TECHNOLOGY IN THE MATHEMATICS CLASSROOM

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MATH 5365: TECHNOLOGY IN THE MATHEMATICS CLASSROOM

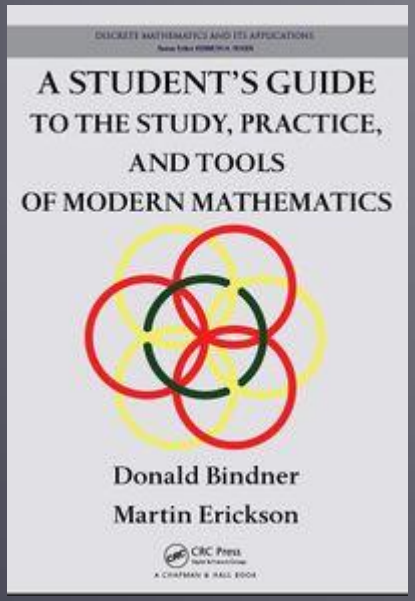
- Is a required three-hour graduate course in our *Master of Arts in Teaching Mathematics* program.

- Aimed at current Mathematics teachers and recent Secondary Education graduates.

- Catalog description:

An introduction to technology used in mathematics education such as graphing calculators, computer algebra systems, course specific software and the use of the internet, and an exploration of its appropriate and effective use in the mathematics classroom.

MATH 5365: THE CLASS AND ITS STUDENTS



- Taught in Spring 2013
- Class met one evening per week
- 24 students:
  - 13 HS teachers
  - 2 MS teachers
  - 3 ES teachers
  - 6 students with no or mimnimal teaching experience
- Textbook:

Bindner/Erickson, *A Student's Guide to the Study, Practice and Tools of Modern Mathematics*, CRC Press, 2011

MATH 5365: COURSE STRUCTURE

- 40% Lecture (a lot of Mathematica, some LaTeX, Geogebra, R)
- 35% Student presentations
- 25% In-class activities

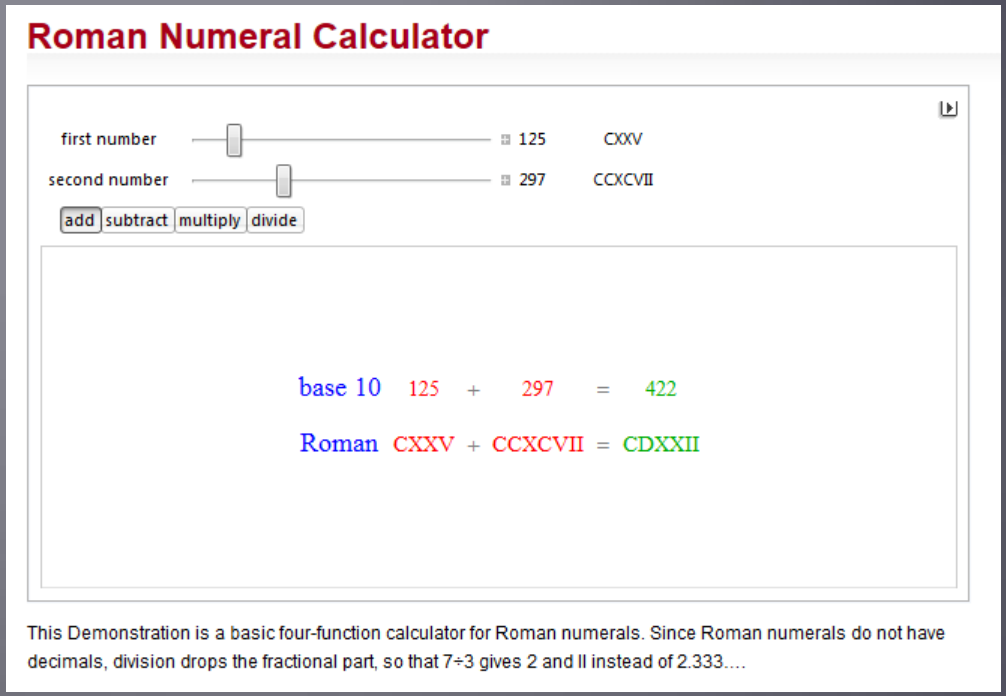
Course website:
http://helmut.knaust.info/mediawiki/index.php/CRN_26960

Student comment:
"The course left ample room for self-instruction."

