**Introduction**

Psychology students currently have access to three modules for which podcasts are provided by academics, one in each of the three years of the degree. Podcasting has been discussed at length in Staff-Student Liaison Committee (SSLC) meetings and was regularly noted as good practice. However, due to staff concerns about the negative impact podcasts might have on attendance, the number of modules providing podcasts is currently limited.

The purpose of this study was to investigate the use of podcasts as a learning tool for Psychology students, and specifically to:
- review the benefits they provide;
- outline areas of lecturer concern;
- make recommendations about future podcast provision.

**Methods of data collection**

An online questionnaire was created by students in order to investigate the use of podcasts as a learning tool. It was split into five sections:
- How podcasts are used by students
- Why students use podcasts
- The impact of podcast use
- Opinions about lecture podcasts
- Podcast use for specific Psychology modules

The questionnaire was completed by 78 students from across the three years of the degree, representing about 15% of all undergraduate Psychology students.

**Analysis of data**

Overall, 95% of the sample would like more podcasts to be provided within modules, though one in five already recorded lectures using their own recording devices. Nearly all students (96%) considered that lecture podcasts are a useful learning tool, even though most (67%) preferred live lectures. Most students found podcasts easy to download and listen to. Comments overall were extremely positive.

- ‘They’re really, really, really helpful and should definitely be used in the future’.
- ‘Definitely need more to be podcasted!!’
- ‘I think all lectures should be podcasted, even if they are only made available at the end of the teaching period before exams as a revision tool’.
- ‘I think it is fairer to record podcasts for all as otherwise those with their own recording devices are at an advantage merely because they can afford to buy one’.
- ‘Please give us some more!’

Three quarters of students thought all Psychology lectures should be provided as a podcast and only one in ten was happy with the number of Psychology podcasts currently available.

**Why students use podcasts**

Feedback covered areas such as: allowing for the increased development of understanding, improving the quality of notes, providing a revision tool, and acting as a resource for times when lectures had been missed. Nearly two thirds of students reported listening to podcasts to write up notes after the lecture. A large majority (95%) listened in order to recap on information they missed during the live lecture and to go over
information they didn't understand. Almost all (95%) also used the podcasts as a revision tool. A third of students considered podcasts helped with essay writing.

Enhancing understanding

- I fully support the use of podcasts. Often you miss information when you are in the lecture or don't fully understand something the lecturer has said. The podcasts mean I can listen to the information again to increase my understanding. They are also valuable revision aids. On the odd occasion I have been forced to miss a lecture the podcasts allow me to keep up to date so I don't fall behind with work'.
- I like to go back over a point made by the lecturer and listen to it several times so I am able to get a full understanding of what they are saying'.
- 'I've found them to be very useful in helping me to understand things that I didn't understand properly'.
- 'It helps to understand the limited information on lecture slides, when in lecture the lectures go through complex information at a very fast rate. You can pause and go back on podcasts'.
- 'I think they are very useful in lecture series where the slides are not completely self-explanatory, in some they are (more or less) so podcasts are not as useful'.
- 'Podcasts are brilliant - the lectures say so much more than what is on the slides, as well as phrasing things differently if someone says they don't understand - this isn't on the slide. I have some lectures that are not podcasted in which the lecturer uses loads of graphs - with no explanation on the slide. While he explains them in detail in the lectures, its still too fast for you to make adequate notes on - going back over the lecture slides with your own notes when revising doesn't help. I would have seriously struggled with my understanding of the stats course had they not been made available online, despite attending all of the lectures throughout the term. Its so easy to make full notes and gain a better understanding of the content and theories when you can stop, pause and rewind the podcasts'.

Improving notes

- 'I have found them very helpful as you cannot always take good notes during the actual lecture...it is nice to be able to press pause on the lecturer and absorb the info that is given'.
- 'I go to live lectures all the time, because you can ask questions. Podcasts are used to go back over the information in case your notes missed anything, and to understand vague scribbles!' 
- 'I think they are very good as it is sometimes difficult to write down everything the lecturer has said. Podcasts would mean that anything ambiguous in my notes I could go back and listen to and hopefully understand from the lecture rather than having to bombard the lecturer with questions!' 
- 'A lot of the time so much information is covered in lectures it is near impossible to take notes, for example the psychology 1st year Perception module, nearly all slides in class only have pictures on and we simply have to make notes during the lecture, I often find it incredibly hard to keep up, if I miss, or don't understand something it is hard to get the information again. Perception is not the only module where this is the case, I've merely used it as an example'.
- 'I got my highest exam grade on the module where podcasts were available'.
- 'Podcasts are extremely useful as they allow you to build upon your original notes at a later time, go over any material which you don’t fully understand and are useful for revision as they can be downloaded and listened to on the move. They are a really helpful resource; it would be good if every module had them'.
- 'The good thing about the podcasts is that I can press pause when I want to look further into a topic. I can take time to make my notes complete and easier to re-read instead of the hurried scrawled mess that comes from my live lecture notes'.

