

## Arun Karnad & [Steve Bond](#) Neurodiversity and lecture recordings

### Report

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# NEURODIVERSITY AND LECTURE RECORDINGS

*Results and analysis from the Neurodiversity and Recorded lecture survey.*

## Recommendations

- Students could be encouraged to produce their own lecture recordings in formats that suit their learning requirements, and provided support and guidance in being able to do so.
- Students and lecturers could be made more aware of the existence and benefits of lecture capture, and the practice of recording all lectures and making them available should be promoted to lecturers.
- Support could be given to lecturers to help them adapt their lecture style to produce better lecture recordings.
- Lecturers could be incentivized to provide lecture recordings, by including any training taken towards providing lecture recordings being included as part of personal development.
- Further research could be conducted into more specific issues faced by neurodiverse students, and how technology is incorporated into the study strategies used by neurodiverse students.
- Guides on how to use lecture recording equipment with tips and reminders to help improve the quality of recordings could be produced by academic support staff.
- Academic support staff should also ensure that lecture recording equipment is installed and in working condition, especially if there have been extensive technical problems with recordings from a particular room or course.



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## Executive Summary

Neurodiversity is a term which encompasses a range of conditions, including autism and Asperger's syndrome, ADHD, dyslexia and dyspraxia (Dalton & Hall, 2013). While past studies have posited that recorded lectures *could* be a useful tool for neurodiverse students (Williams & Fardon, 2007), little is known about the extent to which these lecture capture actually is useful to neurodiverse students, or about the study strategies used by these students to study effectively while managing their condition.

Therefore, we conducted a survey of neurodiverse students to measure the impact, and the (perceived) pedagogical benefits of the School's Echo360 software. We sought to answer the following questions:

- Do neurodiverse students access lecture recordings more or less often than neurotypical students?
- To what extent do students access recordings?
- How useful were these recordings to the study strategies of neurodiverse students, and what challenges did they face when using lecture capture technology?
- Did students record lectures themselves? If so, why?

138 students responded to the survey, of which 124 completed surveys were used in the study. 66% of students reported having a neurodiverse condition, the most common of which was dyslexia (33%). Neurotypical students, or students not reporting to have a neurodiverse condition, were also invited to complete the questionnaire to allow a comparison as a control. They formed 34% of the study population. The study was conducted in conjunction with the LSE's Disability and Wellbeing Office and the LSE Students' Union.

The key findings from this study were as follows:

### **Neurotypical and neurodiverse students access lecture recordings at similar rates.**

Although previous studies suggest that neurodiverse students may benefit more from lecture recordings, neurodiverse students in this survey reported accessing lecture recordings at similar rates to neurotypical students.

### **Both neurodiverse and neurotypical students find lecture recordings "essential" for their studies.**

49% of neurotypical students, and 46% of neurotypical students claimed that recorded lectures were "Essential" to their studies, **Neurodiverse students may not be accessing lecture recordings because they are unaware of their existence, or because they are not available in the first place.**

The key reasons why neurodiverse students reported not accessing lecture recordings on Moodle were either lack of awareness that recorded lectures were available on Moodle, or that lectures had not been made available.

### **Neurodiverse students raised sporadic availability of lecture recordings as an issue.**

Out of 81 suggestions on how the LSE could improve its provision of lecture recordings, issues with availability of lecture recordings were raised almost a third of the time (29%, 24 responses).

### **Neurodiverse students are more likely to use lecture recordings to reinforce concepts and revision, than to avoid attending lectures.**

Neurodiverse students were over more likely to use recorded lectures to revisit sections to reinforce concepts and to make extra notes than neurotypical students, who were more likely to use recorded lectures to catch up on missed lectures. Only 4% of neurodiverse students and 7% of neurotypical students (16 respondents in total) reported using recorded lectures to avoid attending lectures.

### **Students identified audio and video quality as the biggest technical issue with lecture recordings.**

Technical issues, including the video and sound quality of lecture recordings were mentioned 37 times out of 81 suggestions on how lecture recordings on Echo360 could be improved.

### **The majority of students do not record lectures themselves...**

122 students completed this section of the survey in total, and the majority of students reported that they did not record lectures themselves (62%, 76 respondents).

### **...but if they do, its predominantly in audio format.**

Audio recording was the most popular format for recording lectures, with 93% of all recordings made in audio format. Standalone recording devices, such as Dictaphones were mainly used for recording, with 32% of all recordings made on such devices.

### **Students suggested that access to lecture recordings on mobile devices and the ability to bookmark sections of recordings would be useful**

The functionality to add bookmarks to recordings on Echo360 does exist, and a recommendation could be to better inform students about the features of Echo360 to allow them to make optimal use of the service.

### **Conclusion and recommendations**

A greater proportion of neurotypical students reported using lecture recordings more frequently, although the majority of neurodiverse students reported using recorded lectures. Neurodiverse students found lectures to be an “essential” tool for their studies and reported using lecture recordings to help address issues in note-taking and content comprehension. However,

inconsistencies in the availability, quality and accessibility of recordings are hindering neurodiverse students from fully exploiting this resource.

As a result of this study, we recommend the following measures:

- Support could be given to lecturers to help them adapt their lecture style to produce better lecture recordings.
- Lecturers could be incentivized to provide lecture recordings, by including any training taken towards providing lecture recordings being included as part of personal development.
- Academics could be provided with guides on how to use lecture recording equipment, and given tips and reminders to help improve the quality of recordings, such as remembering to switch on lecture recording equipment microphone in case lecturer before them switched it off.
- Academic support staff should also ensure that lecture recording equipment is installed and in working condition, especially if there have been extensive technical problems with recordings from a particular room or course.
- Students could be encouraged to produce their own lecture recordings in formats that suit their learning requirements, and provided support and guidance in being able to do so.
- Further research could be conducted into more specific issues faced by neurodiverse students, and how technology is incorporated into the study strategies used by neurodiverse students.

We believe that implementing these recommendations could improve not only the learning experience of neurodiverse students, but also of the wider student body, and also improve the inclusivity credentials of the LSE.

## Introduction

The term 'Neurodiversity' was first coined by Singer (1999) who advocated viewing Asperger's syndrome and autistic conditions as another state of being, deserving the same rights and treatment as 'Neurotypical' citizens, or people without such conditions. Since then, the term has also incorporated conditions such as Dyslexia, Dyspraxia, Dyscalculia and Attention Deficit and Hyperactivity Disorder (ADHD) (Dalton & Hall, 2013). Neurodiverse students can often display highly developed learning skills, such as creativity and ability to develop a good overview of large scale problems (Dalton & Hall, 2013). However neurodiverse students still face significant challenges. For example, the chances of dyslexic students graduating with a first class, or upper second class degree are lower than their non-dyslexic peers (Brunswick, 2012). According to Richardson & Wydell (2003), 40.7% of dyslexic students achieved these grades compared to 51.6% of their non-dyslexic peers.

Mortimore & Crozier (2006) argue that *"...it is important to analyze the ways in which the policies and practices of higher education institutions facilitate or place obstacles in the way of empowerment, to investigate the experiences of students with dyslexia and to identify their needs"*. They explored the reasons for gaps in attainment by surveying 136 dyslexic students from 17 universities about the difficulties they encountered whilst studying in higher education. They found that dyslexic students in higher education in particular reported difficulties in areas such as note taking (78%) and organizing essays (76%). Williams' (2006) findings also show that the majority of students (58%) in their survey with dyslexia were *"unable to take notes"* during the lecture.

Legislation has been passed to ensure that disabled and neurodiverse students receive equal development opportunities from their courses (Disability Rights Commission, 2007), and universities have since had to make 'reasonable adjustments' to accommodate the learning and assessment needs of these students. Institutions have often turned to learning technologies to accommodate the learning requirements of neurodiverse students, as well as enhance student engagement and foster flexible learning (Habib *et al.*, 2012). Dror, Makany, & Kemp (2011) recognized that effective note-taking is integral to the study strategies used by the majority of students in higher education. Universities throughout the UK have taken the perspective that *Lecture capture* technologies, such as Panopto and Echo360 may alleviate pressure on neurodiverse students, as the technology offers the possibility of efficiently reviewing lectures, allowing students to make notes on topics they have missed in class, or to add to notes they may have already made (Williams & Fardon, 2007). Indeed Giliberti, Corradini, Bertarelli, & Genovese (2012) suggest that neurodiverse students may benefit from lecture capture and associated learning technologies as:

*"...[the] materials delivered during the lectures can be successively processed by the students with disabilities according to their need and using specific technologies made available to them: trailers of the lectures can be selected, can be watched/listened to more times, and the written materials processed by text-to-speech software"*.

Mortimore (2013) found that dyslexic students welcomed increasing uses of electronic and virtual learning environments, and 65% of students with dyslexia surveyed by Williams (2006) considered

lecture capture software as an “*essential*” learning tool, with a further 32% stating that it was “*useful*”. However, the issues faced by neurodiverse students actually using lecture capture are unclear.

## Lecture Capture at the London School of Economics and Political Science

The LSE has been providing video and audio recordings of lectures since 2003. LSE has an automated lecture recording system, providing video and audio recording of the speaker and their visual aids in nine lecture theatres, and recording of audio and visual aids only in another 30 classrooms (Bond & Grussendorf, 2013). LSE uses the Echo360™ automated lecture capture system to produce recorded lectures and host lecture recordings. Links to recordings are made available to students via the course page on the LSE virtual learning environment (VLE), Moodle. Students are under no obligation to access lecture recordings, and lecturers are free not to record lectures under the LSE’s opt-in policy requiring lecturers’ consent to record lectures. Since 2009, two departments, Finance and Accounting have made the departmental decision not to record lectures as default, but allow staff the option to opt-in to allow their own lectures to be recorded.

## Aim and Method

The aim of this study is to identify the common issues faced by neurodiverse LSE students using lecture recordings captured by the Echo360 software used within the school, and the strategies these students use when studying using lecture capture. We also explored the technologies used by neurodiverse students to record lectures themselves, and the challenges they faced in doing so. Finally, we propose a range of recommendations that, if implemented, may be useful not just to neurodiverse students, but to students throughout the LSE.

Qualitative data were collected through an online survey of students at the LSE, and students at every department within the LSE were invited to participate in an online survey. The survey comprised a total of 23 questions, although skip and display logic was used so that respondents only saw options related to previously answered questions. Please see Appendices 1 and 2 for the full set of results, and Appendix 3 for the full set of questions asked in the survey.

The survey was widely advertised throughout the LSE via email invitations sent by the LSE Student’s Union (SU), Centre for Learning Technology (CLT) and the LSE Disability and Wellbeing office.

Content analysis was conducted on qualitative data, which was collected by requesting students to provide statements for two questions within the survey:

1. Do you have any comments/suggestions on how **recordings** on Moodle could be improved to help with your studies?
2. Why do you record lectures yourself?

Responses to 1. were coded using five criteria:

1. Availability of lecture recordings: statements related to presence or lack thereof, of recorded lectures

2. Accessibility of lecture recordings: including ability to download and view lectures on mobile devices, and bookmarking and dividing lectures into chapters
3. Audio quality
4. Video quality
5. Other suggestions

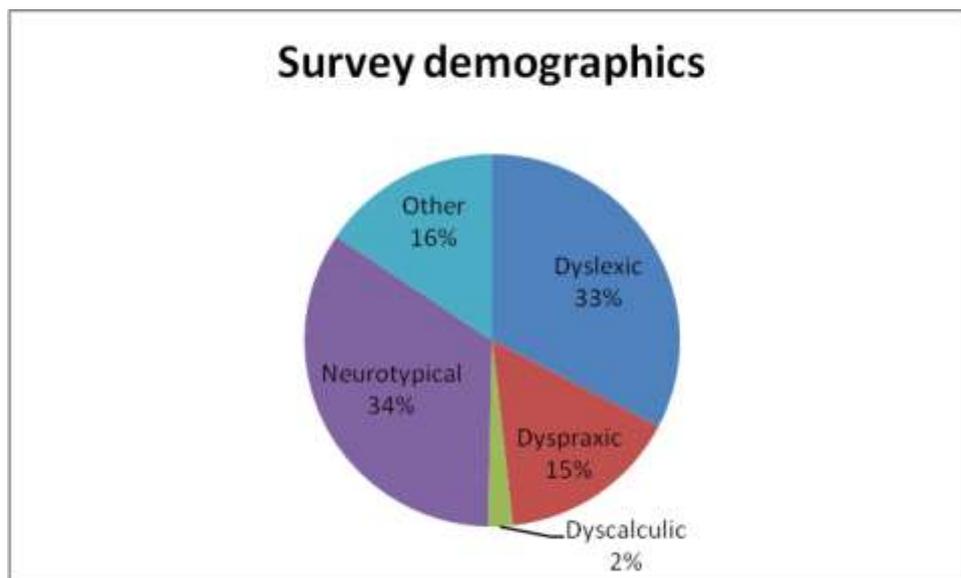
Responses to 2. were coded using the five criteria below:

1. Lack of existing recording
2. To aid note-taking
3. For revision
4. Due to the poor quality of existing recordings
5. Other reasons

As statements often contained several suggestions, statements containing multiple suggestions were unpacked, and individually coded as 'mentions' to get a fuller picture of the scale of some issues faced by students using lecture recordings. Further qualitative data will be collected via focus groups in a future study planned in the Michaelmas (Autumn) term of the 2013/14 academic year.

