Study on the impact of the use of video captured lectures and tutorials on student experience attendance and engagement

Dr Philip Trwoga
Department of Computer Science
Faculty of Science and Technology

Outline

Motivation

Background research

The process

Why video capture?

The study

Viewing statistics and attendance

Student experience questionnaire

Closing the loop - enabling Q and A and feedback

Conclusions

Motivation

- Level 6 ECWM601 - iOS (iPhone, iPad software development)

- Large class - doubled from 2015 to over 150 students in 2016-2017 - Module already relied on some video for tutorials for efficiency and consistency - concerns about large class

- Challenging module - new programming language, new development environment, advanced programming paradigm

- Achieve more - do more challenging tasks

- Improve engagement

- Improve student experience

Why video capture?

- Provide a record, an opportunity to watch again

- Good for complex processes, arguments, anything that takes repeated efforts at learning

- Allows students who are unable to attend lectures an opportunity to view the lecture

- Useful for quality control and review

- Can increase accessibility

- Risk - students will not attend the live lecture

Evidence in the literature

- A study at Queen's University Belfast (2015) who monitored the introduction of lecture capture on their courses concluded that it had not had a negative impact on attendance, and that students had instead used the video to reinforce traditional learning

- The study concluded the videos were a reinforcement, rather than a replacement for lectures

Evidence in the literature

- (Leadbeater et al. 2013; Franklin, et al. 2011), whilst Von Konsky et al. (2009) suggest that higher-achieving students tend to supplement recorded with live lectures.

- Traphagan et al. (2009) and Phillips et al. (2011) suggest that more frequent access to recorded lectures leads to more positive results and learning behaviours.

- Traphagan et al. (2009) also found that reductions in student attendance of live lectures due to the availability of lecture recordings had a negligible effect on students' attainment

General conclusions from the literature

- Students liked having access to recorded lectures

- Generally used for missed lectures

- Students in most studies also preferred access to a mix of live lectures, with most preferring a blended format incorporating lecture recordings, live lectures, course materials and additional classes

- Studies have suggested that lecture capture may also be a helpful tool for students with learning disabilities

- The perception that access to recorded lectures lowered student attainment has also been disputed by most of the studies with lecture recordings having a slightly positive, or negligible effect on student attainment, and even a rise in student grades and lecture attendance in some cases

The process

Panopto

Create ▾

Record a new session
Record from your Mac or Windows PC

Upload media
Create new sessions by uploading video or audio

Webcast
Prepare a webcast and share a link to it

Build a session
Combine your slides, video, and audio

New Folder
At the top level or anywhere else

PC, presentation, camera

Panopto application

Panopto file structure

Modules

The process

What was recorded?

- All lectures - captured live lecture (laptop only used - no post editing)

- One lecture was webcast

- 3 video tutorials - early in the module run

Overall weekly viewing data
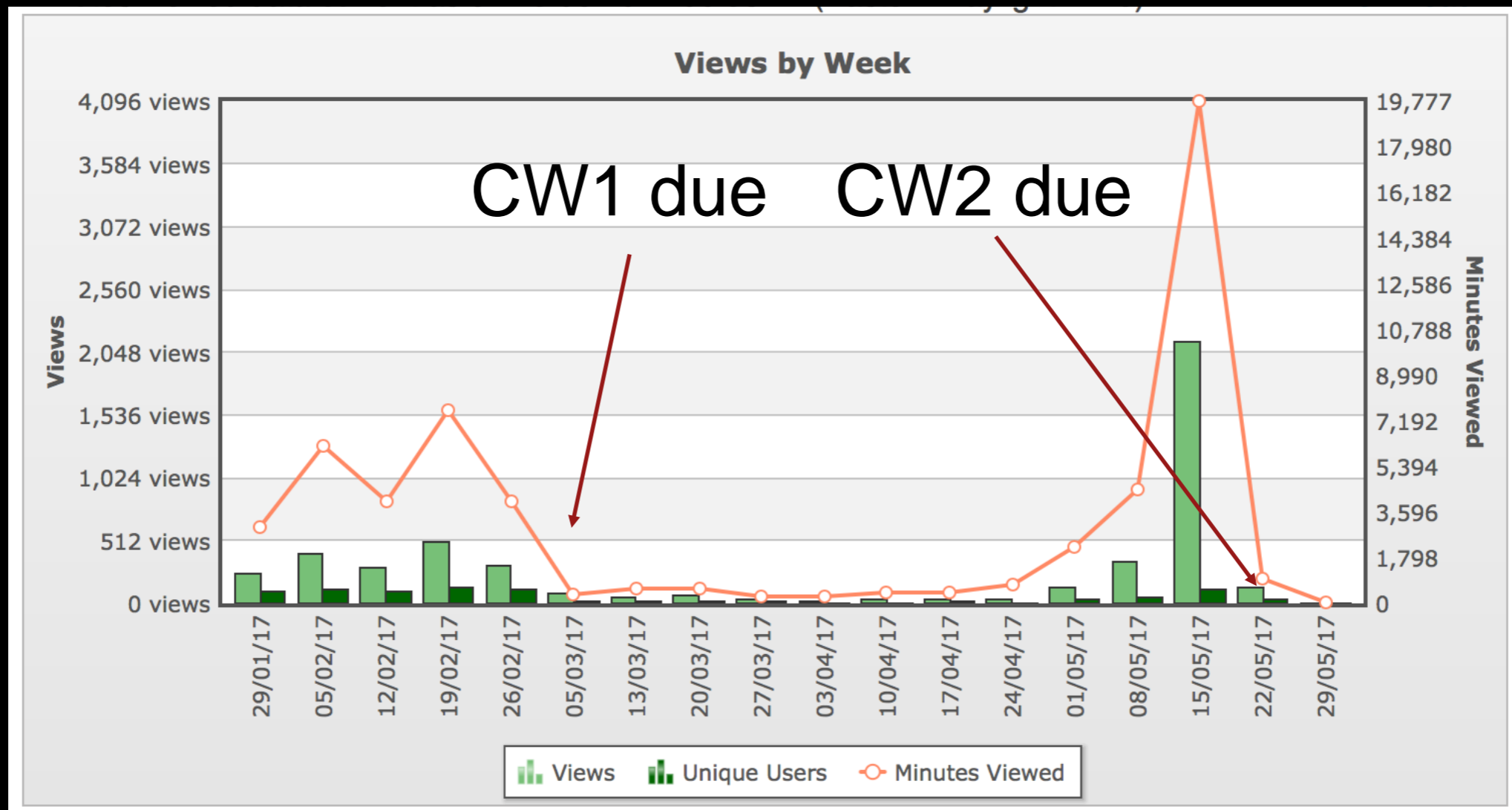
Summary statistics

