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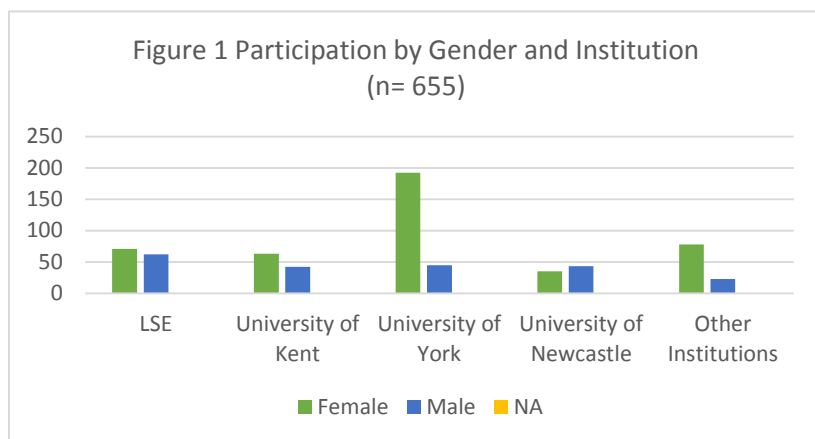# City, University of London Institutional Repository

CHOOSING BETWEEN PRINT AND ELECTRONIC...OR KEEPING BOTH? ACADEMIC READING FORMAT INTERNATIONAL STUDY (ARFIS) UK REPORT

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1 INTRODUCTION

The Academic Reading Format International Study (ARFIS) is an initiative led by Diane Mizrachi of the University of California Los Angeles (UCLA) and other partners from universities across the world. The aim of the study is to identify students' format preferences and behaviours when engaging with academic reading (Mizrachi et al, 2015). Furthermore, the collection of data at an international level, offers a possibility to identify if there are any variations across cultures and institutions, in the attitudes and behaviours of the students regarding the formats (digital or/and print) in which they do their academic reading. The first study of this kind took place at UCLA and involved undergraduate students. At the moment, the ARFIS has been conducted in more than 20 countries of Asia, Europe, Latin America and Oceania (see Mizrachi et al for a full list of countries).

In the United Kingdom, the ARFIS survey took place during the Lent term of 2016. The survey was initiated by Jane Secker (LSE) and Chris Morrison (University of Kent) following their attendance at the European Conference

Figure 1 Participation by Gender and Institution (n= 655)

on Information Literacy (ECIL) in October 2015. They advertised it via several Jiscmail discussion lists and encouraged staff at other institutions to help promote the survey to their own students, with agreement that they would sup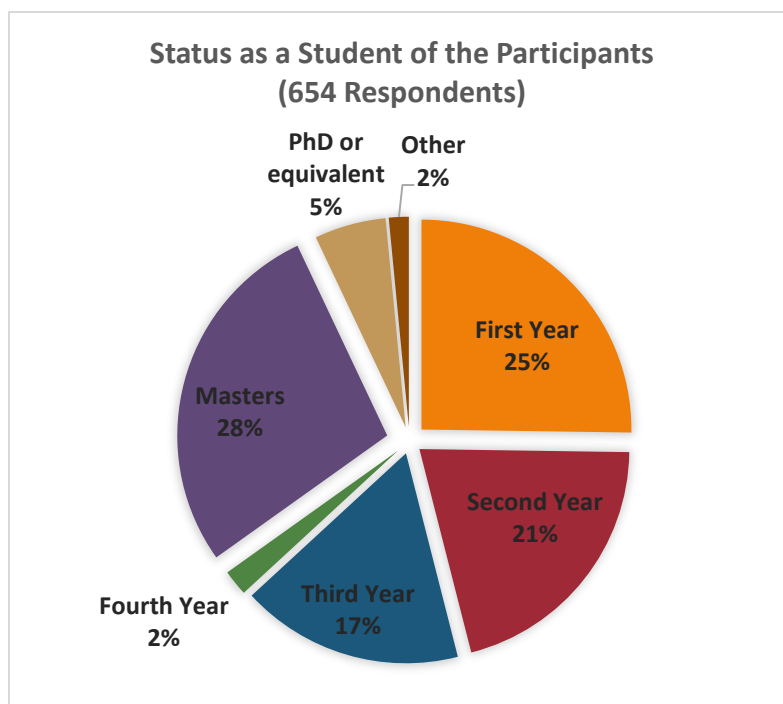ply the data set to participating institutions. Promotion to students in the UK was largely undertaken by library staff in the participating institutions, however some institutions asked their Students' Union to help promote the survey.

The survey was completed by 655 students from different universities. From all the participants, 67 percent were female and 33 percent were male. Figure 1 shows the participaton per institution and gender. The proportion of female and male participants was similar in most of the institutions, with the exception of the University of York and the participants from other institutions. The University of York, the London School of Economics and the University of Kent, were the institutions with a higher number of participants (see figure 1).

There was a significant participation from students in the first three years of their undergraduate degree and of Master students (see figure 2). In addition to the above, 8 percent of the population stated having a visual impairment or accessibility needs (this is equivalent to 51 out of 653 students who answered this question).
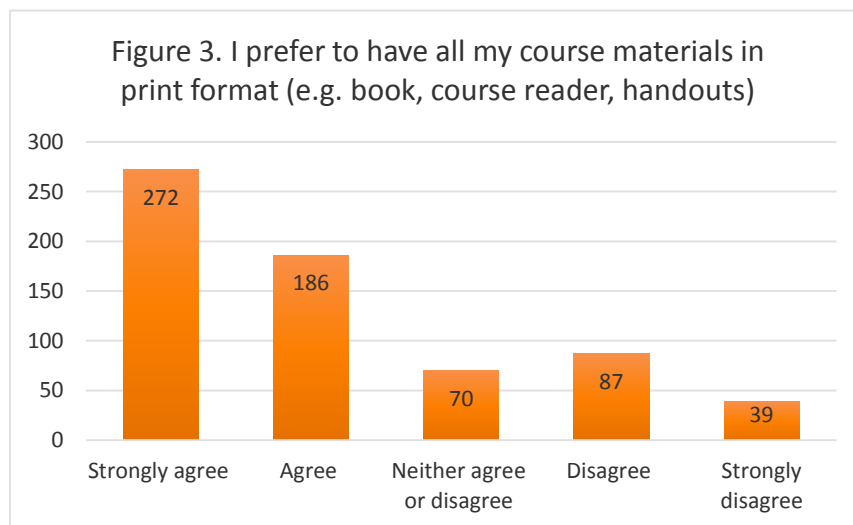
There are some differences in the demographic data collected, in comparison to the survey carried out in the University of

Status as a Student of the Participants (654 Respondents)

- PhD or equivalent 5%
- Other 2%
- First Year 25%
- Second Year 21%
- Third Year 17%
- Fourth Year 2%
- Masters 28%

California Los Angeles in 2010 (Mizrachi, 2014). In the UK survey there was no demographic information collected in relation to the respondent's strongest language and the cumulative grade point average. Nevertheless, one of the survey questions explored the preference for reading electronically in a native language and another question explored a possible preference for reading material in a foreign language in printed format.

