Students’ attitudes towards using podcasts in Higher Education

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Students’ Attitudes Towards Using Podcasts in Higher Education
By
Shalika Gajasinghe

This project is submitted in partial fulfilment of the requirements for the award of
Bachelor of Science degree of Loughborough University

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Department of Information Science
Abstract
Technology has developed over the years and podcasting has become the new phenomenon. Podcasting has been integrated within the higher education sector to update learning styles with the technological revolution. Research into the implementation of this feature has been carried out overseas, particularly in the USA and Australia. Implementation within the UK, however, is still within the research stages. The following report explores the methods being utilised overseas and in the UK and the future of podcasting in education in the UK. Primary research at Loughborough University enabled an effective judgement on student attitudes to be assessed. Primary research consisted of questionnaires, focus group and a case study on the UK podcasting project devised by professors at Leicester University. From the primary research quantitative and qualitative is captured for an analysis of student attitudes to be gained, where the success of podcasting can be evaluated with the Loughborough sample. Aspects of the structure of the podcast presented to students and how it would be utilised, e.g. as a replacement to lectures or as an additional resource. From both the primary research and secondary research both from overseas and in the UK the update of podcasting integrated with education is analysed and a judgement made on how successful the update will be in UK universities yet to adopt the concept as well as Loughborough University itself.
Acknowledgements

This project could not have been completed without the help of the following people, who I am incredibly grateful for their time and effort they have placed in aiding in my project investigation.

My thanks go to:

- Professor Cliff McKnight
- Professor Palitha Edirisingha
- Friends and family
- Loughborough University students (respondents to the questionnaire/focus group)
### Contents Page

#### CHAPTER 1........................................................................................................... 7

1. INTRODUCTION........................................................................................................... 7

1.1 – DEFINITION OF PODCASTING......................................................................... 7
1.2 – AIMS................................................................................................................ 8
1.3 – OBJECTIVES ..................................................................................................... 8
1.4 – WORK PLAN....................................................................................................... 9

#### CHAPTER 2..........................................................................................................10

2. LITERATURE REVIEW .................................................................................10

2.1 – ‘TRADITIONAL’ LECTURES ..........................................................................10

2.11 – Howard Gardner’s Theory of Multiple Intelligence ..................................11

2.2 – EDUCATION AND PODCASTING.................................................................12

2.21 – Issues with podcasting ...........................................................................12

2.3 – CURRENT PROCESSES ...............................................................................13

2.31 – Links with companies ...........................................................................13

2.311 - Overall Analysis......................................................................................14

2.32 – Vodcasts ......................................................................................................14

2.33 – Podcast Only Lectures ...........................................................................15

2.34 – Attendance At Lectures ...........................................................................17

2.35 – Research Projects.....................................................................................18

2.36 – UK Institutions ..........................................................................................20

#### CHAPTER 3..........................................................................................................21

3. RESEARCH METHODS .....................................................................................21

3.1 – LITERATURE SEARCH TECHNIQUES..........................................................21

3.11 – Keyword Search ........................................................................................22

3.2 – PRIMARY RESEARCH ...................................................................................22

3.3 – SURVEYS .......................................................................................................23

3.31 – Questionnaire.............................................................................................24

3.311 - Design/Questions......................................................................................24

3.312 – Distribution..............................................................................................25

3.313 – Comparison to IMPALA questionnaire ...............................................25

3.32 – Interview/Case Study ...............................................................................26

#### CHAPTER 4..........................................................................................................27

4. ANALYSIS...............................................................................................................27

4.1 – QUESTIONNAIRE ........................................................................................28

4.11 – Demographics .........................................................................................28

4.12 – CURRENT MP3 AND PODCAST USAGE ................................................29

4.121 – MP3 Player Owners .............................................................................29

4.122 – Podcast Listeners ..................................................................................30

4.123 – Non-Podcast Listeners .........................................................................33

4.13 – Podcasting Knowledge .............................................................................34

4.131 – Statement Response .............................................................................35

4.132 – Statement Response via Gender ............................................................36

4.133 – Statement Response via Faculty .............................................................37

4.14 – Current Lectures.........................................................................................39
Figure 8 - Reasons for not listening to podcasts ......................................................33
Figure 9 - Podcasting and education knowledge .......................................................34
Figure 10 - Loughborough library podcast ..............................................................35
Figure 11 - Statement response ...............................................................................36
Figure 12 - Gender response to statement ...............................................................36
Figure 13 - Faculty response to statement ................................................................38
Figure 14 - Percentage of students who receive online information for modules .......39
Figure 15 – Do online lecture slides dissuade you from attending lectures? ..........39
Figure 16 - Personal interaction with lecturer .........................................................40
Figure 17 - Comparison of allocated lectures and attended lectures ......................41
Figure 18 - Reasons for lack of attendance to lectures .............................................41
Figure 19 - Attendance to lectures if lectures via podcasting were available ..........43
Figure 20 - Percentage of respondents who would listen to a module podcast .......44
Figure 21 - Features that would be missed from the traditional lecture style ......45
Figure 22 – “Other...” Lecture features that would be missed.................................46
Figure 23 - Podcasting - a novelty idea? .................................................................47
Figure 24 - Utilisation of podcast lectures ..............................................................47
Figure 25 - Creating a podcast for yourself ..............................................................48
Figure 26 - Creating a podcast for others .................................................................49
Figure 27 - Listening to a podcast created by a peer ................................................49
Figure 28 - Reaction to vodcasts .............................................................................50
Figure 29 - Snapshot of Loughborough library podcast page ................................53
Figure 30 - SWOT analysis from focus group .........................................................57
Figure 31 - IMPALA research questions .................................................................60
Figure 32 - IMPALA podcast structure .................................................................62
Figure 33 - Podcast utilisation features ..................................................................64
Figure 34 - Diagram of podcast utilisation within schools .....................................68

List of Appendices

Appendix A - Work Plan .........................................................................................74
Appendix B - IMPALA Questionnaire .................................................................75
Appendix C – Podcasting Questionnaire ..............................................................78
Appendix D - Chi-squared test .............................................................................85
Appendix E - Focus Group Presentation ...............................................................87
CHAPTER 1

1. Introduction

Technology is an ever evolving and demanding industry. It is becoming more and more ‘fashionable’ to have the latest technological advancement/gadget, especially for the younger generation. Various mediums have become involved in this technological movement, such as mobile phones using internet features and acting like mp3 players, radio stations becoming available online and it is becoming apparent podcasts have become the latest addition to the technology revolution.

Podcasting has already progressed into the radio sector with radio shows being available on podcasts for downloading. This has become a popular medium and it is not only the multimedia industry becoming involved with podcasting but businesses are also showing interest in the area. IBM are encouraging its employees to utilise podcasts as it is an ‘opportunity to share knowledge through a proven medium (audio recording) but in a new and more personal way’\(^1\).

Podcasting has also been suggested within the European Parliament for capturing information from meetings. Labour MEP, Mary Honeyball, stated it would ‘encourage more young people to become involved in politics’\(^2\); by associating politics with a medium they are familiar with. She also states, ‘this would finally allow all stages of parliament to be followed by all citizens – no matter where they are or what language they speak’\(^3\), therefore suggesting it is a beneficial feature for a variety of person(s).

1.1 – Definition of Podcasting

A podcast can be described as a ‘digital recording of a radio broadcast or similar program, made available on the Internet for downloading’\(^4\). It allows users to utilise

---


\(^2\) MEP wants meetings to be podcast, <http://news.bbc.co.uk/1/hi/england/london/4890928.stm>, [08.04.2006], [Accessed 03.05.2006].

\(^3\) Ibid.

their downloads to be ‘played, replayed or archived as with any computer file’\(^5\). This makes it highly appealing within the education sector, allowing students to ‘store’ lecture notes, revision notes, etc. in a format attractive to the younger generation. The term ‘profcasting’ has been developed to express this feature of podcasts in an academic format and being created by ‘professors’.

Podcasting provides people with opportunities to deliver their material/information through a different medium and to a wider audience. It was recorded ‘1.7 million people downloaded BBC content’\(^6\) in February 2006, in which the Chris Moyles radio show was the most popular. This demonstrates the increasing popularity of this medium with the consumer.

1.2 – Aims

The aim of this project is to: “Investigate student attitudes to the use of podcasting in higher education”.

1.3 – Objectives

- To review current literature concerning the use of podcasting in education.
- To survey a sample of Loughborough students in order to determine their attitudes.
- To make recommendations on the likely uses and success of podcasting at Loughborough University.
- Make a judgement of the future progress and success of podcasting in the UK education sector.


1.4 – Work Plan

A work plan for all project activities was designed where key events such as interviews, focus group and release dates for questionnaire were input so an evaluation of the various write-ups and research could be accurately planned. Appendix A explains the time plan for the various activities as well as the key milestone(s) in place during the project.
CHAPTER 2

2. Literature Review

2.1 – ‘Traditional’ Lectures

A lecture is defined as ‘an oral presentation intended to teach people about a particular subject…are used to convey critical information, history, background, theories and equations’\(^1\). Lectures have progressed over the years from initially the lecturer reading notes, which is still common practice to modern lectures using technology such as Microsoft PowerPoint. These PowerPoint presentations are often made available to students after the lecture in the form of online material for downloading and reviewing at a later date.

Lectures have been a physical pedagogical approach to present information and gain knowledge. A feature to retain the information provided in physical lectures is the use of a tape recorder. Many disabled students tape record lectures so as not to be at any disadvantage. It has been enforced, in the Disability Discrimination Act, to ‘facilitate the recording of lecture by disabled students’\(^2\). This process has been developed further with the introduction of delivering lectures notes via podcasting. The concept of a podcast would therefore be practical for those with disabilities.

Another form of learning in higher education is via distance learning. This form of pedagogy can be seen as featuring similar concepts to that of lectures via podcasts. It utilises technology so students do not ‘have to physically be in the place where the teaching is taking place’\(^3\). Distance learning uses mediums such as email, presentations and online interaction techniques to aid users’ learning. An example of an institution implementing distance learning is the Open University, which has ‘150,000 undergraduate and more than 30,000 postgraduate students’\(^4\), showing the popularity of the service. Relating this to the traditional lecture format, students who

---


\(^4\) About the OU, <http://www.open.ac.uk/about/ou/>, [n.d], [Accessed 20.02.2007].
simply utilise lecture notes online and do not attend lectures are performing the act of distance learning.

2.11 – Howard Gardner’s Theory of Multiple Intelligence

Based on these principles of some students recording lectures for a greater learning experience and distance learning being popular, the differing types of learners should be considered. Howard Gardner developed a theory in which he categorised seven ways in which people learn (Table 1). Gardner suggests most people ‘are strong in three types’\(^5\), which does not restrict the user’s preferred learning to one intelligence type.

Podcasts provide only auditory output and using Gardner’s theory, this single style does not compliment his intelligence types. Utilisation of the musical element or a visual component may develop the podcast to accompany the various learning styles. The use of vodcasts will be discussed in Chapter Two, where visual aids are included with audio output, which will benefit some of Gardner’s learners. It can be noted, however, if the podcast is being used as an additional source, these elements need not be considered as much as if the podcast was replacing lectures.

<table>
<thead>
<tr>
<th>Intelligence type</th>
<th>Preferred Learning Style Clues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linguistic</td>
<td>Words and language</td>
</tr>
<tr>
<td>Logical-Mathematic</td>
<td>Numbers and logic</td>
</tr>
<tr>
<td>Musical</td>
<td>Music, sounds, rhythm</td>
</tr>
<tr>
<td>Bodily-Kinaesthetic</td>
<td>Physical experience and movement, touch and feel</td>
</tr>
<tr>
<td>Spatial-Visual</td>
<td>Pictures, shapes, images, 3D space</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>Human contact, communications, cooperation, teamwork</td>
</tr>
<tr>
<td>Intrapersonal</td>
<td>Self-reflection, self-discovery</td>
</tr>
</tbody>
</table>


\(^6\) Ibid.
2.2 – Education and Podcasting

Podcasting in education is still within the research stages in the UK. There has been a slow uptake of the area here, however, the USA and Australia have carried out research and have begun to implement a higher education system combined with podcasts.

It has been stated an advantage of ‘this technology is that it relies on its readiness to be made available immediately to large audience via download or a subscription notification system’. Therefore, there is no extra effort for the student to download material as this application can be automatically downloaded through a subscription service or simply downloaded when appropriate for the student.

2.21 – Issues with podcasting

Podcasts provide only an audio medium for the student. This may not necessarily be advantageous for a student as Koumi describes:

‘For maximum effect, materials must not simply be a recorded version of another medium [e.g. a lecture], but should be rescripted to incorporate and interrelate with other modes of presentation’

This statement expresses the need for additional material such as a video to accompany the podcast, which has no visual component. Or this could be used in conjunction with the idea that for podcasting ‘to be effective as audio content needs to be created in a way that the user get the most out of the experience’. Therefore indicating the podcast is utilised as an additional resource to lectures, pre and/or post the lecture.