- Total viewing time - 893 hours

- Average viewing time - 6.04 hours

- Highest viewing figure 47.3 hours (student had a 13% attendance - SEN)

- Average attendance - 23.3%

- Average engagement increase 27% - this compare full lecture attendance and average video viewing

Video viewing as a function of attendance

Total Viewing by Attendance Bands

hours

Lowest · Middle · Top

Indicates that students who attend most also watch the most video
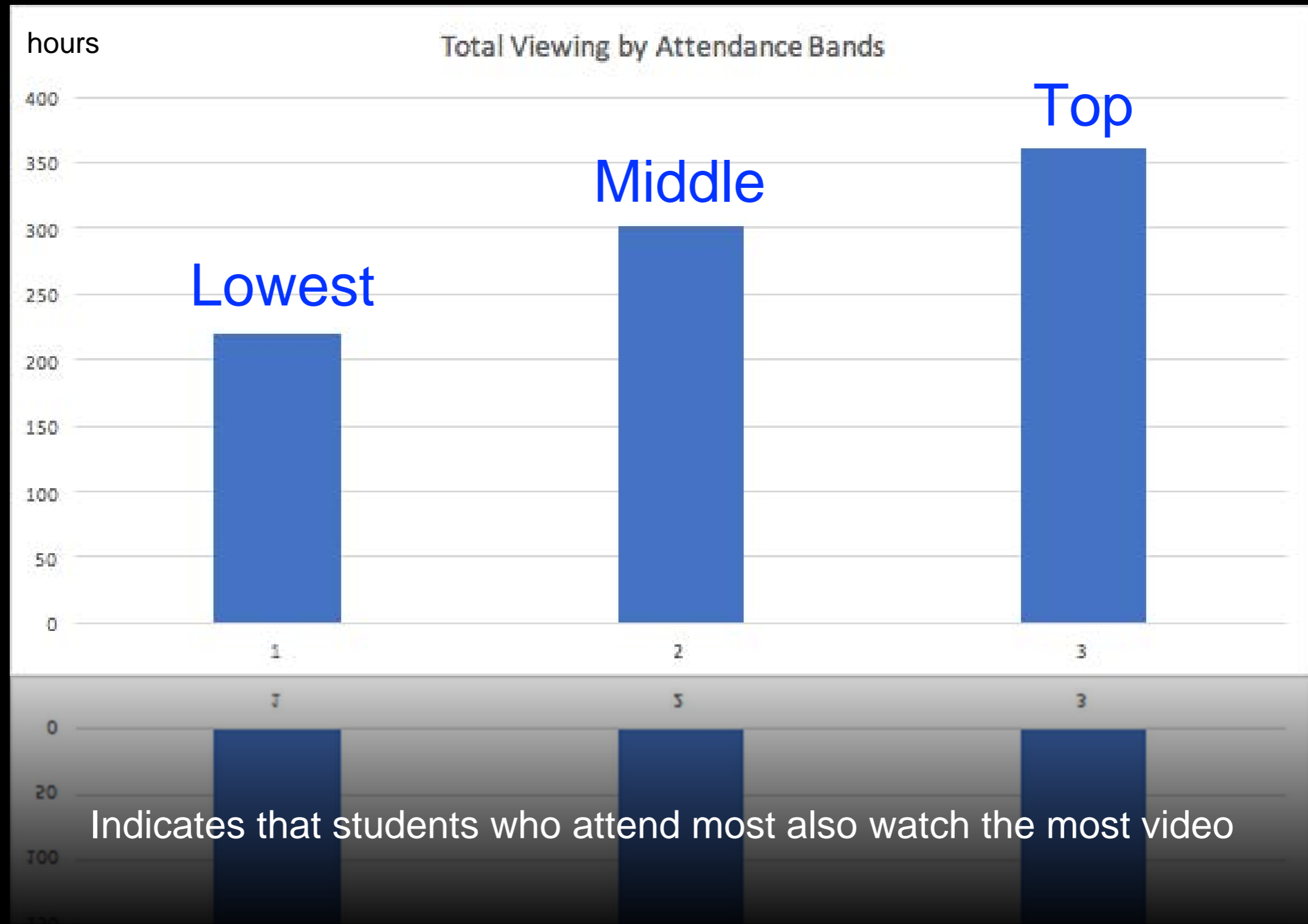
Zero Attenders Usage
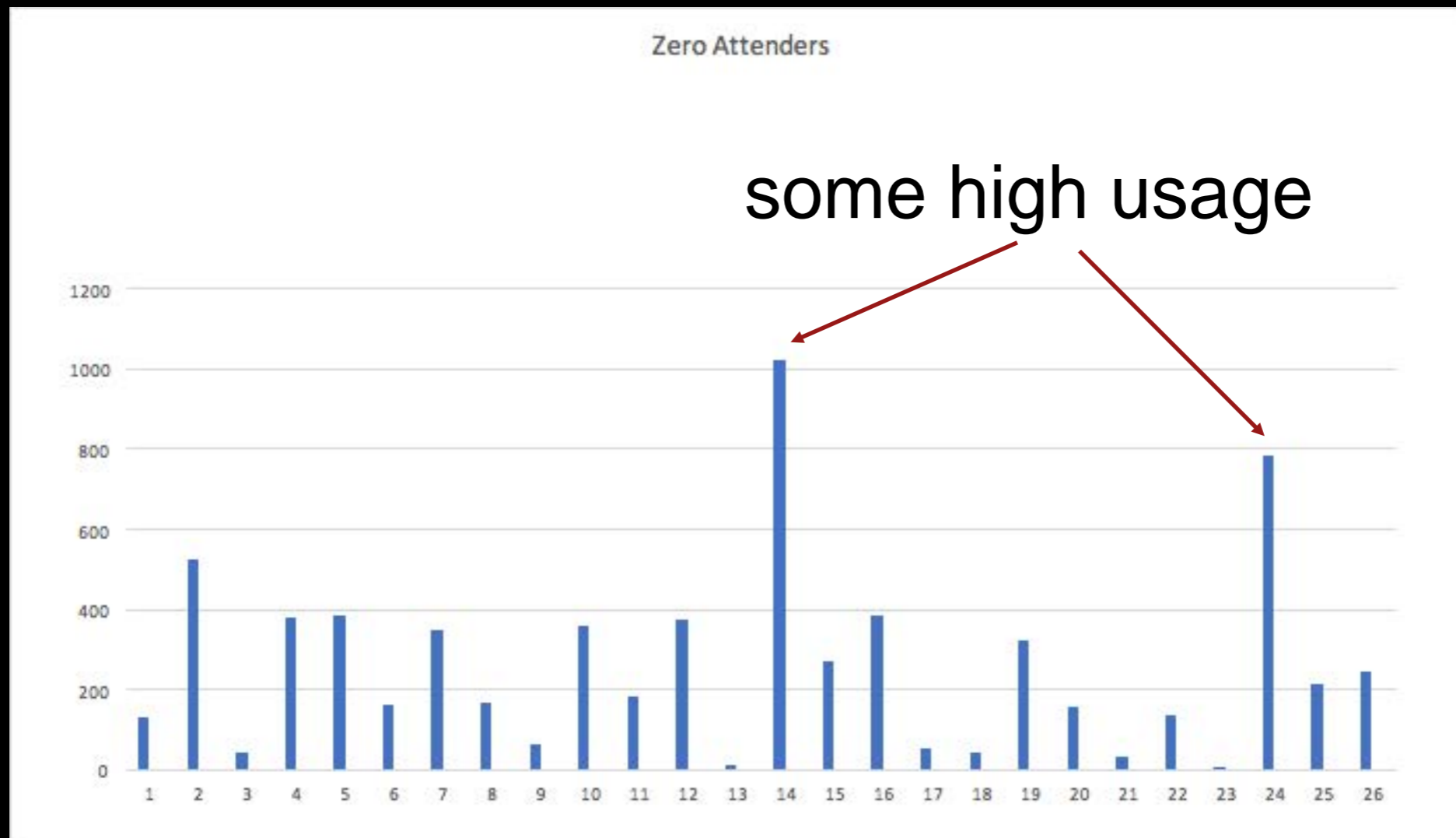
Zero attenders on average had lower viewing figures with s[...]