Catching up missed lectures

- 'Have used for Statistics in Semester 1 and found very useful. I travel into University and have unfortunately, missed a few lectures due to bad weather, train cancellations and family matters - I'm a single parent. It would have been very useful to have the option to access lectures this way. Also, as a mature student having left education for a long time now, would be good as confirmation for areas in lectures that are not too clear'.
- 'Very useful, especially if you've had to miss a lecture for some reason, as many slides are quite vague without explanation!' 

Supporting revision

- 'I think podcasts are an excellent idea. I make sure I attend every lecture during term time, and try to make extensive notes, however sometimes I miss certain things, or my notes aren't clear. Podcasts are
so useful during exam time, when trying to revise the content. Because otherwise it is sometimes very unclear what the lecture slides are referring to. As I attend every lecture, I don’t feel the need to use them until exam time’.

- ‘I think podcasts help revision as it provides a break from silent studying and reading and a different way to learn so revision is more effective’.
- ‘I think the recorded lectures are really really helpful especially when it comes to revision and you need reminding of what a slide from a lecture is talking about - I think it would be really helpful to have them for every module! I would definitely use them!’
- ‘Really helpful throughout the whole course but especially when it comes to revision’
- ‘Useful to go over info that you didn’t grasp the first time around’
- ‘They are the most helpful study and revision aid that the School could provide, it would be brilliant if we could have them for every module’.
- ‘So much easier to understand what the lecturer is saying if able to be gone over 2+ plus times’.
- ‘They are a very useful revision and learning tool. I only used podcasts for the statistics module as they were the only available ones (as far as I know) but they made revision more interactive and helped me to remember facts better. They also helped me clarify aspects of certain lectures that I didn’t understand due to hearing the lecturer explain it again. Also, if a lecturer made a point that was very useful and was not on the lecture slides and I was unable to note it down quick enough, the podcast solved this problem’.

How podcasts are used by students

Forty five percent of this sample reported using Psychology podcasts weekly; 28% once a term, 14% once a month, and one student just once in the year. Ten percent of respondents had never made use of them. Most students would like more of their modules to provide podcasts (95%). They mostly used them around exam times (64%) or in the week after the lecture (28%), with four students listening to them immediately after every lecture. The majority of students listened to the whole podcast, nearly all students looked at the PowerPoint slides at the same time as listening, and over half listened to every podcast available within a module, as well as listening more than once. They suggested that the way in which podcasts can be listened to is important, along with the flexibility of listening.

- ‘I find it really useful to attend the lecture and listen to the podcast as well. It is a useful aid as sometimes I am too tired to read but find listening easy. Plus its great to be able to hear the lecturers speak again as so much information is packed into lectures’.
- ‘Podcasts have the advantage of you being able to pause the lecture, when you want to note down a really good point made by the lecturer. Or you can rewind to go back to see what the lecturer said which you may have missed’.
- ‘I prefer the audio only podcasts and we haven’t had any this semester! The reason being that I can listen to these anywhere (walking to uni, on the bus to work, in bed!!) and it’s really helpful because I am really busy and it gives me extra time to go over the lectures and revise as I go. With the video lectures you have to set aside an hour to sit down and watch them and I find I don’t have the time, so I only use them if I have to’.
- ‘I have found podcasts really useful in being able to revisit my notes. I found the audio-visual casts very useful, particularly the ones (before they were deleted!) which displayed the lecture slides at the same time as the video. They make it easier for me to listen in lectures because I know that I can revisit the material later’.
- ‘Podcasts are extremely useful as they allow you to build upon your original notes at a later time, go over any material which you don’t fully understand and are useful for revision as they can be downloaded and listened to on the move. They are a really helpful resource, it would be good if every module had them’.
- ‘It is good to be able to make notes in a lecture then listen back to the lecture at a later date without having to concentrate on making notes so that you can really take in everything that is being said’.

Attendance

The matter of attendance was clearly a matter for concern by students in that it was mentioned by a number of respondents.

- ‘The podcasts are a great help in both reviewing the lectures and as a tool for revision, however I think if everyone knew that all lectures were available as podcasts attendance at lectures would decrease massively’.
- ‘I think that podcasts are a great way for people to catch up on things that they missed, but I think they could be abused by people who use them as an excuse to not turn up to lectures’.
Importantly, although some students admitted to using podcasts to catch up on individual lectures they had not attended (77%), very few thought that lecture attendance would decrease if they were widely available. The vast majority (90%) stated they did not use podcasts as a substitute for attending lectures.