The future of podcasting has been described by one source as learning having ‘found the perfect ally in podcasting to create an on demand anytime/anywhere delivery of

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9 Podcasting: Recording, managing and delivering the classroom experience, Ref 7.
instructional content\textsuperscript{10}. Primary research will explore whether his statement is accurate.

2.3 – Current Processes
Some institutions have used podcasting to their advantage whilst others require further market research as to how to approach the technique.

2.31 – Links with companies
Various universities have formed relations with other companies in order to promote and share their podcasts with their audience.

\textit{Stanford University}, California, has joined its online learning system with Apple iTunes. The system offers students ‘public access to faculty lectures, campus events and performances’\textsuperscript{11}. This system is restricted to only students who attend the university, therefore ensuring only those who should have access to the material can utilise it and only relevant material is placed on the system. As one source describes ‘institutions may want to protect their content in much the same way as music in iTunes’\textsuperscript{12}.

Another university implementing its educational podcasts via iTunes is \textit{Berkeley}. It provides information on courses, events and campus life. It offers students easy access to general university facilities.

This system, however, unlike the Stanford University iTunes store is not secure. A simple search of ‘UC Berkeley’\textsuperscript{13} on iTunes allows you to view the information available to its students. It was also possible to download material, which may be beneficial for others, however, the university may want to consider security restrictions so only those who attend the university have access.

\textsuperscript{10} Ibid.
\textsuperscript{11} Why iPods are refreshing parts teachers can’t reach, <http://education.guardian.co.uk/appleducation/story/0,,1720747,00.html>, [01.03.2006], [Accessed 03.05.2006].
\textsuperscript{12} Podcasting; Recording, managing and delivering the classroom experience, Ref 7.
The iTunes platform will be familiar to students in that it is a medium many will already recognise. The ability to download material was efficient and effective: the automatic addition of a UC Berkeley folder to your iTunes interface containing all material downloaded, so future reference can be viewed in one location.

2.311 - Overall Analysis

The links the universities have with Apple iTunes provides them with a great advantage and is a highly effective means of encouraging students to make use of the system. It is a happy medium for both university and student, as the iTunes application would be a recognisable application for those who already download music, therefore, encouraging the use.

However, a downside to this may be that students see iTunes as a recreational pastime, which does not involve their academic lifestyle. By combining the two it may put students off using the application and simply keeping it for their personal use.

2.32 – Vodcasts

A vodcast can be described as the video alternative to the podcast. This medium would satisfy many of the elements in Howard Gardner’s types of learners some of whom require pictures and sounds or a physical experience, which this would, in the form of distance learning.

It would present information such as ‘figures and tables, describing images or procedures’\(^{14}\), which podcasts cannot demonstrate as effectively. For example, Stanford University, California, uses this method to demonstrate their sport activities along with audio podcasts for other areas.

A lecturer at the University of Miami’s school of Medicine has developed a vodcast for his students.

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\(^{14}\) Podcasting; Recording, managing and delivering the classroom experience, Ref 7.
His reasons for using vodcasts are: ‘…we learn in different ways. Some students love to read primarily. Some are good with audio. Some with video’[15]

Therefore, by creating a vodcast, which incorporates both of these factors as well as images, it caters to all learners, which incorporates Gardner’s theory of different learners.

The students in his class are highly impressed with the system as one student explains:

‘When you have a quick question I can just go to that lecture (on the iPod) and go to the point’[16]

The vodcasts do not present the whole 50 minute lecture to the student but a condensed 15 minute version of the key areas of the lecture, which has been described as ‘hammering…home the most important things’[17]. This is a wise decision as well as being practical in encouraging students to continue attending lectures and then providing the vodcasts as a means of reflecting and retaining what they heard in the lecture theatre.

2.33 – Podcast Only Lectures

From the research investigated it has not been a popular choice to remove lectures. Various questions would be asked on the effectiveness of complete dependence on an audio or visual file of a ‘virtual’ lecture. There is no specific evidence podcasts can aid a learner as a lone tool, however, research has been carried out into podcasts being used as an additional tool.

The educational podcast has become popular in the UK within the last couple of years, this current year in particular (2006/7). Several UK universities are implementing podcasting with lectures. It was reported a lecturer at Bradford

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[16] Ibid.
[17] Ibid.
University has ‘abolished traditional lectures in favour of podcasts’\. To eradicate lectures is completely dubious, it is unknown if the lecturer researched the area before deciding this concept.

Dr Ashraf, who is the lecturer implementing this idea, states this lecturing style mainly ‘suits the need of distant learners, part-time students and those balancing studies with family and work’\. This may be the case but what about full time students who can and prefer to attend lectures? The lecturer states students utilise the podcasts as either a ‘lecture replacement or as a useful revision repeat for the lecture’\. In contrast to the majority of other institutions, Dr Ashraf is not against the idea of full lectures via podcasts where student attendance could be affected. He states:

‘When I tell the students the lecture they are in is going to be available as a podcast, they engage even more than usual and start asking questions in the full knowledge that what they say will be available on iTunes.’

This concept is questionable and may not necessarily be effective in the long run. The suggestion that students thrive on the idea of hearing themselves on iTunes, some form of fame, will wear off and can be seen as a novelty. Although Dr Ashraf has found positive aspects in the concept, others have had the opposite effects.

Deakin University, Australia, had a mixed response to their educational podcasting scheme. As ‘material is uploaded…within an hour of a lecture’\, the students were keen on the concept, however, academics were less keen fearing ‘it may empty lecture halls’\. This was proven correct when the concept was put into practice.

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\(^{18}\) Podcast lecture for uni students, \langle\text{http://news.bbc.co.uk/1/hi/england/west_yorkshire/5013194.stm}\rangle, [26.05.2006], [Accessed 26.07.2006].

\(^{19}\) Ibid.

\(^{20}\) Ashraf, B. Lecturer adds value with iTunes, \langle\text{http://education.guardian.co.uk/elearning/story/0,,1969517,00.html}\rangle, 12.12.2006, [Accessed 12.02.2007].

\(^{21}\) Ibid.


\(^{23}\) Ibid.
The university carried out a research project over one semester with a $70,000 budget for the system. They recorded a figure of 15,000 downloads during this time, however, along with this positive uptake of podcasts there was also a decline in student attendance at lectures.

This is an issue with presenting students with the whole lectures via podcasts, which is what this university’s concept involved. However, it is felt the university would have benefited by using the concept the University of Miami’s medical lecturer used. By only creating a 15 minute pod/vodcast of relevant information, it does not dissuade students from attending lectures as there is still information to gain by attending them. It is unknown of the scale of the Bradford University’s podcast only scheme with Dr Ashraf; therefore, the Deakin University’s project may provide more effective evidence of overall student attitudes.

2.34 – Attendance At Lectures

This is a major issue with the implementation of podcasting in lectures. As demonstrated at Deakin University by proving full lectures on the podcast there are no incentives for some students to attend lectures and therefore resulted in falling attendance levels.

Charles Stuart University, Australia, grasped the important concept that the new feature ‘will in no way replace face-to-face lectures and tutorials…the intention is not to use audio to teach complex concepts’ 24. This is a highly important fact within this sector, in encouraging the general age range of 18-22 year olds to attend lectures to gain information in many formats not just via an audio/visual podcast.

They also feel an important element is for ‘students themselves…be actively involved in the product of the podcast material’ 25. The view Charles Stuart University have created is that the podcasts produced are merely to aid/prepare students before and after a lecture, learning is not completely dependent upon the podcasts:

25 Ibid.
‘…an ideal medium for producing material to address students’ preconceptions about a subject and its content, and to alleviate the anxiety that students bring into the classroom’

A statement to sum up the problems within this area is:

‘In a perfect world, all students would attend every lecture and lab and then later download the lectures…to supplement their learning and reinforce the knowledge they just acquired…But this is not a perfect world’

2.35 – Research Projects

Chan and Lee carried out a research project reviewing literature and carrying out an investigation; in which twenty-six undergraduates were interviewed via questionnaires regarding their views on the topic of implementing podcasting in lectures. Considering Charles Stuart University is Australia’s eighth largest university, this number of interviewees most probably will not reflect the majority of the university’s views. Out of the twenty-six, twenty-five stated they would ‘listen to additional audio material made available in MP3 format’, a 96% positive response rate.

However, the view of twenty-six students cannot be the only consideration in such a large environment. It is stated ‘their review of the literature and their own observations and experiences’ were a basis for further research. This is a far more effective means of gathering data, as a sample of twenty-six students cannot be the only source for their decision-making.

Overall, although the chosen sample of respondents were questionable, the concept of retrieving data via a questionnaire was appropriate to the study. This enabled students’ views to be collected. If there were more participants a greater evaluation

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26 Ibid.
29 Ibid.
could be made. Nevertheless, the research and literature the research team carried out have provided them with sensible and effective conclusions such as not using podcasts as a replacement for lectures but as an additional resource e.g. pre-class, preparing the student for the lecture ahead.

An investigation is currently being carried out within the UK regarding the use of podcasts in higher education. A research project funded by ‘the Higher Education Academy under its eLearning research strand of student learning experience’\textsuperscript{30} is being carried out. The project called IMPALA (Informal Mobile Podcasting and Learning Adaptation) began at Leicester University in May 2006 and also involved the following universities:

- Royal Veterinary College London
- Kingston University
- University of Gloucestershire
- Nottingham University

Their aim is to gain an understanding of how the concept of podcasting in education will work. Therefore, by involving fellow universities a better understanding of how the system will work can be gathered. The project began due to intrigue by particular individuals involved being interested in the technological advancements of MP3 players, the Internet and other mobile devices being available to the appropriate audience who have access to these tools.

IMPALA have grasped the concept of utilising podcasts to benefit students and not being dependent upon podcasts for the single use of providing lectures but instead aiding students with additional information to lectures. This was evident in the research carried out from the overseas projects and IMPALA are carrying out the necessary research to ensure the most effective analysis and implementation of the study can be carried out. Further research into the project will be discussed through an interview with a representative from IMPALA and a case study on the project, as discussed in Chapter Four.

2.36 – UK Institutions

As previously stated the uptake of podcasts in UK universities is slowly increasing. As well as the universities involved in the IMPALA project, the following table explores other universities involvement with podcasting, however, not all are used for educational uses. Nevertheless, it is a promising outlook at the current usage of the technology, which could eventually develop further for educational purposes.

Table 2 - University podcasts

<table>
<thead>
<tr>
<th>University</th>
<th>How podcasts are being utilised</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bath</td>
<td>‘Public lecture series where leading names from the worlds of science, humanities and engineering talk about the latest research in their field’[^31]</td>
</tr>
<tr>
<td>Bradford</td>
<td>Lecturer Dr Ashraf utilises podcasts within his lectures</td>
</tr>
<tr>
<td>York</td>
<td>Fresher’s guide for the new students who come to the university</td>
</tr>
<tr>
<td>Oxford Brookes</td>
<td>Library podcast</td>
</tr>
<tr>
<td>Glasgow</td>
<td>Library podcast used via iTunes. ‘The majority of our podcasts are aimed at people who are new’[^32]</td>
</tr>
<tr>
<td>Warwick</td>
<td>‘Warwick Podcasts allow you to hear from University experts commenting on important issues, their research and events. The University Management Podcast focuses on issues relating to the management and administration of universities’[^33]</td>
</tr>
<tr>
<td>Southampton</td>
<td>‘Stay up to date with the latest news and information from the School of Management’[^34]</td>
</tr>
<tr>
<td>Loughborough</td>
<td>Library podcast</td>
</tr>
<tr>
<td>Leeds</td>
<td>‘Climate change podcast: Farmers break new grounds in university podcast’[^35]</td>
</tr>
<tr>
<td>Brunel</td>
<td>‘For prospective students who are thinking about going to university’[^36]</td>
</tr>
<tr>
<td>Nottingham</td>
<td>‘Platform for University of Nottingham experts, alumni and students to discuss current issues, latest research and events here at the University’[^37]</td>
</tr>
<tr>
<td>Birmingham</td>
<td>‘Audio recordings’[^38] for the business school</td>
</tr>
</tbody>
</table>

[^31]: University of Bath, [http://www.bath.ac.uk/podcast/], [08.03.2007], [Accessed 25.04.2007].
[^35]: School of earth and environment, [http://info.see.leeds.ac.uk/news-items/farmers], [n.d.],[Accessed 25. 04.2007].
CHAPTER 3

3. Research Methods

The following chapter discusses the data capture methods for both the literature search and the data collection methods for the study. It is important to clarify the sources of the literature, establishing those of high relevance and to present the scope of the topic. Identifying the methodology for primary data collection provides a base for the primary research project.

