**Summarizing Journal Articles**

 **Pre-Class Activities**

Summarizing information is one of the most important skills to learn. Turning complex material into a form that makes it more readable for others requires similar skills to paraphrasing and using quotations effectively. However, there are some subtle but very important differences. These pre-class activities have been designed to give you practice in distinguishing these, as well as ensuring you write a summary of a recent peer-reviewed journal article that interests you. You must bring your summary and the journal article to the in-class activities for this writing skills unit.

You may have already learned how to paraphrase material from its source by making it more concise and putting it into your own words. When writing a summary, you should do exactly the same thing, except you should make it considerably shorter than its original form and focus only on the **very important** information. When you work with scientific journal articles, it can be initially difficult to distinguish which pieces of information are very important from those that are less important, because every article contains so much information. These activities should help you develop strategies for making this distinction.

**The Key Elements**

Every journal article is different, but as a general guide, you should read each one and make notes with the following questions in mind:

1. What problem/question does this research consider?
2. Why is this problem/question important/interesting?
3. What methods were used (**in general**)?
4. What were the main findings?
5. What evidence is provided to support the main findings?

**Questions 1, 2, 3, 4, and 5 (2 marks each, 10 marks total)**

For each of the following five questions, you will need to refer to the fictional **abstract** that appears below (it is deliberately not concise and features complex words and jargon that would be typical of a journal abstract). When you summarize an article, it is important that you read the whole article (and not just the abstract), but for this exercise, a smaller body of text will be sufficient. As you read it, try to think about what the really important information is.

***We conducted a 261-day research project to assess whether there was a link between exam performance in science courses and the happiness of students in these courses. We used the responses of 1,046 undergraduate students, who volunteered and were from different economic and social backgrounds, to answer this research question. Students were asked to answer a 15-question survey that had been previously validated by other researchers, and was therefore reliable, immediately after sitting their final exam in a science communication course. Survey questions were comprised of statements about happiness and wellbeing, such as: “I wake up feeling positive every morning,” and “I laugh at least 10 times a day,”. Students then had the option of answering these questions on a five-point Likert scale (with 1 representing ‘strongly disagree’ and 5 representing ‘strongly agree’). We split students into three groups based on their exam scores; one group contained students that scored As, one contained students that scored Bs and Cs, and one contained students that scored Ds or lower. We then took averages of questionnaire responses from these students and ran Bonferroni-corrected T-tests to ascertain whether there were significant differences between groups. We found that there was no difference in happiness between students that scored As and those that scored Bs and Cs (T=1.17, p=0.39), but students that scored Ds or lower were less happy than students in the other two groups (T=3.91, p=0.003, and T=4.71, p=0.0007). Social science researchers had long wondered whether students’ perceived happiness is affected by their exam performance but no studies had previously sought to address this conundrum experimentally. We propose that happiness is directly affected by exam performance in undergraduate science students, but that this is only true when students achieve grades of D or less. Students that achieve Cs or above, traditionally seen as passing grades, do not appear to be affected by the extent to which they differ from their peers, so long as they also achieve Cs or above. As a next step, we would like to devise experiments to tease apart the cause and effect relationship here; we still do not know whether students perform less well on exams because they are unhappy in other areas of their lives, or if students are unhappy because they perform less well than they hope on these exams.***

Now, for the following five questions, copy and paste the complete sentence in the abstract that **contains** the answer (1 mark). Then, try to summarize this information for each question by writing it in your own words. Write it more concisely and useless specific detail (1 mark). *Hint: Think hard about whether you need specific information to provide an accurate summary answer to each question and* ***do not*** *include it if it is unnecessary. We have not worked with interpreting statistics before, but in* ***most*** *circumstances (such as this one) you can assume it is safe not to include specific numbers, but you should say whether or not the statistics* ***provided evidence*** *for any conclusions made by the authors.*

**\* As you work through questions 1 - 5, keep a copy of your answers in another file. You will need to paste the combined answers into Connect for Question 6. \***

**Q1:** **What problem/question does this research consider?**

**Q2: Why is this problem/question important/interesting?**

**Q3: What methods were used (in general)?**

**Q4: What were the main findings?**

**Q5: What evidence is provided to support the main findings?**

**Question 6 (5 marks)**

Imagine that you have summarized 10 papers in the same way as you have just done for the fictional abstract above, and that you now want to summarize everything into one piece of writing (perhaps you were writing a review of all the studies that relate to happiness and academic performance, for example). This will mean summarizing everything again, which means removing any information from each one that is not vital or very interesting.

Copy and paste all your summarized answers to questions 1 – 5 together to form one summary paragraph. When you read it, this might seem as though you have paraphrased rather than summarized the material. To rectify this, re-write your summary more succinctly (1 mark). Try to remove any redundant or uninteresting information (2 marks), and make sure it all transitions smoothly from sentence to sentence (2 marks). *Hint: You might wish to re-order the sentences to make the summary more interesting and/or succinct. We have not worked with interpreting statistics before, but in* ***most*** *circumstances (such as this one) you can assume it is safe not to include specific numbers, but you should say whether or not the statistics* ***provided evidence*** *for any conclusions made by the authors.*

**Question 7 (5 marks)**

Try to summarize a recent peer-reviewed journal article that interests you (this can be from any scientific discipline). In your summary, try to answer the five questions that appear in the ‘key elements’ section (above). Most importantly, try to write no more than 250 words, but do not worry too much about style just now. Although the content is very important, you will not be graded on this aspect yet.

\* When you have completed your summary, copy and paste it and include a word count. **Make sure you also save a copy for yourself. You will need to (1) print this, along with (2) a copy of the peer-reviewed journal article you used, and bring them both with you to participate in the in-class activities.** In these activities, you will work with a partner to improve your summaries in terms of content and style. \*