An overview on the curricula for linear algebra in the Macedonian gymnasiums

ANA DONEVSKA-TODOROVA
Institute of Mathematics
Faculty of Natural Sciences and Mathematics
Humboldt University of Berlin, Germany
todorova@math.hu-berlin.de

In this talk, I would discuss the current state of the curriculum for Linear algebra in the upper high schools, called gymnasiums with a profile for natural sciences and mathematics in the Republic of Macedonia. The discussion would consider two aspects. First, I would compare the old with the actual version of the curriculum dating from 2014. Second, I would compare the current curriculum with appropriate curricula in the west European cultures as Germany and France. These comparisons will point out not only the selection of the content-specific topics based on an epistemological analysis but will also include didactic considerations and suggestions for teaching and learning. The argumentation is based on research evidence related to the teaching and learning of Linear algebra through lower secondary, upper secondary and tertiary level of education with an emphasis on the transition periods. Further on, I would suggest *Situations*, according to the Theory of Didactic Situations (TDS) (Brousseau, 1986), for innovative teaching of Linear algebra. In conclusion, the overview could offer proposals for further research-based curriculum development which could take into account the suggested innovations. The talk might attract the attention of textbooks authors besides curricula designers and teachers.