

Supporting the development of critical thinking skills in secondary education through the use of interdisciplinary statistics' and mathematics' problems

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Abstract

The present paper explores the issue of critical thinking through the use of interdisciplinary problems in the teaching of Secondary Statistics and Mathematics (Algebra). A definition of critical thinking is provided, the most important models-frameworks of critical thinking that have been developed since 1950 are briefly described and Halpern's framework of critical thinking skills and dispositions is analyzed further. Suggestions on teaching basic concepts of Secondary Statistics based on Halpern's model are presented. Also, interdisciplinary problems in the spirit of the OECD PISA program (Programme for International Student Assessment) are presented in correspondence to topics of Secondary Education Statistics and Mathematics (Algebra) Curriculum and in correspondence to the critical thinking skills, as defined by Halpern's model, whose development each specific problem can support.

Keywords and phrases : *Teaching statistics, critical thinking skills, interdisciplinary problems, teaching mathematics (algebra).*