## Participants

138 responses were received, of which 124 completed surveys were considered for this report. Dyslexic students formed the majority of students recognizing themselves with a neurodiverse condition, forming 37.1%, or 45 students. Dyspraxic students formed 18.5% (23 respondents) of the sample, and Dyscalculic students 2.4% (3 respondents) of the sample. 17.7% (22 respondents) students identified as having a condition 'Other' than dyslexia, dyspraxia or dyscalculia. Some of the respondents in this category reported having conditions including Attention Deficit and Hyperactivity Disorder (ADHD), Asperger's syndrome, Depression and Tourette's syndrome.



Graph 1 shows a breakdown of the survey population according to identification with having a neurodiverse condition. Numbers within segments indicates the number of respondents.

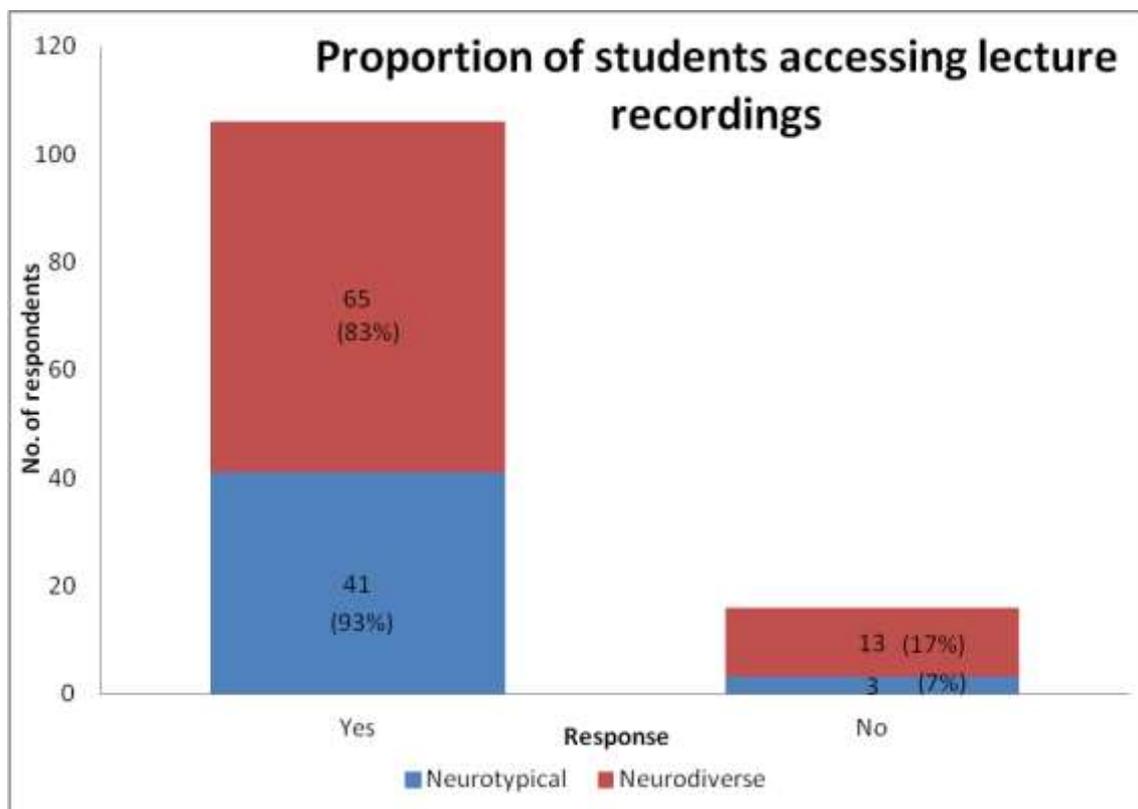
A breakdown of the neurodiverse population revealed that 91% of dyslexic students (41 respondents) were registered with the LSE Disability and Wellbeing office, as were 94% of dyspraxic students (17 respondents). Neurotypical students formed 38.7% (48 respondents) of the survey population.

The majority of students surveyed were Undergraduates, comprising of 52.4% of the surveyed population (65 respondents), followed by Masters students at 42.7% (53 respondents). For a breakdown of the survey population, please see Appendix 1. For a detailed breakdown of results for neurodiverse students, please see Appendix 2. Please see Appendix 3 for the full list of survey questions.

## Results and discussion

### Using lecture capture

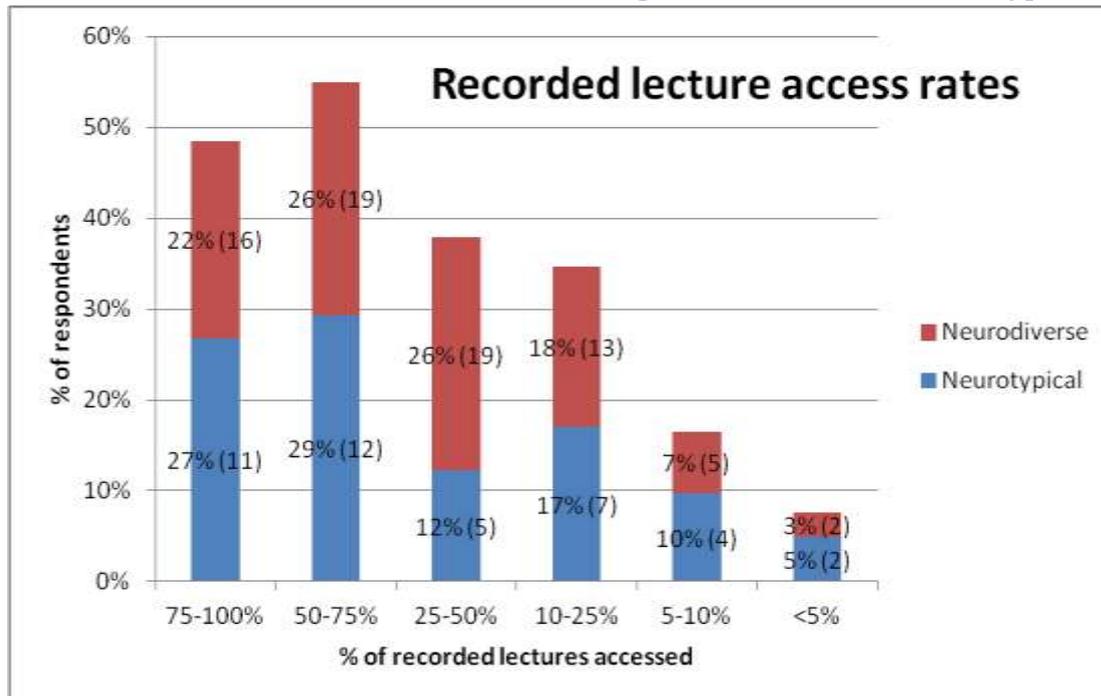
Students were asked “Have you ever accessed lecture recordings on Moodle?” 87% of students (106 respondents) reported accessing lecture recordings captured by Echo360. The remaining students (16 respondents) reported that lecture recordings for their courses were not available via the LSE virtual learning environment (VLE) Moodle.



Graph 2 shows the proportion of students reporting to have accessed lecture recordings. Whilst neurotypical students only comprised 34% of the overall study population, 10% more neurotypical students reported accessing lecture recordings.

A larger proportion of neurotypical students than neurodiverse students report accessing lecture recordings on Moodle (around 10% greater). Many students reported not accessing recorded lectures due to a lack of knowledge that lecture recordings were available via Moodle, or not having enough time to access lecture recordings. These findings are explored in greater depth later in the report.

## Neurodiverse students access lecture recordings at similar rates to neurotypical students

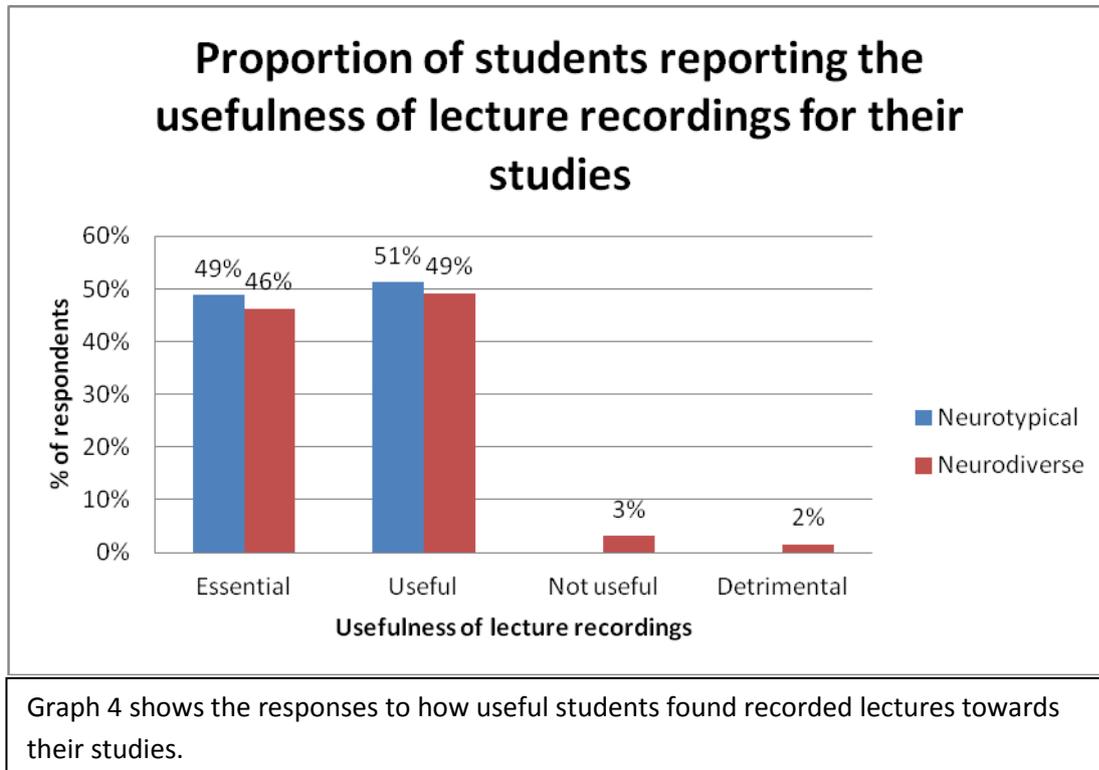


Graph 3 shows the rates at which neurodiverse and neurotypical students accessed recorded lectures on Moodle.

Although Giliberti et al (2012) suggest that lecture recordings may be more useful to neurodiverse students, our findings suggest neurodiverse students report accessing lecture recordings at roughly similar rates to neurotypical students.