3.1 – Literature Search Techniques

Due to podcasting being a new speciality there were limited resources available on the library OPAC, which presented only two search results. These results were not relevant for the literature search therefore; the search was limited to journals and the Internet.

A highly useful search tool was the search engine. The single search engine Google was highly effective producing a number of results using varied search names. The metasearch engine, SurfWax was also beneficial in providing a variety of results by searching ‘a combination of many search engines at once, to optimise web search’[1].

The BBC news presented sufficient information to gain knowledge into the current affairs perspective on the topic. National newspapers also provided information on the issues of podcasting and education within the UK. A useful insight was gained as university lecturers wrote many of the articles. Beneficial information included discussion of their experience with podcasts in academia and their personal thoughts regarding the subject.

3.11 – Keyword Search

The table below presents the number of hits produced with each of the search terms used within the literature review.

Table 3 - Keyword search

<table>
<thead>
<tr>
<th>Resource Search Term</th>
<th>Resource</th>
<th>Google</th>
<th>OPAC Library</th>
<th>Scirus</th>
<th>Surf wax</th>
<th>BBC News</th>
<th>The Times</th>
<th>The Guardian</th>
<th>Sage Journals Online</th>
</tr>
</thead>
<tbody>
<tr>
<td>Podcast</td>
<td>Google</td>
<td>113,000,000</td>
<td>-</td>
<td>381,159</td>
<td>129,000,000</td>
<td>73</td>
<td>488</td>
<td>570</td>
<td>10</td>
</tr>
<tr>
<td>Podcasting</td>
<td>OPAC</td>
<td>38,700,000</td>
<td>2</td>
<td>122,540</td>
<td>39,300,000</td>
<td>73</td>
<td>104</td>
<td>256</td>
<td>17</td>
</tr>
<tr>
<td>Podcasting and Lectures</td>
<td>Scirus</td>
<td>5,130,000</td>
<td>-</td>
<td>8,668</td>
<td>753,000</td>
<td>10</td>
<td>11</td>
<td>38</td>
<td>2</td>
</tr>
<tr>
<td>Podcasting in Lectures</td>
<td>Surf wax</td>
<td>5,130,000</td>
<td>-</td>
<td>8,525</td>
<td>739,000</td>
<td>10</td>
<td>11</td>
<td>38</td>
<td>2</td>
</tr>
<tr>
<td>Podcasting and Education</td>
<td>BBC News</td>
<td>22,800,000</td>
<td>-</td>
<td>34,130</td>
<td>9,890,000</td>
<td>11</td>
<td>12</td>
<td>52</td>
<td>6</td>
</tr>
<tr>
<td>Podcasting in Education</td>
<td>The Times</td>
<td>24,700,000</td>
<td>-</td>
<td>33,248</td>
<td>9,950,000</td>
<td>11</td>
<td>12</td>
<td>52</td>
<td>6</td>
</tr>
<tr>
<td>Podcasting in Higher Education</td>
<td>The Guardian</td>
<td>3,960,000</td>
<td>-</td>
<td>12,396</td>
<td>935,000</td>
<td>5</td>
<td>2</td>
<td>17</td>
<td>4</td>
</tr>
</tbody>
</table>

*Red numbers indicate where useful information was retrieved

3.2 – Primary Research

Primary research refers to data ‘collected from the natural world (including experiments, naturalistic observation, case studies, etc)’\(^2\). This indicates the user carries out research and an original set of data is obtained, as opposed to secondary research where conclusions have been made and are publicised.

Research data can be either qualitative or quantitative; qualitative research ‘relies on the views of participants, ask broad, general questions…describes and analyses these

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words for themes and conducts the inquiry in a subjective, biased manner. In contrast, quantitative research explores a study with specific, narrow questions, collects numeric data from participants, analyses these numbers...and conducts the inquiry in an unbiased, objective manner. This study will explore both concepts in order to gain an understanding of student attitudes with raw data for analysis and quantitative measurements to be evaluated. A more qualitative approach can be gained from further investigation of quantitative approaches and case studies.

3.3 – Surveys

Surveys can provide both the qualitative and quantitative approaches to data collection. Two typical formats are via questionnaires or interviews. For this research project on the basis of Figure 1 it can be established a questionnaire is the best data collection method for this project. To distinguish which method was most appropriate in this situation, the requirement for a respondent to 'choose answers to questions and supplies basic personal...information' was considered. This is due to the quantitative nature of the study and questionnaire format allowing for information to be presented, educating the respondent and a view recorded, as the subject area is still in development and awareness is unknown.

![Figure 1 – Forms of data collection in survey research](image)

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4 Ibid.
5 Ibid, p360.
6 Ibid.
3.31 – Questionnaire

Questionnaires are an effective means of collecting primary data as they ‘identify trends in attitudes, opinion, behaviours or characteristics’\(^7\) of the sample. Therefore in order to gain an insight into student attitudes/views on the topic, this would be an effective research and data collection method. It provides the quantitative data for analysis and patterns to be recognised and displayed in the form of charts/tables. From the data gained further investigation can be made via the means of a focus group to develop ideas and theories received from the responses.

This research method of a questionnaire was also carried out by the Charles Stuart University in Australia and the IMPALA project to aid in the research of using podcasts in education within the university (Appendix B). It obtains information where a vast range and number of students can be targeted and information can be gained demonstrated by these two comparison studies.

3.311 - Design/Questions

The questionnaire (Appendix C) was divided into five sections to gain an understanding of students’ knowledge and views on the topic. The sections included:

1. **Demographics**: established the characteristics of the user generating a profile for each response.
2. **Current MP3 and Podcast Usage**: This area explores the respondents’ access to the technology available for utilisation of podcasts.
3. **Podcasting Knowledge**: determines the user’s knowledge of current affairs and features of the subject area.
4. **Current Lectures**: establishes the features and facilities they currently obtain from traditional, physical lectures.
5. **Integration of Lectures with Podcasting**: enables the students’ views and perspective on the topic to be acquired.

\(^7\) *Ibid, p52.*
The questionnaire was created online using the Learn service, in which the five sections were created. A link to the questionnaire was provided which could be distributed to the necessary person(s). This method of questionnaire design enabled easy access and recording of results for the user as well as results being documented in one location for manipulation at a later date. All students at Loughborough University have access to computers (library or computer labs) and have a university email account, therefore this means of communication seemed most appropriate. However, a disadvantage of the electronic questionnaires would be the ease of ignoring emails, forgetting to respond to them and the junk mail filtering.

3.3.12 – Distribution
The questionnaire was distributed to various Loughborough University students via email. Not all students received the email, as the 12,000 students would be too large a scale for this study. However, it was distributed to modules/departments within each faculty to provide a random sample population; including the information science department and various modules from the business school, computer science and the engineering faculties. There was difficulty distributing the questionnaire to various departments due to representatives unwilling to dispense the questionnaire link. Regardless of a few drawbacks the questionnaire was distributed effectively to a variety of Loughborough students.

3.3.13 – Comparison to IMPALA questionnaire
The questionnaire created in comparison to the IMPALA questionnaire is a more detailed attempt at gaining information on the current utilisation of podcasts. The IMPALA questionnaire simply gains information regarding those who utilise podcasts and reasons why. This questionnaire also tries to explore students’ attitudes towards podcasts; both current users and non-users. The IMPALA questionnaire provided more qualitative answers to the questions, whereas this questionnaire provided more quantitative responses. To gain this more qualitative response a focus group would develop the ideas gained from the questionnaire.
Another comparison is the distribution of the questionnaire. IMPALA’s sample was second and third year Engineering students, whereas, the Loughborough questionnaire attempts to gain a range of students views based on their demographic profile of gender, ages and department/faculty they belong to.

3.32 –Interview/Case Study

By obtaining an interview from a representative from the IMPALA project an insight into the study would be gained, whose aim is to:

‘…Investigates the impact of Podcasting on student learning and how the beneficial effects can positively be enhanced’8

A case study on the project will be completed and research carried out by the team can be compare to data retrieved from the research carried out in Loughborough. A discussion of the interview will be examined and findings of the project recorded in Chapter 4.

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CHAPTER 4

4. Analysis

The following section explores the results and ideas generated from the primary research carried out. From the literature review various issues were established from secondary research. Other universities documented various reactions to the integration of podcasting with education. The data collection methods in this project aimed to establish these issues within the Loughborough University environment and formed a base for questions within the questionnaire.

The issues raised in secondary research and integrated into primary research are as follows:

- Podcast only lectures
- Utilisations of iTunes
- Views on vodcasts
- Effects of podcasts on student life

The primary research consisted of a questionnaire, focus group and case study on IMPALA, where all aspects of these issues were explored. The questionnaire aimed to reveal students’ opinions on these subject matters. Further enquiries of these answers were gained through a focus group where ideas developed and discussions were generated.

The IMPALA project also provided information on a comparison of a research project in the sector. It also establishes the current situation of podcasting in the UK education sector and its development. A case study of the project enables an in-depth overview and understanding of the project to be recognised.
4.1 – Questionnaire

The questionnaire was distributed to Loughborough students. The following section will analyse and evaluate the results obtained and conclusions drawn from this data. The structure of the analysis will follow the structure of the questionnaire with the five sections as described in chapter Three.

4.11 – Demographics

The demographics of the respondents to the questionnaire are displayed in Figure 2. Altogether 139 students responded to the survey; 45% female and 55% male response rate. The department to which each student belonged to was divided into its relevant faculty; science, engineering or social science and humanities. These basic demographical elements provided a useful reference for further analysis of questions within the report.

![Demographical Profile of Respondents](image)

**Figure 2 - Respondent demographics**

It can be seen the majority of respondents were from the science department, which may have some effect on the results; a stereotypical view of the results could assume the science students may be more aware of technological gadgets – however this is a
stereotypical judgement and may not be accurate. The majority of students being in their final year of university may also affect results, as the lectures for final year students may be more of a priority than first year students. However, this level of experience may prove beneficial due to their experience of the lecture styles and overall university experience.

4.12 – Current MP3 and Podcast Usage

These questions aimed to gain an understanding of the current usage the students have with the technological gadgets associated with podcasting. These include the number of students who own an mp3 player, those who currently listen to podcasts and if so which ones and if not, why not?

4.121 – MP3 Player Owners

![Figure 3 - MP3 owners](image)

This chart demonstrates a high volume of students own some form of MP3 player. This is a popular device among this generation and is often utilised for recreational activities and most popularly for listening to music. This high uptake over the years of MP3 players demonstrates the ability for new technological advancements to be a success. There are only a handful of respondents who do not wish to own an mp3 player, however, it can be seen that the majority of students are interested in this form of technology.
From the Mintel report, Figure 4 demonstrates the high volume of the population who own just an iPod, this does not consider all MP3 players and samples 24,343 participants aged over fifteen. However, the 14.4% is slowly nearing the figures of sky plus users (a new product, which as increased steadily) indicating mp3s are also increasing in popularity.

**Figure 4 - Mintel report: GB’s technology adoption**

4.122 – Podcast Listeners

From the results 32% of the respondents currently listen to a form of podcast, either academic or non-academic (Figure 5). This is a fairly low percentage of listeners compared with IMPALA, although their sample was 24 participants with 88% listening to a form of podcast (see section 4.323 – Survey Results). However, as podcasting is still in the initial stages of individuals becoming aware of the medium and grasping the concept of utilisation this figure may rise as it becomes more recognised.

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Do you listen to any podcasts currently available? (academic and non-academic)

- Yes: 32%
- No: 68%

Figure 5 - Percentage of podcast listeners

A list was gathered of those podcasts, which students do listen to, as well as podcasts they would be interested in listening to. A selection of options were provided as well as the ability to input a category not listed. The results gathered are displayed in Figure 6. From the results the most popular categories were radio, music and comedy – this may be reflected in the age range of the participants. A sample of a varied demographic profile may provide differing results, however, these categories effectively demonstrate the interests of this generation.

If you listen to podcasts or would listen to them, which of the following would you listen to?

- Radio (Chris Moyles): 34%
- Books (Harry Potter): 19%
- Music (reviews, interviews): 11%
- Business and Finance: 16%
- Science and Technology: 11%
- Comedy (Ricky Gervais): 5%
- Politics: 3%
- Erotica: 3%
- Academic Resources: 2%
- Religious: 1%
- Yoga - Fitness: 1%

Figure 6 - Popular podcasts
This primary data can be compared with the data from Podcast Nation in which they have listed popular podcasts. This website has provided results via a voting system in which the most popular podcasts are rated within each category. To compare this data to the primary data, the votes have been collated and grouped into each category as Figure 7 demonstrates. Although this may not be an accurate overview of the whole of the UK, it provides a sample of those who utilise this website.

![Podcast Nation Top Rated Podcasts](image)

**Figure 7 - Podcast nation top podcasts**

Due to statistics being based on only those who use the site to download podcasts, the high volume of spiritual downloads reflect this compared to the one vote within the questionnaire results. Again this may be the result of the specific age range and demographic profile the primary research presented, whereas the Podcast Nation would have a more varied profile of respondents. However, from both sets of data, the topics of comedy and music provide high results of interest, even with the Podcast Nation providing a greater range of categories.