2 GENERAL FINDINGS FOR THE UK

Following the approach by Mizrachi (2014), the survey results can be divided into two categories. The first category refers to reading preferences or behaviours that reflect reading preferences from the participants. The second category focuses on learning engagement. Bearing this in mind, in general terms, participants to the UK survey followed similar patterns to students at the University of California. Most participants showed a preference for printed materials as shown in figure 3. From 654 participants, 272 strongly agreed to the statement 'I prefer to have all my course materials in print format'. This means that 42 percent of the UK participants of the survey strongly agree to a preference to have all their course materials in print format, followed by 28 percent who agreed with this statement.

Figure 3. I prefer to have all my course materials in print format (e.g. book, course reader, handouts)

It is interesting to compare the preferences reported above with those in question 2, which asked whether participants agree or disagree to the statement: it is more convenient to read assigned readings electronically than to read them in print. Participants in the UK showed a more balance participation between agreeing and disagreeing (see figure 4). While 27 percent reported disagreeing with the statement "It is more convenient to read my assigned readings electronically than to read them in print", 25 percent of the 665 participants who answered this question, agreed with the statement. This almost even distribution is also similar to the findings of Mizrachi's (2014) study with students in the US. To explore further the reasons for this distribution, it is necessary to explore the 116 comments provided by respondents for this specific question. Within the participants who reported agreeing or strongly agreeing, the most common comments refer to the accessibility and the portability of electronic texts.
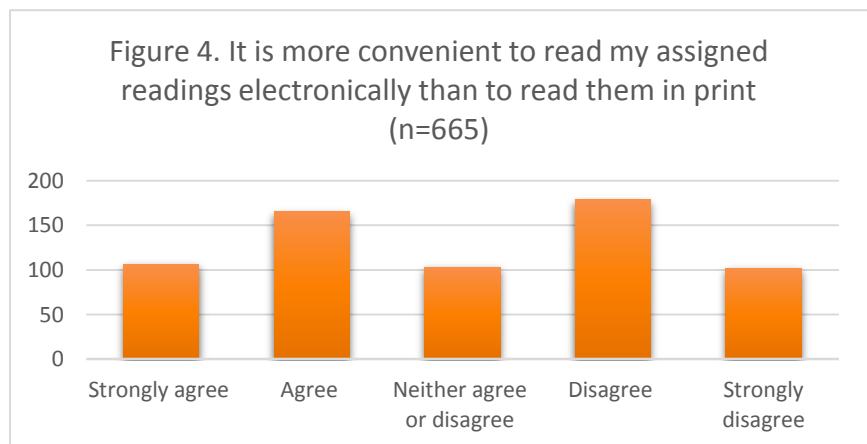
Figure 4. It is more convenient to read my assigned readings electronically than to read them in print (n=665)

- "It's nicer to read them on paper, but it would mean printing too much. Electronically, they are accessible quicker. Also, it saves carrying around lots of paper".

- "It is more convenient as it is more portable, can be read on the phone, laptop etc."
- "This is because reading a digital version of the text allows for manipulating the text (annotating, copy-pasting...)"
- "For instance weight of carrying around textbooks. Or having access to texts online when you forget/misplace hard copies"

The accessibility and portability reasons for preferring digital readings, are often accompanied by comments that refer to a preference for reading in print. Another common category found on the comments referred to the advantages and disadvantages of "manipulating" or using digital texts:

- "Easier access (especially if there are limited copies in the library), can access them from any computer. I like having searchable text as well. A scanned image is not really preferable to a paper copy because it isn't searchable and I can't copy/paste passages into a separate notes document."
- "This is because reading a digital version of the text allows for manipulating the text (annotating, copy-pasting...)"
- "But ONLY when the type/pdf is of good enough quality and easy to navigate, use, zoom, etc."
- "If I read for writing assignments, I like using computer to make notes as words are easier to be moved and organised. Therefore, I prefer electronic copies. But, if I read to prepare classes only, I like reading with printed copies and I can underline words and make marginal notes."

The participants who reported that the e-book platform or in general having opportunities to manipulate the text easily are important factors, were those who strongly agreed or agreed with the fact that reading digitally is more convenient. Other factors such as the cost of printing readings were also commonly cited within the comments. On the other hand, the most common categories that appeared in the comments of participants that strongly disagreed or disagreed with the convenience of reading electronically, included health associated reasons (eyestrain caused by reading on electronic devices) and the difficulty to focus due to distractions associated to the use of electronic devises:
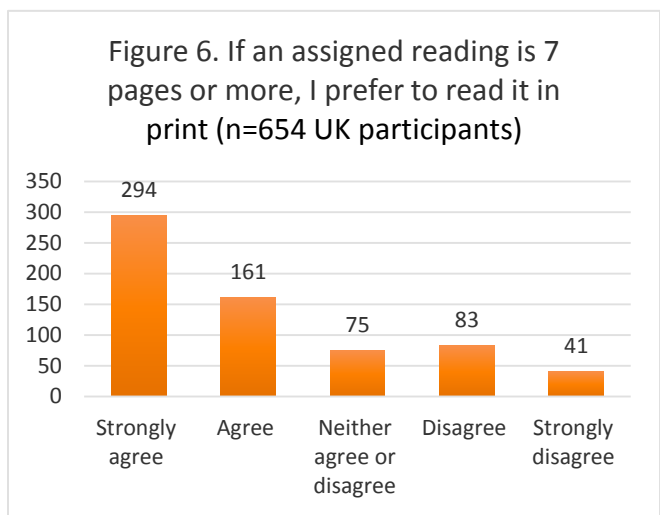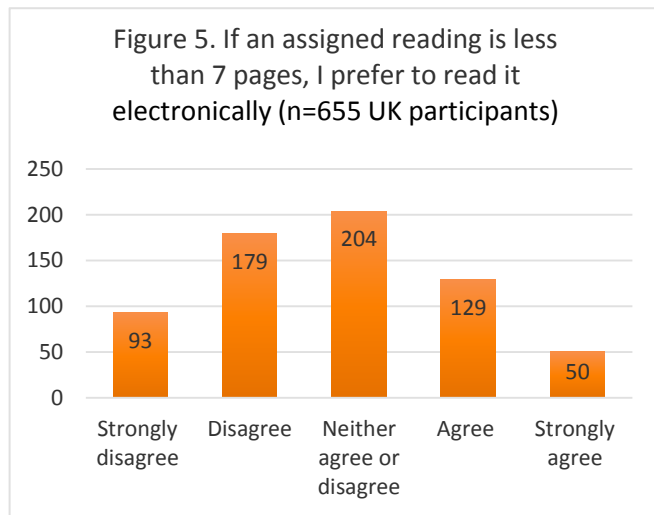
- "I'm not a fan of using tablets or screens to read as it strains my eyes and I don't get much from skimming (Even with highlighting and annotating apps)"
- "I wear contact lenses during the day. Staying too long in front of a screen gives me headaches & is proven to deteriorate my vision. All-electronic might be greener but it is definitely not healthy."
- "No access to tablets, plus distracting if not only use for reading. Also worries of battery etc."

