Example 1 (annotated)

Self reference and memory recall

Word count: 1819

Introduction

Rogers, Kuiper and Kirker (1977) showed that students who were shown a list of words and then asked either "is there an "e" it this word?" or "Does this describe you?" remembered more words if they had to think about them. So the students remembered more words if they had to think if the word described them. If they just had to look at the word to find an "e" they were not able to remember as many.

The aim of this experiment is to replicate this study in an international high school. The null hypothesis is that there will be no significant difference in the number of words remembered under the two different conditions. The research hypothesis is that there will be a significant difference between the two groups. To prove this, we used an experimental method.

> **Commented [A1]:** The theory or model upon which the student's investigation is based is identified but the description is incomplete. The outline of the study lacks detail and there is no link to a theoretical framework for the study. The aim is too general. "To replicate the original study" is not an appropriate aim.

Exploration

In our study, one group was asked to answer the question, does the word have an "E?" in it? The other group was asked "does this word describe you?" Our sample had 32 participants - with 15 in the first condition and 17 in the second condition. Both groups met at the same time but were in different rooms with a different member of our team. The participants were from two classes of IB English, one class for each condition.

> **Commented [A2]:** Null and/or research hypotheses are stated, but do not correctly state the independent and/or dependent variables.
> The IV and DV are not identified. The reader can identify the IV and DV from the method given, but the student needs to clearly identify the IV and DV themselves to be credited.

For our materials we created a list of forty words which we put into a Power point presentation and had each word projected to the participants for 15 seconds.

After the list was complete, participants were shown the video "Funny Animal Videos" as a distractor task.

After the distractor task, participants were given two minutes to write down as many words as they could recall. At the end they were thanked for taking part and debriefed.

> **Commented [A3]:** This account of the procedure used to generate the data is scant but clear. However, there is no attempt to explain any of the choices made so the higher marks are not available. For example, the sampling of participants is identified but not the sampling method.
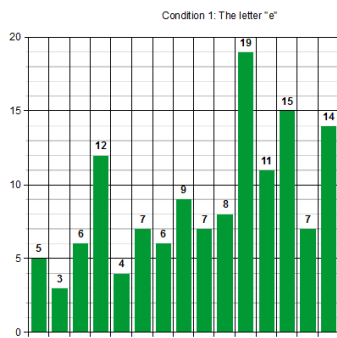
Example 1 (annotated)

Analysis

Here are the results of our experiment.

Table 1. Descriptive Statistics

	Condition 1	Condition 2
Mean	8.86	21.29
Median	7	22
Mode	7	22
Range	16	25

We can see that the group that was asked if there was an "e" remembered fewer words than the group that was asked if the word describes them. This shows that personalization is an important part of how we learn. The difference between the groups is 12.43 words. The median is the middle number. It is interesting that the mode and the median are the same. There was actually more than one mode for the second condition, but since the median was also the mode, that is the most important of the numbers. The range shows the variance of the data. It is much bigger for the second condition than for the first condition. That means that the results in the second group are not as reliable as in the first group. This may mean that our results are not valid. The following graphs show how many words were remembered in each condition.

Commented [A4]: The descriptive statistical findings are interpreted with regard to the data and linked to drawing conclusions.

Graph 1. A comparison of the recall of words in the "e" group

Commented [A5]: The student has graphed the raw data from both conditions, The graph should show the treated data. However, there is no treatment of the data and the hypothesis has not been addressed in the presentation. Errors in the graphs with no labels on the axes make them difficult to interpret and the scale does not appear appropriate for the range of data available.

Graph 2. Asking participants if the word describes them.

Example 1 (annotated)

Asked "Does this word describe you?"
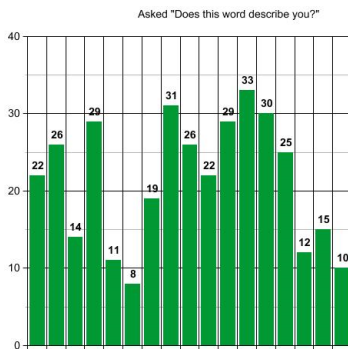
In order to see if our hypothesis was correct, a t-test was carried out. The test showed that the data was significant at $p < 0.0001$. This means that we can reject the null hypothesis. It appears that there is a significant difference when people are asked if there is an e in a word, and when they are asked if the word describes them. Personalizing education would probably be the best way to help children to learn.

Evaluation

Our study was successful and got the same results as Rogers, Kuiper & Kirker (1977). It seems that if we think about how a word describes us, we are more likely to remember it.

