

Transforming student learning in an undergraduate course through the use of bespoke videos

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Two Parts to Presentation

Part 1 – Description of a recent project where undergraduates created short videos of key “specific” skills in sport and exercise science degree for sharing across the program

Part 2 – Description of a planned project where we hope to use a “summary video” of key behaviours to help guide students toward approaches that may improve their academic experience

Part 1

Description of a recent project where undergraduates created short videos of key “specific” skills in sport and exercise science degree for sharing across the program

The problems we wanted to tackle

- Academic and technical staff often ~~complained~~ noted that second and third year BSc Sport Science students often required refresher training on key skills including:
 - Laboratory equipment set-up/use
 - Statistical techniques in Excel and subject specific software
- Staff are frustrated by volume and frequency of e-mail needed to support students
- Some students struggle with module progress because they either could not OR did not attend scheduled sessions
- Some students enrol in modules but don't have the all of the expected background (e.g. exchange and transfer students)
- Scheduled contact time is increasingly used to describe and explain standard aspects of assessment tasks (much of which is contained in the assessment brief)

Personal experience of videos in teaching and learning

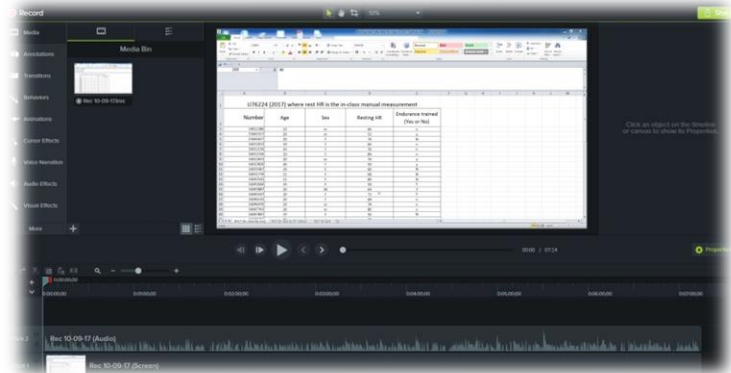
- I have used video lecture capture at all my undergraduate lectures (synchronised voice and slides) since 2013 with following benefits:
 - Personal development
 - Checking fairness of multiple choice exam questions by checking the exact detail of what was taught (listening again to what was actually said)
 - Enable colleagues to experience samples of my modules if they wish
 - Reviewing what guest lecturers and colleagues taught in my absence
 - Better support for students with disabilities (e.g. auto-captioning)
- I also make separate computer screen capture videos to help show students how to approach formative and summative assessment
- Tracking statistics in Moodle over the last 5-years show that:
 - ~50% of students regularly “access” the lecture capture videos
 - 100% of students in a module watch videos that are directly related to their assessment
 - (~95% of module recognised exam content that was exclusively taught in the video)

Spreading the video based approach by inviting students to create key videos









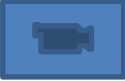

- Faculty of Health and Life Sciences funded a small project in 2015 - 2016 year (~£1500) to support staff/students in creating videos that would be helpful to students in Sport and Exercise Science.
- Project repeated in 2017 - 2018
- Funding used:
 - Student paid time (Faculty teaching budget)
 - Staff time (Department “in kind” contribution)
 - Equipment (Department budget for Camtasia software + good quality microphones)

What did we actually do ?

- Staff and invited students (4 students per year) met to discuss areas to target for video creation
- Students then created scripts and storyboards for target areas that were presented to staff for approval
- Students then created videos using camera phones and produced the final versions with Camtasia software for upload to Moodle pages and use in lab classes



Ten videos completed to date

- Overview of diet analysis software 
- Explanation of statistical tests in Excel (e.g. t-test, correlations + regression)  
- Measuring metabolic rate via expired air analysis
 - Automated approach 
 - Manual approach 
- Body composition tests (skinfolds, bio-impedance)  
- Reaction timer
 - Anticipated reaction 
 - Directed reaction 
- Vertical jump measurement 

Student reflections

“I thoroughly enjoyed the whole experience, being able to give something back to both my lecturers, who have put in so much for my own learning and the university. I think the project was a wonderful idea and hope it helps future students.”

“The videos made me appreciate how much this project would help others as personally I am very much a kinaesthetic learner and therefore the videos would help this learning process greatly.”

Future enhancements

- Widen impact by using Moodle to host videos increasingly within the module specific pages rather than the general BSc course webpage
- Expand the quality and range of videos in the database by developing an assessment task in a module to help all students create videos
- Create a video for all items in our lab equipment inventory and locate in our online resource pages:

<https://sites.google.com/brookes.ac.uk/shslaboratories/laboratories/equipment-procedures>

Part 2

Description of a planned project where we hope to use a “summary video” of key behaviours to help guide students toward approaches that may improve their academic experience

Part 2 - Origins

Part 1 project – student led help video:

1. Read the assessment criteria well
2. Plan your essay/report
3. Get involved (research - project volunteer)
4. Good working environment (low distraction area)
5. Print off journal articles (shows text added/highlighted)
6. Use feedback
7. Effective time management (planning well before deadlines)
8. Read the module handbook
9. Contact lecturers
10. Exams and coursework (reading the question carefully/don't panic)

TOP 10 TIPS FOR A SUCCESSFUL SPORTS SCIENTIST



Presenter view

Next steps - outline

1. We plan to provide 1st year BSc students with an engaging/entertaining talk (45mins) which will introduce eight desirable student behaviours in Week 0
2. The talk will end with a 3 min summary video
3. The same video will be replayed to these students in a compulsory module at the start of Year 2 and Year 3
4. Posters with each desirable behaviour will be located in prominent places (e.g. labs)
5. The video will also be available on Moodle pages

What to choose for the eight desirable behaviours to include in the talk and video?

