

MATHEMATICAL MODEL FOR THE ANALYSIS OF EXPERT ASSESSMENTS IN EDUCATION

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ABSTRACT

In this paper we develop and study mathematical model for the analysis of the educational numerical expert evaluations that characterize both the educational and psychological levels of student training (scholars and/or students) required in order to continue their further studies successfully. To solve the constructed mathematical model an iterative algorithm is developed. Besides, it is proved that algorithm convergence as well as its convergence rate is determined. A numerical experiment illustrating how an iterative algorithm function is implemented was conducted. The obtained results show that by means of using the developed model as well as algorithm required for finding its solution there could be ranked both the true ratings of students based on the overall expert evaluations and the experts themselves in two ways – using the levels of "objectivity" and "coherence".

Keywords: Mathematical model, expert assessments, objectivity, coherence.