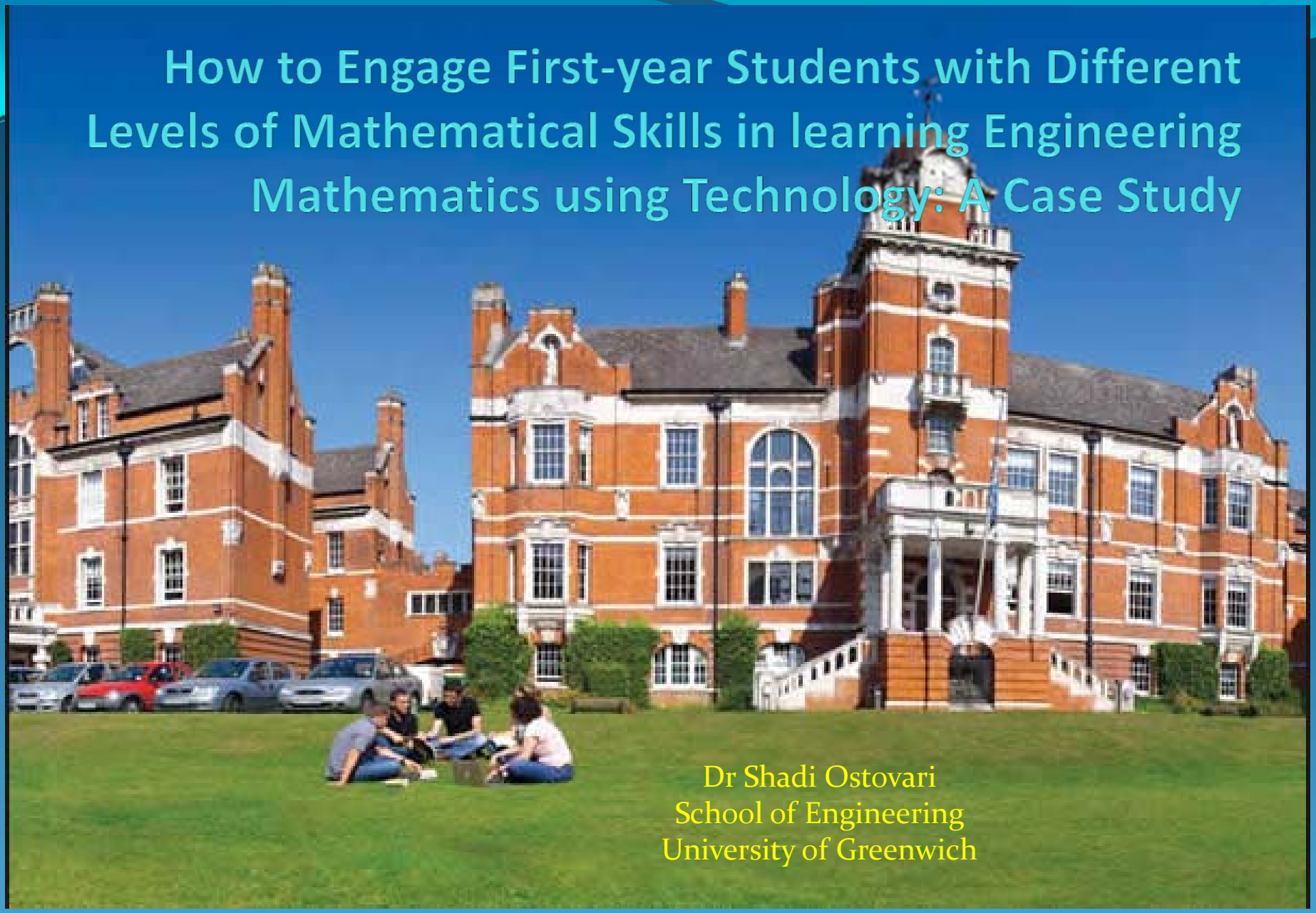
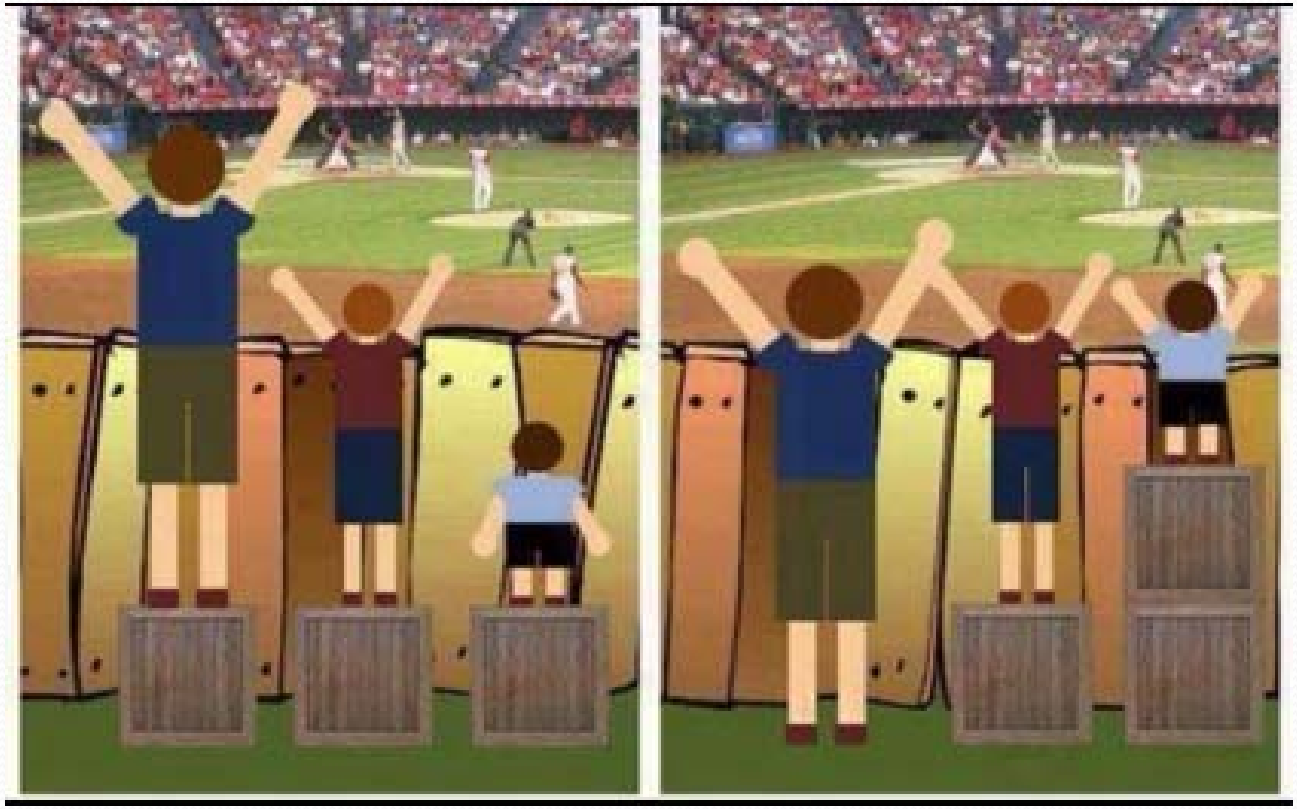
How to Engage First-year Students with Different Levels of Mathematical Skills in learning Engineering Mathematics using Technology: A Case Study



