Does Mathematics Education Contaminate the Mathematical Education?

Lenni Haapasalo & Lasse Eronen

University of Joensuu, Department of Applied Education,
P.O. Box 111, 80101 Joensuu, Finland

Emails: lenni.haapasalo@joensuu.fi, lasse.eronen@joensuu.fi

For anybody who wants to get a solid view of mathematics, it is important to know how and from where mathematical knowledge and mathematical thinking might appear and to come into life and action. A long term study of cognitive and motivational processes from the history of mathematics reveals eight main motives and activities, which proved to lead very often to new mathematical results at different times and in different cultures. These activities can be considered as a relevant framework not only for the teaching and learning of mathematics but also for what could be called ‘mathematical education’ in more general sense.

This contribution represents preliminary results of empirical studies, concerning how these eight components appeared by students at 8th class, by student primary school teachers, and by student mathematics teachers. Besides that the results reveal very stereotypic view of mathematics among all those sample groups, the most concerned finding is that the answer to the provocative question asked in the title might be affirmative: conventional mathematics education (i.e. mathematics teaching) seems to act in contra-productive way when thinking about extending students views of mathematics. However, a progressive shift to promote creative activities within constructivist framework using modern technology, for example, seems not only to change students’ view of mathematics but also to increase their self-confidence in making mathematics and utilizing technology.