The survey - viewing perception

I viewed the lecture videos on a regular basis

63 responses

- Strongly agree
- Agree
- Neutral (nether agree nor disagree)
- Disagree
- Strongly disagree

44.4%   14.3%   38.1%
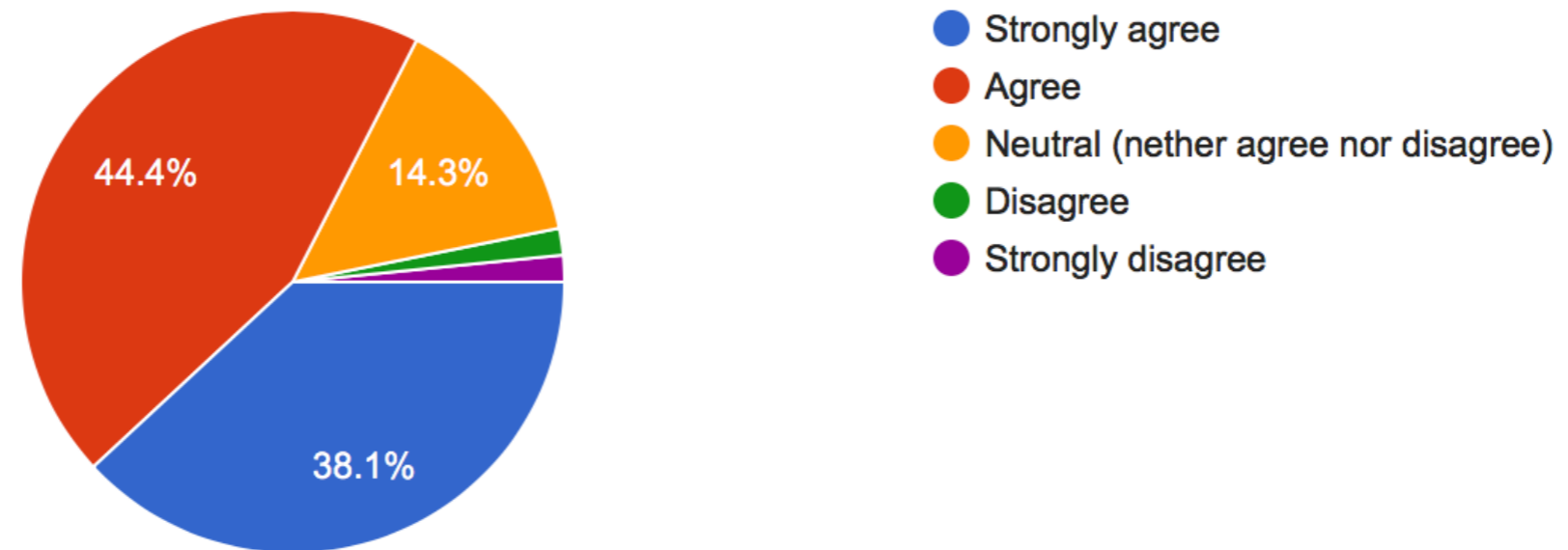
The Survey - help with studies