There were many limitations to our study. In our procedure we were supposed to do a distraction task to make sure that the words were actually in long-term member. But because we had two different groups of researchers carrying out the study, one group had the distraction task and one did not. This may be the reason that the second group remembered more words than the first group. In a future replication, we would make sure that both groups had the distractor task and that there was only one set of researchers doing both conditions so that there would not be any differences in the procedure.

Another limitation of the study was that we used a repeated measures design. Because there were so many words, the participants could have been bored and not cooperated. It seemed like many of the participants were stopped paying attention half way through the experiment. If we were going to do this again, we should have a shorter list of words or do it at a different time of day. Since we were doing it just before lunch, the participants could have been hungry and that may have influenced their motivation.

Another limitation is that there were many students in the sample who did not speak English as their first language. If I were going to do this again, I would give them an English test first and take any participants out of the sample who did not have an average level of English. We cannot know if they did not remember the words because they don't speak enough English, or because of the change in the independent variable.

Commented [A6]: A T test is appropriate as the data was in the range of a normal distribution. The actual result of the T test should be given, not just the interpretation of significance. The results are linked to the hypothesis, but statements are perfunctory and need elaboration. The variability highlighted by the descriptive statistics could be linked to this conclusion.

Commented [A7]: This is a superficial conclusion, the results of the two studies should be more rigorously compared.

Commented [A8]: This is "human error" and is not a valid limitation. If this mistake was made, then the candidates should have redone the second condition with another group. It is not acceptable to say "we did it wrong" as a limitation of the study especially when the mistake amounts to a disregard for very simple instructions. Some comment as to how this might have skewed the results could also be expected.

Commented [A9]: This is not correct.

Commented [A10]: Although these may be factors, they are a rather superficial evaluation of the study.

Commented [A11]: Motivation is a valid limitation, but the modification needs more careful consideration.

Example 1 (annotated)

For future research, it would be interesting to see what would happen if we asked different questions like "Do you like this word?" or "Do you know where this word comes from?" This may also influence how many words they remember.

From our study we are able to conclude that thinking about the personal relevance of a word affects your ability to remember it.

Works cited

Rogers, T. B., Kuiper, N. A., & Kirker, W. S. (1977). Self-reference and the encoding of personal information. Journal of Personality and Social Psychology, 35, 677-688.

Commented [A12]: Again a superficial evaluative point and one which could have been preempted by more thoughtful planning.

Commented [A13]: A few limitations are stated but most of them suggest that the study was not properly conducted or that the controls that were attempted to be made were not really provided. One modification is clearly stated. Ideas for future research are stated in a very vague manner. At the end of the analysis there is an attempt to draw a conclusion and an equally vague conclusion at the end of this section.

Commented [A14]: A very general conclusion.

Example 1 (annotated)

Appendix i. Letter of consent

Hello, we are performing an experiment for our Psychology class. We are doing a study on the perception of vocabulary words. In our experiment, we are going to read to you a list of words and then ask you questions about them. We would like to ask you to take part in our experiment.

If you agree to take part in our experiment, you should know that:

- All data will be kept confidential and anonymous.

- You may stop participating in this experiment at any time.

- You will receive information about the nature of this experiment and our results after our analysis is complete.

I, _____, understand the nature of this experiment and I agree to participate voluntarily. I give the researchers permission to use my data as part of their experimental study.

Signature: _____ Date: _____

Native English Speaker (circle one):   Yes   No

Gender (circle one):   Male   Female

Appendix ii. Standardized directions & "answer sheet."

Good afternoon and thank you once again for agreeing to take part in our experiment.

We are now passing out a letter of consent. Please read the letter and if you agree to participate, please sign the form and fill out the relevant information.

After forms are collected, pass out the answer sheet to all participants.

Group 1.

You are about to see a series of words projected on the screen in front of you. Each word will be projected for 20 seconds. During that time, decide if the word contains the letter "e." If the word contains the letter "e", please write the letter Y on your answer sheet for "yes." If it does not contain the letter "e", please write no. Once we begin showing the words to you, you may not talk or ask any questions. If there is a word that you do not know, that is ok. If you miss a word, please be sure to skip a line on your answer sheet.

Example 1 (annotated)

Are there any questions?

Group 2.

You are about to see a series of words projected on the screen in front of you. Each word will be projected for 20 seconds. During that time, decide if the word describes you. For example, if the word is "shy" - if you are shy, write yes on your answer sheet. If you are not shy, then write "no" on your answer sheet. Once we begin showing the words to you, you may not talk or ask any questions. If there is a word that you do not know, that is ok. Simply leave the blank on your answer sheet with no response.   If you miss a word, please be sure to skip a line on your answer sheet.