For the third group of comments, convenience is related to either the purpose of the reading or the place where the reading process is going to take place:

- "Sometimes. It's a question of access - electronic access means I can see them at odd times (particularly as I don't live in York) and, especially, can determine fast via the abstract, conclusion, etc. whether the items is useful for me. If I want anything more from the text, I'd rather have it on paper. This is a must for texts I use extensively and/or often."
- "It depends upon the nature of the text; for literature I like to have a physical hard copy; for academic essays, I like to read electronic versions."
- "For a first read of a document an electronic version is fine. But for note taking a hard copy is preferential. Also, some electronic documents do not work well on tablets or IPads."
- "Agree - digitally I can organise my work, notes, citations and references digitally in a word document. Disagree - It's sometimes easier to visualise patterns and synergy between points when the points are clearly laid out in front of me."

The variety of categories observable in the comments could suggest a diversity of approaches when students consider the convenience of reading in electronic format. It also suggests a degree of flexibility in students' approach to decision-making when choosing print or electronic formats for academic reading preferences. Although most participants report preferring to have their course material in a print version, the perception of convenience is divided amongst the UK participants in ARFIS. This finding, linked to the qualitative data collected through the students' comments on the survey questions, demonstrates that there are a variety of reasons for students changing or adapting their preference for print formats.

Another interesting finding is that the length of the reading might not be the most determining factor for the UK ARFIS participants. This is true for the readings that are less than 7 pages. Even though it is not easy to compare because in the UCLA study (Mizrachi 2014) these questions referred to 5 pages instead of 7 pages, it is possible

Figure 5. If an assigned reading is less than 7 pages, I prefer to read it electronically (n=655 UK participants)

Figure 6. If an assigned reading is 7 pages or more, I prefer to read it in print (n=654 UK participants)

to observe that in contrast to the American participants, the UK participants were more prone to neither agreeing nor disagreeing with the preference of reading electronically when the reading is less than 7 pages (see figure 5). Meanwhile, there were more similarities in agreeing with the preference to read longer readings in a printed version (see figure 6). The only question that referred to a particular type of academic source (question 10), showed a clear preference for reading textbooks in printed format. Thirty-nine percent of the participants strongly disagreed and 32 percent disagreed with preferring electronic textbooks over print textbooks.
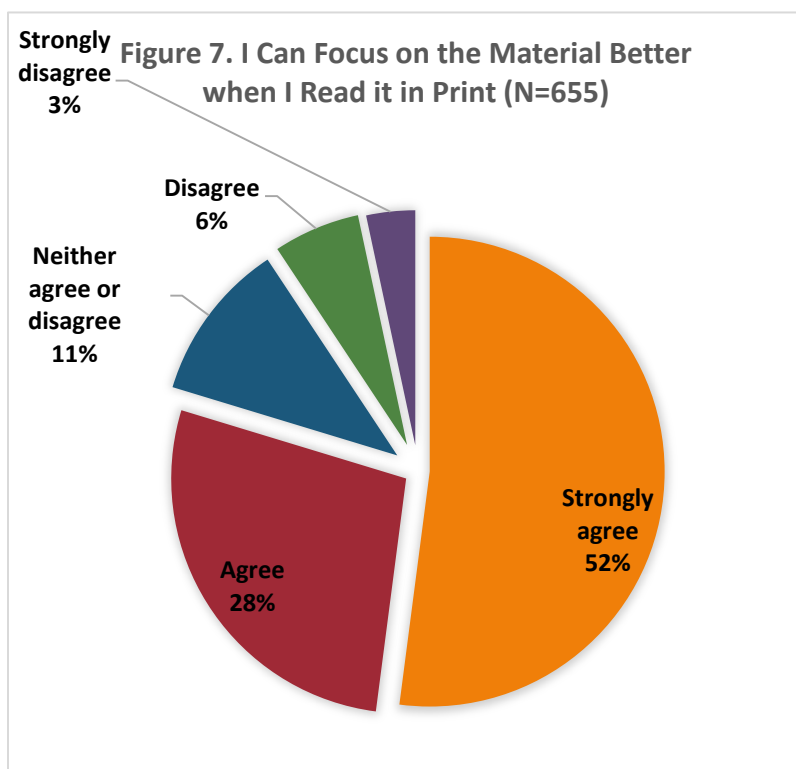
With regards to the questions that were related to learning engagement, participants of the UK ARFIS showed significant preferences for printed materials. Question 12 asked about students' ability to focus when reading printed materials. Within the UK participants, 52 percent strongly agreed and 28 percent agreed to the statement "I can focus on the material better when I read it

Figure 7. I Can Focus on the Material Better when I Read it in Print (N=655)

in print" (see figure 7). Furthermore, 42 percent of the participants strongly agreed with remembering information better from their course readings when they read from printed pages (see figure 8). It was possible to observe a similar trend in question 9, in which 43 percent of the participants agreed to the statement "I am more likely to review my course readings (after I've read them at least once) when they are in print".

The questions above refer directly to a preference for print material for learning engagement. Differently, question 7 and question 11 asked about the practice of highlighting and annotating for both printed materials and electronic materials (see Appendix 2). In the answer to question 7, 50 percent and 31 percent of the participants strongly agree or agree that they usually highlighting and annotating their printed course readings (n=655). Meanwhile, only 9 percent and 18 percent of the participants strongly agreed or agreed to usually highlighting and notating their electronic readings. This difference in highlighting and annotating between printed and electronic materials might be interesting to explore further in the comments given by the students in

