



## Methodology of formation of econometric competences of students in theoretical and practical classes of econometrics.

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### ABSTRACT

This article contains comments by the author about the method of formation of econometric competences of students in theoretical and practical classes of econometrics. Also, the three main classes in which econometric models can be used in analysis and forecasting, as well as the stages of the modular teaching system in teaching econometrics are presented.

### Keywords:

Econometric Model, Pair Regression And Correlation, Multiple Regression And Correlation, Time Series

From the complex of widespread pedagogical technologies, forms and methods of teaching, and advanced pedagogical-psychological concepts of mastering, choosing a concept that ensures the fulfillment of the tasks set for the achievement of the level of readiness of students and meets the requirements for pedagogical technologies received. That is:

- the possibilities and reality of the proposed higher education institutions;
- systematic coherence with pedagogical processes and systematization to the necessary extent;
- necessary controllability of technologies and the availability of diagnostic tools to ensure this controllability;
- applicability, i.e. the availability of experience in applying these technologies in other similar conditions.

It is known that "the didactic module or educational topic in technology is considered the main object of design. Based on this, the principles of modular teaching were adopted as the main basis for designing the training course. The working program includes didactic

modules and educational elements selected during the analysis of the educational content. Based on the rules of classification, "econometric models are divided into three main classes that can be used in analysis and forecasting:

- temporary series model;
- one-equation regression models;
- system of econometric equations".

In this way, the main modules of econometrics training corresponding to these models are defined. However, based on the research of a number of authors, it is appropriate to divide the module into separate parts aimed at studying one-equation regression models. What do we get as a result? Each of the separate parts provides conditions for the application of the didactic rule in the order of "from simplicity to complexity" based on the results and for the conscious understanding of the educational material, considering pair and multiple regressions. Unfortunately, practice shows that students do not have enough basic knowledge to master econometric knowledge in the necessary volume and quality.

The solution to this problem lies in the content of the module. In our opinion, it is necessary to add another module to the structure of modules, and it should consist of elements related to the stages of recognition of knowledge in the field of probability theory and mathematical statistics, basic concepts of econometrics, and the history of the emergence of physical knowledge.

As a result, we can choose the following modules:

Module 1: Introduction to Econometrics.

Module 2: Pairwise Regression and Correlation.

Module 3: Multiple Regression and Correlation.

Module 4: system of econometric equations.

Module 5: Time Series.

Based on the principles of functional approaches to goal-setting in modular teaching and education, "generalizing didactic goals and collective didactic goals were defined for each module."

"Knowledge of the methodology of quantitative analysis of experimental data in the field of economics and their theoretical interpretations are the theoretical foundations of the science of "Econometrics". "Econometrics" is also integrated with many other fields of science (social-humanitarian, natural, scientific, professional and special) for all-round development of the future specialist, formation of personal and professional culture, knowledge related to his future activities. it is necessary to acquire it deeply and to ensure the development of economic thinking". We use identifiable proprietary metrics and parameters to diagnose the level of goal achievement. Such indicators and parameters include the level of education, consistency of acquisition, readiness to use skills and conscious application of knowledge.

In order to determine and evaluate the effectiveness of methodological systems, the following indicators indicating the effectiveness of educational technologies:

- increased level of mastery;
- increasing interest in the studied subject can be recommended.

"According to the main program of our research, the content of educational technology directly includes the structure of education and specific aspects of course design".

"Econometric methods used in economics are as follows:

- linear model of multiple regression;
- the method of least squares;
- least squares estimation features;
- regression quality indicators;
- linear regression models with heteroscedastic and autocorrelation residuals;
- generalized least squares method;
- regression models with variable structure (dummy variables);
- non-linear models and their linearization;
- properties of time series;
- stationary and non-stationary temporary series model, their identification;
- system of simultaneous linear equations and their identification;
- identification of the system of simultaneous equations".

We will consider methodological aspects of the technology of teaching econometrics to students of economics.

According to him, the method of studying the materials of the educational program in lecture classes, and strengthening them in practical classes, as well as developing skills and competencies, gives the expected effect.

Additional questions selected for any form of training should be based on the knowledge needs and readiness levels of learners.

"When introducing the principle of an individual approach to education, training is adjusted to the knowledge, skills and qualifications of the learner, his/her characteristics as a person, and the characteristics manifested in the educational process. The "diversity" of mathematical and statistical methods used in economics creates a basis for choosing a set of problems that meet the interests and capabilities of each student and meet the requirements of his individual development directions. An important place is the introduction of an individual approach to teaching in the proposed technology for teaching econometrics to economics students. This approach can be implemented by ensuring the quality of students' non-curricular activities (work outside the classroom, homework, independent research, etc.).

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