Are there any questions?

Answer Sheet for Psychology Experiment

1. _____   21. _____

2. _____   22. _____

3. _____   23. _____

4. _____   24. _____

5. _____   25. _____

6. _____   26. _____

7. _____   27. _____

8. _____   28. _____

9. _____   29. _____

10. _____   30. _____

11. _____   31. _____

12. _____   32. _____

Example 1 (annotated)
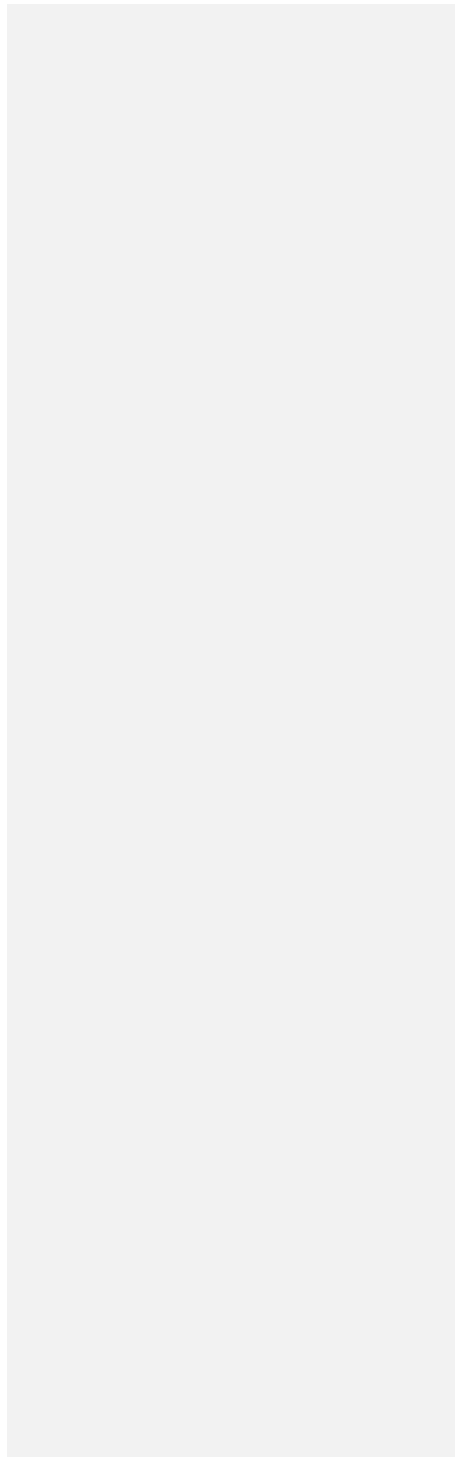
13. _____   33. _____

14. _____   34. _____

15. _____   35. _____

16. _____   36. _____

17. _____   37. _____

18. _____   38. _____

19. _____   39. _____

20. _____   40. _____

Appendix iii. Word list

arrogant, ambitious, adventurous, aggressive, careless, moody, charming, sarcastic, selfish, boring, careful, intelligent, fussy, loyal, bossy, jealous, honest, thoughtful, hard-working, lazy, flirtatious, diplomatic, courageous, patient, optimistic, quick-tempered, romantic, stubborn, creative, funny, greedy, energetic, grumpy, practical, polite, inflexible, generous, gullible, nervous, sneaky.

Appendix iv. Raw data & inferential statistics

Descriptive Statistics

Participant #	Condition 1	Condition 2
1	5	22
2	3	26
3	6	14
4	12	29
5	4	11
6	7	8
7	6	19
8	9	31

Example 1 (annotated)

Participant #	Condition 1	Condition 2
9	7	26
10	8	22
11	19	29
12	11	33
13	15	30
14	7	25
15	14	12
16		15
17		10
Mean	8.86	21.29

Appendix v. Debriefing notes

First we would like to thank you for taking part in our experiment. In our experiment we were trying to determine if the way that you processed information made a difference in your ability to recall it. In one group you were asked to say whether the letter "e" was in the word. In the second group, you were asked to think about whether the word described you. The first group was asked to do something we call "shallow processing". The second group was doing "deep processing" - making a connection to the word. We found that the second group had a much higher rate of recall than the first group.

Are there any questions about our study?

We now have a few questions for you. Here are the words that we showed you (Project the list of words). Are there any words here that you do not know the meaning of ?

Secondly, is there anything you think we should know about the experiment?

Thank you once again for your time.