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4.123 – Non-Podcast Listeners

With 68% of the 139 respondents indicating they did not listen to any form of podcast, Figure 8 provides more details of reasons why these respondents have not listened to podcasts.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Number of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>I use my mp3/iPod for listening to music</td>
<td>2</td>
</tr>
<tr>
<td>My mp3 player does not play podcasts</td>
<td>2</td>
</tr>
<tr>
<td>Have never considered it</td>
<td>5</td>
</tr>
<tr>
<td>Have never heard of it</td>
<td>1</td>
</tr>
<tr>
<td>Have had no motivation to find any</td>
<td>2</td>
</tr>
<tr>
<td>Do not own an iPod</td>
<td>1</td>
</tr>
<tr>
<td>Have not had the time</td>
<td>8</td>
</tr>
<tr>
<td>I've not found any that interest me</td>
<td>22</td>
</tr>
<tr>
<td>I don't know how to listen/download one</td>
<td>24</td>
</tr>
<tr>
<td>It doesn't interest me</td>
<td>32</td>
</tr>
</tbody>
</table>

This section was for only those respondents who do not listen to podcasts currently and they were able to select a number of options. Although the majority of respondents responded as either having not found any podcasts that interest them, or, not knowing how to listen/download a podcast or not being interested in the concept…these were options which were provided for selection, with an ‘other…’ option enabling further responses to be input. The time response and idea of having not considered the concept were also dominant.

From the results, there are five respondents who believe you require an mp3 player to listen to or to download a podcast. Incidentally these five respondents answered the statement (section 4.131 – Statement Response) incorrectly. One respondent commented:
‘I would rather listen to my music when on the go, rather than an intricate conversation that would require a lot more attention.’

Whilst, another responded:

‘My mp3 player doesn’t take podcasts I dislike iPods so I can’t view podcasts.’

Both these responses are clear examples of the misconceptions people have of podcasts, i.e. they require an mp3 player to listen to them. Although the question posed did not indicate you had to own an mp3 player or be on the move these respondents interpreted the question has having to respond with these answers. It does provide some input as to student views on listening to podcasts whilst ‘on the go’, even if it is the view of one student out of 139.

4.13 – Podcasting Knowledge

This section aimed to identify the current knowledge the respondents hold with regards to podcasting. The questions varied from being specific to the education sector (Figure 9) to a generalisation of the podcasting subject.

![Figure 9 - Podcasting and education knowledge](image_url)
The question regarding the podcast available within Loughborough University explored the effectiveness of the marketing of the podcast to the students. The library podcast is the only podcast available at Loughborough University and consists of five categories (Figure 29). It is apparent that the promotion of the podcast is currently ineffective from the figure below. This issue has been developed further within the discussions of the focus group (section 4.23 – Summary of Discussions).

![Figure 10 - Loughborough library podcast](image)

### 4.131 – Statement Response

“To listen or to download a podcast, you must own an MP3 player.”

This statement aimed to test the knowledge of the respondents with a common misunderstanding, which occurs with the podcasting terminology. As discussed in section 4.123 – Non-Podcast Listeners, some respondents believe you require an mp3 to listen to or to download a podcast. The response rate to the statement can be seen in Figure 11, with 66% answering the question correctly. This is a high percentage showing the majority of the students are aware of the criteria for listening/downloading a podcast.
"To listen or to download a podcast, you must own an mp3 player such as an iPod". This statement is...

17% 17% 66%

Figure 11 - Statement response

4.132 – Statement Response via Gender

Although the figures for overall statement accuracy are positive, by breaking down the results via gender and faculty a different set of results are revealed. Figure 12 presents the results via gender and a significant difference can be identified. This significance is based on the chi-squared formula (Appendix D).

Figure 12 - Gender response to statement
The percentage of males who answered the statement correctly was 81%, whilst the percentage of females who answered this correctly was only 43%. The correct answers were only those who stated the statement was ‘False’, those who indicated ‘I don’t know’ or ‘True’ were classed as answering the statement incorrectly. This considerable difference in males and females who answered the statement correctly may be concluded as being a stereotypical gender difference; males having more knowledge of the technology available and its workings.

As section 4.122 – Podcast Listeners explored the number of respondents who listen to podcasts; Table 4 demonstrates the gender difference in those 32% of podcast listeners. It can be seen this also has a higher percentage of males who listen to podcasts, although not as much difference as the statement response. Again the explanation for both these instances would be the gender difference.

Table 4 - Gender difference of podcast listeners

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number who listen to podcasts</th>
<th>Percentage (Out of total number from that gender)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>30</td>
<td>30 ÷ 77 x 100 = 39%</td>
</tr>
<tr>
<td>Female</td>
<td>14</td>
<td>14 ÷ 62 x 100 = 23%</td>
</tr>
</tbody>
</table>

4.133 – Statement Response via Faculty

The uneven response rate per faculty makes the analysis of the statement response fairly biased towards the science faculty, for example, had a higher majority of responses resulting in clearer results. However, Table 5 examines the percentage of correct answers for each faculty in comparison to the number of respondents from each faculty.
The table provides a detailed account of results from the faculties’ response to the statement and by calculating the percentages to the number of respondents; it provides a less biased overview, which Figure 13 may initially provide at a first glance.

Table 5 - Faculty statement accuracy

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number who answered statement correctly</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science</td>
<td>70</td>
<td>66%</td>
</tr>
<tr>
<td>Engineering</td>
<td>5</td>
<td>71%</td>
</tr>
<tr>
<td>Social Science and Humanities</td>
<td>16</td>
<td>62%</td>
</tr>
</tbody>
</table>

Overall the percentage of correct answers per faculty is fairly high and on an even ground. There is no distinguished anomaly where one specific faculty has provided a low/high set of results. This may have an effect on the statement that science students may have some form of bias as stated in section 4.11 – Demographics, as it may be assumed they have a clearer knowledge of technological matters, however, it is one assumption for the results. If there were an even set of respondents from each faculty a more accurate assumption could be made, for example, Engineering provided high results, however, this is only from 7 respondents from the faculty.
4.14 – Current Lectures

Obtaining information on current lecture styles and attitudes provides an overview of how lectures with podcasts can be used. As described in the literature review section 2.1 – ‘Traditional’ Lectures, lecturers often provide online lecture notes for students to review. Figure 14 demonstrates the percentage of students who receive online lecture notes from their lecturers. This form of distance learning may not necessarily prove beneficial if students need not attend lectures and are still able to download the information. Figure 15 explores whether utilising online lecture notes dissuades them from attending lectures. However, from the primary research it is evident the majority of the sample prefer the tradition lecture style of gaining information physically from the lecturer.

![Figure 14 - Percentage of students who receive online information for modules](image1)

**Figure 14 - Percentage of students who receive online information for modules**

![Figure 15 – Do online lecture slides dissuade you from attending lectures?](image2)

**Figure 15 – Do online lecture slides dissuade you from attending lectures?**
The personal interaction with a lecturer is the main focus of traditional lectures and to gain an understanding of students’ views on this matter is important. Figure 16 demonstrates the view students have with regards to how they value interaction with a lecturer.

![Chart: Do you value personal interaction with a lecturer?]

- **Depends on Lecturer**: 38%
- **No**: 4%
- **Yes**: 54%
- **Yes, Depends on Lecturer**: 4%

**Figure 16 - Personal interaction with lecturer**

Over half of the respondents do value the interaction they have with a lecturer whilst in the lecture theatre, whilst 38% stated it would depend on the lecturer. Some (4%) selected two options of ‘yes’ they do value personal interaction with a lecturer, however, it would also depend on the lecturer, adding to the value of both categories. The high percentage of students who value the interaction will be affected by the podcasting only format where this personal interaction may be lost. This is especially the case if podcast only lectures were to take place, like at Bradford University with Dr Ashraf. Therefore from these results it can be evaluated a situation such as that at Bradford University would not be effective with this sample of Loughborough University.

Gaining an understanding of the average number of lectures students attend will provide an insight into the effectiveness podcasts may have on those who miss lectures. Figure 17 demonstrates the perception students themselves have on how many of their allocated hours of lectures they attend.
Figure 17 - Comparison of allocated lectures and attended lectures

From the 139 respondents, 47 believe they do not attend the allocated number of hours programmed to them. Although this is only 34% of the sample by providing a podcast it will aid those who are unable to attend the lecture. It may, however, be argued that if these students cannot attend the lectures, why should they benefit from the podcast? This issue is reviewed within section 4.23 – Summary of Discussions of the focus group. Reasons for why these 47 respondents do not attend lectures are explored in Figure 18.

Figure 18 - Reasons for lack of attendance to lectures

If you attend fewer hours than you are designated, what are your reasons for the lack of attendance?

- Lecturer is no help, I can learn better by myself: 16%
- Online notes are available and they are enough for me: 21%
- Other: 63%

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Not all the 47 non-attendees responded to this question, however, the 43 who did respond replied with the majority stating they can simply learn better without help from the lecturer. Those who opted for the other option input the following responses:

- “Other: can't understand the lecturer - she is foreign”
- “Other: I’m lazy and have absolutely no motivation esp. when lectures are on the other side of campus”
- “Other: early mornings”
- “Other: some lectures are not worth attending”
- “Other: usually laziness”
- “Other: usually only miss if I’m busy with something else”
- “Other: Sleep”

From these responses, 4 can be classed as being lazy and preferring to sleep than to attend lectures. The podcast only lectures may suit these students, but what about those 92 students who do attend lectures? Student reactions to podcast only lectures and their perceptions of their behaviour are explored in section 4.15 – Lectures and Podcasting.

### 4.15 – Lectures and Podcasting

These questions aimed to make the students think about being in the situation where podcasts were available and what their reaction would be to the concept being implemented. This section may be the most valuable as it will gather an opinion as to whether this sample will welcome the concept of podcasting in all its formats; podcast only lectures or as an additional resource pre/post traditional lecture.

#### 4.151 – General views of podcasting in education

An important characteristic, which has been concluded in the literature review by many universities implementing the podcasting notion, is the effect it has on the attendance at lectures. Dr Ashraf at Bradford University (UK) has stated the students’ attendance has improved since the introduction of podcasts; however, Deakin University (Australia) received the opposite effect with lecture attendance
decreasing. Figure 19 demonstrates the sample of Loughborough students’ views on how they would react if this concept were introduced.

![Chart: Attendance to lectures if lectures via podcasting were available]

Figure 19 - Attendance to lectures if lectures via podcasting were available

From these results it is evident the majority of students would still attend the traditional style lectures with a percentage of 54% utilising both mediums (traditional and podcast lectures) to gain information. Therefore from this research it is apparent the traditional lecture would not be taken over by the technological advancement podcasting brings to the education sector, however, it can also be seen that it would be utilised by the students as Figure 20 explores in more depth.
If podcasts were available for modules, would you listen to them?

85% Yes
15% No

Figure 20 - Percentage of respondents who would listen to a module podcast

This is a very high percentage of students who would adopt this new style of information acquisition. Whether the student wants to listen to the podcast or feels under pressure to because it has been made available, however, is questionable. This concept is posed to respondents in section 4.23 – Summary of Discussions of the focus group. However, from this primary research some form of podcast would receive a positive uptake from the students.

If podcast only lectures were to be implemented, as described in section 2.33 – Podcast Only Lectures, the traditional style lectures of face to face communication would be lost. This would have several implications on the students and Figure 21 explores the students’ thoughts on features they would miss if this concept were introduced.
This additional feature may change the way lectures are held. Which of the following would you miss?

- Meeting new people/course friends: 117
- The lecturer: 49
- Having a purpose to get up in the morning: 68
- Interaction within the lecture hall/seminar room: 62
- Additional information not available on the online slides/web/podcast: 107
- In meeting with friends/fellow students - identifying who would be good in group work activities: 92
- Other: 11

Figure 21 - Features that would be missed from the traditional lecture style

The respondents were able to select more than one answer therefore expressing all the views they wished. From the responses both social elements and academic elements would be missed. Social elements in meeting friends the traditional lecture style holds and the academic features being interactions with lecturer(s) and the addition content which may be provided. The focus group discusses these elements further and the reasons these features would be missed.

The ‘other…’ options revealed some further thoughts and feelings, as Figure 22 illustrates.
Figure 22 – “Other...” Lecture features that would be missed

It is apparent some respondents had strong views about how the podcasts would affect the tuition fees and how learning will become distance learning, which can be completed from their own homes. However, this is only a selection of the students. The majority were positive about the podcasting features, as the figure above demonstrates.

