

Pilot research

MatemaTech

Hluboká nad Vltavou

11. - 12. 10. 2012

...Our questions...

- 1. Could you spell out the positive aspects of mathematics?**
- 2. What do you think is the hardest part of mathematics?**
- 3. If you had the possibility to change something in the mathematics lessons to make mathematics more popular, what would it be?**

...Our approach...

- Introduction (Jakub and Tereza)
- Few words about Matematech
- What is the PILOT about
 - Popularization of math
 - Motivation (increase)
- Why is math so unpopular ?
- Everything is anonymous (no stress)

...Our approach...

- Next step = three questions
 - Very specific and extentional answers
- 3 groups – writer
 - Each group gets their own papers for each question
 - Fill in these papers
- Questions one by one, every question 10 min
- The end – 5 minutes for control – notes
- We are there to answer any questions and help students with anything

...Schools – GYMCON...

- Gymnázium Česká a olympijských nadějí
- 3. A
- 3 groups, 24 students
- PC – IW
 - 1 – 2 times a week
- Notes:
 - divide the class
 - mixed groups
 - detailed explanation of the questions
 - write down every idea

...Schools – ISS Stavební...

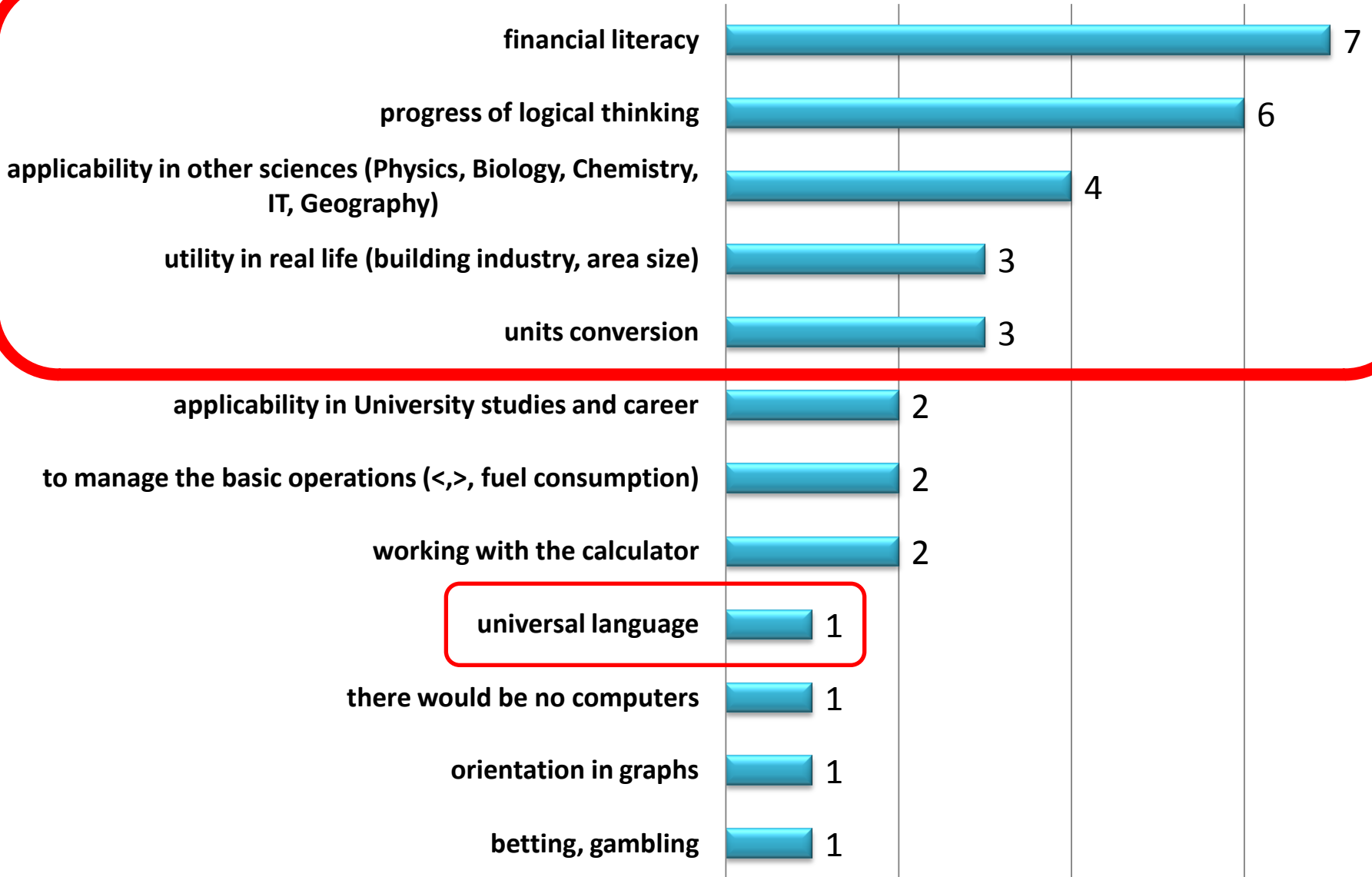
- Integrovaná střední škola stavební
- 4. A – lyceum
- 3 groups, 18 students
- PC – IW, GG, Cabri, Excel
 - every lesson
- Notes:
 - more active students
 - talk less write more !!!

