes the features of the organization of the process of formation of technological competences, the used forms and methods of training.

Therefore, a necessary condition for the formation of technological competences is the activation of educational activities - the teacher's actions aimed at developing and using such forms, methods and educational tools that increase the interest in learning, independence and creative activity of students. formation of knowledge, skills, their practical application, as well as helps to form the ability to predict the production situation and make independent decisions



In the block, active teaching methods are especially problematic, research, game methods, heuristic learning methods, programmed teaching, methods of using new pedagogical and information technologies, trainings, discussions, etc.

Another important element of the procedural block is educational tools: visual, printed, audiovisual, electronic, including interactive whiteboard, electronic educational resources, didactic materials, mannequins, equipment of educational workshops, tools, etc[6].

The fourth and last block of the model we designed is the evaluation result. It reflects the result of the implementation of the above three blocks and assumes the assessment of its effectiveness, calculated on the basis of the set purpose of the result, and the formation of technological competences of the students in accordance with the requirements of the DTS.

The block also creates a system of criteria, indicators and signs of formation of technological competence among students and levels of its formation in accordance with the competence-based approach in education.

The general technique of four levels of technological competence formation was used in the model: insufficient, initial, sufficient, successful.

Inadequate - the subject of activity is not ready to professionally and competently set their tasks independently and solve them accordingly.

Elementary - solving professional problems is carried out and limited, everyday knowledge and skills are used.

Adequate - the student chooses a way to solve existing problems based on awareness and appropriateness of actions, as well as personal motivation, controls the correctness and incorrectness of his actions.

Successful - high awareness and attention, strong civic and moral attitudes; a creative approach to determining the forms of action and their content; originality and creativity, the availability of skills that ensure accuracy, thrift, timely performance of actions, etc. It should be added that these components of technological competence can exist as independent systems, which in turn have a separate set of elements, a specific structure, logic and internal organization. However, separate ownership of any components of technological competence is not effective and does not lead to the desired result.

## CONCLUSIONS

In conclusion, it can be said that the presented module blocks indicators and signs are a system of interrelated components of the model of formation of technological competences of students in technology classes, taking into account a certain set of pedagogical conditions. At the same time, it is effective serves as a basis for determining the levels of students' technological competence formation.

## REFERENCES

1. *Hamidov J.A. Main Components of information Culture in Professional Teacher education in Informatization of Society // Eastern European Scientific Journal.- Germany, 2016. №1. -P.102- 105.*
2. *Akhmedov E.R. Use Of Interactive Electronic Educational Resources In Professional Training Of Students Of Vocational Education // European Journal of Research and Reflection in Educational Sciences, 2019 №12. -P. 115-1203.*
3. *Malyutina, L. A. Multimedia presentations in the educational process // Science yesterday, today, tomorrow: sat. St. on mater. LI mezhdunar. science.- prakt. Conf. No. 11 (45). - Novosibirsk: Sibak, 2017. - Pp. 64-68. 40. Naked*
4. *Akimov, N. A. Application of electronic educational resources in the educational process // Theory and practice of modern science. - 2016. - No. 12 (18). - Voronezh. - 42 s*
5. *Hamidov J.A. Main Components of information Culture in Professional Teacher education in Informatization of Society // Eastern European Scientific Journal.-Germany, 2016. №1. -P.102- 105.*



6. *Hamidov J.A. Using Multimedia Technology Problems in Professional Education // Eastern European Scientific Journal /Auris – Verlag.de 2019, №1. 187- 190 стр.*
7. *ГОВЕРДОВСКАЯ, Е. В., & АБИДОВА, З. К. ДОПОЛНИТЕЛЬНОЕ ПРОФЕССИОНАЛЬНОЕ ОБРАЗОВАНИЕ В ПЕРИОД ПАНДЕМИИ: ПРОБЛЕМЫ И РЕШЕНИЯ. ЕВРАЗИЙСКИЙ ЮРИДИЧЕСКИЙ ЖУРНАЛ Учредители: Евразийский научно-исследовательский институт проблем права, (10), 443-444.*