The comment of this style feeling impersonal and having less structure compared to the traditional lectures is beneficial and relate to the statement made by Koumi:

“For maximum effect, materials must not simply be a record version of another medium [e.g. a lecture], but should be rescripted to incorporate and interrelate with other modes of presentation”\(^3\)

Therefore, it should be utilised as an additional resource or provide the elements traditional lectures possess (visual component), which benefit the student’s learning

(see Figure 24). These discussions lead on to the views students have of the podcasting concept, which Figure 23 demonstrates.

**Figure 23 - Podcasting - a novelty idea?**

This is a positive response, which is encouraging, as half the sample is reacting optimistically to the idea of podcasting both in the general manner as well as within the education section as apparent in Figure 24.

**Figure 24 - Utilisation of podcast lectures**

Again this positive response rate to utilisation of podcasts within education/lectures demonstrates how effective it would be if implemented. However, it must be noted
that only 1% would utilise it as their only resource and traditional lectures are still important for the learning. This corresponds with the concept Charles Stuart University (section 2.34 – Attendance At Lectures) have adopted by producing material to aid the students and not as a replacement lecture. From the primary data it can be concluded that this scheme would also benefit this sample; as they would utilise podcasts as an additional resource to lectures.

4.151 – Podcast creation
This section explores the idea of students creating podcasts and in what circumstances they would create or utilise a podcast. From the primary research it was apparent respondents were less likely to create a podcast for themselves or for others (Figure 25 and Figure 26) but would be willing to listen to a podcast created by a peer (Figure 27).

Would you create your own podcast as a means of lecture or revision notes?

![Figure 25 - Creating a podcast for yourself](image)

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Would you create an educational podcast for others to benefit from?

- Yes: 9%
- No: 91%

Figure 26 - Creating a podcast for others

Would you listen/download a podcast created by a peer regarding modules, etc?

- Yes: 41%
- No: 59%

Figure 27 - Listening to a podcast created by a peer

This may be the result of students unwilling to go to the effort of creating a podcast as it takes time and effort; however, they are more than willing to listen to a podcast, which has been pre-made for them to simply download. It is interesting that students would be more likely to listen to a revision podcast for example created by a peer than to create their own. The focus group explores these concepts in more detail and the responses from the students are recorded.
4.151 – Vodcast

The idea of a vodcast has a positive response from the sample. This may be due to the respondents being uncertain of how the podcasting format would succeed as there is only audio output, hence 75% would still attend the lectures as well as gaining information via the podcast. If the question of ‘How do you think you would utilise vodcasts?’ were posed a different set of results may be achieved.

Figure 28 - Reaction to vodcasts
4.2 – Focus Group

From the questionnaire, various participants responded to the question regarding “Would you be interested in discussing your views and ideas on podcasting further?” Altogether twenty-three participants answered yes to this question, however, due to some students being on placements or on a gap year not all would have been able to attend. Therefore, an email reminding them of their interest was sent to those who would have been able to attend. The eighteen participants were emailed and informed of a focus group taking place on Wednesday 7th March at 1pm in a group study room at Loughborough University library. It was expressed that if they no longer wish to take part in the project any further, this was not a problem and they should simply ignore the email.

4.21 – Structure of the Focus Group

The focus group was kept informal to ensure all the students involved were comfortable with each other and would be confident in the discussions that took place. A PowerPoint presentation (Appendix E) was created in order to ensure a flow and main observation point was obtained in the discussions. This would enable all participants to be aware of what was being discussed and to understand facts/figures.

4.22 – Characteristics of Participants

From the twenty-three participants emailed, only five attended the focus group, all of whom had similar demographics. Table 6 summaries the demographics of those participants.

<table>
<thead>
<tr>
<th>Sex</th>
<th>Age Range</th>
<th>University Year</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>20-21</td>
<td>Final</td>
<td>Science</td>
</tr>
<tr>
<td>Female</td>
<td>20-21</td>
<td>Final</td>
<td>Science</td>
</tr>
<tr>
<td>Female</td>
<td>22-23</td>
<td>Final</td>
<td>Science</td>
</tr>
<tr>
<td>Male</td>
<td>20-21</td>
<td>Final</td>
<td>Science</td>
</tr>
<tr>
<td>Female</td>
<td>22-23</td>
<td>Final</td>
<td>Social Science and Humanities</td>
</tr>
</tbody>
</table>

This small sample of participants with similar characteristics may prove some bias towards certain discussions; however, some ideas and views explored are useful for this demographic profile.
4.23 – Summary of Discussions

The following section will provide a summary of the discussions that took place from the questions posed on the PowerPoint presentation (Appendix E):

© Response to the results of the statement “To listen or to download a podcast, you must own an MP3 player such as an iPod”

The response rate of 66% of respondents answered this question correctly; the statement being false is right for the age range the questionnaire was aimed at. It was believed this younger generation who have grown up with technology, as it has evolved over the years, were more like to answer this question correctly compared with the other generations.

It was agreed that females are less likely to know about technology compared with the males. Figures comparing the percentage of correct answers for each gender were explained to participants: 81% of males answering the question correctly compared to 47% of females answering correctly. It was evaluated males are generally ‘Early Adopters’ to technology and are more likely to purchase/utilise the latest technological advancement. Hence presenting the higher percentage of correct answers.

Another factor considered, resulting in the high percentage of respondents answering correctly, is that a high percentage of respondents were from the Science faculty. They may have more knowledge within the sector, however, this is a generalisation made by the group, like with the male/female response rate.

Utilisation of the Loughborough library Podcast

All participants admitted they had not known about the library podcast and have not utilised it since knowing there was one. Reasons for this non-utilisation were mainly they had forgotten about the question and had not had time to search for the item.
Upon viewing the podcasting page the reaction was negative. The content available to view (Figure 29) did not impress the group and it was stated for those topics currently available they would simply ask a librarian for the information instead of listening to a podcast for a few minutes. However, it was stated if more relevant information was presented appropriate to themselves such as how to reference or various workshops available such as how to search databases, they would be more willing to listen to the podcast.

Figure 29 - Snapshot of Loughborough library podcast page

This may be a useful tool for new students, however, for those who are graduating this year and have been students at Loughborough for three/four years and have utilised the library in this time the current content is not useful. Another point made was the awareness of this library podcast and the fact that it has not be publicised and therefore awareness is low.

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4 Library Loughborough University, <http://www.lboro.ac.uk/library/archived-2006-09-25/news.html#pod>, [07.03.2007], [Accessed 07.03.2007].
Podcasting – General Views

Various views on the concept of podcasting in education were presented:

- There is a need for a visual component, for example, Engineers would need this visual presentation for diagrams and the effectiveness of the podcast would depend on what type of learner you are.

- The effectiveness will depend on how clear and understandable the language/accent spoken on the podcast is.

- The atmosphere generated at lectures would be missed if podcast only lectures took place.

- It would reduce the time spent with lecturers, the face-to-face interaction.

- The females in the group stated they would be annoyed at those who were able to utilise the podcast but had not attended lectures.

- A question was asked stating “would you feel under pressure to download a podcast if a lecturer made it available?” Within the group the females stated they would feel under pressure whereas the males said they would not. This again may be a generalisation but it was thought that males were more laid back regarding the information content they need to know, whereas females are more likely to search for extra information.

- Through podcasts you would miss out on the body language and visual qualities face-to-face lecturing provides.

- A good point is the flexibility of learning content.

- Note taking is about knowing what to write down – so it is good for those who miss points.

- If slides accompanied the podcast this would be more advantageous.
A vodcast would be the best medium in terms of lecturing in the podcasting format.

However, it was concluded the podcast/vodcast should be supplementary to lectures instead of replacement.

Use of iTunes to store lecture podcasts

This concept was debated from being a positive concept to a negative concept and vice versa. It was evaluated that it was not a good idea as music is a social activity, which the group utilised for relaxation purposes away from work and did not want to associate it with work. A link to the Berkeley iTunes platform was available on the slide; however, it would not process on the library computers. Therefore the method of utilising the podcast from the university page was described (see section 2.31 – Links with companies). The addition of a folder to the play-lists was not a positive reaction as it was discussed whilst viewing music, seeing a folder associated with work would not be a positive feeling. However, if the files were stored in a separate folder away from the iTunes music this would be more beneficial and the download of podcasts from iTunes was not a problem.

Podcast Creation

Figures of the questionnaire results regarding whether students would create podcasts for themselves/peers or if they would listen to a podcast created by a peer, were presented to the group. The results for creating one for yourself or a peer were low and the group agreed they would not spend the time/effort to create a podcast. However, the thought of a peer creating a podcast generated intrigue in the group and they stated they would be interested in what their peers have to say.
Discussion of a group podcast formed a more positive response as the judgement of one person would not necessarily influence an individual. A group podcast would be a form of a discussion board where various views would be presented and the individual can selectively capture information they want.

A development to this discussion was the concept that this form of communication may be more beneficial for the future generations. Although the group are aged between 21 and 22 they are aware of how to do things without technology. The younger generation, however, who can be seen as the digital generation may appreciate the concept more. It was also stated that this form of technological advancement might not necessarily excel like the mini-disks not having the major success hoped for a few year ago.

© Final Statement “‘Distance learning will never replace the social element – [which is] why many young people want to study a degree in the first place – but it’s complementary to student life in many way’5”

The statement was agreed by all group members and the feeling that university was not only about academia but also about the social side of life and learning. As an overall discussion and evaluation it was concluded podcasts present only the academic learning, no other qualities are gained such as facial expression and body language from lecturers. University is about learning in terms of education, social qualities and life experiences all in one.

5 Hoare, S. This is the modern way, <http://education.guardian.co.uk/egweekly/story/0,1745825,00.html>, 04.04.2006, [Accessed 18.02.2007].
### 4.24 - SWOT Analysis

From these discussions a SWOT analysis on podcasting can be created deriving the information/ideas captured in the focus group.

<table>
<thead>
<tr>
<th><strong>Strengths</strong></th>
<th><strong>Weaknesses</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Flexible</td>
<td>× Some students may feel under pressure to listen to them if made available for a module</td>
</tr>
<tr>
<td>✓ Podcast with visual slides would be effective</td>
<td>× Lose lecturer contact time and non-verbal expressions</td>
</tr>
<tr>
<td>✓ Vodcasts would benefit different types of learners</td>
<td>× Fairly anti-social</td>
</tr>
<tr>
<td>✓ The concept is good for reviewing information</td>
<td>× Accent/language difficulties on audio formats</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Opportunities</strong></th>
<th><strong>Threats</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Digital generation is growing older – may be the best target audience</td>
<td>× Mini-disks did not do as well as hoped in the technology market and the same could happen to podcasting</td>
</tr>
<tr>
<td>✓ Group podcasts allow for different views to be gained in the form of a discussion forum</td>
<td></td>
</tr>
</tbody>
</table>

Figure 30 - SWOT analysis from focus group
4.3 – IMPALA Case Study
As discussed in section 2.35 – Research Projects, IMPALA is a UK based project investigating ‘the impact of Podcasting on student learning and how the beneficial effects can positively be enhanced’\(^6\). The following case study is based upon material obtained through an interview with a co-investigator from the project. It will explore the research methods they have implemented in the project. A description of the study would also provide a basis of how a podcast for a lecture would be structured.

4.31 – Interview
The interview with Dr Palitha Edirisingha who is a member of the research team for IMPALA provided a great insight into their workings and how the project is developing. The interview took place during the initial stage of the project and the information is based on the pilot study being implemented. The interview protocol is presented below:

**Project: Student Attitudes Towards Podcasting in Education**

**Time of Interview:** 3pm  
**Date:** 20\(^{th}\) October 2006  
**Place:** University of Leicester  
**Interviewer:** Shalika Gajasinghe  
**Interviewee:** Palitha Edarasingha  
**Position of Interviewee:** Project Manager and Researcher

**Details of Project**
The following questions will enable me to gain an insight into the workings of IMPALA. I am currently undergoing a project regarding the use of podcasting in education and any information regarding IMPALA would be a great resource for my project. There are 10 questions to explore and the interview should take no longer than 60 minutes.

\(^6\) *IMPALA Informal Mobile Podcasting and Learning Adaptation, <http://www.impala.ac.uk>, [n.d], [Accessed 15.10.2006]*.
Questions

IMPALA started in May 2006, so is therefore a recent development within the UK. Why did you get involved with the project? What interests you in the area?

Your role within the project?

The research project began in November/December 2005, after Professor Gilly Salmon became interested in the concept of podcasting and wanted to create a podcast project and asked if Dr Palitha Edirisingha would also become involved. This initial discussion and recruitment of members for the project led on to the formation of IMPALA in May 2006. Palitha’s role within the project is Project Manager for IMPALA and a researcher.

There are only four universities in the UK involved in the project. Why did Leicester University want to be involved?

The other institutions involved were asked if they would like to take part as Gilly and Palitha had contacts within these fellow institutions and therefore would be able to converse effectively on the outcome of the project stages and to understand a larger scale of the project, not just within Leicester university. As stated above Gilly Salmon initially drove the concept and therefore Leicester University was the base for the project.