...Schools – ČAG...

- Česko – anglické gymnázium
- 3. year
- 3 groups, 20 students
- PC – GG, $W\alpha$, Cabri 2 and 3D
 - once a week
- Notes:
 - we were more experienced
 - smooth and dynamic work of the groups

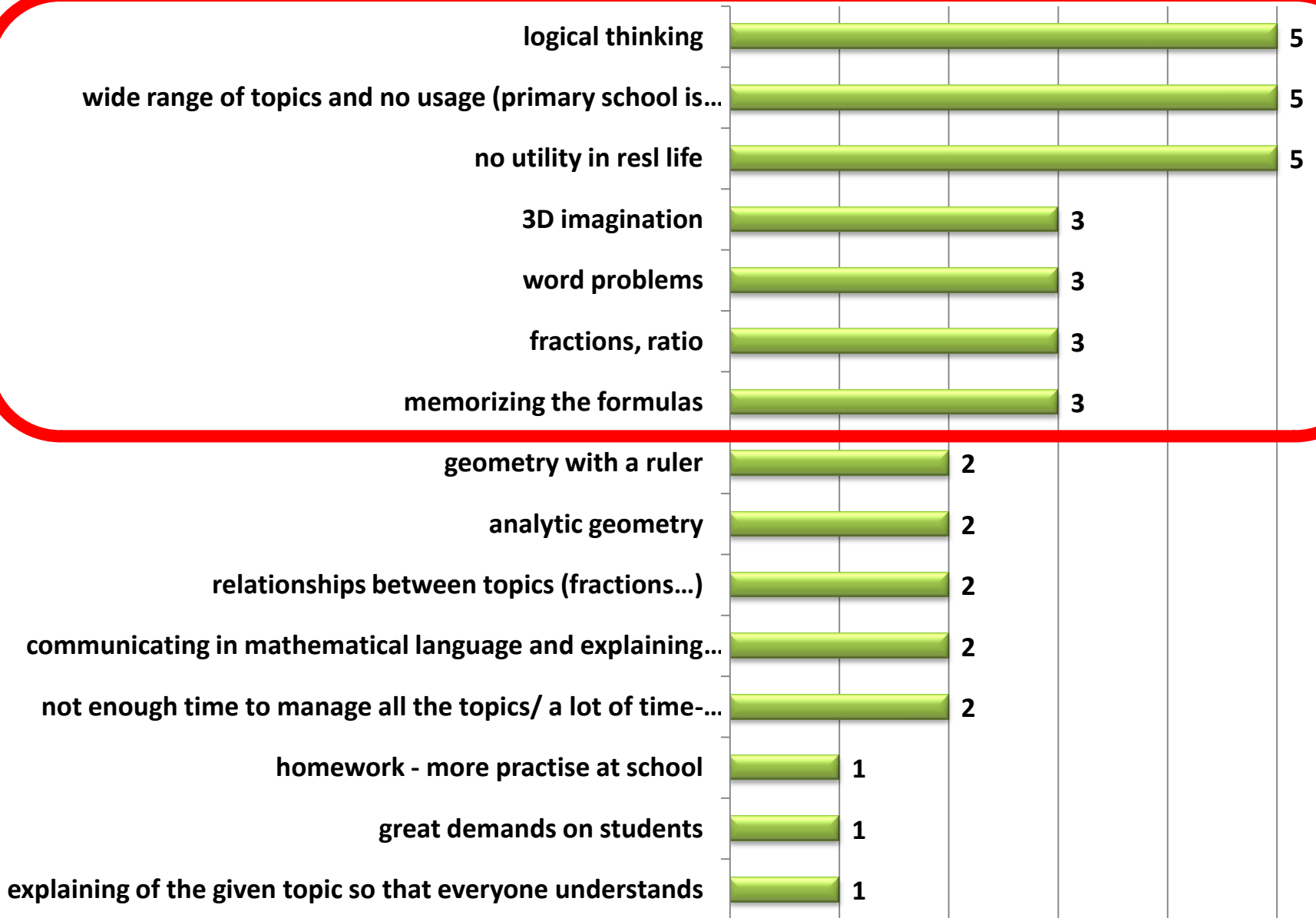
...Summary of 3 CB schools...

Could you spell out the positive aspects of mathematics?



...Summary of 3 CB schools...

What do you think is the hardest part of mathematics?