Figure 8. I remember information from my course readings best when I read them from printed pages (n=655)
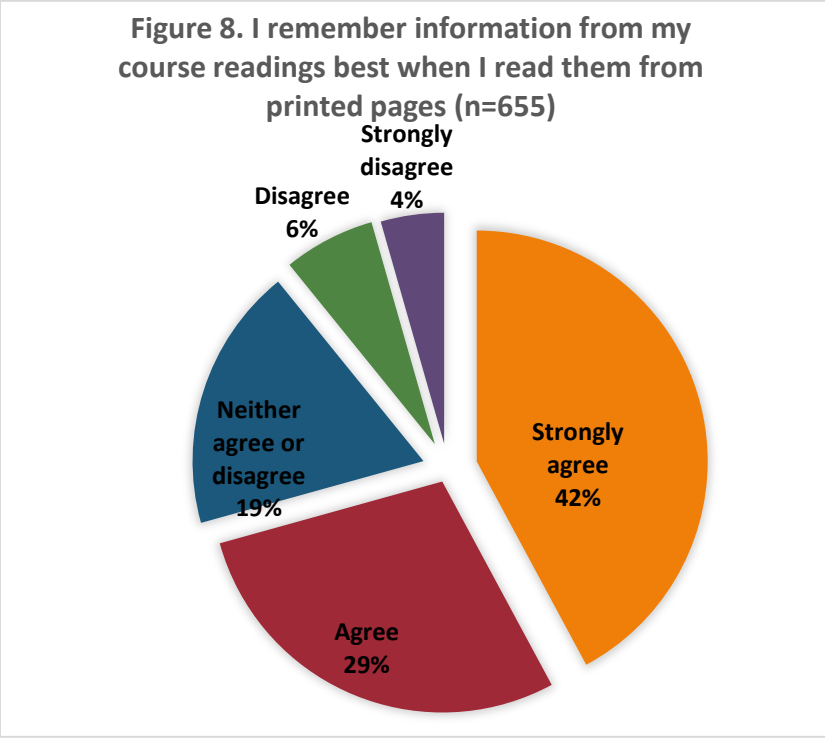
question 11. In total, 68 participants commented on question 11 and most of the comments could be categorised as related to the ability or difficulties associated with highlighting and annotating electronic material.

> "Where the format allows me, I find it really useful to be able to highlight areas that are important, and to make notes on my thoughts and ideas. Doing so enables me to engage directly with the text and the ideas, which helps me to learn. If I can't highlight or annotate the text directly, I will normally copy and paste the relevant sections into a working 'study notes' document." (Comment by a participant who agreed to question 11).

Nevertheless, the comments also referred to a lack of knowledge on how to highlight and annotate electronic
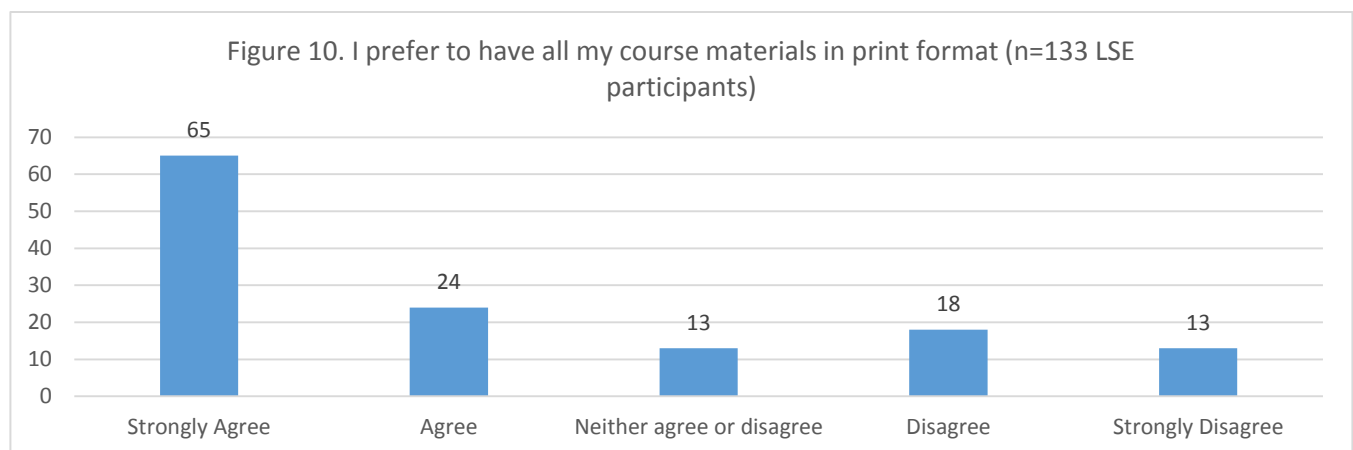
Figure 9. I Read My Electronic Course Readings on a:
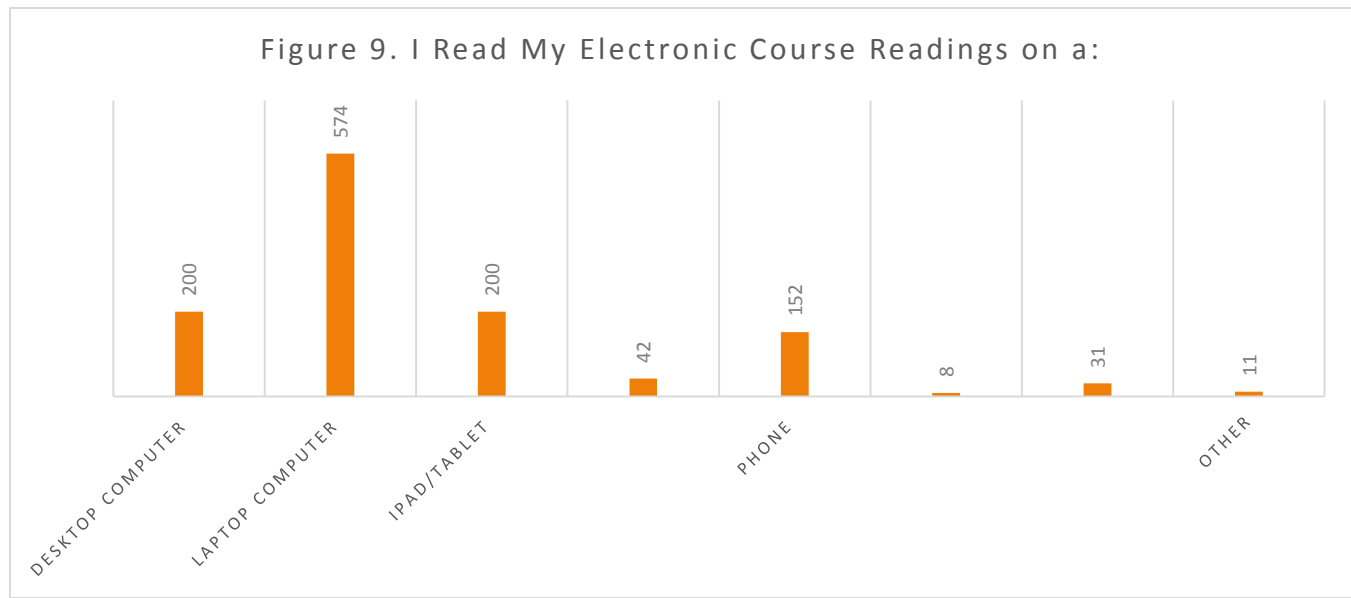
material. "Don't know how and it would probably disappear or time out". Other comments recognized the facility offered by electronic material to copy quotes. "It's slower to annotate in electronic reading programs than on paper, but I like being able to copy/paste quotations as I make notes rather than write or type them out". This last type of comments might be interesting for thinking about the extent to which the variation in format preferences relates to the purposes for engaging with specific texts. As discussed previously, with regards to the convenience of electronic readings, the facility to copy electronic quotes and organising notes for essay writing, suggests that there could be potential variations on preferences depending on the context and purpose of what is being read.

