

DESIGNING AN INFORMATIONAL - ANALYTICAL SYSTEM OF A
DISTANCE COURSE ON THE SUBJECT
“DATA ANALYSIS IN THE SAS SYSTEM”

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It is difficult to imagine a modern education system without distance learning, because during it a significant part of educational processes is carried out using modern information technologies. The analysis of publications with the development of information technologies is becoming more and more relevant for the use of open and remote systems using telecommunication systems, video collections, computerized and multimedia programs, Internet. So, in conjunction with the full-time and part-time forms of education, a distance learning form began to function. It is considered not as a modern approach to self-education, but as a separate system, which is a way to give a deep knowledge, to prepare high-level specialists who have a diploma that stands next to traditional diplomas.

The disadvantages and advantages of such a system of education are ongoing disputes. Currently, we are considering distance learning as one of the intermediate stages of developing a distance learning course in combination with a traditional correspondence form. This system is especially relevant for non-resident students who cannot seek advice directly from a teacher.

The main motive for creating the theory of IRT is the development of such models of educational assessments, which allow determining the level of preparedness of participants that do not depend on a specific test.

The procedure for more accurate data conversion into an interval scale can be performed based on the Rasch model.

George Rush suggested that the level of preparedness of the tested θ_i and the level of the task β_j are placed on the same scale and measured in the same units - logit. The argument for the success of the subject is the difference $\theta_i - \beta_j$. If the difference is positive and large, then it is high, and the possibility of success of the i-th test in j-th task [1].

If the difference is negative and large modulus, then the probability of success of the i-th test subject in the j-th task will be low.



Fig. 1. Characteristic Curves for ICC Problems in the 1PL Model

As a mathematical model that relates the success of the subject with the level of his preparedness and difficulty of the problem, choose the logical function, which for a one-parameter model, Rash has the following form:

$$P_j(\theta) = \frac{e^{1,7(\theta - \beta_j)}}{1 + e^{1,7(\theta - \beta_j)'}}$$

where θ , β are independent variables for functions.

The purpose of this work is to improve the quality of student learning by designing an information and analytical system of distance course on discipline "Analysis of data in the system SAS".

In the framework of the study, the requirements for distance learning systems were studied, the classification of distance learning systems was considered. Existing remote learning systems were also reviewed and the most commonly used analysis was analyzed, on the basis of which we chose LMS Moodle, which is the best free software open source software and many plug-ins.

The results obtained. A course is developed for students and a program complex that analyzes students' answers.

References

1. DeMars, Christine. Item Response Theory Understanding Statistics. [Text] / M.: Christine DeMars – Oxford University Press – 2010. – P. 10-15.

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