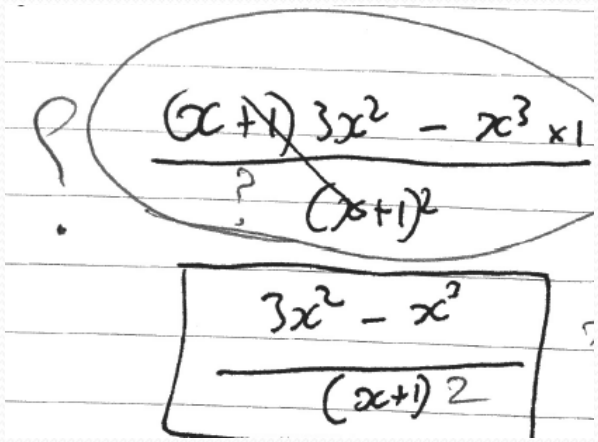
Dr Shadi Ostovari
School of Engineering
University of Greenwich

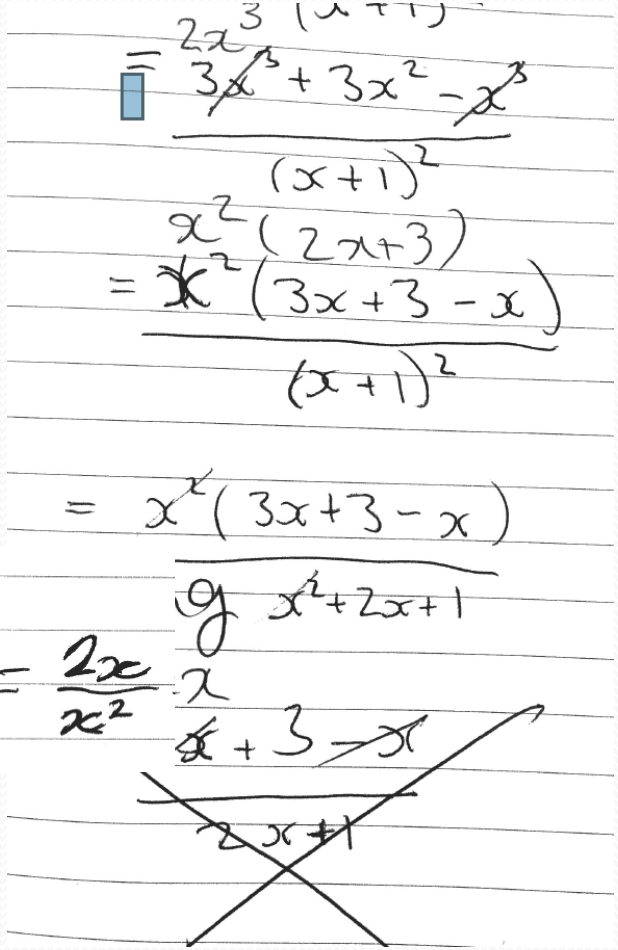
How the new generation learns?

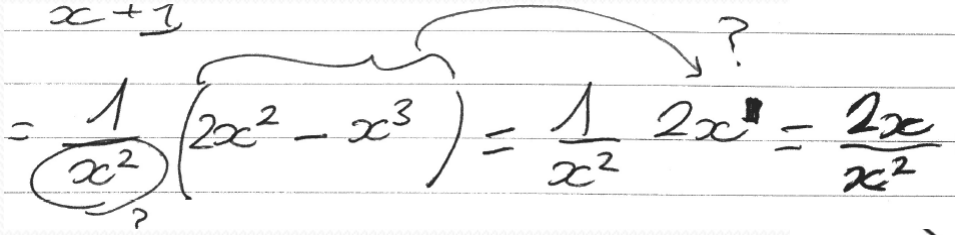
Students having very diverse backgrounds in Maths



