Students Think more Critically on Internet than in Classrooms

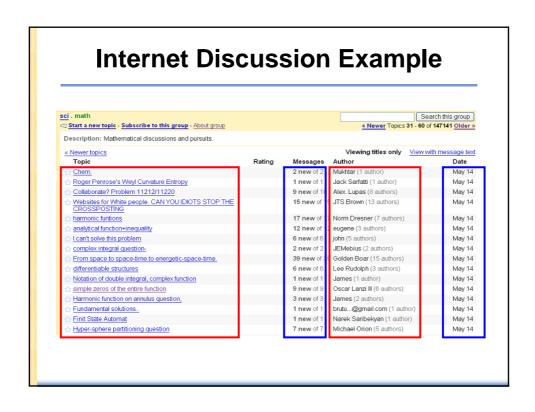
Gaowei Chen & Ming Ming Chiu

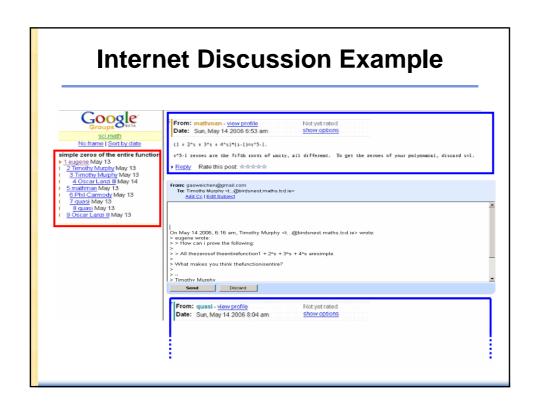
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Students' Internet Discussions?

- How often do they think critically?
- How often do they create new ideas?
- How do disagreements and new ideas affect other students' responses?





Learning Outside Classrooms

- Course related Discussions
 - Part course work online
 - Teacher moderation
- Independent academic Discussions
 - No course work
 - No teacher moderation
 - Free participation

Internet: More Accessible

- Via a connected computer
 - Individually
 - No need to gather a group of students
- Join discussion at any time & any place
 - Day, Night
 - School, Home, on Travel

Internet: More Critical Thinking

- Adequate time for preparing & thinking
 - Search for extra information
 - Refine personal ideas
- Less concerns about self-image
 - More willing to disagree others

Internet: Face-saving Concerns ↓

- Not Face-to-face
 - Less nonverbal cues (Face, Body, Voice)
- Use Pseudonym- ID or Nickname
 - Less real personal info(No real name, gender, nor past grades)
 - Weaker social relationships
- More Equality
 - Less status effect

Data and Analysis

- 47 university students, 131 messages on 7 mathematics topics
 - Free, un-moderated internet discussions
- Dynamic Multilevel Analysis (DMA; Chiu & Khoo, 2005)
- Published in the best journal in the field:
 Computers & Education

Results

<u>Message property</u>	<u>% of Wessages</u>

Disagreements 40%

New ideas 51%

Engage others to respond 55%

Results

Message property Effect on next message

Disagree ↑ Response by +22%

Disagree by +14%

High status person No effect

Internet vs. Classroom Discussions

	<u>Internet</u>	<u>Classroom</u>
Critical Thinking	40%	Less than 10%
Disagree	More responses	End conversation
High status person	No effect, More equality	Defer to high status, Less equality

Implications for Parents and Teachers

- Encourage children to join contentfocused internet discussions
- · Monitor children's internet use
 - Reduce social conflicts on the internet
- Use internet to discuss controversial topics

Thank You!