MATH 5365: STUDENT DELIVERABLES

- Software review (2 students each, 20 minutes)
- Video lesson (2 students each, 3 minutes)
- Technology lesson (2 students each, 30 minutes)
- *Wolfram Demonstration Project* (individual)
- *Geogebra* demonstration (individual)
- Homework (individual)
- No tests

MATH 5365: WOLFRAM DEMONSTRATION PROJECT

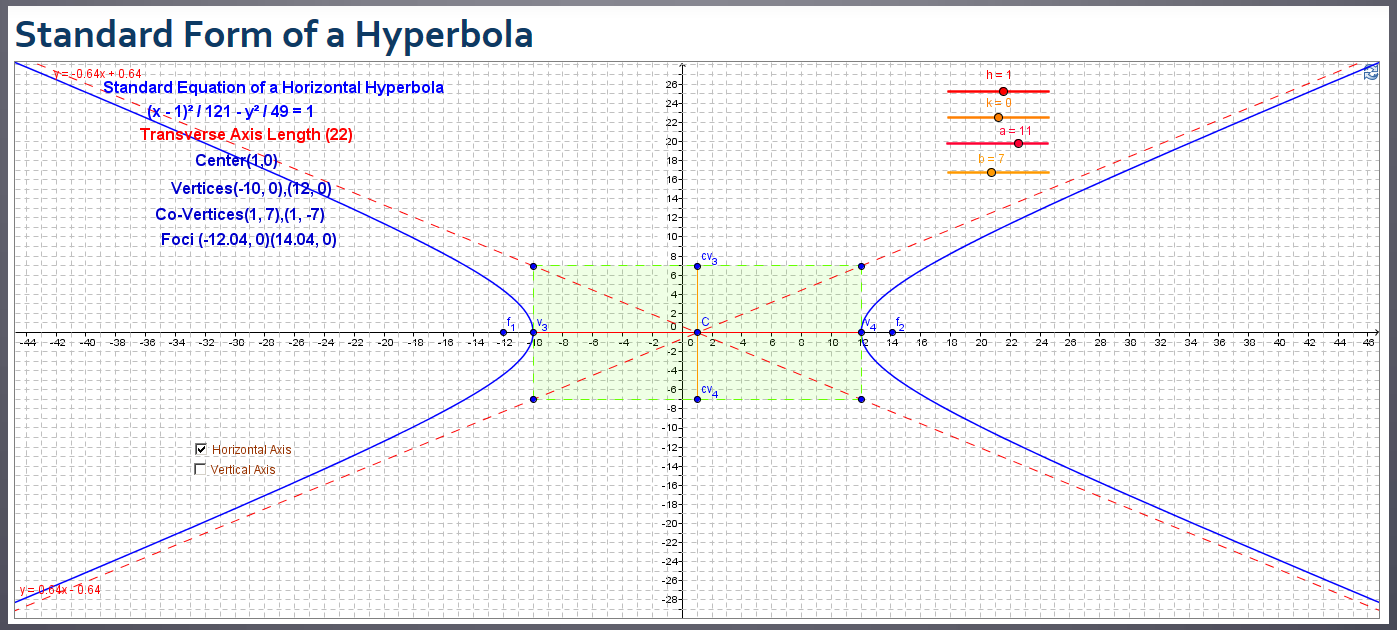


Mathematica has a steep learning curve.