It would be worth exploring in future research, the reading preferences of participants for specific activities such as seminar preparation, essay writing or research projects. Though, when analysing if there were differences between student type and the fact that they find more convenient to read electroniclly, no significant differences were found between undergraduate students, master students and PhD or equivalent students, from the data collected for this study (see Appendix 1).

In relationship to the devices used for electronic readings, similar to the results found in the study by Mizrachi (2014), the most common used device is a laptop, followed by a desktop computer and a tablet/IPad (see figure 9). Unlike the American participants, UK participants did not report their phones as being one of the three most used devices for doing electronic readings.

3 Findings for the LSE and other Institutions with High Numbers of Participants

The findings for the LSE participants are very similar to the UK results described in the previous section. In total there were 133 participants from this institution, from which 53 percent were female and 47 percent were male. In relation to a reported preference for all their course materials to be printed, as in the UK level findings, there

Figure 10. I prefer to have all my course materials in print format (n=133 LSE participants)

|	Strongly Agree	Agree	Neither agree or disagree	Disagree	Strongly Disagree
Value	65	24	13	18	13

was a significant number of participants who strongly agreed to preferring printed material (see figure 10). Nevertheless, the composition of the other participants' preferences was to some extent different to the UK's, because the amount of participants reporting to agree or disagree, was very similar. This can suggest that in the case of the LSE there is a significant group of students that might not be willing or able to change their preference from printed material, but there is another group of students who might be more flexible in the format they use for course material, or they even prefer other formats for some of their course materials. These results are interesting when considering that the majority of the participants at the LSE were Masters level students (47 percent of the LSE participant population). It might be worth exploring further the preferences for printed or digital materials and their relation to the purpose of the materials that is being read (e.g. material for

lectures or seminar discussions, materials for writing essays, materials for research purpose, etc.). When exploring the comments from the participants to this question, it is possible to observe that while some of the students prefer printed material, others insist in having both options:

- "Sometimes it helps just to have lecture slides handouts printed, and the readings electronically."
- "I would love to have all the compulsory reading printed in one folder, and read the additional online."
- Generally, I do all my philosophy readings on the computer because there are a lot more pages to read. All my economics work, I prefer to do on paper."

The comments on this question (only 11 students commented) suggest that there are some variables, different to the cost of printing readings that can impact on the preference for printed readings.

Continuing with reading material format preferences, it is also possible to observe variations between the institutions with more participants, regarding the convenience to read assigned readings electronically (see figure 11). In the case of the LSE, the highest percentage of the participants strongly agreed or agreed to the statement "It is more convenient to read my assigned readings electronically than to read them in print" (50

Figure 11. It is more convenient to read my assigned readings electronically than to read them in print (n= 553 comparison of percentage of students in 4 institutions)
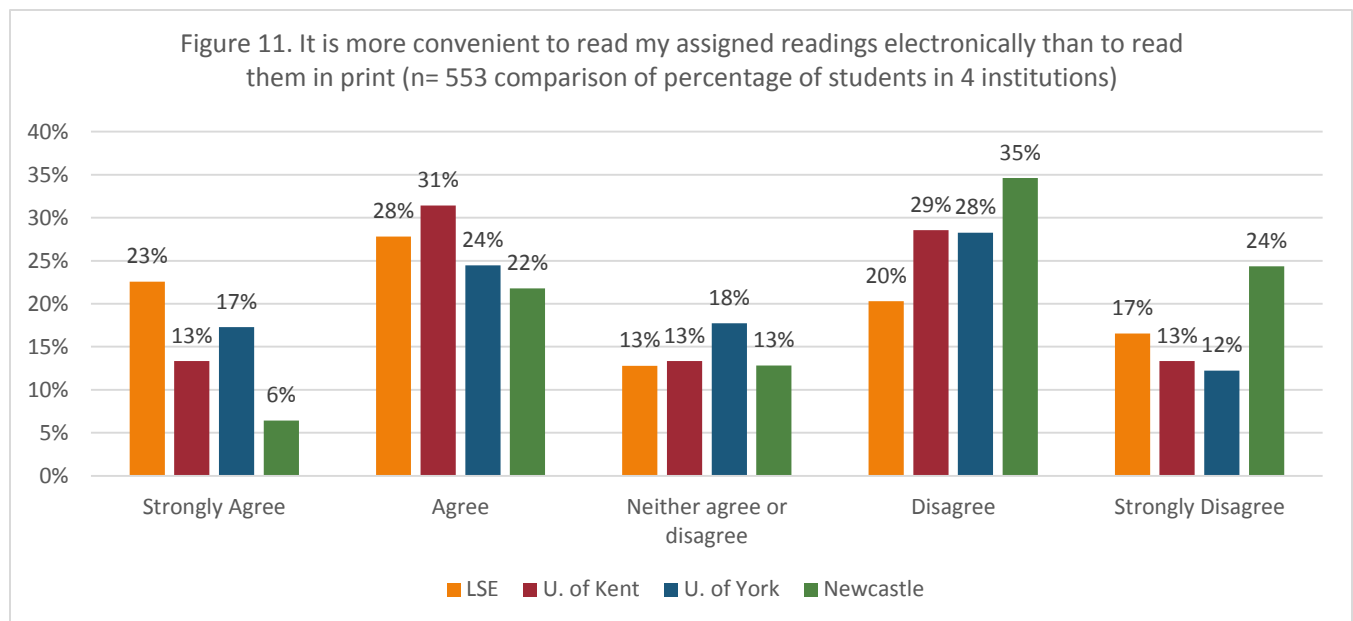
percent of the LSE participants). Meanwhile, this pattern was slightly different for the University of York, where the majority of the participants reported either agreeing (24 percent) or disagreeing (28 percent) to this statement. The pattern for the University of Kent was similar to the one of the University of York, 31 percent of the participants agreed and 29 percent disagreed. In the case of Newcastle University, most of the participants either disagree (35 percent) or strongly disagree to this statement (24 percent). It might be worth exploring further what causes the different patterns between institutions in the UK. When reviewing the comments for this question, including only the ones from LSE and Newcastle participants, there is not enough evidence to explain this difference. LSE and Newcastle University students refer to similar reasons for preferring printed or electronic formats.