Students having very diverse backgrounds in Maths- Examples







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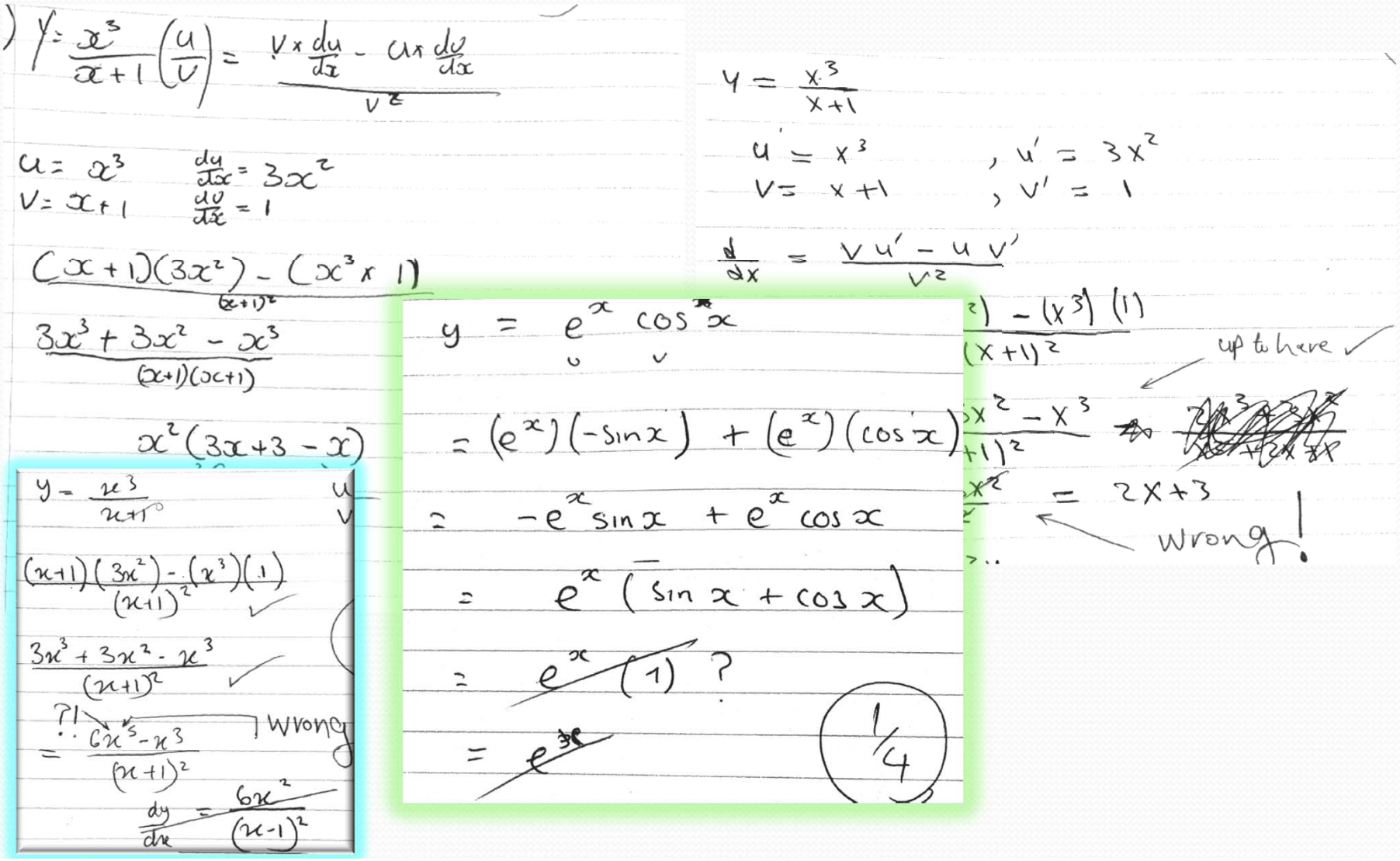
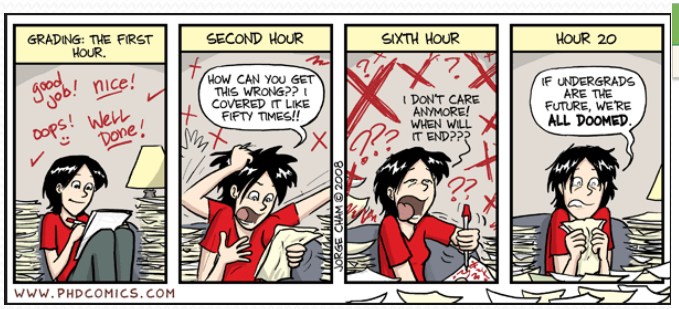
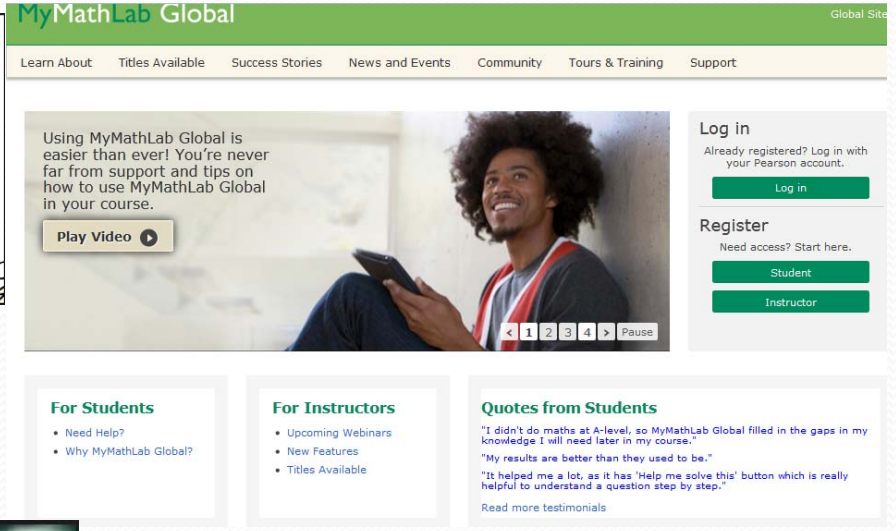
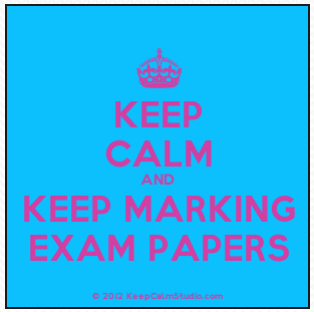