- ‘They don’t discourage people from attending lectures, which I feel is the fear. Instead they help to remind students of the content of the lectures. It is always said that there is a reason to attend the lectures, and that is because the lecture slides are not sufficient to explain the material. Therefore in revision time, these podcasts are an essential tool, to help remind me of the content’.
- ‘I really think that the lack of available podcasts is because of fear students will not attend lectures, but I don’t think this is the case for every student and generalisations like this should not be made. Additionally, we all pay a great amount of money for the education we receive and more often than not I feel I’m paying much more than the tuition I receive costs’.
- ‘They should definitely be used to back up lectures and not as a substitute, although if a student was ill or otherwise unavoidably detained they are very useful to catch up’.
- ‘Podcasts are an excellent source of information to go with the PowerPoint slides and the lecture itself. They should not be used instead of going to a lecture, but are an excellent way of catching up if a lecture was missed for whatever reason’.
- ‘I aim to attend all lectures, but if a lecture is being recorded and I need more time for an essay due in that day, I will miss it - but this is rare. It’s easy to get complacent with note-taking if you intend to go through the podcast later anyway, but the threat of technology failing, or not recording is enough to make you make some notes, albeit not as detailed as if they were not recorded’.
- ‘I supplement the lecturer’s notes with notes made from a podcast and those taken in the lecture. I don’t find the podcasts an alternative to lectures, but a useful back-up to information I might have missed’.
- ‘I wouldn’t use podcasts as an excuse to skip lectures, just to reinforce the material covered in lectures more clearly as it helps to hear the lecturer explain things again as opposed to learning from the slides or books’.

Students were also happy that strategies should be used to ensure attendance, such as only releasing podcasts at revision times, or monitoring lecture attendance more closely.

- ‘Revision tool - maybe only put them up around revision time so students aren’t encouraged to miss lectures’.
- ‘Podcasts should not be used so that people can skip lectures. I really liked how the lecturer didn’t say they were being recorded or post them up until after the series was complete so they could just be used for revision’.
- ‘Think they’re brilliant! They have helped with my revision so much. I don’t think making podcasts more frequent/ regular will affect lecture attendance. One of our lecturers didn’t tell us he was filming the lectures, so there was always a good attendance, however after our last lecture he told us he had filmed them all, which was great so we could use them to revise - however didn’t rely on them throughout the course’.
- ‘I think that recording attendance would be a good idea, especially if the lecture is podcasted. I know in Drama their attendance counts towards their grade, and I think this is a good way of ensuring that people have the best opportunity to access the resources available to them’.
- ‘I understand that attendance would drop if podcasts were more widely available, but I believe registers are a good thing - I don’t know why we don’t have them now anyway. It’s clear to see over the semester how many people don’t go to many of the lectures compared to the first lectures of term. If people are to have to privileges of using podcasts then I think they do need to be earned. The lecturer didn’t tell us that he was recording his lectures until the last one - brilliant move considering the lectures were 3-4 on a Friday afternoon’.
- ‘I was quite aware that some podcasts were being recorded, yet still attended all of these lectures. Podcasts aren’t a substitution for lectures. Also I would be happy if the podcasts are only made available to those with high attendance records, or only available during exam periods, if these measures meant the continuing of the podcasts. Furthermore, even if certain people on the course may take the attitude not to attend lectures because of the podcasts, it is not fair on those who do attend all lectures, and simply want to use the podcasts for revision to be denied this’.

In fact, 80% of students agreed they would be happy to have their attendance recorded in exchange for more podcasts.
The impact of podcast use

Ninety percent of students considered that using podcasts had enhanced their learning and 80% believed that they would achieve higher marks in modules that provided this service. Most (89%) thought using podcasts had a positive effect on their exam performance. The majority felt more prepared for exams where podcasts had been made available (89%).

Some students (27%) felt it was acceptable to miss one or two lectures if they were available as podcasts and a third of students thought lecturers did expect students to miss some lectures when they provided them. However three in five did not agree that it would be acceptable to miss any lectures. Only 6% of students said they were less likely to do extra reading due to time taken by listening to podcasts.

Comments on the impact of using podcasts touched on the achieving of better results, allowing better understanding and, as outlined above, changes in the way they operate during the live lecture.

- ‘I engage more positively in lectures which are being podcast because I know that if I miss something, I can access it again later’.
- ‘If podcasts are available I will make less notes in the lecture because I can concentrate on understanding the lecture instead’.
- ‘It allows me to be more confident that my lecture notes are accurate and I really did understand what was being said. I am more confident that I'm not revising inaccurate information’.
- ‘I feel much more prepared for the exams which have podcasts of the lecture series. I wish they were all podcasted’.
- ‘Last semester my highest exam mark was for the lectures with the podcast’.