## Both neurodiverse and neurotypical students report that lecture recordings are “essential” to their studies

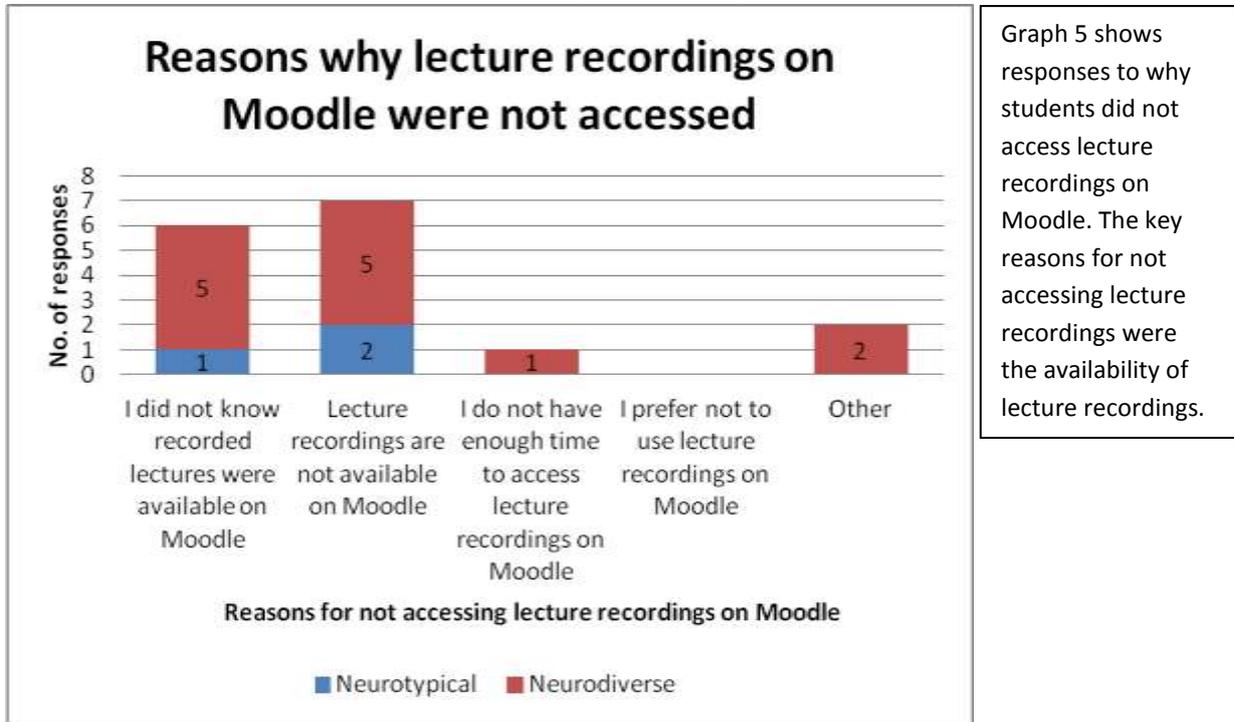
When exploring the utility of lecture recordings to neurodiverse students, the results of this survey support the suggestion made by Williams & Fardon (2007) that recorded lectures are an important tool of the study strategies used by neurodiverse students. 49% of neurotypical students claimed that recorded lectures were “Essential” to their studies, whilst 46% of neurodiverse students reported that lecture recordings were “Essential” to their studies (see Graph 4 below).



Graphs 3 and 4 indicate that, although recognised as important towards their learning, lecture recordings remain comparatively slightly under-utilised by neurodiverse students<sup>1</sup>. To explore why this may be the case, we asked both sets of students why they may not have accessed lecture recordings on Moodle. The results are discussed in the next section.

<sup>1</sup> One student appears to have selected 'detrimental' in error, since when asked to explain why the recordings were detrimental to their studies, the student responded by saying "I forget information easily and even if I took notes, the information doesn't make sense. So having a recording helps as the teacher usually explains it in an understandable way. Listening verbally also is a lot easier than reading which is particularly time consuming. If I had them available, I usually use them to fill in the missing parts of my notes, as I struggle to write quickly enough during lectures and seminars."

Neurodiverse students may not be accessing lecture recordings because they are unaware of their existence, or because they are actually not available in the first place



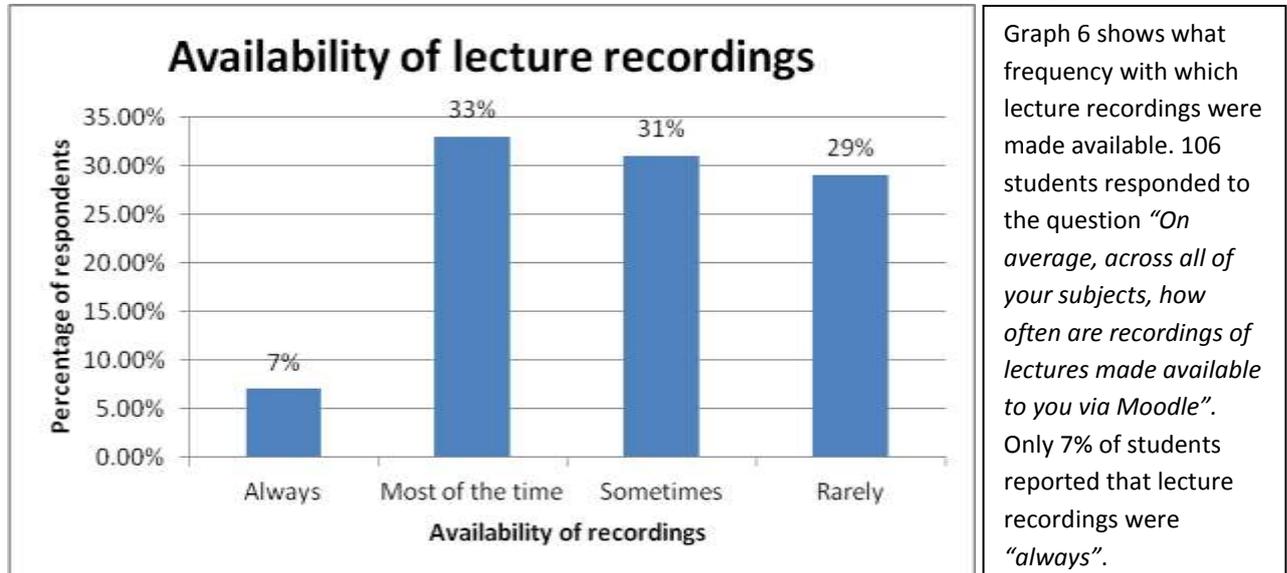
Graph 5 shows responses to why students did not access lecture recordings on Moodle. The key reasons for not accessing lecture recordings were the availability of lecture recordings.

The key reasons why neurodiverse students reported not accessing lecture recordings on Moodle were that lectures had not been made available, or the lack of awareness that recorded lectures were available on Moodle. Therefore, **a recommendation could be to increase awareness of the existence of lecture recordings to students.**

An underlying issue may also be that students may not be able to navigate the virtual learning environment (VLE) and access recordings effectively. A student raised the issue of the lecture recording organization, saying that *“Better organization of uploaded lectures and titling (sometimes it’s all dates and it’s not clear which is which until I have started watching them)”*. Habib et al. (2012) explored how dyslexic students perceived and interacted with VLEs, and found that dyslexic students struggled with the “deep folder” structure of storing information online, as well as the lack of cues to indicate whether resources had already been accessed. The extent to which this is an issue will be discussed in a later study.

## Availability of recorded lectures

### Neurodiverse students struggle with sporadic availability of lecture recordings



Of course, another reason students may be unaware of the existence of lecture recordings on Moodle is that lecturers have not actually made the recordings available. Graph 6 (see above) indicates that only 7% of students reported that lecture recordings were "always" made available, and feedback from students suggests that the biggest issue faced by neurodiverse students was the sporadic availability of lecture recordings, and the quality of those videos when they were available. Out of 81 suggestions on how the LSE could improve its provision of lecture recordings, issues with availability of lecture recordings were raised almost a third of the time (29%, 24 responses). Students were particularly explicit on the issue of inconsistent availability of lecture recordings, and held lecturers and departments responsible. Some student suggestions included:

*"Every lecture should be recorded and posted online"*

*"I wish that more departments uploaded lectures..."*

*"Making them available for all of the courses would be fantastic + perhaps some recordings on major seminars"*

*"They need to be available for every course"*

*"Encourage every teacher to upload their lectures. It is very helpful to me".* Please see Annex 1 for the full list of suggestions.

The comments above indicate a sense of student frustration with lecturers' unwillingness, or lack of competence with using lecture capture technology, and echo the findings of Williams & Fardon (2007) who suggested that "[s]ome of the survey feedback revealed a high-level of frustration with a handful of lecturers who did not appreciate the learning benefits that many students with disabilities

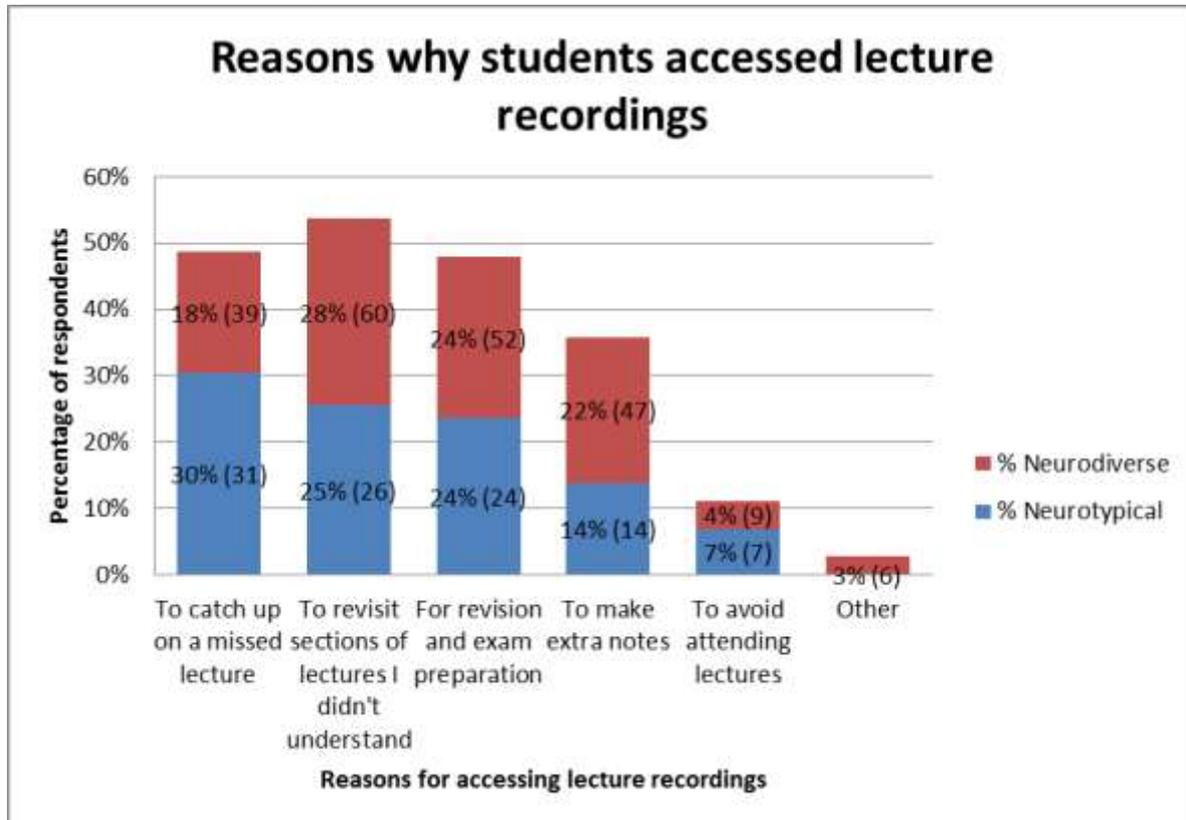
*derived from lecture recordings and did not deal with recording requests sensitively: for example, “One lecturer said that don’t bother asking to have lectures taped unless you have two broken legs and a broken neck. Another said technology was ‘too hard’ hence not taping”.*

Secker, Bond, & Grussendorf (2010) found that academics cited reasons such as declining lecture attendance, unsuitability of lecture capture for conveying lecture content and inconsistent accessibility and reliability of lecture capture technologies. Fardon (2003) explored the concept of certain lecture styles being unsuited to recording, and concluded that lecturers who put an emphasis on gestures, interactions with students or who often stray off topic may not convey information as effectively over recordings as structured, content-driven lecturers. Chang (2007) found that lecturers felt that formats such as seminars were not appropriate for lecture recording, as these formats relied on student participation and lecturers felt that lecture capture could not adequately capture discussion. Ritter (2012) argues that lecturers find online resources difficult and time consuming to prepare, and may not be willing to record lectures unless using this technology directly affects their career development and progression.

Changing the attitudes of lecturers towards lecture recordings at the LSE may be a difficult task, as so many academics feel that lecture recordings fundamentally change the interactions between students and lecturers. However, concerns about the suitability of lecture recording for certain lecture formats could be discussed further with support staff and techniques could be devised which would provide the accessibility of lecture recordings, whilst not compromising on the content of lectures. **Lecturers could also be incentivized to provide lecture recordings by including any training taken towards providing lecture recordings being included as part of personal development.**

## Study strategies

Students are more likely to use lecture recordings to reinforce concepts and revision than to avoid attending lectures



Graph 7 shows the differences between neurodiverse and neurotypical students in reasons for accessing recorded lectures on Moodle. The majority of students used recorded lectures to revisit lectures to reinforce concepts.