LSE students' comments:

- "It's nicer to read them on paper, but it would mean printing too much. Electronically, they are accessible quicker. Also, it saves carrying around lots of paper."
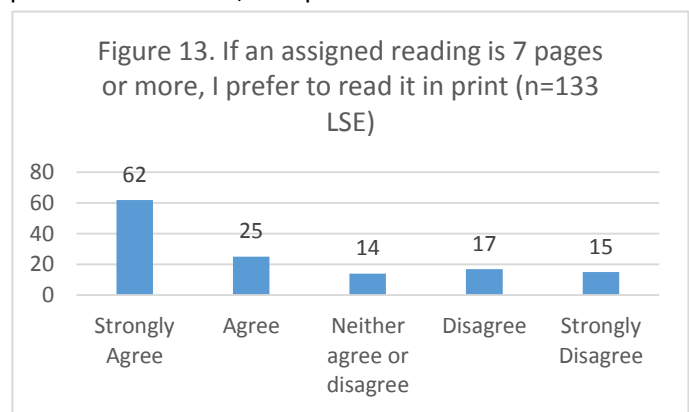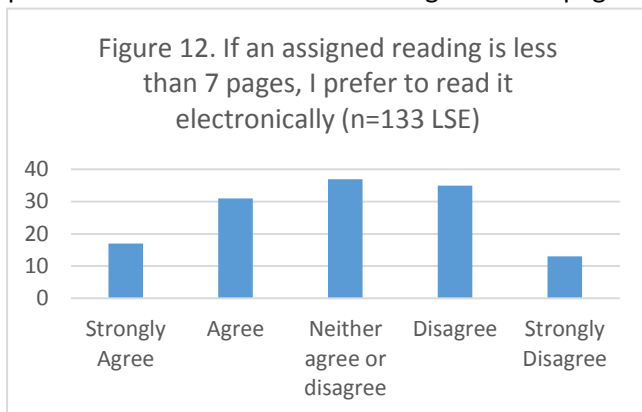- "Agree but this is purely to reduce printing costs."

- "Moodle/reading list errors, sites such as Dawsonera log out every 5 minutes, connectivity problems, a lot of material is unavailable online, far too strenuous on the eyes staring at a computer screen for hours on end, etc." Student who strongly disagree.
- "I find it really hard to read from screen. Plus it damages my eyes."
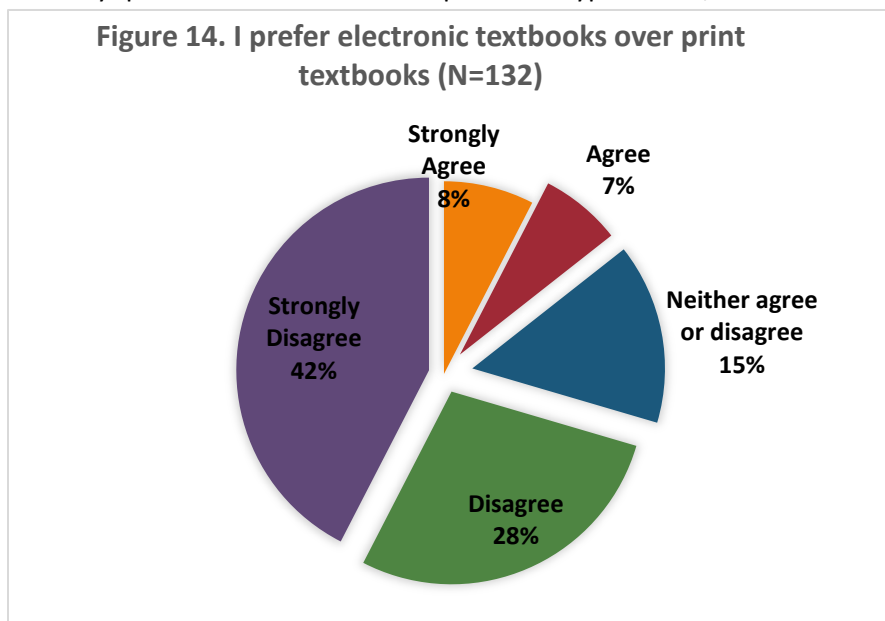
Newcastle University students:

- "Mainly due to the ease of digital commenting on the reading material."
- "Easier in that I can access them even if I forget to take them, but in print I can read them when without computer access."
- "It is more convenient to access but not to use and actually read."
- "Easier to annotate when printed off"
- "Eye strain from screens means you cannot focus on a screen for long compared to printed text."

The differences between the patterns of both universities cannot clearly be explained by using the comments for this question. Nevertheless, for future research it can be worth exploring possible variables for these differences that can include variations in printing costs, differences in electronic reading platforms, availability of electronic or printed materials, among other possible reasons.

Continuing with the patterns found within LSE Participants, in relation to the number of pages and the reading format preferences the findings were similar to the ones for the UK (see figure 12 and 13). Most of the students prefer to read material that is longer than 7 pages in print. Furthermore, the preferences for material that is

Figure 12. If an assigned reading is less than 7 pages, I prefer to read it electronically (n=133 LSE)

Figure 13. If an assigned reading is 7 pages or more, I prefer to read it in print (n=133 LSE)

shorter than 7 pages are diverse, and in general terms it is challenging to determine a preference for one of the options for the LSE population (most of the students reported neither agreeing or disagreeing to this question). The only question that referred to a particular type of text, showed a similar trend between the LSE participants' findings and the UK findings. 42 percent of the LSE participants who answered the question reported strongly disagreeing to preferring electronic textbooks over print textbooks, and 28 percent reported d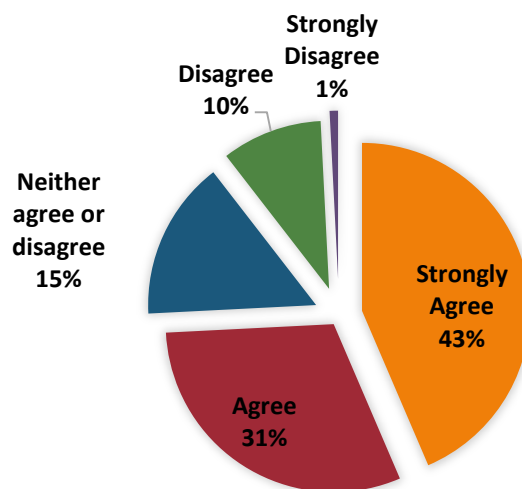isagreeing to this same statement (see figure 14). Because the LSE has a large proportion of international students, the question related to native and foreign language reading material preferences, was

Figure 14. I prefer electronic textbooks over print textbooks (N=132)

Strongly Agree 8%
Agree 7%
Neither agree or disagree 15%
Disagree 28%
Strongly Disagree 42%

important. However, there was no evidence in the results of the survey that suggested that language can be a determinant when choosing either a printed or electronic format. Forty two percent of the LSE participants neither agreed or disagreed to the statement "I prefer reading foreign language material in print than electronic". Again, when asked to report preference to read course readings which are in their native language electronically rather than print, 42 percent of the students neither agreed or disagreed (n=133).