I found the video lectures helped me with my studies for this module

63 responses

- Strongly agree
- Agree
- Neutral (nether agree nor disagree)
- Disagree
- Strongly disagree

84.1%

9.5%
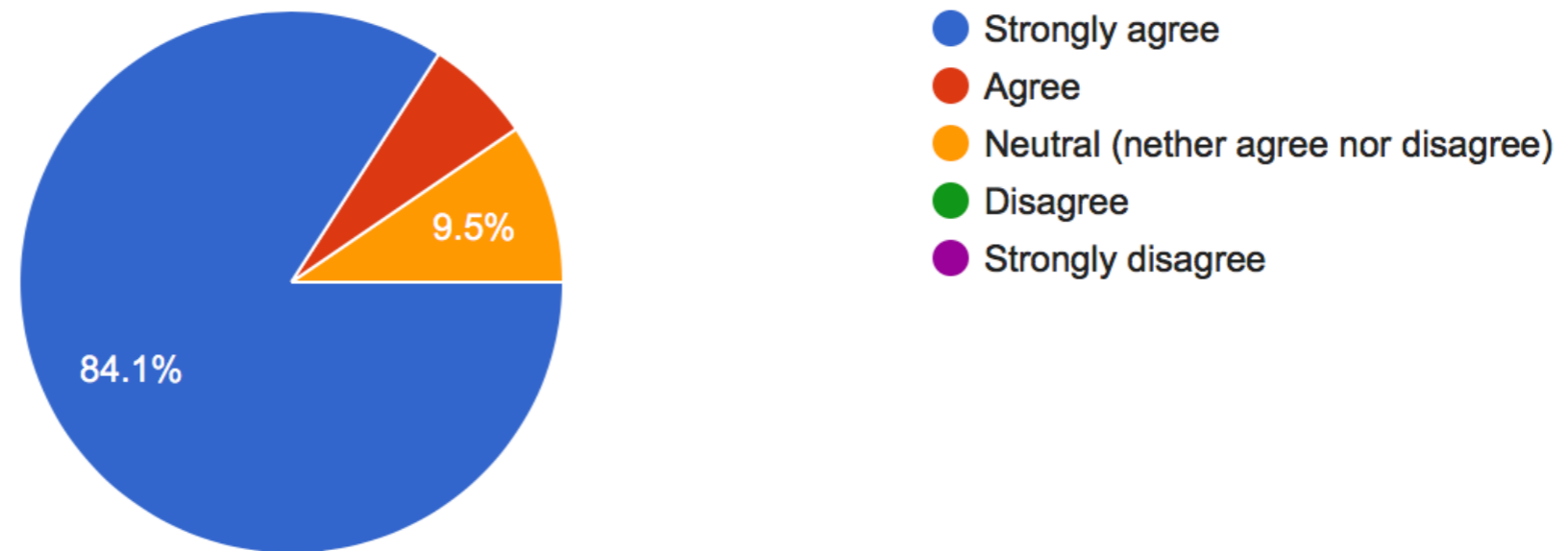
The survey - general attitude to lecture capture

I think that all modules should video capture the lectures

63 responses

- Strongly agree
- Agree
- Neutral (nether agree nor disagree)
- Disagree
- Strongly disagree

9.5%

85.7%

The survey - attendance
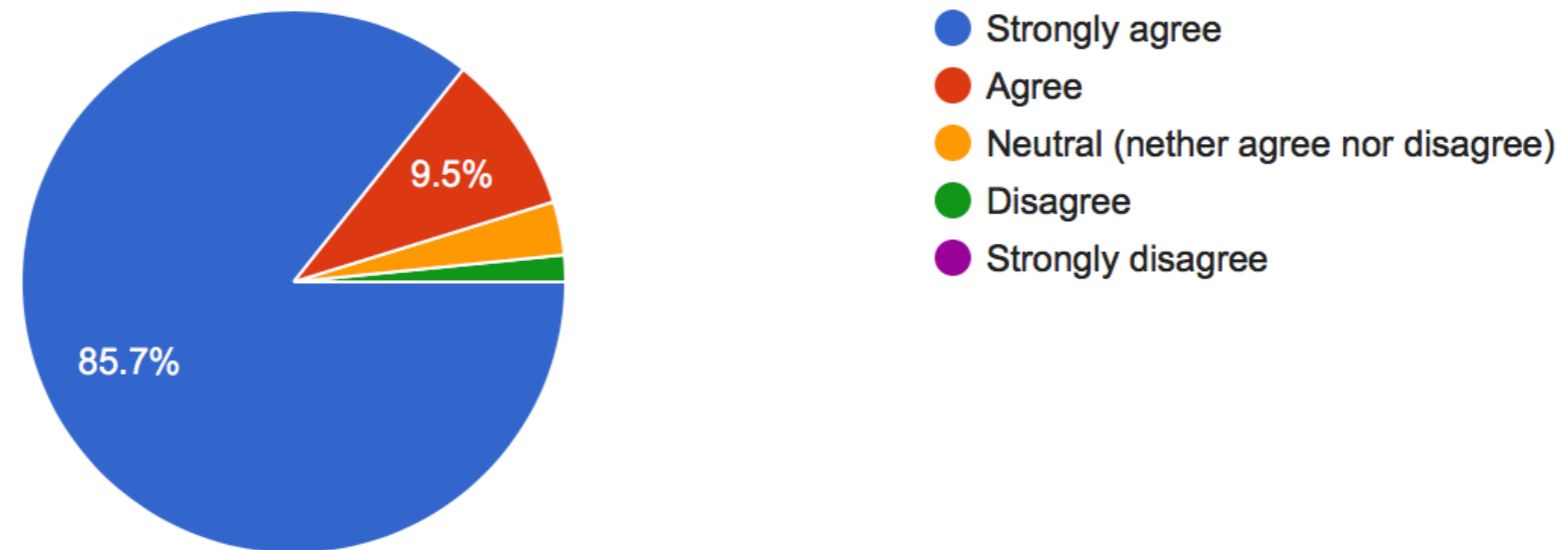
The survey - attendance