Overall, neurodiverse students were over more likely to use recorded lectures to revisit sections to reinforce concepts and to make extra notes than neurotypical students, who were more likely to use recorded lectures to catch up on missed lectures. Only 4% of neurodiverse students, and 7% of neurotypical students (16 respondents in total) reported using recorded lectures to avoid attending lectures. When asked to elaborate on the strategies students used when using recorded lectures, students mainly reported viewing the entire recording once, and then further revisited sections (41%, 43 respondents). Many dyslexic and dyspraxic students in particular claimed to use this strategy, with 39% of students claiming to watch the entire recording once, followed by revisiting discrete sections of the recording.

Some of the other reasons for using recorded lectures reflected issues relating to note-taking reported by students in previous studies (Mortimore & Crozier, 2006). Some responses included:

*“Sometimes the slides are confusing and also hearing the information verbally is easier to understand than reading it on the slide. Sometimes I read and the information doesn’t ‘go in’”*

*"I write really slowly in lectures so in lecture I only listen and then I rewatch and pause recordings"*

*"[I] Didn't catch all the words the teacher said"*

These findings indicate that neurodiverse students do use lecture recordings in order to overcome difficulties in note-taking during lectures and included with the findings in graph 4, support the notion that neurodiverse students find lecture recordings useful in their study strategies, and benefit from having lecture recordings made available.

## Audio and video quality of recordings

### Students identified audio quality as the biggest technical issue with lecture recordings

Technical issues, including the video and sound quality of lecture recordings, were mentioned 37 times in 81 suggestions on how lecture recordings on Echo360 could be improved. Some of these included suggestions on how lecturers could improve their use of the lecture capture technology:

*"...Sometimes, the lecturer decided not to speak into the microphone, and while it is audible in the lecture theatre, it was not audible on the recorded video".*

*"The sound quality and audibility can definitely be improved by simply suggesting the lecturer stand in front of the microphone for the most part of the lecture".*

*"The volume of the lecturer is inconsistent it is too low to hear".*

*"Several lectures were inaccessible because [of] technical issues. Two had no sounds available and two had no input from the overhead projector, which was essential for me to follow the lectures".*

*"... In one specific course, 80% of recorded lectures were without sound, technical problems should receive more attention".*

Better training for lecturers on using Echo360 technology may help improve the quality of recordings. However, training for lecturers should also account for different lecturing styles, **and support could be given to lecturers to help them use lecture recordings in a way which suits their lecture style.**

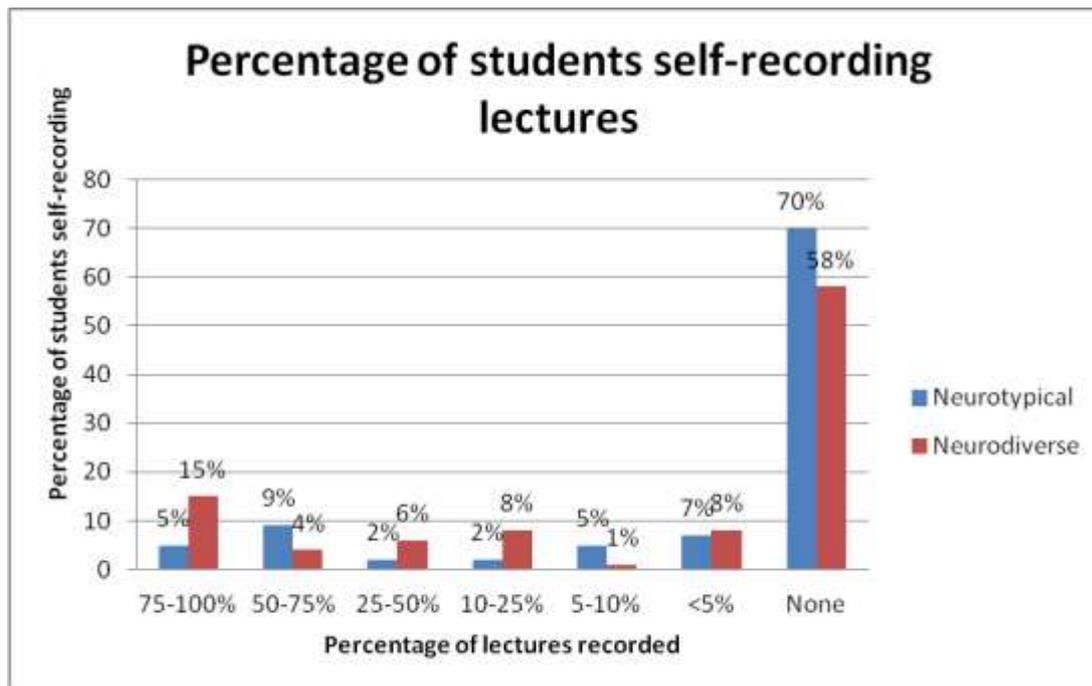
**Academics could be provided with guides on how to use lecture recording equipment, and given tips and reminders to help improve the quality of recordings, such as remembering to switch on lecture recording equipment microphone in case lecturer before them switched it off.**

**Academic support staff should also ensure that lecture recording equipment is installed and in working condition, especially if there have been extensive technical problems with recordings from a particular room or course.**

## Self-recording of lectures

### The majority of students do not record lectures themselves

122 students completed this section of the survey in total, and the majority of students reported that they did not record lectures themselves (62%, 76 respondents).



Graph 8 shows a comparison of the population of neurodiverse versus neurotypical students who record lectures themselves. The majority of students reported that they did not record lectures.

However, 30% of neurotypical students, and 42% of neurodiverse students reported recording lectures themselves. Students who did make recordings, made them mainly in audio format using standalone recorders (86%, 53 respondents), possibly as it may have been easier to use audio recording equipment during a lecture.

Students were also asked why they recorded lectures, and their responses included:

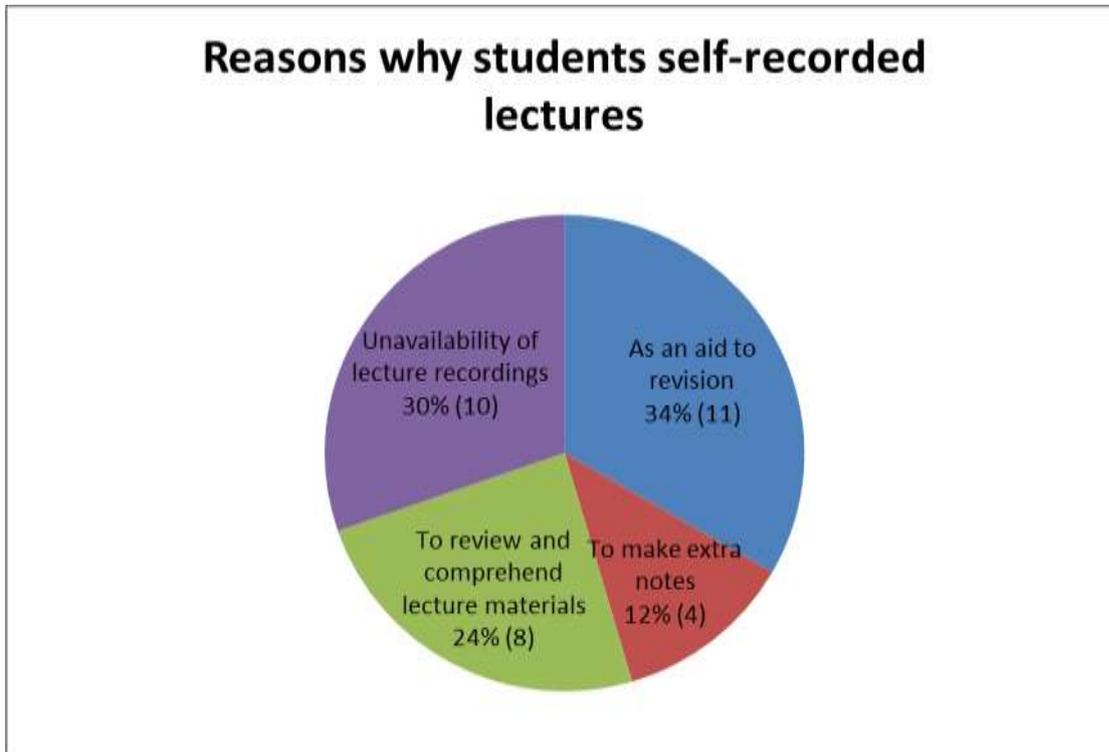
*“Because it wasn’t recorded by LSE”*

*“A failsafe in case lectures don’t record, in case Moodle ever breaks down and one of my modules doesn’t upload lectures to moodle.”*

*“Some of the lecture recordings are not good enough to use”*

*“Reliability of recording. My software allows me to insert markers into recording so it becomes easier to navigate the recording during revision/essay-writing”*

These results reflect the wider reasons given by neurodiverse students for using lecture recordings (Graph 7), and reflect the finding that only 7% of recordings are always made available to students via Moodle (see Graph 6).



Graph 9 shows the reasons why students chose to self-record lectures. The majority of students do not make their own lecture recordings (see Graph 8). However, a third of the ones that do, do so because of the unavailability of lecture recordings.

Applications used by students to record lectures
Voice Record Nokia Android App
tape a talk
I use Evernote on a laptop (Apple) and my mobile phone (Android).
RecorderPro and Quickvoice
voice recorder on google play I recorded some of the seminars from motorola xoom 2
exrecording
nexus 4 camera
Audionotetaker
iPhone: recordings; Mac: microsoft word notes r
Voice memos on iPhone
Word - notebook recording feature

Table 1 shows some of the applications and software used by students to record lectures.

Bond & Grussendorf (2013) found that lecturers at the LSE broadly supported the idea that lecture recordings improve accessibility for disabled and neurodiverse students, and were willing to allow students with neurodiverse conditions and disabilities to make their own recordings. Nevertheless, some lecturers still speculated that attending lectures was still the best option for neurodiverse students.

As many some courses do not offer lecture recordings, or indeed, some teaching spaces at the LSE are currently able to support lecture recordings, students could be encouraged to make their own recordings as a solution to the unavailability of recordings. LSE staff could also provide students support and advice on the tools available to them.

## Accessibility of lecture recordings

**Students suggested that access to lecture recordings on mobile devices and the ability to bookmark sections of recordings would be useful**

Students suggested that bookmarking lecture recordings would be very useful towards their studies:

*“...One way might be for them to be able to “bookmark” sections of lecture recordings as they are going along; after the lecture, they could be presented with a list of their bookmarks, and links to those sections of the recordings to provide a prompt, in order for them to produce captions”.*

*“...perhaps a chapter functionality allowing to skip to certain parts of the lecture”.*

The ability to download lectures so that lectures could be viewed offline and on multiple platforms was also a common suggestion:

*“...if they could all be downloaded so they could be examined offline”.*

*“Make them available to download so it’s easier to skip to relevant sections and pause without having to wait for buffering and rely on the echo service”.*

The functionality to add bookmarks to recordings on Echo360 does exist, and **a recommendation could be to better inform students on the features of Echo360 to allow them to make optimal use of the service.** Downloading lecture recordings is also a functionality of Echo360, however current LSE policy means that lecture downloads are currently not allowed by default, and lecturers must opt in to allow students to download recordings on to their mobile devices. Lecturers may simply be unaware that they must grant their students permission to download lectures. However, lecturers may also be self-censoring or presenting lectures in a different way (Bond & Grussendorf, 2013), in case the lecture content is taken out of context, or shared illicitly. Chang (2007) found examples of lecturers self-censoring on lecture recordings, with one lecturer remarking:

*“I do remain conscious of knowing what I am saying is being recorded and therefore, sometimes you may offer an anecdote about a person or a company and you do think to yourself, ‘Mmm I’m on record here and could it come back to be used against me.’”*

**Making lecturers aware of the importance neurodiverse students place on lecture recordings as a supplementary tool to attending lectures might persuade more lecturers to record lectures and make them available for download.** Restricting the sharing of downloaded lectures to users with valid LSE email addresses, or limiting the availability of downloaded lectures to a given period of time may also help to address issue of lecture recordings being leaked out of the LSE network.

### Other suggestions

Miscellaneous suggestions for improvements to lecture recordings referred more generally to the quality of recordings. However, some suggestions included:

*“Sometimes they don’t start at the beginning of the lecture. They should.”*

*“To know prior to the lecture whether it is going to be recorded. If a lecture is to be recorded I am more likely to listen and absorb rather frantically trying to note everything down.”*

## Timing of study

The survey was conducted towards the end of the Summer term at the LSE, as we believed that students, particularly first year undergraduates, would have had sufficient experience of lectures and lecture capture at the School to effectively participate in the survey.