One student project accepted…

MATH 5365:
GEOGEBRA TUBE

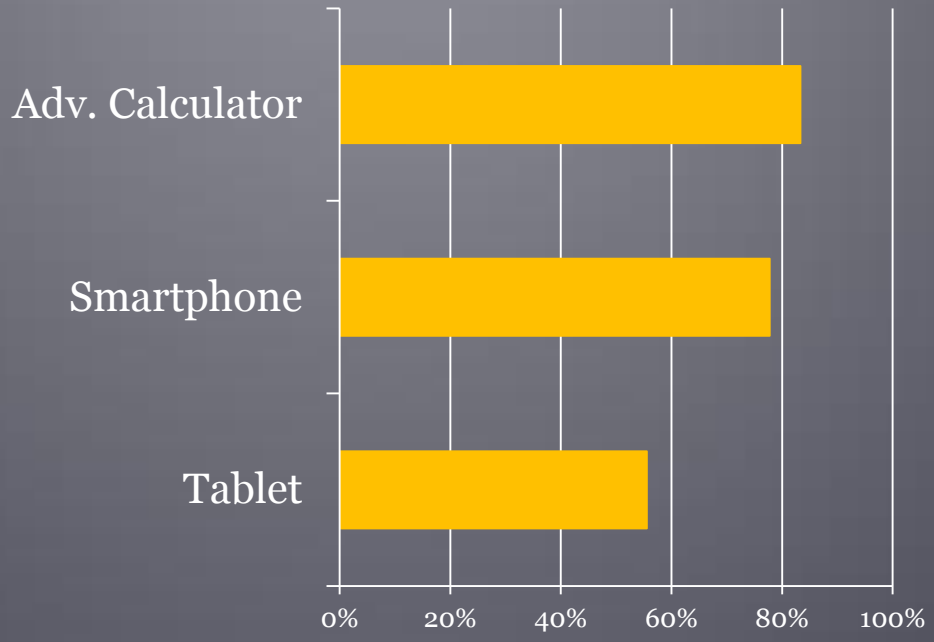
Everybody loves *GeoGebra*



Results presented only for the 18 teachers among the students

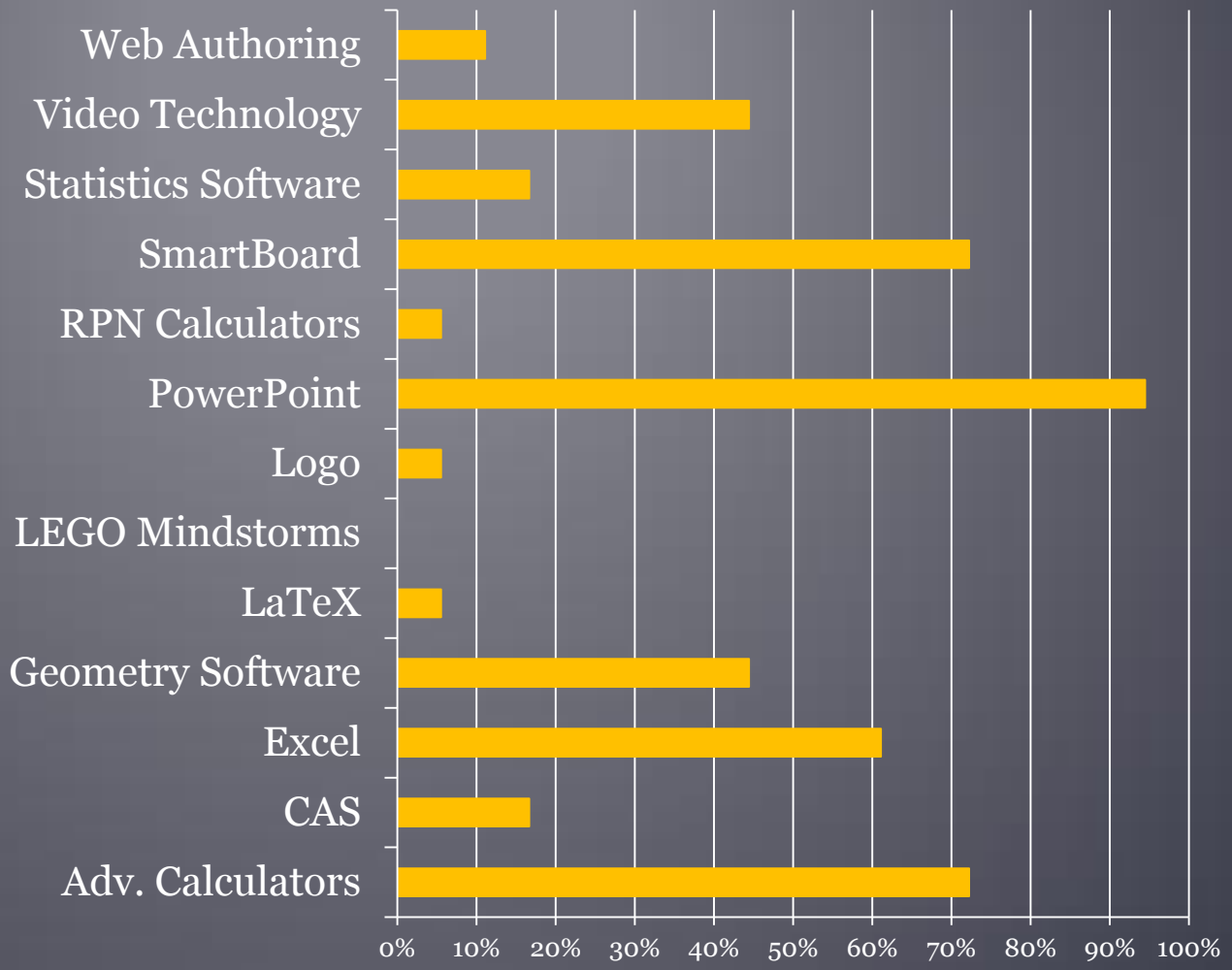