Moving on to the analysis of the questions that referred to learning engagement, the findings at the LSE were very similar to the ones for the UK participants. 43 percent of the LSE participants strongly agreed to remembering information from their course reading better when reading from print format (see figure 15). Although, only 17 students included comments for this question, it is possible to observe that the majority of the comments refer to the way in which students interact with the reading material for learning purposes and how this impacts their ability to remember:
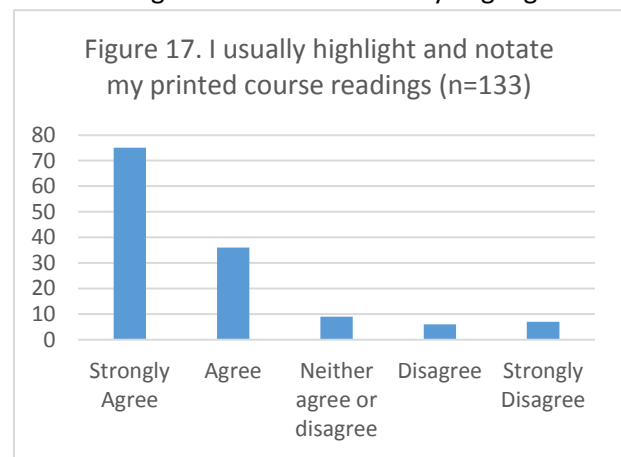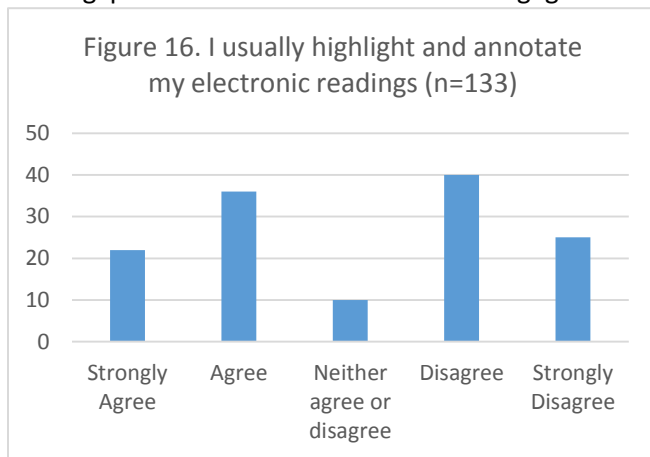
- "This is because it is easier to make notes for further understanding when reading on printed pages as well as highlighting key points or relevant information" (student who strongly agree).
- "Whenever I have to read from printed pages, I take notes on my computer anyway. Ultimately, what I retain from the readings is what I noted down.
- "I prefer having the hardcopies of articles in front of me and to type my notes into my computer. It's from this routine that helps me better remember."
- "(From printed readings) Can write comments, underline, and generally customise to my preference."

The comments suggest that the students link the ability to remember the information from their readings, when they engage more actively (by highlighting, annotating or typing comments) and this

Figure 15. I remember information from my course readings best when I read them from printed pages (n=124 LSE)

Strongly Disagree 1%

Disagree 10%

Neither agree or disagree 15%

Strongly Agree 43%

Agree 31%

can vary from student to student, but probably because most of the students strongly agreed to this question, interacting and manipulating material could be perceived as easier to do in printed format. A very similar response pattern was observed when asking about the ability to focus. 53 percent of the LSE participants strongly agreed to the statement "I can focus on the material better when I read it in print", followed by 25 percent who agreed to the same statement (n=133).

As observed in the comments above, highlighting and annotating are processes that students relate to their learning process and to their level of engagement with the readings. When asked if they highlighted and

Figure 16. I usually highlight and annotate my electronic readings (n=133)

Figure 17. I usually highlight and notate my printed course readings (n=133)

annotated printed course readings, most of the students strongly agreed to usually highlighting and notating their course readings (see figure 17). Different to the general UK results to some extent, with regards to usually highlighting and annotating their electronic readings, a very similar number of students reported agreeing (27 percent) and disagreeing (30 percent) to this statement (see figure 16). Furthermore, comparing this question to the general results for the UK, it is also possible to observe that less students reported strongly disagreeing (19 percent) and more students strongly agreed (17 percent). Although again there were few comments for this question (13 participants commented), from the ones who did it, it is possible to observe that the difficulty of highlighting or annotating in electronic format is perceived as greater: *"I still highlight and annotate them, however it is easier to do so on printed materials"; "I make separate summaries and notes altogether";* and *"Unfortunately this is not always possible according to the format of the electronic copy (especially when the papers are pre-"electronic" world - i.e. Before 1990s)".* Finally, with regards to the most common devices used for electronic readings, most of the LSE participants reported using a laptop (118 participants), followed by a tablet or iPad (46 participants), with a desktop computer (35 participants) and with a phone (26 participants).

4   CONCLUSIONS AND RECOMMENDATIONS

In general, the results from the ARFIS UK discussed in this report reveal important similarities with the results found by Mizrachi (2014) of students in the US. Students who participated in the UK survey, reported a significant preference for having their course material in print format. Forty-two percent of the UK participants reported strongly agreeing with having all their course material in a print format (see figure 3). Furthermore, with regards to the convenience of reading the assigned material electronically, the pattern was also similar to the one found in the Mizrachi (2014) study. The answers were divided into students who found it more convenient to read their assigned readings in an electronic format (165 students agreed) and students who did not agree (179) to finding more convenient to read in electronic format (see figure 4). This suggests that in practice, a significantly large proportion of the participants recognizes that even if it can be preferable to read in print, there can be factors that make reading electronic formats more convenient.

In a more qualitative approach to this question, when analysing the comments, it was possible to identify some of the factors associated with the extent of the convenience of electronic formats. These factors included portability and accessibility (perceived as a quality of electronic format), difficulty or facility to 'manipulate' the electronic texts, health associated reasons (impacting negatively on the perceived convenience or not, of reading electronic formats), high costs of printing materials, among others. The relationship between preferred

format and the number of pages, was shown to be a less determining factor in the case of shorter readings for the UK participants.

Similarly, the questions related to learning engagement demonstrated similarities between the UK and the US participants. Focusing and remembering are reported to be achieved better when reading material in print format (see figures 7 and 8). Likewise, more students reported to usually notate and highlight material in print format than those who reported doing the same when reading electronic formats. Fifty percent of the participants strongly agreed to usually highlighting and annotating their printed course readings (n=655). Meanwhile, only 9 percent of the participants strongly agreed to usually highlighting and notating their electronic readings.

When exploring the comments included by the students, it is possible to observe that there is a perceived greater difficulty associated with highlighting and annotating in electronic formats. This finding can be telling about a need of greater diffusion of knowledge and training on the different apps that are available for learning purposes. The LSE have started to promote this through the LSE Student Ambassadors for Digital Literacy Programme. The access to training in the use of digital tools can be highly valued by students, as is evident from what one of the students involved, reported in a blog entry of the Digital Challenge: *"My favourite discovery remains GoodNotes. I use it mostly to edit lecture slides by adding my own notes on them (…) It has avoided me to have to either print off the lecture slides or having random information scribbled in notebooks or loose sheets of paper."* (Delior, 2016).

