A Platform for Nonlinear Programmed Learning of Mathematics

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This paper presents a platform for nonlinear programmed learning, an innovative tool for individualized acquisition and practice of educational content. The platform allows students to learn and practice various procedures, especially in mathematics education, but also in other subjects, adapting to their needs and levels of knowledge. Nonlinear programmed learning involves generating subsequent tasks based on the student's current response. When solving tasks, students have access to textual or pictorial questions with four possible answers, out of which only one is correct. In the case of a correct answer, the student moves on to a new task. Otherwise, they receive a simpler task or instructions explaining common mistakes, as well as review materials in the form of definitions and statements. The platform enables students to practice independently, both in school and at home, at their own pace, without direct teacher involvement. On the other hand, the teacher's interface allows the input and customization of tasks, the definition of task difficulty levels, and the monitoring of student progress. Teachers have insight into students' results, which allows them to better understand each student's knowledge level and specific needs, through the recorded unique exercise path.

The nonlinear programmed learning platform provides a dynamic and interactive environment that encourages students to engage in active learning and continuous improvement, while providing teachers with tools for effective monitoring and support in the educational process.

Key words: *nonlinear programmed learning, interactive platform, modern tools*

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