MATH 5365: STUDENT TECHNOLOGY SURVEY I

- Devices owned



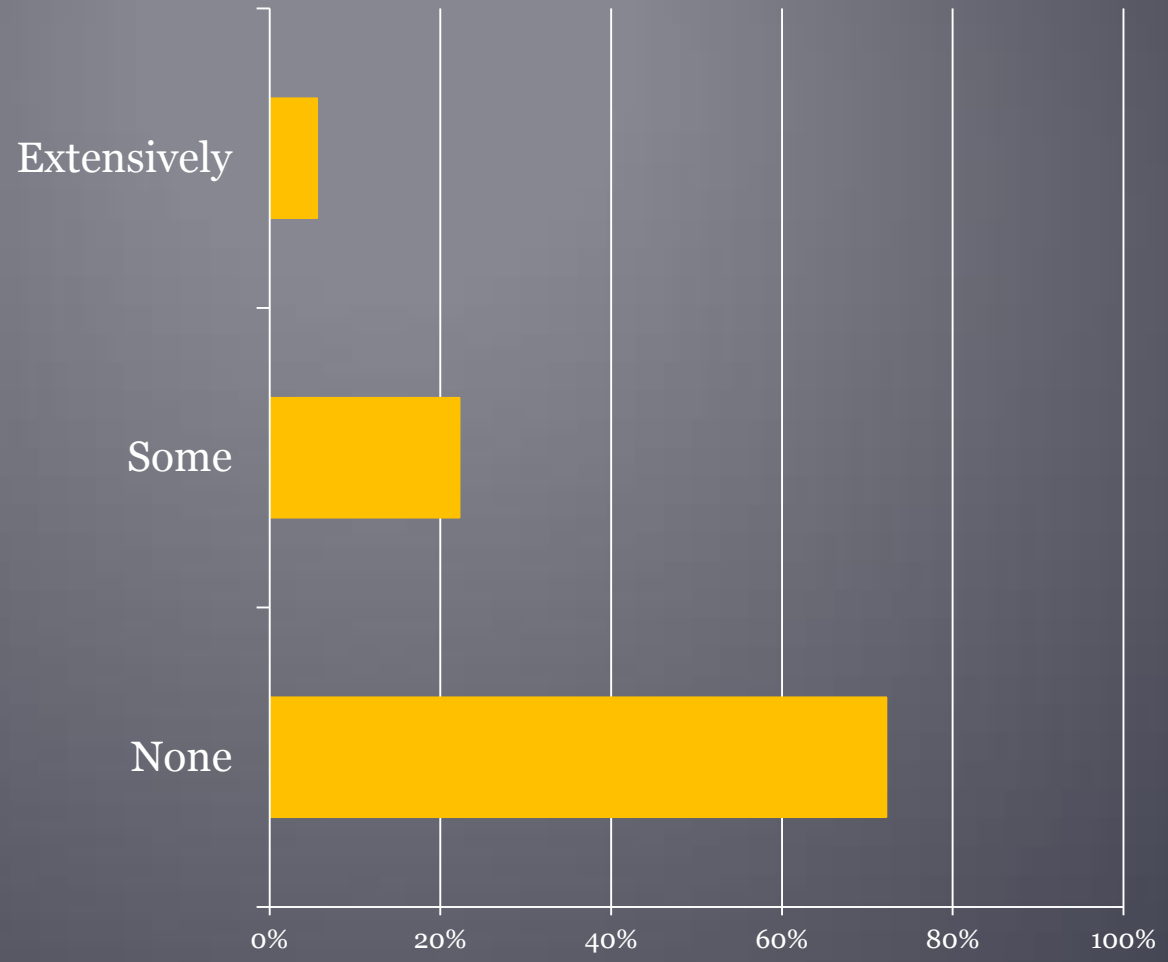
MATH 5365: STUDENT TECHNOLOGY SURVEY II

- Familiarity with Software (average to excellent rating)