However, the timing of the survey coincided with exams for the majority of students at the LSE, which may have resulted in fewer students participating in the survey. We also wished to conduct focus groups with students to further explore specific topics on lecture recordings, such as the attitudes of academics and students on lecture recordings, and the software and applications used to record lectures and their functionalities. Therefore, we shall be following up this survey with focus groups with students towards the end of the 2013 Michaelmas term to explore issues such as whether the way recordings are posted on to Moodle affect how students access to them, and on students' awareness of the functionalities available with Echo360 recordings.

## Conclusion and recommendations

The survey results have indicated that, while the majority of neurodiverse students reported using recorded lectures, and find lectures as an "essential" tool for their studies. However a greater proportion of neurotypical students reported using lecture recordings more frequently, showing that this resource may not be utilized as fully by neurodiverse students as possible. Neurodiverse students did report using lecture recordings to help address issues in note-taking and content comprehension. However, inconsistencies in the availability, quality and accessibility of recordings are hindering neurodiverse students from fully exploiting this resource.

Therefore, we recommend promoting the practice of recording all lectures to lecturers, as well as providing guidance and training to students and lecturers on using Echo360 recording equipment to ensure recordings are easily accessible and usable. Following this recommendation would lead to improvements in lecture recording quality, especially when advice on how lecture recording can be incorporated in to their lecturing style is provided alongside. Academic support staff at the Centre for Learning Technology, Teaching and Learning Centre, Disability and Wellbeing Office and the Information Management Team should work closely with academics to ensure lecture recording equipment is available and fit for purpose, and that students and lecturers are able to use the equipment effectively.

Students could also be encouraged to produce their own lecture recordings, and support staff could provide students with advice and guidance on how to produce recordings best suited for their learning strategies.

Finally, we recommend that further qualitative research be conducted to explore the issues around lecture recording accessibility and self-recording of lectures expressed by neurodiverse students to get a more in-depth understanding of students' perceptions about lecture recordings and how they use them for their studies.

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## Appendix 1: Neurodiversity and lecture capture survey results

Response Set: Neurodiversity response set  
Completion Status: Completed

### 1. Undergraduate

#	Question	First Year	Second Year	Final Year	Industrial placement/exchange year	Total Responses	Mean
1	Level	15	25	24	1	65	2.17

Statistic	Level
Min Value	1
Max Value	4
Mean	2.17
Variance	0.64
Standard Deviation	0.80
Total Responses	65

### 2. Masters

#	Question	Full-time	Part-time	Total Responses	Mean
1	Level	49	4	53	1.08

Statistic	Level
Min Value	1
Max Value	2
Mean	1.08
Variance	0.07
Standard Deviation	0.27
Total Responses	53

### 3. PhD

#	Question	PhD	Total Responses	Mean
1	Level	9	9	1.00

Statistic	Level
Min Value	1
Max Value	1
Mean	1.00
Variance	0.00
Standard Deviation	0.00
Total Responses	9

#### 4. General Course

#	Question	Year 1	Total Responses	Mean
1	Level	2	2	1.00

Statistic	Level
Min Value	1
Max Value	1
Mean	1.00
Variance	0.00
Standard Deviation	0.00
Total Responses	2

5. If you wish to enter the draw for the £50 Amazon voucher, please enter your LSE email address below

Statistic	Value
Total Responses	117

## 6. Which department is your course based in?

#	Answer	Response	%
1	Department of Accounting	7	6%
2	Department of Anthropology	3	2%
3	Department of Economic History	4	3%
4	Department of Economics	10	8%
5	Department of Finance	2	2%
6	Department of Geography and Environment	4	3%
7	Department of Government	16	13%
8	Department of International History	3	2%
9	Department of International Relations	8	7%
10	Department of Law	8	7%
11	Department of Management	10	8%
12	Department of Mathematics	5	4%
13	Department of Media and Communications	4	3%
14	Department of Philosophy, Logic and Scientific Method	6	5%
15	Department of Social Policy	6	5%
16	Department of Sociology	3	2%
17	Department of Statistics	4	3%
18	Department of International Development	7	6%

19	European Institute	3	2%
20	Gender Institute	3	2%
21	Institute of Social Psychology	2	2%
22	Language Centre	0	0%
23	Methodology Institute	2	2%
24	Other (please explain)	2	2%
<b>Total</b>		<b>122</b>	<b>100%</b>

Other (please explain)

Statistic	Value
Min Value	1
Max Value	24
Mean	10.48
Variance	34.25
Standard Deviation	5.85
Total Responses	122

## 7. Do you consider yourself to have one of the following (please select all that apply)

#	Answer	Response	%
1	Dyslexia	46	74%
2	Dyspraxia	22	35%
3	Dyscalculia	3	5%

Statistic	Value
Min Value	1
Max Value	3
Total Responses	62

### 8. Are you registered with the LSE Disability and Well-being Services?

#	Answer	Response	%
1	Yes	56	55%
2	No	45	45%
<b>Total</b>		<b>101</b>	<b>100%</b>

Statistic	Value
Min Value	1
Max Value	2
Mean	1.45
Variance	0.25
Standard Deviation	0.50
Total Responses	101

### 9. Have you ever accessed lecture recordings on your courses on Moodle?

#	Answer	Response	%
1	Yes	106	87%
2	No	16	13%
<b>Total</b>		<b>122</b>	<b>100%</b>

Statistic	Value
Min Value	1
Max Value	2
Mean	1.13
Variance	0.11
Standard Deviation	0.34
Total Responses	122

**10. Please state why you have not accessed lecture recordings on Moodle for your course(s)**

#	Answer	Response	%
1	I did not know that lecture recordings were available on Moodle	6	38%
2	Lecture recordings are not available on Moodle	7	44%
3	I do not have enough time to access lecture recordings on Moodle	1	6%
4	I prefer not to use lecture recordings on Moodle (please explain)	0	0%
5	I cannot use lecture recordings on Moodle (please explain)	0	0%
6	Other (please explain)	2	13%
<b>Total</b>		<b>16</b>	<b>100%</b>

I prefer not to use lecture recordings on Moodle (please explain)	I cannot use lecture recordings on Moodle (please explain)	Other (please explain)
		At this level of my study programme, I concentrate on writing and on professional workshop. Do not need to attend lectures.
		No need. If I do need a recording of a lecture, I do it myself. But it's nice to know it's there!

Statistic	Value
Min Value	1
Max Value	6
Mean	2.19
Variance	2.56
Standard Deviation	1.60
Total Responses	16

## 11. On average, across all of your subjects, how often are recordings of lectures made available to you via Moodle?

#	Answer	Response	%
1	Always	7	7%
2	Most of the time	35	33%
3	Sometimes	33	31%
4	Rarely	31	29%
	<b>Total</b>	<b>106</b>	<b>100%</b>

Statistic	Value
Min Value	1
Max Value	4
Mean	2.83
Variance	0.87
Standard Deviation	0.93
Total Responses	106

**12. On average, across all of your subjects, how quickly were recordings of lectures made available on Moodle?**

#	Answer	Response	%
1	Before the lecture	0	0%
2	Immediately after the lecture	51	49%
3	A week after the lecture	43	41%
4	A month after the lecture	5	5%
5	At the end of the semester	4	4%
6	At the end of the academic year	2	2%
<b>Total</b>		<b>105</b>	<b>100%</b>

Statistic	Value
Min Value	2
Max Value	6
Mean	2.70
Variance	0.77
Standard Deviation	0.88
Total Responses	105

**13. For what reason do you mostly use lecture recordings on Moodle? Please select all that apply.**

#	Answer	Response	%
1	To catch up on a missed lecture	64	60%
2	To revisit sections of lectures I didn't understand	76	72%
3	For revision and exam preparation	69	65%
4	To make extra notes	54	51%
5	To avoid attending lectures	15	14%
6	Other (please explain)	5	5%

**Other (please explain)**

Sometimes the slides are confusing and also hearing the information verbally is easier to understand than reading it on the slide . Sometimes I read and the information doesn't 'go in'

I write really slowly in lectures so in lectures i only listen and then i rewatch and pause recordings

In terms of catching up on lectures, I have an 1 and 30 mins commute and will my specific learning difficulties I find the best way to revise/study is to stay focused and keep myself in one place therefore when a class is cancelled or I don't have any extra social things on I would prefer to catch up online, otherwise 3 hours is gone travelling as well as other time because it will take me longer to organise myself afterwards, cost of travel is also a factor.

Didn't catch all the words the teacher said

If I had them available, I usually use them to fill in the missing parts of my notes, as I struggle to write quickly enough during lectures and seminars.

Statistic	Value
Min Value	1
Max Value	6
Total Responses	106

**14. On average, across all of your subjects, approximately what percentage of the recorded lectures uploaded onto Moodle from your courses have you accessed at least once?**

#	Answer	Response	%
1	75-100%	27	26%
2	50-75%	30	29%
3	25-50%	19	18%
4	10-25%	17	16%
5	5-10%	9	9%
6		3	3%
<b>Total</b>		<b>105</b>	<b>100%</b>

Statistic	Value
Min Value	1
Max Value	6
Mean	2.62
Variance	1.95
Standard Deviation	1.40
Total Responses	105

### 15. When using lecture recordings, do you mostly...

#	Answer	Response	%
1	View the full lecture recording more than once?	16	15%
2	Only view the full lecture recording once?	24	23%
3	View the full recording, then revisit sections of the lecture?	43	41%
4	Only view discrete sections of the recording?	23	22%
<b>Total</b>		<b>106</b>	<b>100%</b>

Statistic	Value
Min Value	1
Max Value	4
Mean	2.69
Variance	0.96
Standard Deviation	0.98
Total Responses	106

### 16. How useful are these recordings for your studies?

#	Answer	Response	%
1	Essential	50	47%
2	Useful	53	50%
3	Not useful	2	2%
4	Detrimental (please explain)	1	1%
<b>Total</b>		<b>106</b>	<b>100%</b>

## Detrimental (please explain)

I forget information easily and even if I took notes, the information doesn't make sense. So having a recording helps as the teacher usually explains it in an understandable way. Listening verbally also is a lot easier than reading which is particularly time consuming

Statistic	Value
Min Value	1
Max Value	4
Mean	1.57
Variance	0.34
Standard Deviation	0.59
Total Responses	106

**17. Do you have any comments/suggestions on how recordings on Moodle could be improved to help with your studies?**

**Text Response**

Recordings can be improve by having a video of the lecturer speaking

Some lecture recording are not audible clear, so its extremely hard to make notes. Subtitles would be useful

Better sound quality in some lecture rooms. Also permit downloads to view on phones etc.

The Echo system is unstable and doesn't always load first time. Playback speed control would be an excellent feature to add to enable scanning content while still understanding the context. Audio / Slide quality is variable. Also, incorporating the lecturers pointer into slide presentation would be helpful when explaining complex concepts.

I only use them sparingly, but even so, perhaps a chapter functionality allowing to skip to certain parts of the lecture.

To have recordings in parts rather than a full recording - and maybe have a title showing what slide or information was talked about in the recording. Class recording could be useful Have recordings in a way that it can be downloaded or saved so it can be uploaded to an MP3 player. Easier to carry around than a computer.

It would be good if on the ipad version we could see both screens and not just only one. Encourage lectures, which are not used to the necessity of recordings for us to use the visualiser instead of the board whenever possible and when talking do not say 'this' and 'that' because we cannot see them pointing. Also when people in the audiance respond it would be good if this was recorded, too. Maybe just raise awareness with lecturers that we need the recordings. They seem to think only people who cannot be bothered to come to class watch them. But i personally cannot write quickly enough in class so this is essential.

Several lectures were inaccesable because ot technical issues. Two had no sound available and two had no input from the overhead projector, which was essential for me to follow the lectures.

I would like all of my courses to have been recorded, the one half unit that has been this term has helped me enourmously.

categorizing with a quick headline in addition the date would have helped, but I figured out which sessions I was looking for without much trouble.

No- the recordings are great and vital to my revision efforts, especially because I will miss some points or not understand them in class.

Make podcasts available. Stop doing lectures and have personalised 'Webinars' in which lecturers simply give the lecture to a webcam which can then be accessed any time.

Clearer video image - it's very hard to see what professors are writing on white boards. Also, my master's is in the Institute for Public Affairs - There was no option to type in "Other" on the first page.

Make them compulsory

All lectures should be recorded for the benefit of students however as things currently stand very few are. To obviate this problem I have obtained my own lecture recorder.

Yes, They should be in a more acessible link. Sometimes is hard to find the lecture on Echo360 Also not all lectures are recorded, this could be more enforced. In one specific course, 80% of recorded lectures were without sound, technical problems should receive more attention.