From the website it states you provided a questionnaire as a means of research. The demographics of your target audience were 2nd and 3rd year Engineering students, why did you decide on these specifications?

The engineering concept came about because the lecturer involved with the module had started a podcast scheme within lecture use prior to the IMPALA project commencing, therefore, his interest suited the project as well as benefiting his interests. IMPALA did approach lecturers about the scheme but also some lecturers approached them after hearing the concept from colleagues. So general word of mouth promoted the scheme across the university.
I will be completing a questionnaire as a means of gathering information for my dissertation to gain a wider perspective of what Loughborough students think of podcasting being used in education. Did you find the use of a questionnaire effect? What were the results you achieved?

There was a mixed reaction to the questionnaire in terms of the results. It is still being distributed and in December 2006, another questionnaire will be distributed to gain more information. It was only distributed to an undergraduate module with 30 students who studied it. Of these 30 students, 6 were interviewed and 24 completed a questionnaire at the end of semester 2, 2006. (N.B. Results of the questionnaire are explored in section 4.323 – Survey results). A qualitative questionnaire (via an interview) was utilised to explain answers and an incentive was provided of a £5 voucher.

There are 4 research questions the project wants to explore, how did you decide on these specific four?

The research questions (below) were based on the literature researched.

![Figure 31 - IMPALA research questions](image)

The first three points were established in order to compare new technology with the old. The podcasts will not replace lectures but would be adding to them, as in the USA, it is mainly podcast lectures, but this is not what IMPALA wants. Another point

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7 Ibid.
established from these research questions is the scalability of the institution; space on the server if everyone was using the podcasts or downloading them. Kingston has a subscription service to solve this server problem, using RSS technology. Leicester university students, however, would have to download the podcast themselves.

What are your personal views on the connection between podcasts and lecturing? Do you currently create podcasts for your students?

“It is a useful pedagogical tool if used intelligently. Students already know how to install, etc and have computer. No training element would be involved. At Kingston University some students do record lectures and listen to them, however, I have not yet used podcasts in lectures.”

Podcasting has been popular in the USA and Australia for a while; do you know why it has taken the UK longer?

It is expanding to other universities however; it is still slow due to institutions trying to get grants to develop their concepts as well as benefiting from the research carried out overseas.

Thank you for your time and your help with the project. It is greatly appreciated and will provide a great resource for the project.
4.32 – The Pilot Study

As discussed within the interview the pilot stage of the research project was carried out in 2006, over one semester and an interview and questionnaire captured thoughts and views of the trial. Further investigations are to be carried out as the year progresses as the project/investigation ends in June 2007.

4.321 – Demographics of the study

The study took place over a twelve-week period with participants from the undergraduate module of Optical Fibre Communication Systems within the Electrical Engineering department. It was tested upon thirty second/third year students within this module and at the end of the twelve weeks, four were interviewed and twenty-four completed a questionnaire in order to get feedback on the scheme.

4.322 – Structure of the podcast

The podcast was made available at the start of the week and consisted of the following format:

- i. An introductory news item
- ii. The main content section typically referring and extending this week’s work and referring to last week’s
- iii. Lighter weight but fibre optics related items, e.g., a joke at the end, or rap.

Figure 32 - IMPALA podcast structure

This structure does not aim to replace the lecture but support its content and provide a basic resource for students to listen to as guidance of what the week’s topics/ideas will explore.

The student reaction to the podcast was positive with one student stating it ‘gave focus for the week’s work’. This is an interesting opinion as it is one which arose from the primary research carried out at Loughborough University where issues of structure and focus were important parts of traditional lectures styles (Figure 22).

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Therefore, this medium appears to provide this feature, which would benefit the Loughborough students by continuing the traditional lecture style, which is important to them with 75% stating they would utilise both mediums (Figure 24).

4.3.23 – Survey Results

As previously stated IMPALA carried out a questionnaire on 24 of the 30 students who took part in the experiment. The questionnaire (Appendix B) aimed to gather information regarding their current habits of podcast use, unlike the questionnaire distributed to Loughborough students, which aimed to understand their views on the concept of podcasting in education.

From IMPALA’s research 21 of the 24 students listened to podcasts, and ‘58% listened to 6 or more podcasts’. The following table provides an insight into their views on the concept they experienced and provides similar results to what the Loughborough students believed their views would be.

Table 7 - IMPALA Research: The most important aspect of learning through profcasts

<table>
<thead>
<tr>
<th>The aspect</th>
<th>No. of students responding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Podcasts provide a good introduction to online learning material</td>
<td>6</td>
</tr>
<tr>
<td>Podcasts helped me to organise my weekly learning activities</td>
<td>3</td>
</tr>
<tr>
<td>Podcasts helped me stay focused on the course</td>
<td>3</td>
</tr>
<tr>
<td>Podcasts were informal</td>
<td>3</td>
</tr>
<tr>
<td>Podcasts helped me use my time effectively</td>
<td>1</td>
</tr>
<tr>
<td>Podcasts helped me to understand more about e-tivities</td>
<td>1</td>
</tr>
<tr>
<td>Podcasts provided a summary of e-tivities</td>
<td>1</td>
</tr>
<tr>
<td>Podcasts helped to stimulate my interest in the subject</td>
<td>1</td>
</tr>
<tr>
<td>Podcast were motivational</td>
<td>1</td>
</tr>
<tr>
<td>Podcasts helped with assessed work (assignments, exams)</td>
<td>1</td>
</tr>
<tr>
<td>I didn’t listen to any</td>
<td>3</td>
</tr>
</tbody>
</table>

9 Ibid.
10 Ibid.
It can be seen the majority of the participants reacted positively to the experience. However, the sample of 24 does not necessarily provide an overview of the whole university’s thoughts but provides a basis for future investigations to explore these issues.

4.3.24 - Findings

Although the sample is limited in not demonstrating the views of the whole student population it has provided some useful output on how effective podcasts can work and whether its format was successful. The following objectives were derived from the study and establish what the podcasts would be utilised for:

- Supporting organisational aspects of learning;
- Developing positive attitudes towards the lecturer, bringing in an informality of fun to formal learning;
- Helping with independent learning;
- Enabling deep engagement with learning material;
- Enabling access while being mobile.

Figure 33 - Podcast utilisation features

All these objectives represent additional resources to the current approaches to learning via lectures. This is a key concept IMPALA have enforced, as the podcasts being proposed are not a replacement to lectures. The structure they hold, with the news items and joke ending create a less formal approach to the podcast and correspond to the statement made by Koumi, where the podcast should not be a replica of the traditional lecture. By engaging the student with a differing form of audio output and to ‘follow a ‘radio magazine’ style rather than a lecture’ will encourage the students to utilise the podcast.

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11 Ibid.
12 Ibid.
CHAPTER 5

5. Conclusion
The aim of this project was to “Investigate student attitudes to the use of podcasting in higher education”. Researching the current activities and implementation methods of integrating podcasting within higher education completed this aim, as well as completing a primary research project to gain an understanding of the views from a student perspective. It has been concluded the aim and objectives for the project were met and Table 8 provides a summary to justify this statement.

Table 8 - Objectives of the project

<table>
<thead>
<tr>
<th>Objective</th>
<th>Did the project meet this objective?</th>
<th>How was this objective achieved?</th>
</tr>
</thead>
<tbody>
<tr>
<td>To review current literature concerning the use of podcasting in education</td>
<td>✔</td>
<td>A literature review was carried out; exploring the utilisation of podcasting within an educational environment both within the UK and overseas</td>
</tr>
<tr>
<td>To survey a sample of Loughborough students in order to determine their attitudes</td>
<td>✔</td>
<td>A questionnaire was distributed to Loughborough students and a focus group was arranged in order to gain information on student views</td>
</tr>
<tr>
<td>To make recommendations on the likely uses and success of podcasting at Loughborough University</td>
<td>✔</td>
<td>Based on the literature and primary research findings, recommendations are made on the utilisation within Loughborough University, in section 5.11</td>
</tr>
<tr>
<td>Make a judgement of the future progress and success of podcasting in the UK education sector</td>
<td>✔</td>
<td>Considering the literature, current affairs of podcasting in the industry and primary research carried out a judgement of the future of podcasting is made within section 5.3</td>
</tr>
</tbody>
</table>

5.1 - Research Findings
From the primary research conducted, a major concept indicated was the aversion to podcast only lectures, which was also unpopular within the literature search. Although Dr Ashraf (Bradford University) was stated to have ‘abolished lectures’, a newspaper article, however, stated he is still holding lectures in a theatre where attendance is said to be high as well as providing full lectures via a podcast, therefore lectures are still being held.
5.11 – Podcasting at Loughborough University

Based on the primary research carried out on 139 Loughborough students and evidence from secondary sources it has been evaluated podcasting would work effectively alongside traditional lectures. With 85% of the students willing to listen to a module podcast it shows there would be a demand for the scheme. As 75% of students would utilise the podcast as an additional resource, recreating the whole lecture may not be beneficial. Utilising the concept IMPALA have created as described in

Figure 32, this three-stage podcast, pre/post lecture would benefit students greater than a replica of the lecture previous heard, especially if 98% of students receive online lecture note of the PowerPoint presentation. A further development would be the use of vodcasts, which proved popular and would benefit all 12,000 students with different learning needs and styles.

A social difference found within the data was the gender aspect within this sector. It has been stated ‘as children grow, the computer industry which holds their attention consists of male-targeted computer games’\(^1\). This may be the reason males tend to be early adopters in the technology market and stereotypically were more aware of the podcasting phenomenon.

An important and possibly the dominant and overriding factor within this podcasting argument of whether to replace lectures were established in the following question: “What would you miss from the traditional lecture style?”

Loughborough students indicated a variety of features they would miss if lectures were not provided. The university experience is not just about the academia; it is the social developments acquired from the experience as presented in this quote by Hoare, which encapsulates this argument:

‘Distance learning will never replace the social element – [which is] why many young people want to study a degree in the first place – but it’s complementary to student life in many ways’

5.2 - Limitations
A main limitation within the project was the demographics of the respondents to the questionnaire. There are 12,000 students at Loughborough University, so the 139 responses to the question and the small focus group only provide a limited sample of the students’ view. Distribution of the questionnaire was effective; consisting of all ages/year/department ranges, however, it was noticed a large volume of respondents were final year students (aged 20-21) and those from the science faculty. This limitation could not be prevented, as the questionnaire distribution was random sampling, therefore, no specific target was aimed at. However, this initial sample provides some background information for a selection of the Loughborough students.

The questions within the questionnaire and focus group could have been explored further, such as exploring the vodcast category more, however, as stated the basic information for the investigation was provided. Future investigations within this topic would develop questions and may provide a wider sample population to work with.

5.3 – Recommendations/Future of Podcasting
Podcasting in education is continually being developed with the IMPALA project a great contributor to the investigation within the UK. Both investigations in the UK and the primary research have shown a podcast would benefit students as a pre/post lecture feature and implementation is slowly being carried out across universities.

A feature discussed within the focus group was the utilisation of podcasts within the school environment. The younger generation known as the ‘digital generation’ are more aware of technology and its utilisation within education compared with the

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2 Hoare, S. *This is the modern way*, <http://education.guardian.co.uk/egweekly/story/0,,1745825,00.html>, 04.04.2006, [Accessed 18.02.2007].
older students. GSCE and A Level students currently utilise ‘bitesize’ revision resources, which are available via the Internet, television and books. Therefore, by introducing a platform they are familiar with such as iTunes, an interest will be obtained. As well as a form of revision tool, the diagram below demonstrates the variety of possible learning methods that podcasts would provide students. Creating podcasts individually and as a group for an assignment, for example, would be highly beneficial for these younger students. It allows for the following attributes to be achieved:

- Sharing of information and knowledge among peers
- Building communication and team working skills often required in the university and working environment

![Diagram](image)

**Figure 34 - Diagram of podcast utilisation within schools**

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It is felt the features of podcast creation would be better utilised in this school environment where students are able to work together more effectively and would be more of a fun exercise for them to complete, unlike university students who have a higher work load and may not necessarily wish to take the time to record a podcast.

Recommendations for university implementation of podcasts, as previously discussed, are for podcasts to be utilised as an additional pre/post resource. Students’ benefit from gaining an insight as to what lectures will be about and/or a summary of what they have learnt in the lecture. This would be utilised in conjunction with the traditional style lecture, which they favoured considerably.

The future of podcasting appears to be promising within the education sector, with many UK universities adopting this information source. It could be utilised highly effectively within the school environment as well as in the higher education sector. As described in section 2.36 – UK Institutions, several universities are utilising podcasts for a variety of purposes, however, those universities who have adopted the podcasting feature into their education system include:

- Leicester
- Birmingham
- Bradford
- Kingston
- Nottingham
- Bath
- Leeds
- Warwick
- Southampton
- Royal Veterinary College London
- Bath
- Leeds
- Warwick
- Southampton
- Royal Veterinary College London

This uptake shows the demand and success podcasts are having within this sector. It is only a matter of time before it is implemented in the majority of universities across the UK, including Loughborough.