The fact that the lectures were video captured made no difference to my attendance of lectures

63 responses

- Strongly agree
- Agree
- Neutral (nether agree nor disagree)
- Disagree
- Strongly disagree

15.9% 19% 28.6% 31.7%
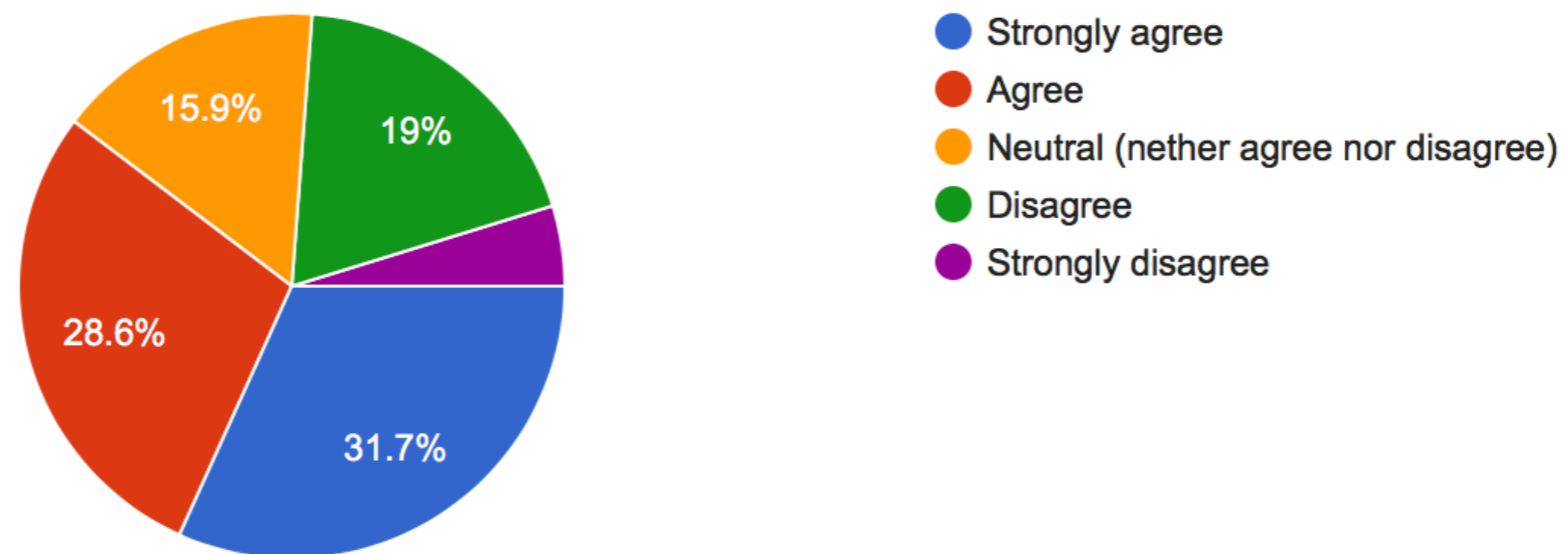
The survey - quality

I think that the lecture videos need to further edited after the lecture to improve the quality

63 responses

- Strongly agree
- Agree
- Neutral (nether agree nor disagree)
- Disagree
- Strongly disagree

33.3%
19%
11.1%
34.9%
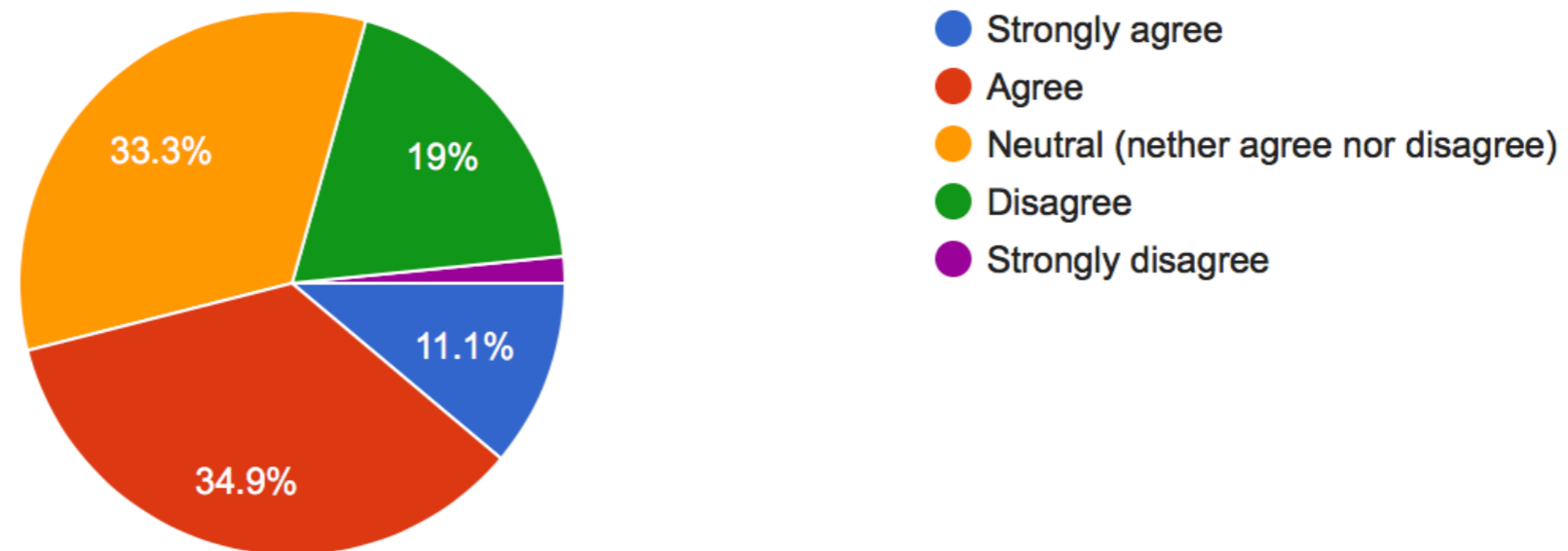
The survey - module engagement

