

# Using screencasts to enhance learning

Helen Busby, Coventry University

## Rationale

- Classrooms increasingly technology-oriented
- **Beneficial for students to see maths unfold** and hear associated language and terminology [1,2]
- Need to keep provision up-to-date and relevant for students (**student experience & digital literacy** [3])
- Providing for large class sizes with diverse student backgrounds

## Background

- Educational video clips are increasingly available on-line (e.g. via Youtube)
- Educators use videos/screencasts to give overview of topic [4], cover background/pre-requisite topics [5]
- **Screencasts shown to improve learning** [6]
- Previous studies use PC with suitable software/hardware (e.g. [5,6] use Camtasia)
- Several apps now available for iPad, developed for easy recording of video lessons

## Methodology

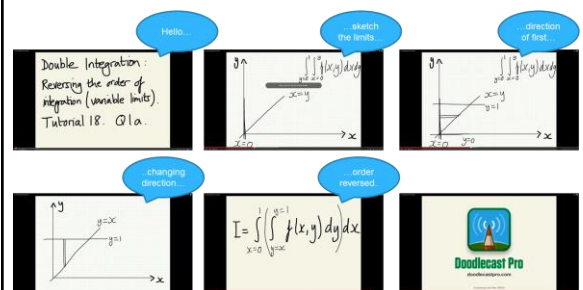
- **'Screencasts' are video recordings of tutor's penstrokes with simultaneous audio commentary**, here recorded on iPad
- Screencasts produced cover worked examples
- Examples **handwritten to retain personal connection** [6] - informal style, familiar tutor
- Students **view screencasts from Moodle**

## Process

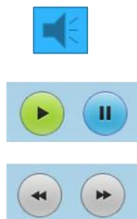
- Screencasts completed using Doodlecast Pro
- Transferred via Dropbox to Youtube
- Made available to students on Moodle



## Tutor experience



## Student experience



## Feedback

Student feedback collected via short questionnaire:

“Excellent videos..”, “Very helpful”

All students felt the screencasts **helped a lot** in their understanding, and **would like to see more**.

Colleagues commented:

“I can fully understand why students like them.”

“I really liked the informal style.”, “Brilliant idea”

## Practicalities

- Chose Doodlecaster Pro app on iPad with stylus
- Doodlecaster Pro videos can go on YouTube not just developers website (discussed with e-learning unit)
- **Software easy to use, continuously improving**
- Time to record depends on complexity of worked example and features used
- Become more adept at recording with practice

## Conclusions

- Screencasts **enhance learning of mathematics**
- **Increase accessibility** - Students can view them in own time at own pace as often as they wish
- **Popular with students**
- Straightforward for staff - quick and easy to record
- **Allows tutor to focus on supporting students** without having to keep repeating core material
- **Embraces technology whilst retaining proven value of traditional methods for teaching maths**

## References

- [1] Australian Mathematical Society (2013). Professional Development Unit: Teaching Classes, M1 to M7. <http://www.austms.org.au/Professional+Development+Unit>
- [2] London Mathematical Society (2010). LMS Teaching Position Statement: Mathematics degrees, their teaching and assessment. <http://www.lms.ac.uk/>
- [3] Coventry University (2011). Teaching, Learning & Assessment Strategy 2010-15.
- [4] Khan Academy (2013). Video library. <https://www.khanacademy.org/math/calculus>
- [5] Loch, B., Gill, O., & Croft, T. (2012). Complementing mathematics support with online MathsCasts. *ANZIAM Journal*, 53, C561-C575.
- [6] Jordan, C., Loch, B., Lowe, T., Mestel, B. and Wilkins, C. (2012) Do short screencasts improve student learning of mathematics? *MSOR Connections*, vol 12(1).