**Word Count: 11, 828 (as agreed with tutor)**
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Appendix B - IMPALA Questionnaire

Podcasting - survey of 2nd and 3rd year Engineering students

The questionnaire prepared for online use

Do you have use of an MP3 player (tick whichever apply)?
  i. No
  i. Yes - iPod
  ii. Yes - Other type / brand of MP3 player
  iii. Yes - A feature of the mobile phone
  iv. Yes - On a Laptop computer
  v. Yes - On a Desktop computer

Please select the number of podcasts that you have listened to?
  0, 1, 2, 3, 4, 5, 6, 7, 8, 9

If you haven’t listened to podcasts, was it because [please tick the relevant statement(s)]
  Not applicable – I did listen to some podcasts
  I didn’t see the relevance of podcasts for my learning of the module
  I had technical difficulties of accessing them
  I didn’t know that they are available on Blackboard
  I was too busy

If you have listened to at least one podcast please complete items 4 to 11.

Where do you normally listen to podcasts [please tick the relevant statement]
  Not applicable – I didn’t listen to any podcasts
  Always / nearly always off the campus (e.g. term time accommodation)
  Usually off the university campus
  Split roughly between on and off campus
  Usually from the university campus
  Always / nearly always from the university campus

If you accessed podcasts from the university campus, did you access podcasts … [please tick the relevant statement]
  Not applicable – I didn’t listen to any podcasts
  Always / nearly always from a campus computer (e.g. library, engineering building.
  Always / nearly always from my laptop from a wireless location.
  Split roughly between from a campus computer and a laptop from a wireless location.

How do you listen to podcasts? [please tick the relevant statement(s)]
  Not applicable – I didn’t listen to any podcasts
  Save to an MP3 player and listen later
  Save to the Laptop and listen later
  Listen realtime on the laptop without saving
  Listen realtime on the campus computer without saving
If you didn’t download podcasts to your MP3 player (e.g., iPod, phone, etc.) was it because … [please tick the relevant statement(s)]

- Not applicable – I didn’t listen to any podcasts
- You had technical difficulties of downloading
- You prefer to use your MP3 players only to listen to music
- There was no need to download for later use because you can access the module anytime you like
- There was no need to listen to podcasts more than once

When did you listen to podcasts [please tick the relevant statement]

- Not applicable – I didn’t listen to any podcasts
- On the same day or the day after they were made available
- 3 or 4 days after they were made available
- At the end of the week
- Just before the tests
- No specific pattern

What do you do when you listen to podcasts? [please tick the relevant statement(s)]

- Not applicable – I didn’t listen to any podcasts
- Take notes
- Visit varies sections of the module that were being referred to in the podcast
- Nothing, just listen
- Do other work such as project work
- Other activities, please write here ….

Please tick any of the following statements that you AGREE with

- Not applicable – I didn’t listen to any podcasts
- Podcasts helped me to make good use of my time
- Podcasts helped me to organise / structure my weekly learning activities
- Podcasts helped me to stay focused on the course
- I like the format of the podcasts
- Podcasts helped to stimulate my interest in the subject
- Podcasts were motivational
- Podcasts were enjoyable; I normally tuned in to weekly podcasts
- Podcasts provided a good introduction to the lecture notes and other learning material
- Podcasts were useful for me to know more about the assessed work (assignments, exams)
- Podcasts helped me to understand more about how to carry out e-tivities
- Podcasts provided summary of group work in e-tivities
- What are your recommendations for the future use of podcasts in the module? (e.g. “Continue the same kind of podcasts”, “Lectures to be made available as podcasts as an option”). Please type in the box.

Rank match the following statements concerning e-tivities to those stating whether or not you agree with them

- Taking part in e-tivities will be an advantage when I go to job interviews
- E-tivities helped me to got to know more about the others in the group and the course
- The online discussions helped me to put forward my ideas better than I would have been able to in face-to-face meetings
- E-tivities helped me to focus on the task better than I would have done in a face to face group work
- I learned carry out research using variety of online sources
- Through the e-tivities I learned to critically assess information sources and compare results
- Looking at others postings helped me to broaden my perspective on Optical Fibre Communications

  - Strongly agree
  - Agree
  - Disagree
  - Strongly disagree
Appendix C – Podcasting Questionnaire

Students' Attitudes Towards Podcasting In Lectures
All data will be kept private and in accordance with the Data Protection Act.

Many thanks for taking the time to fill in the questionnaire, it should take no longer than 5-10 minutes. N.B. Definition of podcast: "digital recording of a radio broadcast or similar program, made available on the Internet for downloading”.

1. Which gender are you?

<table>
<thead>
<tr>
<th>Gender</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>55.4%</td>
<td>(77)</td>
</tr>
<tr>
<td>Female</td>
<td>44.6%</td>
<td>(62)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.0%</td>
<td>139</td>
</tr>
</tbody>
</table>

2. Which year are you studying at University?

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year</td>
<td>19.4%</td>
<td>(27)</td>
</tr>
<tr>
<td>Second Year</td>
<td>10.1%</td>
<td>(14)</td>
</tr>
<tr>
<td>Placement Year</td>
<td>5.8%</td>
<td>(8)</td>
</tr>
<tr>
<td>Final Year</td>
<td>64.7%</td>
<td>(90)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.0%</td>
<td>139</td>
</tr>
</tbody>
</table>

3. Which age range do you fit into?

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 18</td>
<td>(0)</td>
<td>(0)</td>
</tr>
<tr>
<td>18-19</td>
<td>23.7%</td>
<td>(33)</td>
</tr>
<tr>
<td>20-21</td>
<td>54.0%</td>
<td>(75)</td>
</tr>
<tr>
<td>22-23</td>
<td>20.9%</td>
<td>(29)</td>
</tr>
<tr>
<td>24+</td>
<td>1.4%</td>
<td>(2)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.0%</td>
<td>139</td>
</tr>
</tbody>
</table>

4. Which department do you belong to?

<table>
<thead>
<tr>
<th>Department</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aeronaual &amp; Automotive Engineering</td>
<td>1.4%</td>
<td>(2)</td>
</tr>
<tr>
<td>Art &amp; Design</td>
<td>0.7%</td>
<td>(1)</td>
</tr>
<tr>
<td>Business School</td>
<td>10.8%</td>
<td>(15)</td>
</tr>
<tr>
<td>Chemical Engineering</td>
<td>1.4%</td>
<td>(2)</td>
</tr>
<tr>
<td>Chemistry</td>
<td>(0)</td>
<td>(0)</td>
</tr>
<tr>
<td>Civil &amp; Building Engineering</td>
<td>0.7%</td>
<td>(1)</td>
</tr>
<tr>
<td>Computer Science</td>
<td>12.2%</td>
<td>(17)</td>
</tr>
<tr>
<td>Design &amp; Technology</td>
<td>(0)</td>
<td>(0)</td>
</tr>
<tr>
<td>Economics</td>
<td>1.4%</td>
<td>(2)</td>
</tr>
<tr>
<td>Electronic &amp; Electrical Engineering</td>
<td>(0)</td>
<td>(0)</td>
</tr>
<tr>
<td>English &amp; Drama</td>
<td>0.7%</td>
<td>(1)</td>
</tr>
<tr>
<td>Ergonomics &amp; Safety Research Institute</td>
<td>(0)</td>
<td>(0)</td>
</tr>
<tr>
<td>Geography</td>
<td>0.7%</td>
<td>(1)</td>
</tr>
<tr>
<td>Human Science</td>
<td>0.7%</td>
<td>(1)</td>
</tr>
<tr>
<td>Information Science</td>
<td>60.4%</td>
<td>(84)</td>
</tr>
<tr>
<td>Institute of Polymer Technology &amp; Materials Engineering</td>
<td>0.7%</td>
<td>(1)</td>
</tr>
<tr>
<td>Mathematical Science</td>
<td>0.7%</td>
<td>(1)</td>
</tr>
<tr>
<td>Mechanical &amp; Manufacturing Engineering</td>
<td>0.7%</td>
<td>(1)</td>
</tr>
</tbody>
</table>

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1.4% (2)
Politics, International Relations & European Studies (0)
Social Sciences 2.2% (3)
Sport & Exercise Sciences 2.2% (3)
Systems Engineering 0.7% (1)
Teach Education Unit (0)
TOTAL 100.0% 139

5. Do you own an iPod or any other mp3 player?
Yes 80.6% (112)
No, but I would like one 14.4% (20)
No, I don't want one 5.0% (7)
TOTAL 100.0% 139

6. Do you listen to any of the podcasts currently available (academic and non-academic)?
Yes 31.7% (44)
No 68.3% (95)
TOTAL 100.0% 139

7. If yes, or you would, which of the following would you listen to? (Tick all that apply)
Radio (Chris Moyles) 46.0% (64)
Books (Harry Potter, Lord of the Rings) 14.4% (20)
Music (Music reviews, interviews) 21.6% (30)
Business and Finance 4.3% (6)
Science and Technology 6.5% (9)
Comedy (Archers Radio Show) 24.5% (34)
Politics and Government 2.9% (4)
Erotica 3.6% (5)
Academic Resources 6.5% (9)
Other: Religious 0.7% (1)
Other: Ricky gervais 0.7% (1)
Other: Ricky Gervaise 0.7% (1)
Other: theres erotica? where ;) 0.7% (1)
Other: Yoga fitness 0.7% (1)

8. If you do not listen to podcasts, why is this so? (Tick all that apply)
It doesn't interest me 17.3% (24)
I don't know how to listen/download one 23.0% (32)
I've not found any that interest me 15.8% (22)
Other: Have loads of music on my mp3 player so just haven't got round to podcasts 0.7% (1)
Other: have not ever taken the time to see if it could be benificial 0.7% (1)
Other: Haven't had time 0.7% (1)
Other: havent really looked into the whole podcasting thing 0.7% (1)
Other: I don't own an ipod 0.7% (1)
Other: I would rather listen to my music when on the go, rather than a intricate conversation that would require a lot more attention 0.7% (1)
Other: It seems like too much effort to sort out 0.7% (1)
Other: lack of motivation to actually find them 0.7% (1)
Other: Like idea but never got round to it 0.7% (1)
Other: my mp3 player doesn't have the facility 0.7% (1)
Other: My mp3 player doesn't take podcasts, I dislike i-pods so I can't view podcasts. 0.7% (1)
Other: never got around to checking out if they cost to download 0.7% (1)
Other: never heard of it 0.7% (1)
Other: Never looked into it, not sure what they are fully 0.7% (1)
Other: Never really considered it 0.7% (1)
Other: never really thought about it 0.7% (1)
Other: Never really thought about it! 0.7% (1)
Other: no time, they arent perceived by me as easy enough to access 0.7% (1)
Other: not got round to it 0.7% (1)
Other: Not had the time 0.7% (1)
Other: Time 0.7% (1)

9. Did you know podcasts were being discussed as an educational tool before this questionnaire?
Yes 41.7% (58)
No 58.3% (81)
TOTAL 100.0% 139

10. Did you know Loughborough library has a podcast regarding how to use the library facilities?
Yes 6.5% (9)
No 93.5% (130)
TOTAL 100.0% 139

11. "To listen or to download a podcast, you must own an mp3 player such as an iPod". This statement is...
True 17.3% (24)
False 65.5% (91)
I don't know 17.3% (24)
TOTAL 100.0% 139

12. Do you value personal interaction with a lecturer?
Yes 60.4% (84)
No 5.0% (7)
Depends on Lecturer 44.6% (62)

13. Do you receive online information for modules? E.g. Lecture slides
Yes 100.0% (141)
No 2.2% (3)

14. If answered yes, or you feel it is a good idea to produce online lecture slides, does this dissuade you from attending lectures?
Yes 15.1% (21)
No 46.8% (65)
15. Roughly how many hours of lectures do you have a week?