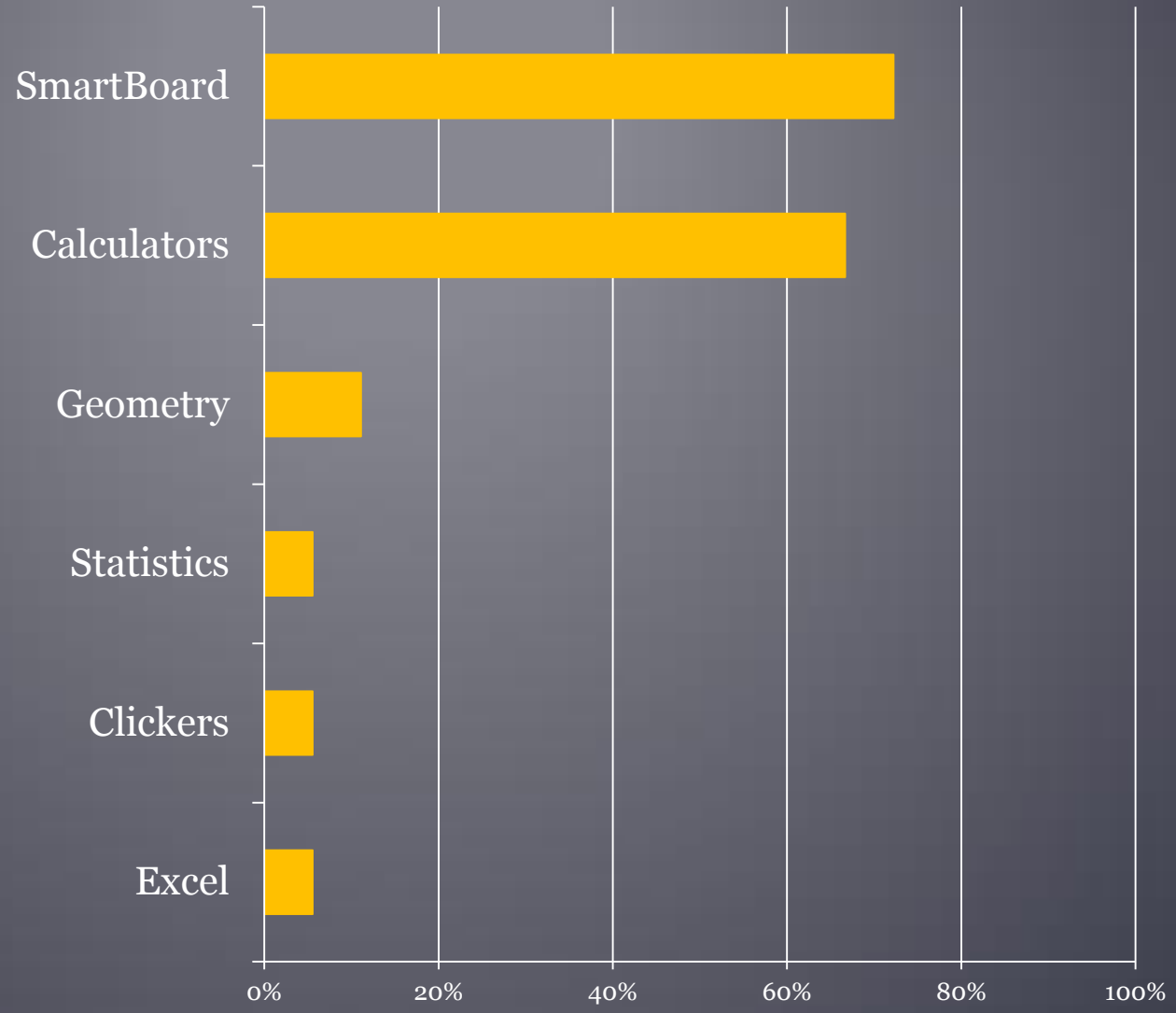
- Software/technology “learned on their own”

MATH 5365: STUDENT TECHNOLOGY SURVEY III



- Software/technology used in the classroom

MATH 5365: STUDENT TECHNOLOGY SURVEY IV



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PPT presentation
http://helmut.knaust.info/ts.html

Class website
http://helmut.knaust.info/mediawiki/index.php/CRN_26960