The survey - attitude to course

The use of lecture video capture in this module has improved my attitude to the teaching on the course in general

63 responses

- Strongly agree
- Agree
- Neutral (nether agree nor disagree)
- Disagree
- Strongly disagree

50.8%
28.6%
14.3%
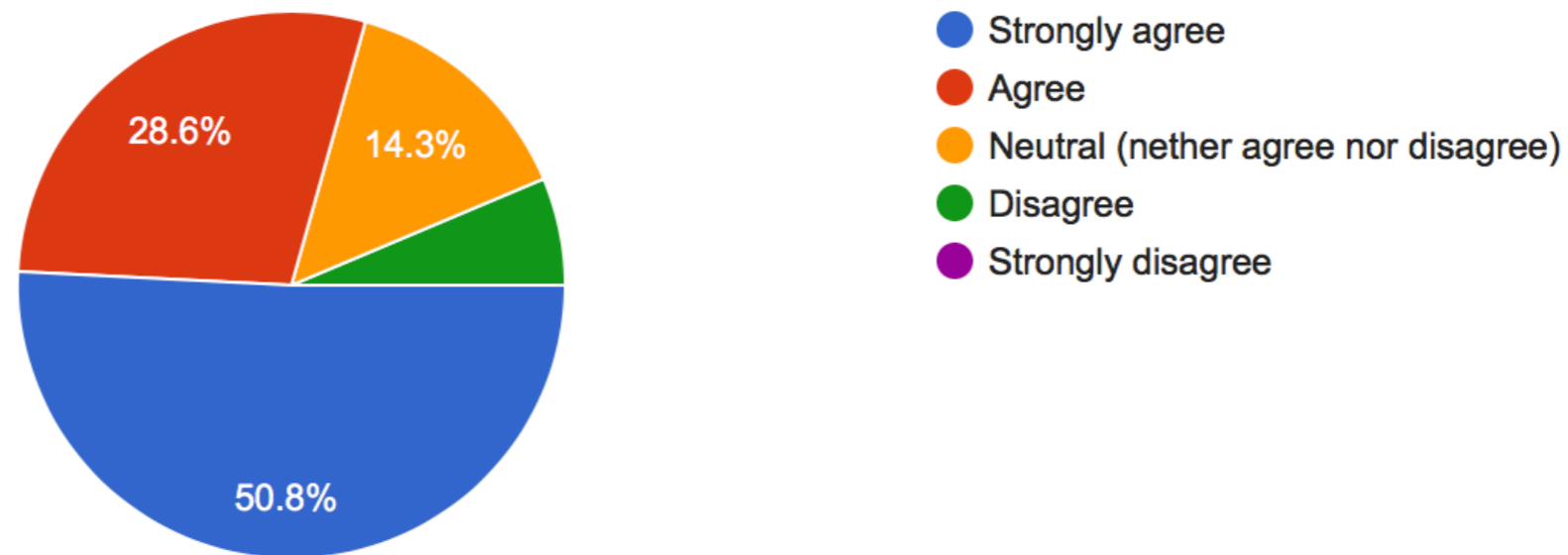
The survey - live webcasting
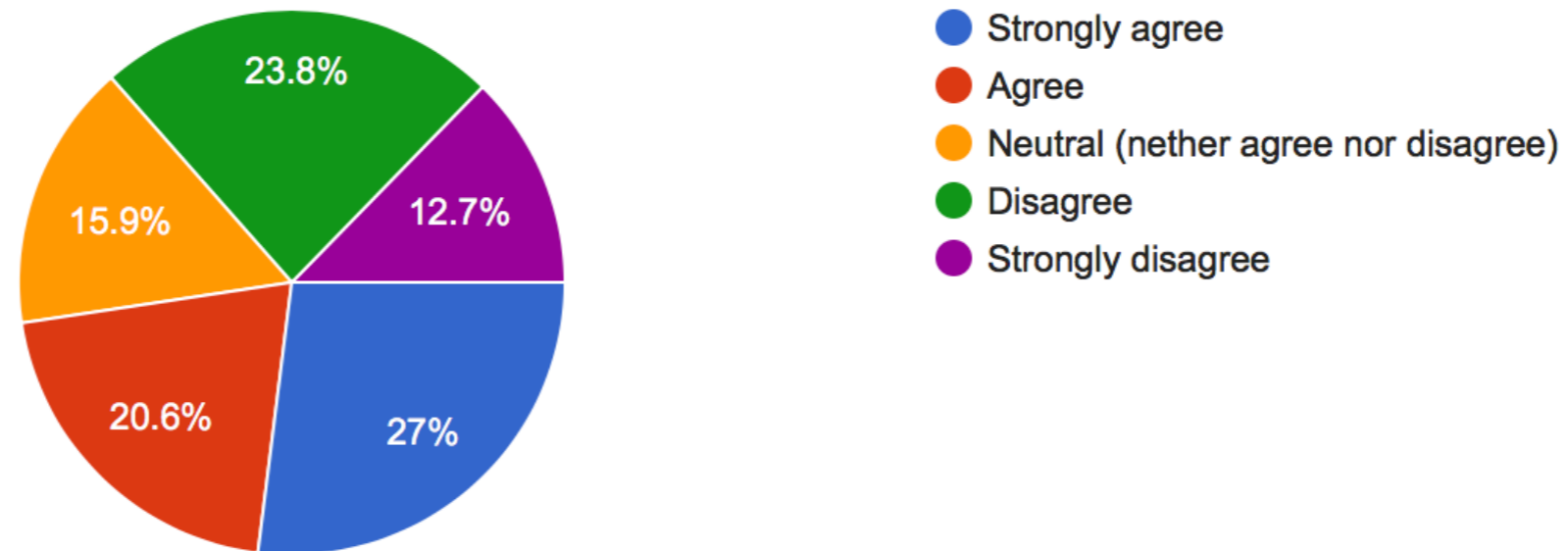
The survey - opportunity to ask questions

It is very important that I have an opportunity to ask questions during a lecture

63 responses

- Strongly agree
- Agree
- Neutral (nether agree nor disagree)
- Disagree
- Strongly disagree

28.6%
15.9%
52.4%

Questions and Feedback

Zeeting

Direct

Live questions

Live Lecture

Lecturer

? ? ?