Methods adopted for giving feedback



Marking by lectures





Peer assessment

Interactive assessment and feedback tool

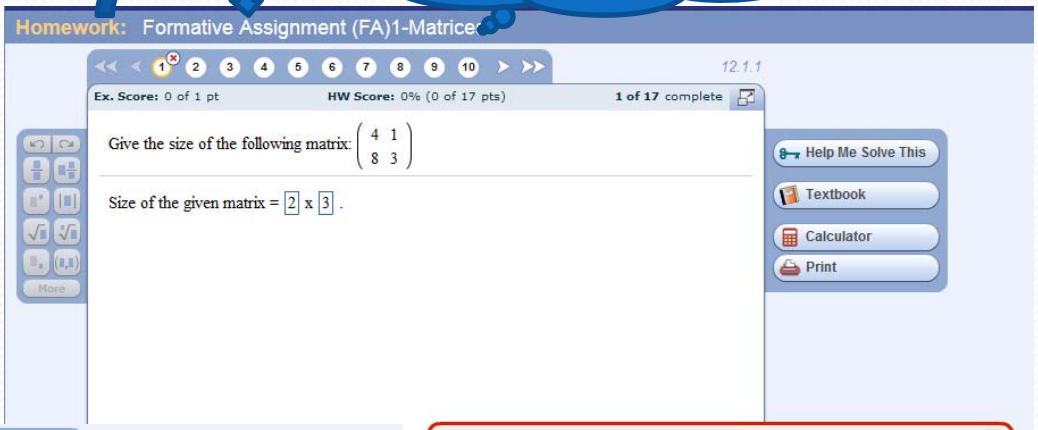
Use of technology can save time

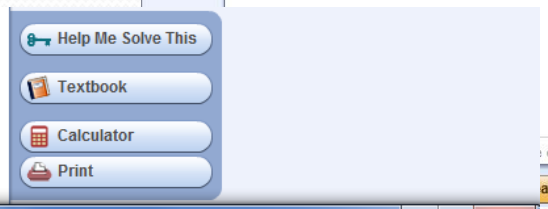
Courses Taught	Course Leading (%)	Students	Credits	Proportion Whole Class Teaching	Proportion Small Group Teaching (Seminar / Tutorial)	Proportion Assessment	Taught Period.	Proportion of whole class teaching allocated to small group Teaching	Total Points
[MATH1062] Mathematics 1A/1B (BSc)	100%	19	30	100.00%	100.00%	100.00%	T1-T3	100%	118
[MATH0027] Mathematics 1A/1B (BEng)	100%	35	30	100.00%	100.00%	100.00%	T1-T3	100%	158

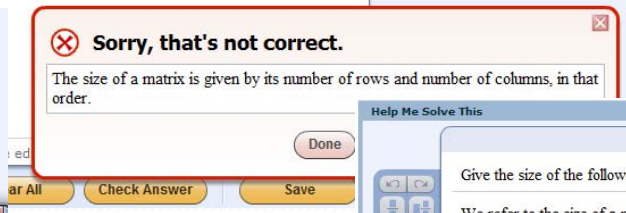
[MATH1062] Mathematics 1A/1B (BSc)	100%	19	30	100.00%	100.00%	20.00%	T1-T3	100%	87
[MATH0027] Mathematics 1A/1B (BEng)	100%	35	30	100.00%	100.00%	20.00%	T1-T3	100%	100

