

MODELING STAEM SCIENCES IN HIGHER EDUCATION

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ANNOTATION:

This article discusses a detailed talk of programs that allow the opportunity to mathematical and physical modeling. Also, the concepts and functions of modeling, and students in the education of staem are given special forms and techniques to organize research to create physical or mathematical models by integrating the theoretical and practical knowledge.

Basicwords: Mathematical Model, Physical Modeling, Modernization, Model Scheme, Programs, Physical Processes, Mathematical Athuosity, Mathematical Heart, Mathematics, Object.

INTRODUCTION:

Currently, rapidly developing science achievements without numbered sciences and technologies. The development of computer equipment and programs allows to create the object of 3D models. The fundamentality is based on staem anyway in the creation of 3D models of the facility. In this case, mathematical modeling, physical modeling, chemical modeling, biological modeling, technical modeling, and other modeling is used.

The rapid development of our knowledge of nature, the rapid development of science and technology leads to a deeper knowledge of the new features of the phenomena, to learn new links between its elements. As a result, the built-in model, the current perspective of science, is more obsolete, which reflects the real reality with a great mistake. This requires a new, a better reality, and the previous one requires a clearer, deeper model creating a model.

Currently we are involved in a mathematical modeling and physical modeling, and we try to illuminate the remaining models in our next articles.

LITERATURE REVIEW:

Optional mathematical supplies to create mathematical models - algebraic, differential and integrated calculation, kits can be used by theory, algorithms, etc. The purpose of modeling and the characteristic aspects of the original determines aspects of models and their methods of research. For example: Mathematical models can be divided into detatory and probability (STOP) classes. The first one determines the mutual agreement between characteristics and parameters of the model determines the match between statistical values.

Scientific Novelty of the Article:

When developing mathematical models, the cause of each object is taken into account - methods of solving these model after the initial stages of modeling producing mathematical expressions. These methods are definitely determined by the structure of the model. Solving engineering issues is also accounted for in many cases in many cases in many cases. It is natural that the mathematical expressions in the mathematical model of complex structure are made up of complex functions.

Analysis and Results:

Examples include programs that allow the possibility of mathematical modeling: Matcel, Matnateka systems and other software packages. These programs are programs that

allow digitizing mathematical formulas and mathematical laws, and the mathematical modeling method is used in two forms in mathematics.

First: leads to a model for a model, in which case the internal mathematical problem of researching new classes will appear. It leads to the development of an existing mathematical theory to develop or a new theory. This form of the mathematical modeling method is often used during a lecture and has the following structure:

1. View the issues of professional conditions leading to a new mathematical concept - creating a model.
2. Statement of the main content of the new topic, a new section (concept, theorems, provision methods).
3. Investigate the model using a new mathematics hardware.
4. Submission of a sampling on solving the case with the help of the made model to address the result.

Secondly: Citation in a certain looks that is mainly implemented in practical classes, or is used at the end of the lecture to solve the previously expressed issues. In this case, the structure of the training will be as follows:

1. Placement of the matter.
2. Select his mathematical model among certain models.
3. Study of model.
4. Transfer of the result to this issue.

"Displaying mathematical modeling elements in mathematics allows you to solve a number of important pedagogical tasks:

- Improves the theoretical knowledge to practice;
- Forms the application of mathematical engineering;

- Movates interdisciplinary dependence and others.

Examples of programs that allow the modeling of physical processes: Matcel, Matnab, Maple, Mathemateka systems, Electronic Physics, Electronics Workbench, Interactive Physics and other software packages. Using the capacity of information technology, the use of computer models in the educational processes bears fruit. Principles of application of computer models in the educational process:

1. The experience of the computer program should be applied or applied when experience is not observant.
2. The computer program must help identify the detail under study or the ilganization of the addressing issue.
3. As a result of the work, students should be able to see evenings characteristics of events with the help of model than both qualitative and quantitative connections.
4. The task of the students during working with the program is to work on various tasks, as this will allow us to work independently. [1].

Interactive Physics is actually taken from English, which means English " Live Physics. This program package is the product of 10 years of teachers of physics and computer programmers. The Interactive Physics programs can be used and students themselves have the ability to model physical processes, independently, such as engineers or scientific professionals. This program is an important pedagogical weapon with the corresponding to state educational standards and the literature educated in educational institutions. It is known that the classification of some processes or a physical model does not reflect the full in drawing posters. On top of that, it is not possible to see the change change. The computer model comes hand in such cases. Of course, there are educational films that reflect all the elements of physical processes, but such reading films

follow the student as a passive viewer. In a computer model of the process, on the computer model, is able to discuss its parameters and change its parameters, i.e., learning and deepening it. [1].

The following principles submitted to the modeling process, called postal postulatus [3] (Figure 1).