Students

Email

Mobile context questions

Padlet

Video Lecture

Support Padlet - Q and A

padlet.com

Dept. Documents | Wing Chun | Using iOS 10...ed Reminders | Tacktile - Mo...lopment India | Madhuri Satpu...agpur, India | Couriers Expr... & Deliveries | Contract Che...ty Do? Univ... | When can I g... - Openreach | Discogs API Documentation | Core Data and...ItsController | Custom Segues | Sorting Resul...rn Core Data | >>

ECWM601 Native Programming Support Padlet

module content in general and also about coursework 2.
Note comments are public so everyone can see them and also see my reply. You can also post screenshots etc.

tableView item how can you update the table when the a different tab in the master sections is clicked?? At present the table stays the same no matter which Master - tab is chosen.....????? HELP

delegate (look up adding a UITableview to a UIViewController) so you can use the managed object passed from the master view to populate the detail table - as your coursework object will have tasks that all get passed from this single object. So in my example I pass an Artist object that has albums. See note at the bottom for the class structure of the detail view controller. Also try
Phil

file?

Can you please explain the process of submitting coursework 2? Do we just copy the contents of all our classes into a word doc and save as PDF or can we zip the project and upload as last time?

CW2 Submission

Submit the zipped XCode project as usual in the main upload link.

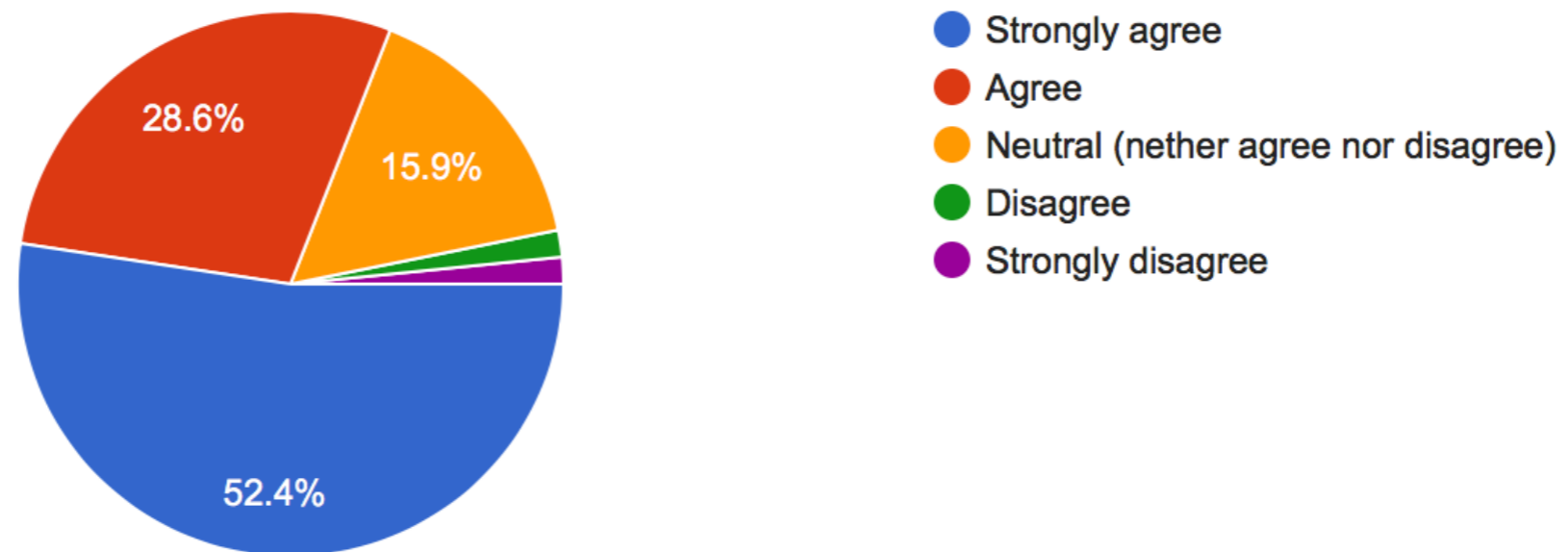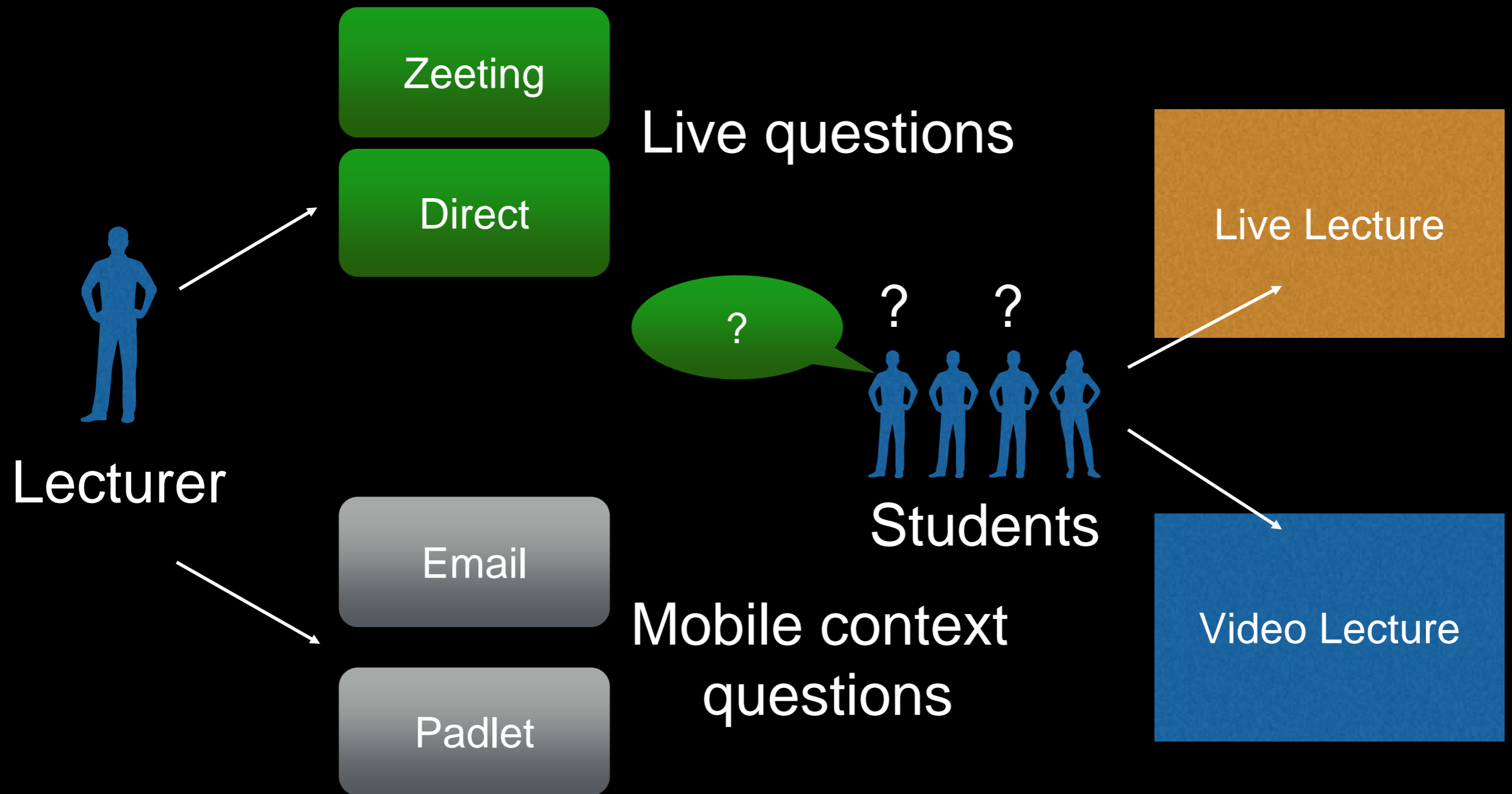For turnitin just copy your class file only (not storyboard etc.) into a pdf or word doc and submit that on the other link on Blackboard.