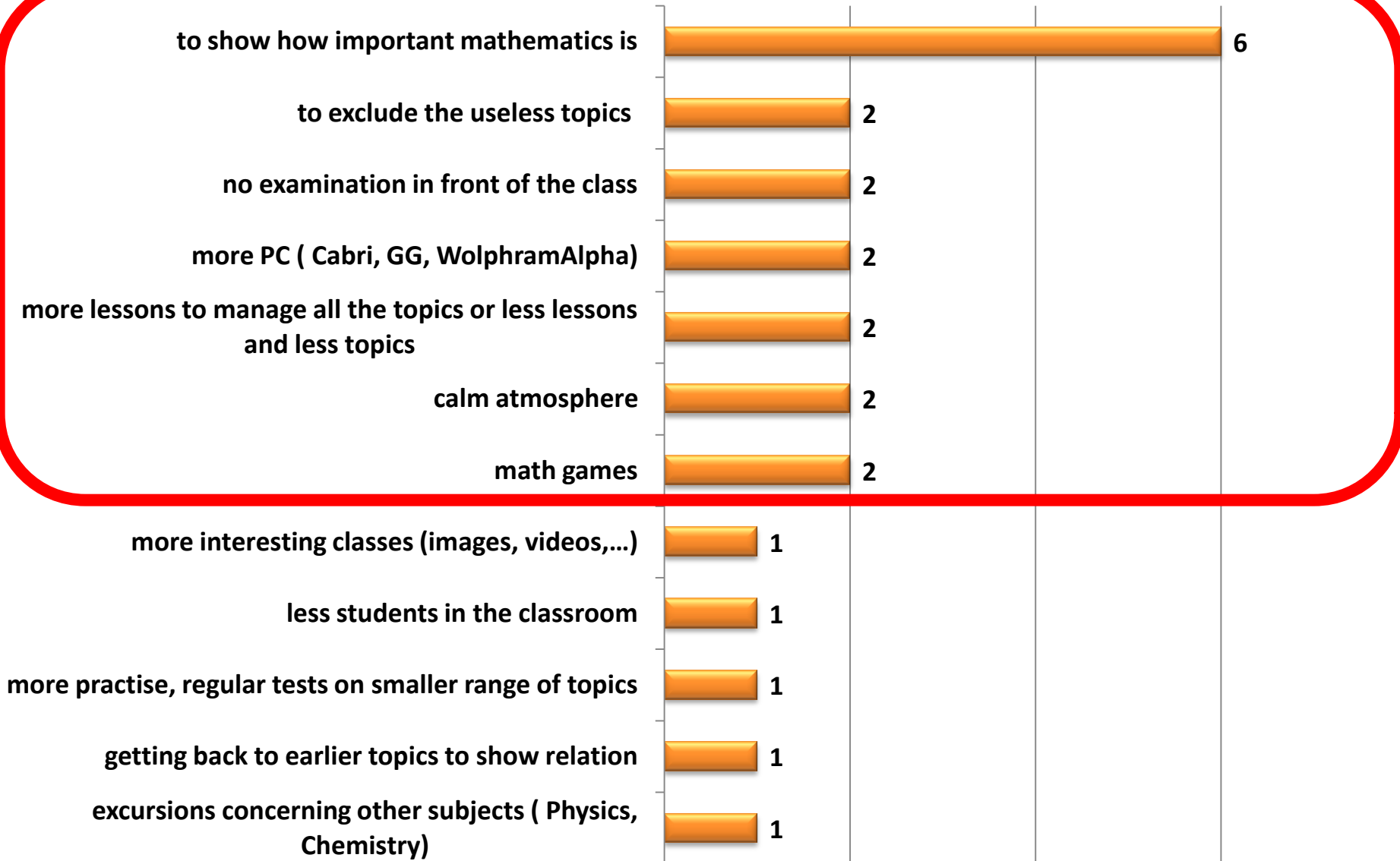
...Summary of 3 CB schools...

If you had the possibility to change something in the mathematics lessons, what would it be?

- 3 rd question
- Answers were about 2 areas
 - general interests
 - teacher
 - most diverse answers

...Summary of 3 CB schools...

If you had the possibility to change something in the mathematics lessons, what would it be?



...Summary of 3 CB schools...

If you had the possibility to change something in the mathematics lessons, what would it be?

Teacher

should capture students attention



tolerate students imperfections



gain students respect



must not mock at students



communicate with students



be interested in his/her field (a fiend)



give slower and more understandable lecture



discuss a problem



should pay attention to weaker students -
individualization



pay attention to students' understanding of the topic



motivate students



...Questions for teachers...

- **Do you ever use computers in your classes? If you do - how often? If you don't - why?**
 - Each teacher uses PC in Math
 - Use of projector with Mathematic software
- **Do you use GG and do you find it helpful in your lessons?**
 - $\frac{1}{2}$ uses GG and are satisfied with it

...Questions for teachers...

- **What is it, that motivates students to study mathematics?**
 - matura exam
 - marks
 - university studies
- **What do you think is the hardest part of mathematics?**
 - relationships, connections, application on everyday life

...Questions for teachers...

- **If you had the possibility to change something in the mathematic lessons, what would it be?**
 - more time to practise
 - more computers, high-quality software, moodle

...Differences between questions...

1) What motivates you to learn mathematics?

1) Could you spell out the positive aspects of mathematics?

2) What are the problems and difficulties you face when learning mathematics?

2) What do you think is the hardest part of mathematics?

3) What kind of mathematics learning and teaching resources/environments would you like to have to improve your motivation to learn mathematics?

3) If you had the possibility to change something in the mathematics lessons, what would it be?