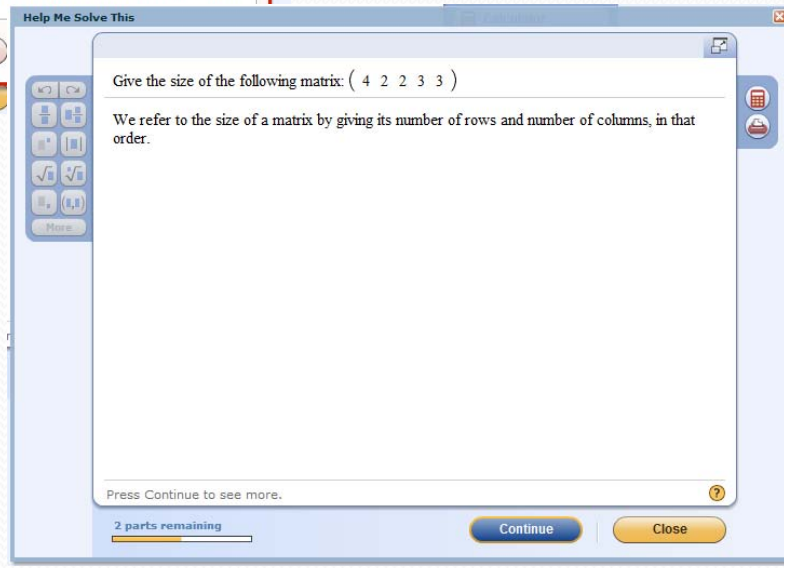
MyMathlab

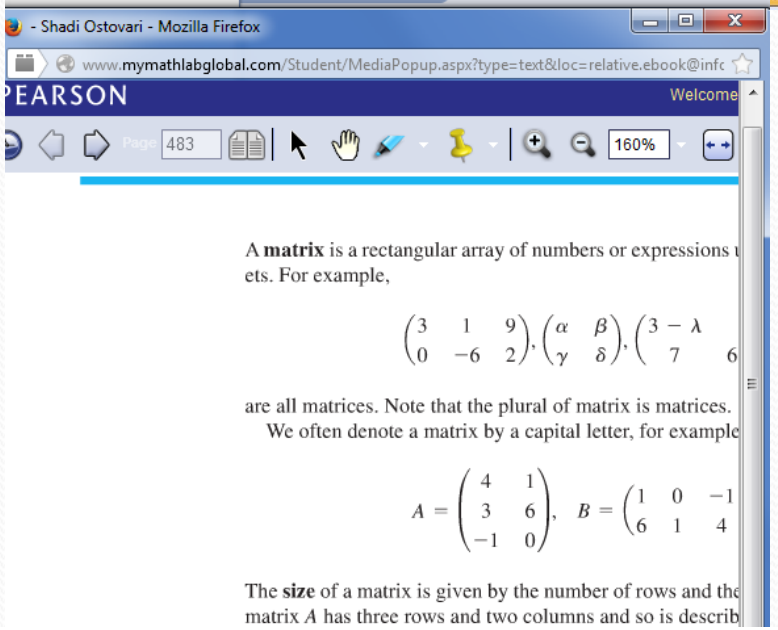
Summative?





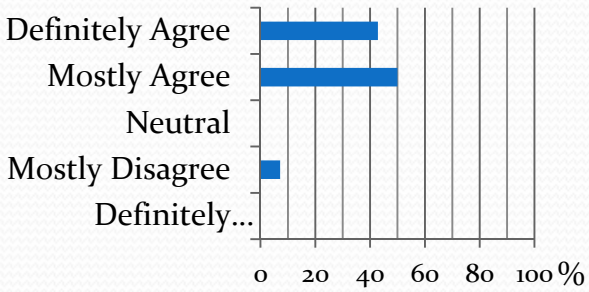




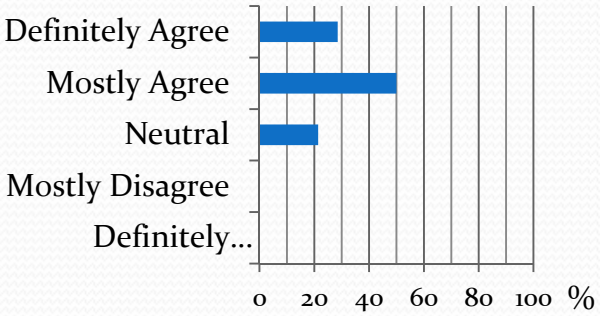


online assessment tool- Survey

Do you think My Mathlab allows you to learn Mathematics Flexibly?