Please allow us to speed up the playback. Being able to listen to lectures at 1.5x speed would be

amazing. Khan Academy allows this with new youtube videos and really saves a lot of time.
The sound could be more louder and clearer
Sometimes they dont start at the beginning of the lecture. They should.
With my dyslexia reading is very difficult and unpleasant, being able to listen to lectures is vital for my learning as I can memories it better and learn while moving about. Sitting down a reading for 1 hour straight is not possible for me
Every lecture should be recorded and posted online.
A few lectures had technical difficulties and there was no audio. The quality of the camera also isn't all that great (not the screen/powerpoint but the actually video of the professor).
Better sound quality. A host that does not keep crashing or tale ages to load. Make more departments record lectures. Consider recording seminars.
Indexing - list of topics covered, and at what point into the recording (eg 40mins) they start. I appreciate this might create a lot of extra work for lecturers. One way might be for them to be able to "bookmark" sections of their lecture as they are going along; after the lecture, they could be presented with a list of their bookmarks, and links to those sections of the recordings to provide a prompt, in order for them to produce captions.
Make sure every module uploads recordings.
Linked to the slides.
Recordings of as many lectures as is possible if not all would help. At the moment recording is not consistent enough.
I wish that more departments uploaded lectures (i.e. Accounting and finance - my core courses!)
Better microphone technology.
Sometimes, I could not see the words on the visualiser (while other time words on the visualiser are very clear)! Sometimes, the lecturer turns on the wrong button and the recorded video shows the screen of the powerpoint instead of the screen of the visualiser, and thus I couldn't see the notes she wrote. The lecturer could have been more aware :) Sometimes, the lecturer decided not to speak into the microphone, and while it is audible in the lecture theatre, it was not audible on the recorded video.
Sometimes I rely on them to work, given they normally do, and for some reason the recording fails (sound etc). this is not ideal given I had assumed it would work so made less notes/did not attend the lecture at all
There was a module that has no recordings. The code of the module is DV411.
Making them available for all of the courses would be fantastic + perhaps some recordings on major seminars
Some courses do not record lectures at all; other courses only recorded the last two lectures due to technical issues throughout the term; and some courses only posted the lectures online at the end of the term (to encourage students to attend the lectures rather than watch them online). All of this was extremely unhelpful for students who actually want to view recordings to catch up and further develop their understanding of issues raised in the lectures. (Particularly as I was writing notes by hand and couldn't take down all the information at the time)
Microphones on the ceiling so that we can hear the questions of students if they ask any during the lecture
Make them downloadable
Encourage every teacher to upload their lectures. It is very helpful to me.
They need to be available for every course.
better quality of sound recording. use of microphone etc

Some of them are not posted, or lecturers do not speak into microphone.
Ensure that its not just a video recording of the slides. Sometimes when teachers work off boards the advice is lost.
It should be compulsory for all academics to upload recordings, some don't and this hampers my studies. Speaking to people at dyslexia action they generally view LSEs approach (when I describe it to them) as the ideal model of how things should be done. However we need to make the lecture recordings compulsory as some academics choosing to skip them hampers my progress. I would like to add, I do not view recordings as a replacement for physical presence in the lecture. I think the lecture and the Q and A that follows it is critical for the learning process.
The Echo needs improving, it will often be very slow or will not play the lecture.
The lectures tend to capture a lot of background noise and so they don't make an effective study tool. Better integration with lecture presentations eg. indicating change of slide would be good.
The recordings for lecture theatres are pretty good. Those for lectures in classrooms can be improved. For instance, if lectures are held in the classrooms of the clement house, the quality is very bad.
Variances in standard. Some lectures have no sound or poor sound quality which is very annoying. should be available across all subjects
I cannot pick up a great deal from reading, so having access to verbal explanations of content in lectures is pretty important for me
All departments need to hav lectures at the least audio recorded. None of the courses within my department (Sociology) are recorded.
To make recordings more technically consistent - recordings do not always reliably work (be it an audio or a visual problem.)
it would be better if they all included video and audio and if they could all be downloaded so they could be examined offline
Recordings of all lectures of all subjects. Even audio recordings would be okay if lecture slides were made available for all courses.
More availability
Should be made available for all subjects, with video preferably. In addition, many of the lectures failed to be recorded because of some technical difficulty or because the lecturer stood too far away from the microphone.
With better stream.
having links to different parts of the lecture through the title
It should be made available for other modules too
I wish lecture recordings were available for all my modules, but this year only two modules out of four offered lecture recording.
Making them available offline - it's technically possible! Also, the reading list service isn't used at all by any of my courses - why? It's a much better and useful way of organising reading lists (compared to IR202 which is a disaster...). See <a href="http://readinglists.lse.ac.uk/index.html">http://readinglists.lse.ac.uk/index.html</a>
Some microphones are poor and this makes the recording useless.
no comment
Sometimes the recording quality is not very good.
Because only one of my modules uses them, I haven't really got into the practice of using them. I think I would make better use of them if more geography modules were covered.
Would be nice to have every course recorded.
The sound quality and audibility can definitely be improved by simply suggesting the lecturer

<p>stand in front of the microphone for the most part of the lecture. Visibility/ image quality is fine.</p>
<p>For recordings to be split by slides/parts to make going back to certain parts easier.</p>
<p>Often lecturers don't want to use Lecture Capture in case of students not attending lectures but after speaking to some of my Professors they agreed to have their lectures recorded and made available for only students with ISSAs which I found really helpful.</p>
<p>Because of my condition, I really struggle to absorb all of the material at first sight. The recordings are absolutely essential for me and I really wish they were available for all of my courses. It would help me so much.</p>
<p>recordings on moodle were great. My only suggestions would be more recordings as only 1 out of 6 lectures were recorded</p>
<p>Both the sound and picture quality must improve and if possible an option to save/ record the file should be available. Thanks</p>
<p>Increase offering to more modules; Better organisation of uploaded lectures and titling (sometimes it's all dates and it's not clear which is which until I have started watching them); Audio does not work all the time, and sometimes include a lot of noise; Reloading problem persists, i.e. when I want to go back a couple minutes to hear the particular section again, it reloads from the beginning rather than from the point I have selected; Some of the recordings allow downloading onto computer to listen when there is no Internet connection while others don't</p>
<p>Have better quality videos of lecturers giving the lecture as well as what is being displayed on the screen.</p>
<p>To know prior to the lecture whether it is going to be recorded. If a lecture is to be recorded I am more likely to listen and absorb rather than frantically trying to note everything down</p>
<p>Why are there recordings only for some subjects? Why can't all subjects get recordings.</p>
<p>it would be great if on my core course which is taught by several lectures all lectures would actually make sure the recording was on. Although the whole course was supposed to be recorded, in reality only around 50% was.</p>
<p>Make them available to download so it's easier to skip to relevant sections and pause without having to wait for buffering and rely on the echo service. If lectures were more frequently recorded then students suffering from various conditions who struggle to attend lectures would not be so severely disadvantaged.</p>
<p>Volume could be made louder</p>
<p>The quality of the lecturer's image could be improved. As could the audio; there was almost always too much sound in the background, students talking etc.</p>
<p>The volume of the lecturer is inconsistent it is usually too low to hear. When students in the lecture hall speak, their voices are not recorded. It would be very beneficial if a fast forward key is available when playing the recording on echo</p>
<p>All lecturers should be encouraged to post recordings on Moodle!</p>
<p>of the 4 International History and International Relations courses I took this year, only one of them offered recorded lectures. This was useful in the michaelmas term because they were downloadable and I was able to access them on my itunes, meaning I could access them on my ipod, ipad, and itunes offline. This meant that I could revisit lectures while doing other things, like running, commuting, or generally being out and about throughout the day. Moodle recording could be very useful if they were all downloadable and all courses made them available.</p>

Statistic	Value
Total Responses	81

**18. On average, across all of your subjects, what percentage of your lectures do you record yourself?**

#	Answer	Response	%
1	75-100%	14	11%
2	50-75%	7	6%
3	25-50%	6	5%
4	10-25%	7	6%
5	5-10%	3	2%
6		9	7%
7	None	76	62%
<b>Total</b>		<b>122</b>	<b>100%</b>

Statistic	Value
Min Value	1
Max Value	7
Mean	5.53
Variance	4.93
Standard Deviation	2.22
Total Responses	122

## 19. Why do you record your lectures yourself?

### Text Response

Because I cannot make notes fast enough or clear enough during lecture.

A failsafe in case lectures dont record, in case Moodle ever breaks down and one of my modules doesnt upload lectures to moodle.

To re-visit parts of lectures I don't understand. None of my lectures this year are recorded by LSE.

Several reasons: I sometimes don't understand what the lecturer was talking about which ends up making me fall behind in a lecture I also forget very easily so looking back at a lecture helps The teacher sometimes talks too fast for me to make any notes . I have to first understand before I can make notes which takes some time.

In order to comprehend the material Better

To understand better the subjects and take later notes.

To listen to them later.

When lecture recordings are not available.

As alot of the time lectures are not recorded formally.

To make better notes at home

Seminars and some of the lectures are not recorded

in case the teacher doesnt record them

no

On my computer, with a free program.

I usually don't. As a research student I tend to record guest lectures by external speakers when I expect them to be extremely pertinent to my thesis. The most useful thing for me to record is my own presentation (particularly the questions I am asked, since my dyslexic difficulty means I can either focus on answering the question, or remembering the question and my response), and my theiss supervisions (during which I respond to the questions of two of my three supervisors).

pictures

Reliability of recording. My software allows me to insert markers into recording so it becomes easier to navigate the recording during revision/essay-writing

in case the other recordings are not available or fail, and I record seminars which are not recorded.

I have/had the equipment, and I didn't know they were available online. But I don't attend courses anymore, so it's moot.

Because it isn't recorded by LSE.

Future revision

Revisit sections of lectures for clarification, especially when very dense material is presented and I want to concentrate more on understanding rather than taking notes (slides aren't always helpful as they only contain a portion of all the information conveyed)

Some of the lecture recodrings are not good enough to use.

I have problems in analysing and remembering heard information

To ensure I do not miss anything.

I very rarely do as I find it technically difficult to organize, which is why lecture capture is so helpful as the lecture happens as it would in real life with slide movements.

Because of my condition, I really struggle to absorb the material in the lecture. Revisiting it via a recording is absolutely essential for me.

Better for revision, easier to go back to fully understand concepts

## If they're not uploaded onto Echo

Most importantly for reference closer to exam; also sometimes to catch up on parts that I do not understand prior to doing the readings assigned.

To ensure I have something to refer to after the lecture and at exam time.

Because for some modules, lectures aren't recorded. Also, sometimes specific lecturers do not speak into the microphone so the recording is too quiet

So that I have a file that I can refer back to and listen again for revision.

As a slow writer, during lectures I often miss out bits and pieces, the recorded lectures are useful for filling in the gaps that I may have. Similarly, they are useful for revision and creating long term memory retention, because I can go over pieces repeatedly until I fully understand them, or ask a teacher or lecturer specific quotes or excerpts.

Statistic	Value
Total Responses	34

## 20. Smartphone (e.g. iPhone, Samsung Galaxy S)

#	Question	Video	Audio	Text	Total Responses
1	Type of recording	1	15	0	16

Statistic	Type of recording
Min Value	1
Max Value	2
Total Responses	16

## 21. Tablet (e.g. iPad, Google Nexus)

#	Question	Video	Audio	Text	Total Responses
1	Type of recording	0	6	1	7

Statistic	Type of recording
Min Value	2
Max Value	3
Total Responses	6

## 22. Laptop

#	Question	Video	Audio	Text	Total Responses
1	Type of recording	1	14	3	18

Statistic	Type of recording
Min Value	1
Max Value	3
Total Responses	15

## 23. Handwritten notes

#	Question	On lecture slides	In a separate notebook	Total Responses
1	Type of recording	9	17	26

Statistic	Type of recording
Min Value	1
Max Value	2
Total Responses	20

## 24. Other

Default - Type of recording

Please explain

MP3 player

Statistic	Type of recording
Min Value	-
Max Value	-
Total Responses	-

## 25. Standalone recording device

#	Question	Video recorder (e.g. Sony Handycam)	Audio recorder (e.g. Dictaphone)	Total Responses
1	Type of recording	2	18	20

Statistic	Type of recording
Min Value	1
Max Value	2
Total Responses	20

26. If you indicated that you use a laptop, smartphone or tablet to make notes, please state which apps or programs you use, and the device(s) you use them on.