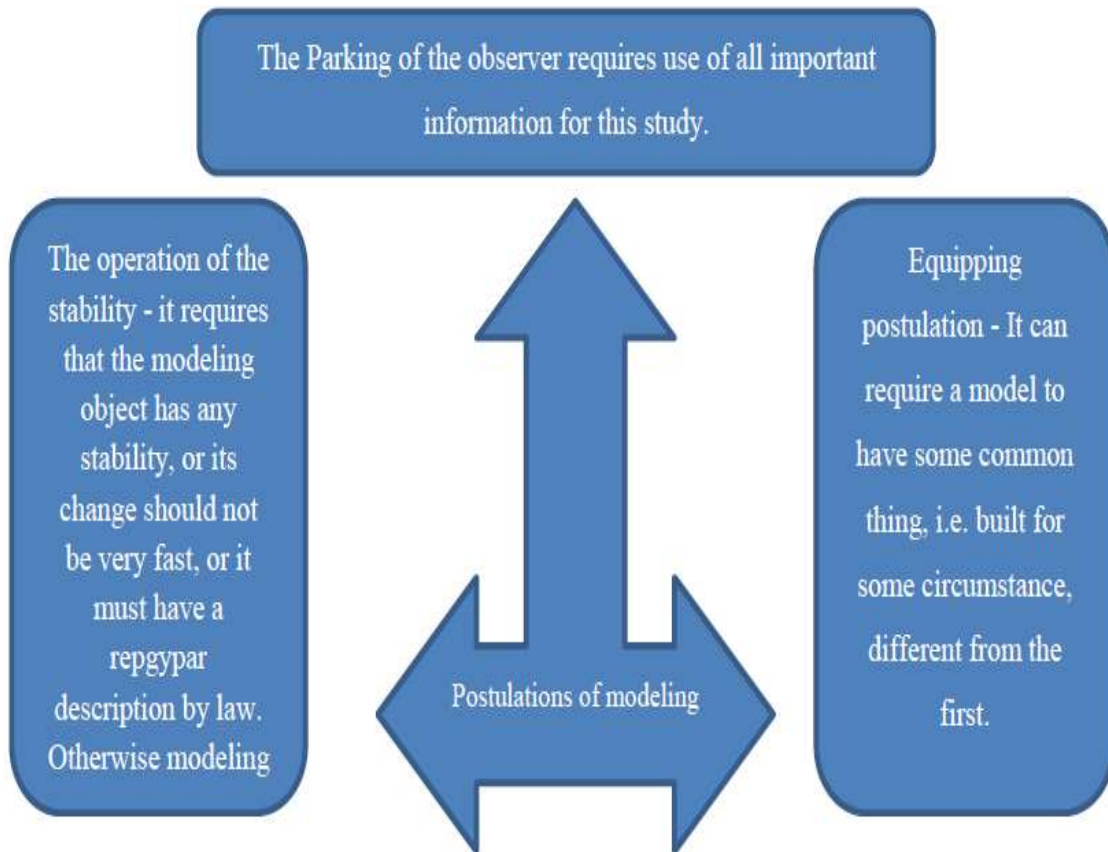


Figure 1. Postulations of modeling

"The model never reflects all properties and specific aspects of the object being seen, it will not be possible. It is based on simplification, idealization, is an approximate reflection of the facility. "[4].

- ✓ There are the following functions of modeling:
- ✓ Nounces simplifying the objects in science, direct study of them, there is no potential for this or for a reason;
- ✓ Crucifying oralization of a solution for analysis - analysis;
- ✓ Oristik - Getting acquainted new knowledge;
- ✓ Integration or synthesizer - installation of a single model of my is [4].

We can tell out the following on specific forms and methods of organizing research work in staem through the integration of theoretical and practical knowledge through the integration of theoretical and practical knowledge.

An important part of the organization of research work to create physicist or mathematical models is to study the problem of the object related to research elements. Studies in this form do not charge any extra time from the students and teachers and is an integral part of the educational process covering all students as equally an agriculture. Here we depatisied the community solutions that allow complexity levels of complexity, require non-standard

approaches and should organize a facility that produces stem sciences.

As a result of modeling stem sciences, each student can separate the research series, systematize, systematize, imagine, systematize, such other skills and other skills formed. In general, the intensive development of contemplation skills continues in the search for solution, and as a result of the students, students are formed in abstract thinking.

To organize a research process that model stem sciences, it is not enough to choose a good issue, but it is necessary to correctly organize the process of solving it. First of all, it is necessary to distinguish between pedagogical purposes in the position of the steps of addressing the issue. In most cases of traditional practice, the most important steps will start on specific issues, end and end creative solutions - no important features such as understanding, understand its solution and generalize it. In such a methodology, the goal is only solving the issue, and the technology does not teach the search and research methods.

Working on the issue should be aimed at shaping the general methods of searching for solutions. This will help you to successfully search for solutions from the harmonical instruction system.

CONCLUSION:

Such research work to create physical or mathematical models in the field of stem sciences to achieve the following goals:

- Improving the professional training of a highly qualified, creative thinking student;
- Affiliates students' creative abilities and the development of research and the formation of research.

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<https://doi.org/10.37547/pedagogics-crjp-02-10-39>.