Students had mixed opinions about whether they would be prepared to have some of their lectures replaced with podcast recordings so that they could have more small group academic tutorials in their place. One third agreed with this, 15% were unsure and nearly half disagreed.

- ‘Would prefer to have lectures replaced with podcasts only if the tutorials were essential to the course content and enhanced this, in contrast with the existing tutorials which often examine peripheral content in a slow boring way (easier just to read the paper at home)’.

Podcast use for specific Psychology modules

Students found podcasts particularly useful for statistics modules with technical/mathematical content (86%). Students indicated that they would also find podcasts particularly useful for all lectures with a high degree of scientific content. Nine in ten students thought podcasts would be particularly useful for lectures in which a number of case studies are discussed. Ninety percent of students questioned thought podcasts were useful for Psychology lectures across all 3 years. There were mixed opinions surrounding whether tutorials and practical classes should also be podcasted; 27% agreed, 24% were unsure and 49% disagreed.

There were a number of comments on the use of podcasts to support specific Psychology modules:

- ‘Especially useful in Language and its influence on thought, as much of the lecture can be misleading’
- ‘Learning and Memory last year in my second year had a podcast - the most useful thing for complicated models and explanations. Got my highest mark in that module!’
- ‘I used the podcasts from the 1st year statistics module and found it really useful not only whilst I was revising for my statistics exam, but also when I was doing statistical tests for pieces of coursework. I find it useful to be able to pause the lecturer to make notes, or rewind him if I don’t understand’.
- ‘Podcasts were available for Psychology Statistics 1st year, this really helped as often notes alone are not helpful, the way something is explained is needed’.
- ‘I would have found it very useful if the Animal Cognition and Behaviour lectures were podcasted as there was a huge amount of content and the slides usually only showed results of studies and not clear explanations of method etc, this means that if I fell behind taking notes I would simply miss the information’.
- ‘Also video lectures for stats and research module were extremely useful - please more of those!’
- ‘Please podcast all lectures!!! Especially the more scientific ones, such as animal cognition’.
- ‘Stats definitely needs podcasts! The difference between my performance in term 1 to term 2 is unbelievable, and I’d put that down to the podcasts. Now revision time has come they’re brilliant for recapping on content we learnt months ago’.
Improvements

There was no negative feedback whatsoever. Students were critical only in that they wanted more podcasting, and they had some ideas for improvements.

- ‘More of them would be helpful - for each lecture ideally’.
- ‘Lectures are intense and jam packed with information so it is very useful to be able to listen again. Also I would like to be able to listen to them on my iPod at times when I am too tired to read’.
- ‘There only seem to be available podcasts in the first year, as far as I am aware, for the statistics module. I used this service and think it would be great if it was available for all of the modules as it proved very useful’.
- ‘I wish someone had told me they were available; it's probably been announced but hasn't registered. They would be really useful for covering the parts I haven't understood or noted down properly therefore the answers I have given are more in line with what I would do’.
- ‘They would be helpful if they were downloadable to iPod’.
- ‘Sound of podcasts needs to be improved’.
- ‘Maybe say when to move to next slide etc’.
- ‘Sometimes cuts off the end of the lecture if longer than an hour’.

Summary of Findings

It was found that most students listened to podcasts weekly, often in the week after lectures. Use was especially prevalent around exam times. Most listened to the whole podcast at the same as viewing the PowerPoint slides. Over half of the students questioned listened to all the podcasts available and about the same number listened to them more than once. Two thirds used the podcasts to write up better notes. Nearly all said they used the podcasts to recap on information missed or not understood in the lecture but, importantly, not as a substitute for going to lectures. Students felt that podcasts enhanced their learning, made them feel more prepared for exams and believed that they performed better in modules when podcasts were available. Students thought that podcasts were particularly useful for modules with a high degree of scientific content and those with high mathematics content. Most would be happy to have their attendance monitored if this meant that more podcasts would be provided. Finally, students wanted them for more modules and thought that podcasts should be provided for all years.

Recommendations/Solutions

Based on the findings from the questionnaire, it is recommended that podcast use in Psychology should be continued and broadened to additional modules. Initially, podcasts could be provided from all first year modules in order to pilot the feasibility of this working on a larger scale. In addition, some podcasts should also be made available for lectures in other years, with a focus on modules with high maths or science content. If lecturers are worried about the impact on attendance, they are advised to monitor attendance formally and to limit podcast provision if problems arise in attendance at lectures. It would be useful if those staff members currently podcasting their lectures could support other members of staff to do the same for theirs. This would be seen as a productive way to implement good practice. In order to ensure podcasts are used effectively, tips on how to use them might be considered. It is important that the availability of podcasts is widely advertised to students, and that information is available about how to convert the files so that they can be used in a variety of media. This will ensure that the resource is accessible to all.

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