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Assessing Mathematics Online: Another Stop on the Way to Imitative Reasoning?

Third level education has been tipped into online teaching out of necessity. The scramble to adapt delivery methods initially overshadows assessment and the implications of assessing mathematics in an online environment. Students frequently use approaches founded on recalling algorithms or facts (imitative reasoning) when solving mathematical problems, without necessarily understanding the underlying mathematical concepts. A study of introductory calculus examinations in Sweden found that 70% of problems could be solved by imitative reasoning and that 15 out of 16 exams could be passed using only imitative reasoning. Furthermore, it was discovered in the 1970's that, perhaps unexpectedly, students are influenced most by the means of assessment rather than the means of teaching. The question I ask is whether or not online mathematics assessment promotes imitative reasoning. I will look at examples from my own experience with online teaching and assessment. The message is that assessment strongly influences learning and perhaps we ought to scramble to find better ways of assessment especially in the online environment, that is, of course if we have time.

Going all online - teaching practice, learning design and assessment
Thursday, 18.3.2021 · 14:20 online (via Zoom)

