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Potential of Maple as tool for improving financial education of future teachers

In the Czech Republic one of the key tasks of an education system is to ensure the financial literacy of citizens. Scarcely any topic of the school curricula is undergoing such rapid and frequent changes as the topic of financial issues. Therefore its teaching requires new approaches that would dynamically respond to the current situation.

The contribution deals with an original collection of educational materials developed by the authors to support the financial education of future teachers at the Faculty of Education at the University of South Bohemia. In addition to the usual computer means of financial computation such as spreadsheet and online calculators the authors discovered the utilization of the computer algebra system Maple to be beneficial. Maple enables to create interactive "smart documents" whose interactivity consists in implementation of a simple user interface beyond the framework of usual document. This fact enables the user to influence the computation result by a change in input parameters and thus de facto to simulate an inexhaustible number of situations. These documents can be extended by executable applications programmed directly in program Maple, maplets. The main benefit of these applications is that even if they utilize the whole computation potential of program Maple, their user environment can be limited to required functions and thus it is possible to reach a close specialization of particular applications.