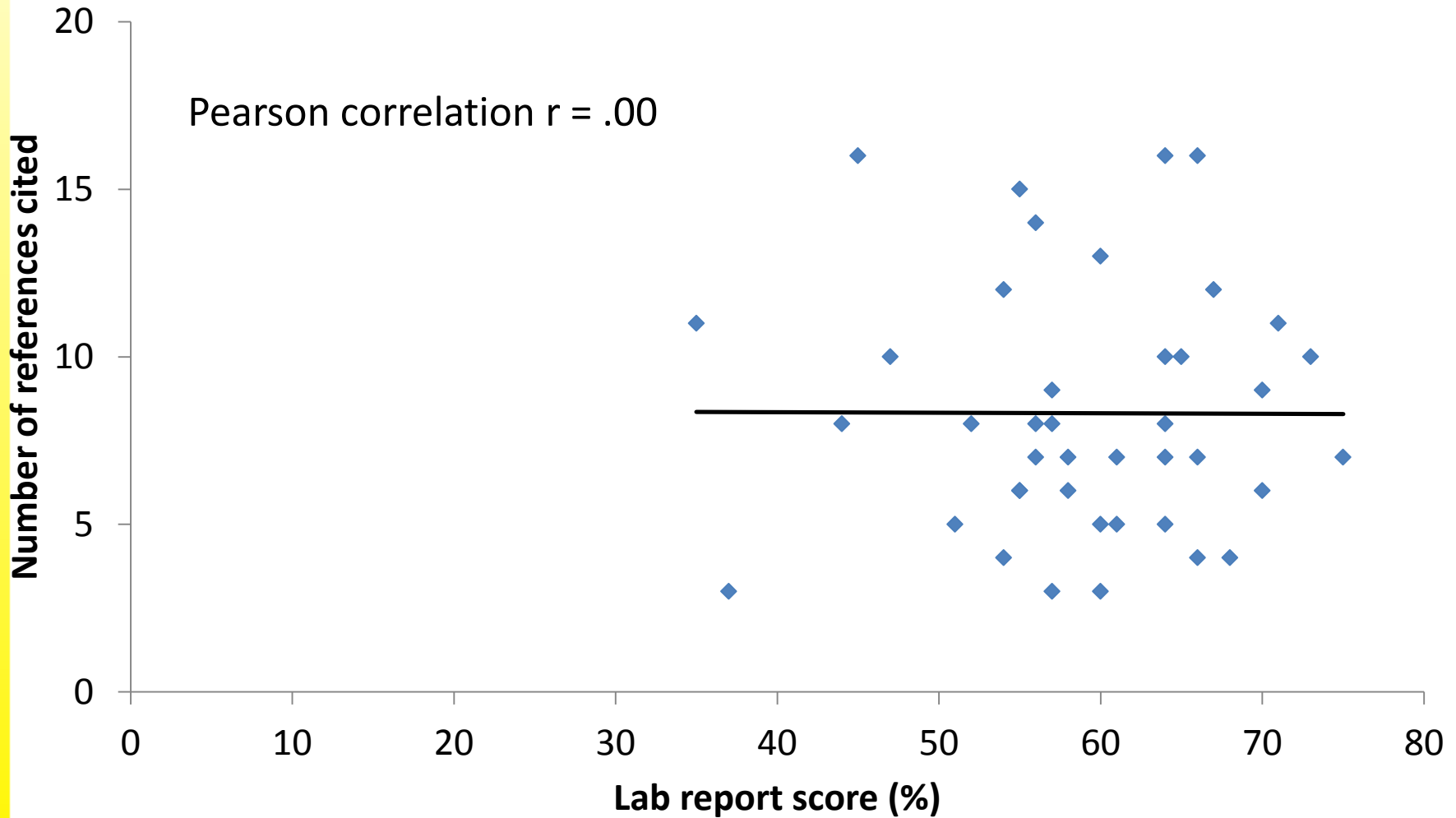
Key Factors:

- All teaching staff will likely require input and agreement
- Evidence based
- Likely to be of interest and perceived value to students when presented

Likely behavioural targets

- Importance of sleep quality/structure
- Benefits of taking written notes vs. digital or no note taking in taught sessions
- Benefits of removing digital distractions in class + private study
- Benefits of wider involvement in university life
- Getting the right information from the right people
- Clarifying the amount and pattern of learning time that is expected (including holiday periods)
- How to articulate ideas in class/benefits of asking questions in class
- Importance of reading sources properly (continued)

Actual relationship between number of cited references and overall mark on 1500-word lab report (textbooks + journals only - websites excluded) in an honours level module (N = 41)



Monitoring the effectiveness

Possibilities include:

- Student questionnaire about effects (if any) of the intervention
- Student focus groups (via interview)
- Staff questionnaire (including simple recognition of the eight targets)
- Moodle hit counter of video downloads
- Specific measurements (e.g. sleep monitoring in a sample; apps that monitor quantity of phone usage in class; survey of approaches to note taking across student cohorts)

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