Phil

allowed? I almost accidently uploaded an earlier version of my code.

but luckily it's good enough

Me too!!

Can you please enable resubmissions sir?

Resubmission for turitin

I can't enable as the system only seems to allow one submission. if you get it wrong i would probably to delete your submission manually.

The main submission will allow up tp 3 submissions.

Phil

View

ling that you meet all quirements it is not tial to use this split pattern. However, the basic split view controller xcode tempate makes a good starting point for the project. Make sure you tick 'core data' too.
Phil

'master' UITableView and the corresponding 'Detail' will detail the sework plus related s."

requirement.

Further submission clarifications

So this means that we have to submit 2 files on blackboard's link:

1). Zipped XCode project folder.
2). All classes developed pasted in PDF (this means all swift files right?).

CW2 Submission

Yes. That is correct.

Thank you

Phil

Log in to Padlet
padlet

HELP

I used a family member's Mac and all the files and metadeta has their name on it. Is this okay? ><

MArks

Hi Phil. Are we marked on the look of the app at all?

Marks

You are markded on usability not so much the aesthetic.
Phil

Run Time Error

Hi Phil.
Ive come across a run time error, I have been following your lecture 12 video, and been using the table data code (pic 1), however it produces an error so i used its advice fix(pic 2), which corrects the error, but then produces a run time error. Can you or anyone advise please

Compiler Errors

Xcode in the labs has too many glitches. Its constantly telling me i have compile errors, then i don't, then i do. Its impossible to get any work done. !

Which errors are you getting specifically?

Third Party Libraries

Hi Phil, are we allowed to integrate third party libraries for certain fuctionality / fancy elements, provided that its

Hey, maybe I can help, does it produce an error or stops and doesnt progress further? If it stops than disable the breakpoint (that blue thing on the left - just untick it..) I hope I helped :)

Likewise, I can see a breakpoint but what is the runtime error you then getting?

NSManaged Object subclass

Is it necessary to create the above?

Quick question, is it possible to get a custom progress circle from the internet or do we have to make our own? This would be purely for the

Additional video?

Hi Phil,
Will there be another video released which was mentioned at the end of lecture 12 - video?

Video

Hi, No the videos are complete. There are two videos covering lecture 12.

Phil

there is a problem with the video, at around 30 min second voice starts talking making this video very hard to follow as 2 voices are talking at once,it must be some glitch, is anyone else experiencing this?

Is there any chance that this video could be re-

Task Saving

I am getting this error , when trying to save a task, sometimes the task

Video Error

I am listening to your lecture 12 video (Part 2) and from 30 mins onwards the audio merges with the audio from the start of the video. Is it possible to upload this again so we can follow

Conclusions

- Video capture does not appear to impact attendance - though needs a longitudinal study to verify

- Evidence that higher attenders watch more video

- Overall student experience is positive in terms of helping engage students and complimenting their studies and also in their attitudes to teaching

- Strong evidence of use of video to supplement learning

- Positive comments and very good scores in module evaluation

Limitations

- Relies on SEA data - attendance is lower limit

- Student behaviour is complex and this study only considers attendance as measured by SEA and video viewing data in its conclusions

Future Work

- Continue study into next academic year

- Influence on student attainment

- How best to integrate and utilise the video lecture

Thank you

Questions?