<table>
<thead>
<tr>
<th>Hours</th>
<th>Percentage</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-3</td>
<td>0.7%</td>
<td>1</td>
</tr>
<tr>
<td>4-6</td>
<td>6.5%</td>
<td>9</td>
</tr>
<tr>
<td>7-9</td>
<td>24.5%</td>
<td>34</td>
</tr>
<tr>
<td>10-12</td>
<td>36.0%</td>
<td>50</td>
</tr>
<tr>
<td>13-15</td>
<td>25.2%</td>
<td>35</td>
</tr>
<tr>
<td>16-18</td>
<td>2.9%</td>
<td>4</td>
</tr>
<tr>
<td>19+</td>
<td>4.3%</td>
<td>6</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>139</strong></td>
</tr>
</tbody>
</table>

16. How many hours would you say you attended?

<table>
<thead>
<tr>
<th>Hours</th>
<th>Percentage</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-3</td>
<td>2.9%</td>
<td>4</td>
</tr>
<tr>
<td>4-6</td>
<td>11.5%</td>
<td>16</td>
</tr>
<tr>
<td>7-9</td>
<td>31.7%</td>
<td>44</td>
</tr>
<tr>
<td>10-12</td>
<td>33.8%</td>
<td>47</td>
</tr>
<tr>
<td>13-15</td>
<td>14.4%</td>
<td>20</td>
</tr>
<tr>
<td>16-18</td>
<td>2.9%</td>
<td>4</td>
</tr>
<tr>
<td>19+</td>
<td>2.9%</td>
<td>4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>139</strong></td>
</tr>
</tbody>
</table>

17. If you attend fewer hours than you are designated, what are you reasons for the lack of attendance?

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecturer is no help, I can learn better by myself</td>
<td>19.4%</td>
<td>27</td>
</tr>
<tr>
<td>Online notes are available and they are enough for me</td>
<td>6.5%</td>
<td>9</td>
</tr>
<tr>
<td>This does not apply to me, I attend the majority of my lectures</td>
<td>43.2%</td>
<td>60</td>
</tr>
<tr>
<td>Other: can't understand the lecturer - she is foreign</td>
<td>0.7%</td>
<td>1</td>
</tr>
<tr>
<td>Other: early mornings</td>
<td>0.7%</td>
<td>1</td>
</tr>
<tr>
<td>Other: Even though I find some of them no better than a textbook, I go just in case that week it is different!</td>
<td>0.7%</td>
<td>1</td>
</tr>
<tr>
<td>Other: Im lazy and have absolutely no motivation espc when lectures are on the other side of campus</td>
<td>0.7%</td>
<td>1</td>
</tr>
<tr>
<td>Other: Sleep</td>
<td>0.7%</td>
<td>1</td>
</tr>
<tr>
<td>Other: some lectures are not worth attending</td>
<td>0.7%</td>
<td>1</td>
</tr>
<tr>
<td>Other: usually laziness</td>
<td>0.7%</td>
<td>1</td>
</tr>
<tr>
<td>Other: usually only miss if im busy with something else</td>
<td>0.7%</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>74.8%</strong></td>
<td><strong>139</strong></td>
</tr>
</tbody>
</table>

18. If lectures were available in a podcasting format, would you still attend lectures? (Tick all that apply)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, interaction with the lecturer is important</td>
<td>41.7%</td>
<td>58</td>
</tr>
<tr>
<td>Yes to gain additional information</td>
<td>54.0%</td>
<td>75</td>
</tr>
</tbody>
</table>
No, I only use online notes anyway 2.2% (3)
Not sure, depends on the module/lecturer 26.6% (37)

19. If podcasts were available for modules, would you listen to them?
Yes 84.9% (118)
No 15.1% (21)
TOTAL 100.0% 139

20. This additional feature may change the way lectures are held. Which of the following would you miss? Tick all that apply.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meeting new people/course friends</td>
<td>84.2%</td>
<td>117</td>
</tr>
<tr>
<td>The lecturer</td>
<td>35.3%</td>
<td>49</td>
</tr>
<tr>
<td>Having a purpose to get up in the morning</td>
<td>48.9%</td>
<td>68</td>
</tr>
<tr>
<td>Interaction within the lecture hall/seminar room</td>
<td>44.6%</td>
<td>62</td>
</tr>
<tr>
<td>Additional information not available on the online slides/web/podcast</td>
<td>77.0%</td>
<td>107</td>
</tr>
<tr>
<td>In meeting with friends/fellow students - identifying who would be good in group work activities</td>
<td>66.2%</td>
<td>92</td>
</tr>
<tr>
<td>Other: a lecture makes you focused and ready to learn</td>
<td>0.7%</td>
<td>1</td>
</tr>
<tr>
<td>Other: completely destroys the purpose of a lecture and all the ticked above. Turns learning into a joke and wouldn't justify the £3000 in tuition fees (which are going to rise again soon). Students mite aswell stay at home and download these podcasts.</td>
<td>0.7%</td>
<td>1</td>
</tr>
<tr>
<td>Other: Exercise going to lectures. Something to motivate us to leave the house and be active.</td>
<td>0.7%</td>
<td>1</td>
</tr>
<tr>
<td>Other: Heres an idea, if this podcast lecture thing is really being suggested then why bother attending uni, just learn from home.</td>
<td>0.7%</td>
<td>1</td>
</tr>
<tr>
<td>Other: I would miss the structure in place that each lecture holds to teach a particular module</td>
<td>0.7%</td>
<td>1</td>
</tr>
<tr>
<td>Other: if lectures are cancelled and reduced to podcasts... will there be any need for any university buildings, universities would only need to be accessible via email/telephone in this case</td>
<td>0.7%</td>
<td>1</td>
</tr>
<tr>
<td>Other: Posting Questions</td>
<td>0.7%</td>
<td>1</td>
</tr>
<tr>
<td>Other: sexbuddy</td>
<td>0.7%</td>
<td>1</td>
</tr>
<tr>
<td>Other: structure</td>
<td>0.7%</td>
<td>1</td>
</tr>
<tr>
<td>Other: The Lecturer: Depending on who it was...</td>
<td>0.7%</td>
<td>1</td>
</tr>
<tr>
<td>Other: the main reason for attending university</td>
<td>0.7%</td>
<td>1</td>
</tr>
<tr>
<td>Other: Would feel impersonal</td>
<td>0.7%</td>
<td>1</td>
</tr>
</tbody>
</table>

21. Do you think this is a novelty idea and technology has gone too far...just a fashion trend?
Yes 24.5% (34)
No 51.8% (72)
I don't know 23.7% (33)
TOTAL 100.0% 139

22. How do you think you would utilise podcast lectures?
I wouldn't, regular lectures are the best method 12.9% (18)
As additional resources to the traditional 74.8% (104)
<table>
<thead>
<tr>
<th>Lectures</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>As my only resource, instead of lectures</td>
<td>1.4%</td>
<td>(2)</td>
</tr>
<tr>
<td>As a one off resource for specific areas</td>
<td>10.8%</td>
<td>(15)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>139</strong></td>
</tr>
</tbody>
</table>

23. Would you create your own podcast as a means of lecture or revision notes?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No way, what's the point?</td>
<td>41.7%</td>
</tr>
<tr>
<td>Maybe</td>
<td>43.2%</td>
</tr>
<tr>
<td>Yes, if I learnt how to do it</td>
<td>13.7%</td>
</tr>
<tr>
<td>Yes, definitely</td>
<td>1.4%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

24. Would you create an educational podcast for others to benefit from?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>8.6%</td>
</tr>
<tr>
<td>No</td>
<td>89.9%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>98.6%</strong></td>
</tr>
</tbody>
</table>

25. Would you listen/download a podcast created by a peer regarding modules, etc?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>59.0%</td>
</tr>
<tr>
<td>No</td>
<td>41.0%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

26. Vodcasts - video lectures...do you like the idea of watching lectures on your computer/mp3 player?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>72.7%</td>
</tr>
<tr>
<td>No</td>
<td>27.3%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

27. Would you be interested in discussing your views and ideas on podcasting further?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
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</tbody>
</table>

© 2007 by Shalika Gajasinghe
<table>
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<th>Other: (if yes, email address) <a href="mailto:xxxx@gmail.com">xxxx@gmail.com</a></th>
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<td>0.7%</td>
<td>(1)</td>
</tr>
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<td>(1)</td>
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<td>0.7%</td>
<td>(1)</td>
</tr>
</tbody>
</table>
Appendix D - Chi-squared test

The chi-squared test enables an analysis to confirm a 'significant differences between proportions for two or more groups'\(^1\) within a set of data. The main aspects of the test are to compare the observed results with the expected results in order to gain an understanding whether the difference is significant or not.

The follow analysis describes the methods used within the chi-square test to derive at the answer of the gender results to the statement response having a significant difference.

\(\odot\) Observed Results = Results extracted from the questionnaire responses

<table>
<thead>
<tr>
<th></th>
<th>True</th>
<th>False</th>
<th>Don’t know</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>8</td>
<td>62</td>
<td>7</td>
<td>77</td>
</tr>
<tr>
<td>Female</td>
<td>16</td>
<td>29</td>
<td>17</td>
<td>62</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>91</td>
<td>24</td>
<td>139</td>
</tr>
</tbody>
</table>

\(\odot\) Expect Results =
Row total (e.g. male (77), female (62)) x column total (24/91/24) ÷ sum total (139)

<table>
<thead>
<tr>
<th></th>
<th>True</th>
<th>False</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>77 x 24 ÷ 139 = 13.29</td>
<td>77 x 91 ÷ 139 = 50.41</td>
<td>77 x 24 ÷ 139 = 13.29</td>
</tr>
<tr>
<td>Female</td>
<td>62 x 24 ÷ 139 = 10.71</td>
<td>62 x 24 ÷ 139 = 40.59</td>
<td>62 x 24 ÷ 139 = 10.71</td>
</tr>
</tbody>
</table>

\(\odot\) Summary of expected and observed

<table>
<thead>
<tr>
<th></th>
<th>Observed</th>
<th>Expected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>8</td>
<td>13.29</td>
</tr>
<tr>
<td>Female</td>
<td>16</td>
<td>10.71</td>
</tr>
</tbody>
</table>

\(\odot\) Difference between Observed and Expected = \(\frac{(O - E)^2}{E}\)

<table>
<thead>
<tr>
<th></th>
<th>True</th>
<th>False</th>
<th>Don’t know</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>((8-13.29)²/13.29) = 2.11</td>
<td>((62-50.41)²/50.41) = 2.66</td>
<td>((7-13.29)²/13.29) = 2.98</td>
<td>7.75</td>
</tr>
<tr>
<td>Female</td>
<td>((16-10.71)²/10.71) = 2.62</td>
<td>((29-40.59)²/40.59) = 3.31</td>
<td>((17-10.71)²/10.71) = 3.70</td>
<td>9.63</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
<td>17.38</td>
</tr>
</tbody>
</table>

\textit{Total chi-square value} = 17.38

5 Value of chi-square
Once we have calculated the total chi-square value it is required to see if the value is significant or not, therefore, the following process is used:

6 Degree of freedom = (rows - 1) x (columns - 1)

\[ DF = (2-1) \times (3-1) = 2 \]

7 Probablity
The following probability was calculated using a web feature:

"Looking up critical values for chi at DF = 2:
Sig levels: 0.20 0.10 0.05 0.025 0.01 0.001
Crit vals: 3.22 4.61 5.99 7.38 9.21 13.82
Sig. 0.20: chi is greater than or equal to 3.22
Sig. 0.10: chi is greater than or equal to 4.61
Sig. 0.05: chi is greater than or equal to 5.99
Sig. 0.025: chi is greater than or equal to 7.38
Sig. 0.01: chi is greater than or equal to 9.21
Sig. 0.001: chi is greater than or equal to 13.82"

p is less than or equal to 0.001.

The chi square value is larger than the critical value, so data has a significant relationship between the variables.

8 The distribution is significant.

---

Appendix E - Focus Group Presentation

Podcasting in Education

Questionnaire Results...

Definition of Podcasting...
- A digital recording of a radio broadcast made available on the Internet for downloading to a personal audio player'
- It allows users to utilise their downloads to be 'played, replayed or archived as with any computer file'

Demographics of respondents
- 139 responses
- 77 Males, 62 Females
  - Faculty Information:
    - 5% from Engineering
    - 19% from Social Science & Humanities
    - 76% from Science

Statement Response
- "To listen to or to download a podcast, you must own an mp3 player such as an iPod"
- This statement is FALSE.
- 66% answered correctly
- More women got the statement wrong compared to men...
Loughborough Library

- 94% did not know about the library podcast
- Now you know about it, have you utilised it? If not, why not? Would you use it? [http://www.lboro.ac.uk/library/archivd-2006/9925/html5.pod]
- Views

Podcast only lectures

- Majority of lecturers are not replacing lectures with podcasts; would be pre/post lecture
- BUT a lecturer at Bradford University has, how would you feel if this happened?
- Some responses mentioned the need for tuition fees if podcast only lectures occurred, however, are lecturers still not providing a service?

iTunes

- Some institutions have integrated the lectures with Apple’s iTunes
- Download lectures onto iTunes platform
- Thoughts of this idea?
  - [http://itunes.berkeley.edu]
Podcast creation

- 42% said they would not create a podcast for themselves
- 90% would not create a podcast for others
- BUT 59% would listen to a podcast created by a peer
- Do you think the digital era will take over?

Final Statement

- “Distance learning will never replace the social element – [which is] why many young people want to study a degree in the first place – but it’s complementary to student life in many ways”
- Do you agree?

And Finally...

THANK YOU!!! 😊