Furthermore, the qualitative data collected through the comments also suggests that there can be an extent of variability in format preferences, in relation to the purposes for which the material is being read (seminar/lecture preparation, essay writing, research purposes, etc.). Further research should be carried out to explore the impact of the purpose of the reading, with the format preference.

In the case of the LSE participants, although in general terms the findings were similar to the ones for the UK participants, there were also some variations. Regarding the preference for having all course materials in print format, like in the UK findings most of the LSE participants strongly agree to prefer to have all their course material in print. However, the distribution of the rest of the answers was slightly different from the one of the UK participants because the amount of participants reporting agreeing and disagreeing, was very similar (see figure 10). Another difference related to the question on annotating and highlighting material in electronic formats. Almost the same amount of LSE participants reported agreeing and disagreeing to usually highlighting material in electronic formats (see figure 16).

When making comparisons between the participants from different institutions within the UK, it was also possible to observe some differences. In the case of the LSE, the majority of the participants either strongly agreed or agreed to the statement "It is more convenient to read my assigned readings electronically than to read them in print" (see figure 4). Meanwhile, this pattern was slightly different for the University of York and the University of Kent, where the majority of the participants reported either agreeing or disagreeing to this statement (see appendix 3). In the case of Newcastle University, most of the participants either disagree (most of them) or strongly disagree to this statement (See figure 11). Additional research should be carried out to explore what factors can be related to these variations between universities. When carrying out further research some important factors to explore include the format in which the digital texts are available (if scanned or not), the e-book platforms offered by the university or college, the accessibility to the library (on campus student residence or not), the cost of printing material, among others. Since the comments analysed in this research suggest that students perceive that annotating and highlighting digital material is more difficult than doing with a print material, the format of the digital reading and the e-book platforms need to be explored further as factors that can impact on students' format preference and learning engagement.

Bearing in mind these findings, it is possible to both advance some general recommendations and some possibilities for further research:

- Overall, students both in the UK and specifically at LSE, reported a high preference for reading materials in print format. This was accompanied by similarly high preference for this format regarding activities related to learning engagement. Therefore, following Mizrachi (2014) more attention should be paid to provide students with print format facilities, instead of assuming that course material should be converted into digital formats.

- Although the preference was significant for print material, there was also evidence in the study suggesting some factors that might impact on the student's preference, and in some cases the availability of electronic texts can also be appreciated. The qualitative findings reported in this research suggest that the purpose for which the material is being read is a significant factor. Further research should be carried out to explore these issues in more depth.

- Also, the qualitative data analysed in this report suggests that the reading platforms and electronic formats can relate to a preference or not for reading from electronic sources. It was also possible to observe that some students reported not being able to highlight or annotate in electronic formats, or not knowing how to do it. In this sense, it is worth exploring the possibility of developing training courses or workshops for students to become more familiar with the electronic reading platforms offered by their universities and how to use note taking Apps such as OneNote, Evernote, etc.

- Some variations were identified within the participants from different institutions within the UK. Further research can be carried out to explore which factors can relate to this differences.

- Considering that the data included in this report is limited to attitudes and reported behaviours, it can also be useful to explore the similarities and differences between this findings and statistical data from library use.
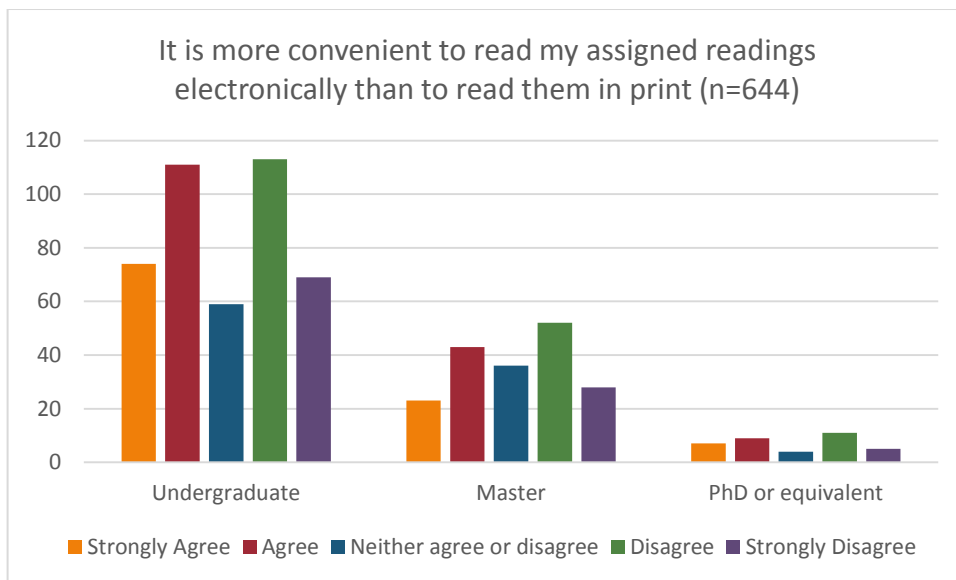
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6 APPENDIX

1. Student type and reported convenience for reading in electronic format for the total of UK participants who answered the question

It is more convenient to read my assigned readings electronically than to read them in print (n=644)

Legend: Strongly Agree ■ Agree ■ Neither agree or disagree ■ Disagree ■ Strongly Disagree

2. List of questions in the ARFIS survey UK.

These questions (except for question 16) have five options: strongly agree, agree, neither agree or disagree, disagree and strongly disagree:

1) I remember information from my course readings best when I read them from printed pages

2) It is more convenient to read my assigned readings electronically than to read them in print

3) I prefer to have all my course materials in print format (e.g. book, course reader, handouts)

4) If an assigned reading is 7 pages or more, I prefer to read it in print

5) I prefer to print out my course readings rather than read them electronically

6) I like to make digital copies of my printed course materials

7) I usually highlight and notate my printed course readings

8) If an assigned reading is less than 7 pages, I prefer to read it electronically

9) I am more likely to review my course readings (after I've read them at least once) when they are in print

10) I prefer electronic textbooks over print textbooks

11) I usually highlight and annotate my electronic readings

12) I can focus on the material better when I read it in print

13) I prefer to read my course readings electronically

14) I prefer to read course readings which are in my native language electronically rather than print

15) I prefer reading foreign language material in print than electronic

16) I read my electronic course readings on a: (desktop computer, laptop computer, iPad/Tablet, dedicated E-reading (e.g. Kindle), Phone, with an Audio Application, I never read course material electronically, other)

17) My preferred reading format, electronic or print, depends on the language of the reading