Does MyMathlab help you to learn independently?



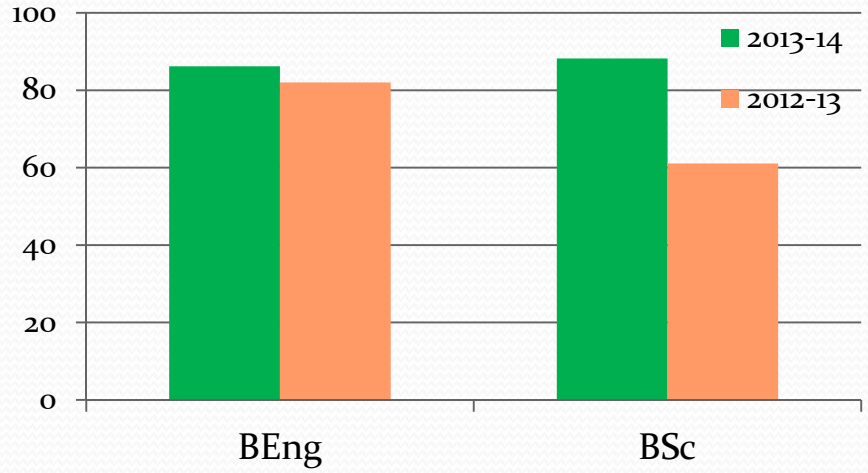
What do you like most about MyMathlab?

- Instant Feedback
- Regular assignments that let me learn on weekly basis
- Gaining confidence that I can learn myself
- Ability to learn A-level topics that I had not learnt before

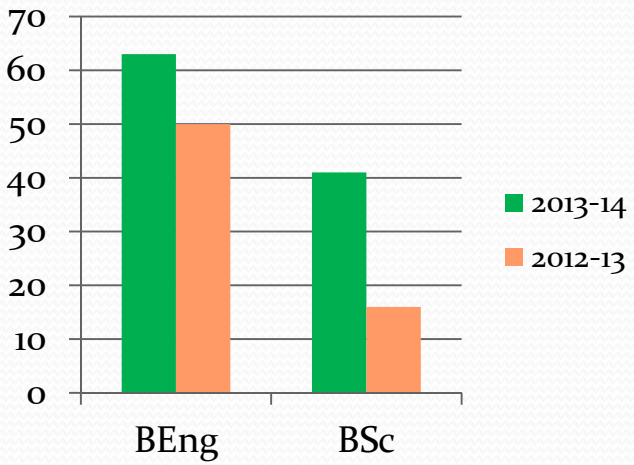
PEER Assessment

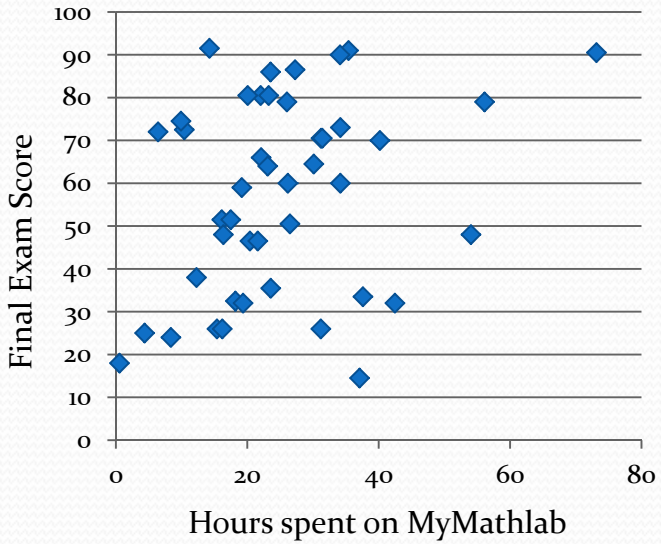
Statistics

Pass rate



Percentage of students achieving more than 60% in the final exam





- The final exam mark of BEng students showed a correlation of 0.39 (p-value=0.037) with the time they spent using MyMathlab.

Conclusions

Technologies → **Engagement**

MyMathLab Global

Confident

Useful

Time saver

Happy

References

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THANK YOU!