Text Response
I dont use any special app, just basic record program on iphone
Voice Record Nokia Android App
Microsoft Word
tape a talk
Word processor.
Microsoft Word.
I use Evernote on a laptop (Apple) and my mobile phone (Android).
RecorderPro and Quickvoice
voice recorder on google play I recorded some of the seminars from motorola xoom 2
Internet explore
exrecording
nexus 4 camera
Audionotetaker
iPhone: recordings; Mac: microsoft word notes r
Voice memos on iPhone
i did not even know you was allowed to digitally record lectures for personal use!
Word - notebook recording feature
Evernote
Word notebooks
iPhone recording app; Microsoft word recording function
Word
Microsoft Word for Macbooks.

## Appendix 2: Survey results of neurodiverse student population

Response Set: Neurodiversity response set

Filter By: Report Subgroup

Filter By: Report Subgroup

Completion Status: Completed

### 1. Undergraduate

#	Question	First Year	Second Year	Final Year	Industrial placement/exchange year	Total Responses	Mean
1	Level	6	19	14	0	39	2.21

Statistic	Level
Min Value	1
Max Value	3
Mean	2.21
Variance	0.48
Standard Deviation	0.70
Total Responses	39

### 2. Masters

#	Question	Full-time	Part-time	Total Responses	Mean
1	Level	31	3	34	1.09

Statistic	Level
Min Value	1
Max Value	2
Mean	1.09
Variance	0.08
Standard Deviation	0.29
Total Responses	34

### 3. PhD

#	Question	PhD	Total Responses	Mean
1	Level	7	7	1.00

Statistic	Level
Min Value	1
Max Value	1
Mean	1.00
Variance	0.00
Standard Deviation	0.00
Total Responses	7

#### 4. General Course

#	Question	Year 1	Total Responses	Mean
1	Level	1	1	1.00

Statistic	Level
Min Value	1
Max Value	1
Mean	1.00
Variance	0.00
Standard Deviation	0.00
Total Responses	1

## 6. Which department is your course based in?

#	Answer	Response	%
1	Department of Accounting	5	6%
2	Department of Anthropology	2	3%
3	Department of Economic History	1	1%
4	Department of Economics	4	5%
5	Department of Finance	2	3%
6	Department of Geography and Environment	2	3%
7	Department of Government	11	14%
8	Department of International History	3	4%
9	Department of International Relations	5	6%
10	Department of Law	4	5%
11	Department of Management	6	8%
12	Department of Mathematics	2	3%
13	Department of Media and Communications	4	5%
14	Department of Philosophy, Logic and Scientific Method	5	6%
15	Department of Social Policy	5	6%
16	Department of Sociology	2	3%
17	Department of Statistics	1	1%
18	Department of International Development	4	5%

19	European Institute		3	4%
20	Gender Institute		3	4%
21	Institute of Social Psychology		2	3%
22	Language Centre		0	0%
23	Methodology Institute		2	3%
24	Other (please explain)		0	0%
<b>Total</b>			<b>78</b>	<b>100%</b>

Other (please explain)

Statistic	Value
Min Value	1
Max Value	23
Mean	10.88
Variance	34.00
Standard Deviation	5.83
Total Responses	78

## 7. Do you consider yourself to have one of the following (please select all that apply)

#	Answer	Response	%
1	Dyslexia		46 74%
2	Dyspraxia		22 35%
3	Dyscalculia		3 5%

Statistic	Value
Min Value	1
Max Value	3
Total Responses	62

### 8. Are you registered with the LSE Disability and Well-being Services?

#	Answer	Response	%
1	Yes	52	90%
2	No	6	10%
<b>Total</b>		<b>58</b>	<b>100%</b>

Statistic	Value
Min Value	1
Max Value	2
Mean	1.10
Variance	0.09
Standard Deviation	0.31
Total Responses	58

### 9. Have you ever accessed lecture recordings on your courses on Moodle?

#	Answer	Response	%
1	Yes	65	83%
2	No	13	17%
<b>Total</b>		<b>78</b>	<b>100%</b>

Statistic	Value
Min Value	1
Max Value	2
Mean	1.17
Variance	0.14
Standard Deviation	0.38
Total Responses	78

**10. Please state why you have not accessed lecture recordings on Moodle for your course(s)**

#	Answer	Response	%
1	I did not know that lecture recordings were available on Moodle	5	38%
2	Lecture recordings are not available on Moodle	5	38%
3	I do not have enough time to access lecture recordings on Moodle	1	8%
4	I prefer not to use lecture recordings on Moodle (please explain)	0	0%
5	I cannot use lecture recordings on Moodle (please explain)	0	0%
6	Other (please explain)	2	15%
<b>Total</b>		<b>13</b>	<b>100%</b>

I prefer not to use lecture recordings on Moodle (please explain)	I cannot use lecture recordings on Moodle (please explain)	Other (please explain)
		At this level of my study programme, I concentrate on writing and on professional workshop. Do not need to attend lectures.
		No need. If I do need a recording of a lecture, I do it myself. But it's nice to know it's there!

Statistic	Value
Min Value	1
Max Value	6
Mean	2.31
Variance	3.06
Standard Deviation	1.75
Total Responses	13

## 11. On average, across all of your subjects, how often are recordings of lectures made available to you via Moodle?

#	Answer	Response	%
1	Always	1	2%
2	Most of the time	24	37%
3	Sometimes	20	31%
4	Rarely	20	31%
<b>Total</b>		<b>65</b>	<b>100%</b>

Statistic	Value
Min Value	1
Max Value	4
Mean	2.91
Variance	0.74
Standard Deviation	0.86
Total Responses	65

**12. On average, across all of your subjects, how quickly were recordings of lectures made available on Moodle?**

#	Answer	Response	%
1	Before the lecture	0	0%
2	Immediately after the lecture	30	47%
3	A week after the lecture	28	44%
4	A month after the lecture	3	5%
5	At the end of the semester	1	2%
6	At the end of the academic year	2	3%
<b>Total</b>		<b>64</b>	<b>100%</b>

Statistic	Value
Min Value	2
Max Value	6
Mean	2.70
Variance	0.78
Standard Deviation	0.89
Total Responses	64

**13. For what reason do you mostly use lecture recordings on Moodle? Please select all that apply.**

#	Answer	Response	%
1	To catch up on a missed lecture	33	51%
2	To revisit sections of lectures I didn't understand	50	77%
3	For revision and exam preparation	45	69%
4	To make extra notes	40	62%
5	To avoid attending lectures	8	12%
6	Other (please explain)	5	8%

**Other (please explain)**

Sometimes the slides are confusing and also hearing the information verbally is easier to understand than reading it on the slide . Sometimes I read and the information doesn't 'go in'

I write really slowly in lectures so in lectures i only listen and then i rewatch and pause recordings

In terms of catching up on lectures, I have an 1 and 30 mins commute and will my specific learning difficulties I find the best way to revise/study is to stay focused and keep myself in one place therefore when a class is cancelled or I don't have any extra social things on I would prefer to catch up online, otherwise 3 hours is gone travelling as well as other time because it will take me longer to organise myself afterwards, cost of travel is also a factor.

Didn't catch all the words the teacher said

If I had them available, I usually use them to fill in the missing parts of my notes, as I struggle to write quickly enough during lectures and seminars.

Statistic	Value
Min Value	1
Max Value	6
Total Responses	65

**14. On average, across all of your subjects, approximately what percentage of the recorded lectures uploaded onto Moodle from your courses have you accessed at least once?**

#	Answer	Response	%
1	75-100%	16	25%
2	50-75%	18	28%
3	25-50%	14	22%
4	10-25%	10	16%
5	5-10%	5	8%
6		1	2%
<b>Total</b>		<b>64</b>	<b>100%</b>

Statistic	Value
Min Value	1
Max Value	6
Mean	2.58
Variance	1.74
Standard Deviation	1.32
Total Responses	64

### 15. When using lecture recordings, do you mostly...

#	Answer	Response	%
1	View the full lecture recording more than once?	11	17%
2	Only view the full lecture recording once?	13	20%
3	View the full recording, then revisit sections of the lecture?	27	42%
4	Only view discrete sections of the recording?	14	22%
<b>Total</b>		<b>65</b>	<b>100%</b>

Statistic	Value
Min Value	1
Max Value	4
Mean	2.68
Variance	1.00
Standard Deviation	1.00
Total Responses	65

### 16. How useful are these recordings for your studies?

#	Answer	Response	%
1	Essential	30	46%
2	Useful	32	49%
3	Not useful	2	3%
4	Detrimental (please explain)	1	2%
<b>Total</b>		<b>65</b>	<b>100%</b>

## Detrimental (please explain)

I forget information easily and even if I took notes, the information doesn't make sense. So having a recording helps as the teacher usually explains it in an understandable way. Listening verbally also is a lot easier than reading which is particularly time consuming

Statistic	Value
Min Value	1
Max Value	4
Mean	1.60
Variance	0.40
Standard Deviation	0.63
Total Responses	65

**17. Do you have any comments/suggestions on how recordings on Moodle could be improved to help with your studies?**

**Text Response**

Recordings can be improve by having a video of the lecturer speaking

Some lecture recording are not audible clear, so its extremely hard to make notes. Subtitles would be useful

Better sound quality in some lecture rooms. Also permit downloads to view on phones etc.

The Echo system is unstable and doesn't always load first time. Playback speed control would be an excellent feature to add to enable scanning content while still understanding the context. Audio / Slide quality is variable. Also, incorporating the lecturers pointer into slide presentation would be helpful when explaining complex concepts.

I only use them sparingly, but even so, perhaps a chapter functionality allowing to skip to certain parts of the lecture.

To have recordings in parts rather than a full recording - and maybe have a title showing what slide or information was talked about in the recording. Class recording could be useful Have recordings in a way that it can be downloaded or saved so it can be uploaded to an MP3 player. Easier to carry around than a computer.

It would be good if on the ipad version we could see both screens and not just only one. Encourage lectures, which are not used to the necessity of recordings for us to use the visualiser instead of the board whenever possible and when talking do not say 'this' and 'that' because we cannot see them pointing. Also when people in the audiance respond it would be good if this was recorded, too. Maybe just raise awareness with lecturers that we need the recordings. They seem to think only people who cannot be bothered to come to class watch them. But i personally cannot write quickly enough in class so this is essential.

Several lectures were inaccesable because ot technical issues. Two had no sound available and two had no input from the overhead projector, which was essential for me to follow the lectures.

I would like all of my courses to have been recorded, the one half unit that has been this term has helped me enourmously.

categorizing with a quick headline in addition the date would have helped, but I figured out which sessions I was looking for without much trouble.

No- the recordings are great and vital to my revision efforts, especially because I will miss some points or not understand them in class.

Make them compulsory

All lectures should be recorded for the benefit of students however as things currently stand very few are. To obviate this problem I have obtained my own lecture recorder.

With my dyslexia reading is very difficult and unpleasant, being able to listen to lectures is vital for my learning as I can memories it better and learn while moving about. Sitting down a reading for 1 hour straight is not possible for me

Every lecture should be recorded and posted online.

Better sound quality. A host that does not keep crashing or tale ages to load. Make more departments record lectures. Consider recording seminars.

Indexing - list of topics covered, and at what point into the recording (eg 40mins) they start. I appreciate this might create a lot of extra work for lecturers. One way might be for them to be able to "bookmark" sections of their lecture as they are going along; after the lecture, they could

be presented with a list of their bookmarks, and links to those sections of the recordings to provide a prompt, in order for them to produce captions.
Make sure every module uploads recordings.
Linked to the slides.
Recordings of as many lectures as is possible if not all would help. At the moment recording is not consistent enough.
I wish that more departments uploaded lectures (i.e. Accounting and finance - my core courses!)
Sometimes, I could not see the words on the visualiser (while other time words on the visualiser are very clear)! Sometimes, the lecturer turns on the wrong button and the recorded video shows the screen of the powerpoint instead of the screen of the visualiser, and thus I couldn't see the notes she wrote. The lecturer could have been more aware :) Sometimes, the lecturer decided not to speak into the microphone, and while it is audible in the lecture theatre, it was not audible on the recorded video.
Sometimes I rely on them to work, given they normally do, and for some reason the recording fails (sound etc). this is not ideal given I had assumed it would work so made less notes/did not attend the lecture at all
There was a module that has no recordings. The code of the module is DV411.
Making them available for all of the courses would be fantastic + perhaps some recordings on major seminars
Some courses do not record lectures at all; other courses only recorded the last two lectures due to technical issues throughout the term; and some courses only posted the lectures online at the end of the term (to encourage students to attend the lectures rather than watch them online). All of this was extremely unhelpful for students who actually want to view recordings to catch up and further develop their understanding of issues raised in the lectures. (Particularly as I was writing notes by hand and couldn't take down all the information at the time)
Microphones on the ceiling so that we can hear the questions of students if they ask any during the lecture
Encourage every teacher to upload their lectures. It is very helpful to me.
Ensure that its not just a video recording of the slides. Sometimes when teachers work off boards the advice is lost.
It should be compulsory for all academics to upload recordings, some don't and this hampers my studies. Speaking to people at dyslexia action they generally view LSEs approach (when I describe it to them) as the ideal model of how things should be done. However we need to make the lecture recordings compulsory as some academics choosing to skip them hampers my progress. I would like to add, I do not view recordings as a replacement for physical presence in the lecture. I think the lecture and the Q and A that follows it is critical for the learning process.
The Echo needs improving, it will often be very slow or will not play the lecture.
The lectures tend to capture a lot of background noise and so they don't make an effective study tool. Better integration with lecture presentations eg. indicating change of slide would be good.
I cannot pick up a great deal from reading, so having access to verbal explanations of content in lectures is pretty important for me
All departments need to hav lectures at the least audio recorded. None of the courses within my department (Sociology) are recorded.
To make recordings more technically consistent - recordings do not always reliably work (be it an audio or a visual problem.)
it would be better if they all included video and audio and if they could all be downloaded so they

could be examined offline
Recordings of all lectures of all subjects. Even audio recordings would be okay if lecture slides were made available for all courses.
More availability
Should be made available for all subjects, with video preferably. In addition, many of the lectures failed to be recorded because of some technical difficulty or because the lecturer stood too far away from the microphone.
having links to different parts of the lecture through the title
Making them available offline - it's technically possible! Also, the reading list service isn't used at all by any of my courses - why? It's a much better and useful way of organising reading lists (compared to IR202 which is a disaster...). See <a href="http://readinglists.lse.ac.uk/index.html">http://readinglists.lse.ac.uk/index.html</a>
Because only one of my modules uses them, I haven't really got into the practice of using them. I think I would make better use of them if more geography modules were covered.
Would be nice to have every course recorded.
Often lecturers don't want to use Lecture Capture in case of students not attending lectures but after speaking to some of my Professors they agreed to have their lectures recorded and made available for only students with ISSAs which I found really helpful.
Because of my condition, I really struggle to absorb all of the material at first sight. The recordings are absolutely essential for me and I really wish they were available for all of my courses. It would help me so much.
recordings on moodle were great. My only suggestions would be more recordings as only 1 out of 6 lectures were recorded
Have better quality videos of lecturers giving the lecture as well as what is being displayed on the screen.
To know prior to the lecture whether it is going to be recorded. If a lecture is to be recorded I am more likely to listen and absorb rather than frantically trying to note everything down
it would be great if on my core course which is taught by several lectures all lectures would actually make sure the recording was on. Although the whole course was supposed to be recorded, in reality only around 50% was.
Make them available to download so it's easier to skip to relevant sections and pause without having to wait for buffering and rely on the echo service. If lectures were more frequently recorded then students suffering from various conditions who struggle to attend lectures would not be so severely disadvantaged.
Volume could be made louder
The quality of the lecturer's image could be improved. As could the audio; there was almost always too much sound in the background, students talking etc.
of the 4 International History and International Relations courses I took this year, only one of them offered recorded lectures. This was useful in the michaelmas term because they were downloadable and I was able to access them on my itunes, meaning I could access them on my ipod, ipad, and itunes offline. This meant that I could revisit lectures while doing other things, like running, commuting, or generally being out and about throughout the day. Moodle recording could be very useful if they were all downloadable and all courses made them available.

Statistic	Value
Total Responses	53

**18. On average, across all of your subjects, what percentage of your lectures do you record yourself?**

#	Answer	Response	%
1	75-100%	12	15%
2	50-75%	3	4%
3	25-50%	5	6%
4	10-25%	6	8%
5	5-10%	1	1%
6		6	8%
7	None	45	58%
<b>Total</b>		<b>78</b>	<b>100%</b>

Statistic	Value
Min Value	1
Max Value	7
Mean	5.29
Variance	5.51
Standard Deviation	2.35
Total Responses	78

## 19. Why do you record your lectures yourself?

### Text Response

Because I cannot make notes fast enough or clear enough during lecture.

A failsafe in case lectures dont record, in case Moodle ever breaks down and one of my modules doesnt upload lectures to moodle.

Several reasons: I sometimes don't understand what the lecturer was talking about which ends up making me fall behind in a lecture I also forget very easily so looking back at a lecture helps The teacher sometimes talks too fast for me to make any notes . I have to first understand before I can make notes which takes some time.

In order to comprehend the material Better

To listen to them later.

When lecture recordings are not available.

As alot of the time lectures are not recorded formally.

To make better notes at home

Seminars and some of the lectures are not recorded

in case the teacher doesnt record them

no

I usually don't. As a research student I tend to record guest lectures by external speakers when I expect them to be extremely pertinent to my thesis. The most useful thing for me to record is my own presentation (particularly the questions I am asked, since my dyslexic difficulty means I can either focus on answering the question, or remembering the question and my response), and my theiss supervisions (during which I respond to the questions of two of my three supervisors).

pictures

Reliability of recording. My software allows me to insert markers into recording so it becomes easier to navigate the recording during revision/essay-writing

in case the other recordings are not available or fail, and I record seminars which are not recorded.

I have/had the equipment, and I didn't know they were available online. But I don't attend courses anymore, so it's moot.

Because it isn't recorded by LSE.

Revisit sections of lectures for clarification, especially when very dense material is presented and I want to concentrate more on understanding rather than taking notes (slides aren't always helpful as they only contain a portion of all the information conveyed)

I have problems in analysing and remembering heard information

To ensure I do not miss anything.

I very rarely do as I find it technically difficult to organize, which is why lecture capture is so helpful as the lecture happens as it would in real life with slide movements.

Because of my condition, I really struggle to absorb the material in the lecture. Revisiting it via a recording is absolutely essential for me.

Better for revision, easier to go back to fully understand concepts

If they're not uploaded onto Echo

Because for some modules, lectures aren't recorded. Also, sometimes specific lecturers do not speak into the microphone so the recording is too quiet

So that I have a file that I can refer back to and listen again for revision.

As a slow writer, during lectures I often miss out bits and pieces, the recorded lectures are useful

for filling in the gaps that I may have. Similarly, they are useful for revision and creating long term memory retention, because I can go over pieces repeatedly until I fully understand them, or ask a teacher or lecturer specific quotes or excerpts.

Statistic	Value
Total Responses	27

## 20. Smartphone (e.g. iPhone, Samsung Galaxy S)

#	Question	Video	Audio	Text	Total Responses
1	Type of recording	1	8	0	9

Statistic	Type of recording
Min Value	1
Max Value	2
Total Responses	9

## 21. Tablet (e.g. iPad, Google Nexus)

#	Question	Video	Audio	Text	Total Responses
1	Type of recording	0	4	1	5

Statistic	Type of recording
Min Value	2
Max Value	3
Total Responses	4

## 22. Laptop

#	Question	Video	Audio	Text	Total Responses
1	Type of recording	1	10	3	14

Statistic	Type of recording
Min Value	1
Max Value	3
Total Responses	11

### 23. Handwritten notes

#	Question	On lecture slides	In a separate notebook	Total Responses
1	Type of recording	4	11	15

Statistic	Type of recording
Min Value	1
Max Value	2
Total Responses	12

### 24. Other

MP3 player
------------

Statistic	Type of recording
Min Value	-
Max Value	-
Total Responses	-

### 25. Standalone recording device

#	Question	Video recorder (e.g. Sony Handycam)	Audio recorder (e.g. Dictaphone)	Total Responses
1	Type of recording	1	16	17

Statistic	Type of recording
Min Value	1
Max Value	2
Total Responses	17

**26. If you indicated that you use a laptop, smartphone or tablet to make notes, please state which apps or programs you use, and the device(s) you use them on.**

**Text Response**

I dont use any special app, just basic record program on iphone

Microsoft Word

Microsoft Word.

I use Evernote on a laptop (Apple) and my mobile phone (Android).

RecorderPro and Quickvoice

voice recorder on google play I recorded some of the seminars from motorola xoom 2

Internet explore

nexus 4 camera

Audionotetaker

iPhone: recordings; Mac: microsoft word notes r

Word - notebook recording feature

Word notebooks

Word

Microsoft Word for Macbooks.

## Appendix 3: CLT Neurodiversity and Lecture Recordings survey questions

Welcome to the CLT Neurodiversity and Lecture Capture survey. This survey should take no longer than 5 minutes to complete, and you could be entered in to a draw to win a £50 Amazon voucher. This survey does not compromise your anonymity. Please tell us your level of study

	Undergraduate				Masters		PhD	General Course
	First Year	Second Year	Final Year	Industrial placement/exchange year	Full-time	Part-time	PhD	Year 1
<b>Level</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you wish to enter the draw for the £50 Amazon voucher, please enter your LSE email address below:

Which department is your course based in?

- Department of Accounting
- Department of Anthropology
- Department of Economic History
- Department of Economics
- Department of Finance
- Department of Geography and Environment
- Department of Government
- Department of International History
- Department of International Relations
- Department of Law
- Department of Management
- Department of Mathematics
- Department of Media and Communications
- Department of Philosophy, Logic and Scientific Method
- Department of Social Policy
- Department of Sociology
- Department of Statistics
- Department of International Development
- European Institute
- Gender Institute
- Institute of Social Psychology
- Language Centre
- Methodology Institute
- Other (please explain) \_\_\_\_\_

Do you consider yourself to have one of the following (please select all that apply)<br>

- Dyslexia
- Dyspraxia
- Dyscalculia
- Other (please explain) \_\_\_\_\_
- None of the above

Are you registered with the LSE Disability and Well-being Services?

- Yes
- No

Have you ever accessed lecture recordings on your courses on Moodle?

- Yes
- No

Please state why you have not accessed lecture recordings on Moodle for your course(s)

- I did not know that lecture recordings were available on Moodle
- Lecture recordings are not available on Moodle
- I do not have enough time to access lecture recordings on Moodle
- I prefer not to use lecture recordings on Moodle (please explain) \_\_\_\_\_
- I cannot use lecture recordings on Moodle (please explain) \_\_\_\_\_
- Other (please explain) \_\_\_\_\_

On average, across all of your subjects, how often are recordings of lectures made available to you via Moodle?

- Always
- Most of the time
- Sometimes
- Rarely

On average, across all of your subjects, how quickly were recordings of lectures made available on Moodle?

- Before the lecture
- Immediately after the lecture

- A week after the lecture
- A month after the lecture
- At the end of the semester
- At the end of the academic year

For what reason do you mostly use lecture recordings on Moodle? Please select all that apply.

- To catch up on a missed lecture
- To revisit sections of lectures I didn't understand
- For revision and exam preparation
- To make extra notes
- To avoid attending lectures
- Other (please explain) \_\_\_\_\_

On average, across all of your subjects, approximately what percentage of the recorded lectures uploaded onto Moodle from your courses have you accessed at least once?

- 75-100%
- 50-75%
- 25-50%
- 10-25%
- 5-10%
- <5%

When using lecture recordings, do you mostly...

- View the full lecture recording more than once?
- Only view the full lecture recording once?
- View the full recording, then revisit sections of the lecture?
- Only view discrete sections of the recording?

How useful are these recordings for your studies?

- Essential
- Useful
- Not useful
- Detrimental (please explain) \_\_\_\_\_

Do you have any comments/suggestions on how <strong>recordings</strong> on Moodle could be improved to help with your studies?

On average, across all of your subjects, what percentage of your lectures do you record yourself?

- 75-100%
- 50-75%
- 25-50%
- 10-25%
- 5-10%
- <5%
- None

Why do you record your lectures yourself?

How do you record your lectures? Please select all that apply

Type of recording	Smartphone (e.g. iPhone, Samsung Galaxy S)			Tablet (e.g. iPad, Google Nexus)			Laptop			Handwritten notes		Other	Standalone recording device	
	Vid eo	Aud io	Te xt	Vid eo	Aud io	Te xt	Vid eo	Aud io	Te xt	On lectu re slide s	In a separa te noteb ook	Pleas e expl ain	Video recorde r (e.g. Sony Handyc am)	Audio recorder (e.g. Dictapho ne)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

If you indicated that you use a laptop, smartphone or tablet to make notes, please state which apps or programs you use, and the device(s) you use them on.

Would you be willing to participate in an interview/focus group discussion on using lecture recordings during your studies?

- Yes
- No

If you would like to participate in an interview/focus group, and have not done so already, please enter your LSE email address below: