**Instructions for Paper II: Study One Methods, Results, and Discussion (Worth 35 Points)**

Purpose of Paper II: Study One Methods, Results, and Discussion

1). Psychological Purpose

The psychological purpose behind Paper II is to make sure you can tell your reader what you did on your study, how you did it, and what you found. By now you have read several empirical studies in psychology, so you should be familiar with the Methods, Results, and Discussion sections. Now is your chance to write your own sections!

Similar to the studies you cited in Paper I, your Paper II will provide information about your study participants, materials, and procedure in your Methods section. Your participant section goes first, and it includes descriptive statistics about your sample (means and standard deviations for age as well as percentages for gender and race/ethnicity). Your materials and procedure section includes information about what you did and how you did it. You should write this section for an audience who is unfamiliar with your specific study, but assume that they do know research methods. Thus educate your reader about your materials and procedure, giving enough detail so they could replicate the study. This includes explicitly describing your independent and dependent variables and discussing how you presented that material to your participants. My suggestion is to look at the articles you cited in Paper I and see how they wrote their Methods sections. This will give you a good idea about the level of depth and detail you need in your own Methods section.

Your Results section follows. The purpose of this section is to show how you analyzed the data and describe what you found.

Finally, you will include a short description of your findings in a Discussion section. Tell me if you supported or did not support your hypotheses and explain why you got those results (you can actually speculate here if you like, but make it an “educated” speculation!)

2). APA Formatting Purpose

The second purpose of Paper II: Methods, Results and Discussion is to once again teach you proper American Psychological Association (APA) formatting for these sections. In the pages below, I will tell you how to format your paper using APA style. There are a lot of very specific requirements in APA papers (as specific as what to italicize), so pay attention to the instructions below as well as the APA formatting powerpoint presentation!

3). Writing Purpose

Finally, this paper is intended to help you figure out how to write a Methods, Results, and Discussion section. Many students find statistics daunting, but my hope here is that writing this paper will help you understand both the logic and format of statistics in your results sections. We will once again give you a lot of feedback and help in this paper, which you help you when you write Papers IV and V later in the course. Make sure that you write this for an audience familiar with APA methods and results, but also for someone who needs you to tell them what you found.

Note #1: The plagiarism limit is higher in this paper (up to 65%) since your classmates are doing the same design. Don’t go higher than that, though! 65% is the maximum allowed!

Note #2: You do NOT need to include your literature review / hypotheses in Paper II, as Paper II focuses just on your methods, results, and discussion. However, you’ll include those Paper I components later in Paper III, so do keep them handy!

Note #3: Unlike Paper I, there is no set minimum or maximum page limit for Paper II. However, we are still looking for good detail about your study design and your study results

Note #4: Sorry for the length of the instructions! They are long, but take it one section at a time and you will get all of the content you need for your paper. It also increases your chances of getting a great grade!

**Instructions for Paper II: Study One Methods, Results, and Discussion (Worth 35 Points)**

* Title Page: I expect the following format **(1 point)**:
* The title page for your Paper II is identical to the one you used for Paper I: Literature Review Study One. For proper APA formatting, either copy your title page from Paper I or review the instructions I gave you in Paper I. You can change your title if you like, but make sure it helps to describe your study (much like a title in PsycInfo describes what the authors did in their paper)
* Abstract?
* You DO NOT need an abstract for Paper I. In fact, because your abstract needs to summarize the results for both study one and study two, you cannot write it until you run both studies and have results to summarize. So omit the abstract until you get to Paper V.
* Methods Section: I expect the following format **(15 points)**:
* For this paper, the methods section starts on page 2.
* Write **Method** at the top of this page, make it **bold**, and center it (see the top of this page as an example!)
* The participants section comes next. The word **Participants** is bolded and left justified. In this section …
* Tell me who your participants were (college students, family members, friends?) and how many there were.
* Note: If a number starts a sentence, then spell out the number. That is, “Two-hundred and five participants participated in this study.” If a number is mid-sentence, you can use numerals. “There were 205 participants in this study.”
* But keep it consistent. If you spell out a number at the start of the sentence, carry that through and spell out other numbers in the rest of the sentence.
* For statistics or scales, always use numbers (the mean, *SD*, %, etc.)
* Provide frequencies and descriptive statistics for relevant demographics.
* Some variables—like ethnicity and gender—are nominal/categorical, so you provide frequency information (the number of participants who fit that category). “There were 100 men (49%) and 105 women (51%) in the study.” Or “The sample was 49% male (*N* = 100) and 51% female (*N* = 105).”
* Other variables—like age—are interval or ratio, so use descriptive statistics (the range, mean, and the standard deviation). “Participants ranged in age from 18 to 77 (*M* = 24.03, *SD* = 3.50).” or “The average age of participants was 24.03 (*SD* = 3.50), and ranged from 18 to 77.”
* Make sure to italicize the *N*, *M*, and *SD* (the letters, not the numbers)
* Make sure to include a “callout” to the demographics table at the end of the participant section. That is, write “See Table 1” to direct readers to your demographics table.
* Then, supply the table right below the callout. APA allows the tables to be in-text after the callout OR in an appendix at the end of the paper. This methods course prefers the former, so include your SPSS tables in-text after the callout. You should include the descriptive statistics table, the table for gender, and the table for ethnicity. See the example paper for a visual aide.
* **Materials and Procedure**
* For this section, things are flexible. Some studies include Materials and Procedure in the same section while others break them up into two sections. This is a matter of choice.
* In general, the more complex the design, the better it is to split up the methods and results. In one section, the author may describe the materials; in the next, they describe what participants did with those materials (the procedure). This is one option for you. However …
* However, your study is simple enough that I strongly recommend combining them into *one* overall Materials and Procedure section.
* Again, the words **Materials and** **Procedure** are flush left. In this section, provide information about your materials and your procedure. I suggest starting with your procedure. Tell your reader what your participants did in the exact order that participants did them. Be very specific here. I have the following recommendations:
* First, talk about the oral informed consent procedure.
* Second, talk about the Twitter Apology survey. Provide enough detail so your reader could replicate your design if they wanted to do so. YOU need to give them enough detail so they can mimic what you did. (Hint: If you want, copy and paste the various questions or refer the reader to an appendix with the actual surveys at the end of the paper)
* I want to stress this detail concept – Pretend that I have no idea what you did or what your materials look like, but I want to replicate your study. Thus teach me your design and your procedures. Be VERY clear and detailed about what you did and how you did it.
* Go into painstaking detail about what EACH section of the survey page looked like, including what the participant instructions say and the look of the stimulus materials. If there are advertisements on the page, describe them. If there are pictures, describe them. If there is a profile, describe it. If these items are identical across all conditions, note that fact.
* Importantly, describe how the surveys differ. That is, you have three versions of the survey, with the main difference in the last few tweets. Describe those tweets (you can even copy and paste them if you want!)
* Note: At the end of the semester (for Paper V), someone other than your instructor / TA may grade your paper. They may know NOTHING about Apology research or research regarding social media, but they do know methods. Write this section for that methodology expert.
* Third, talk about your dependent variables. That is, discuss your survey questions. For these dependent variables, once again provide enough detail so I know exactly what questions you asked. For example, “Participants provided their gender, age, and race”. For other dependent variables, tell me how the responses were recorded (yes/no, true/false, a scale of 1 to 6, etc.). If you used a scale, note the endpoints (your reader needs to know whether a higher number is better / worse than a lower number). For example, “Participants were asked, ‘How frustrating was this task?’, and they responded on a scale from 1 (very frustrating) to 9 (not at all frustrating).’” Your study has a few really important DVs (including several DVs about how sincere the apology seemed, or whether the apology seemed to acknowledge the conduct was wrong or whether it showed an expression of remorse). For these DVs, you again need to tell me what they are specifically!
* Fourth, make sure to highlight which specific DVs you analyzed. If there are DVs that participants completed but you did not analyze, feel free to say that participants completed them but since they were not analyzed, they are not discussed further.
* Fifth, make sure to be specific about your attention / manipulation check question! What did you specifically ask? How did you measure responses?
* Finally, mention debriefing. You don’t need a lot of detail as, most researchers understand what goes into a generic debriefing statement
* There is no set minimum or maximum on the length for the methods section, but I would expect at least a page or two, though probably more. After all, your research script took up several pages – you should provide a similar level of depth and detail in your methods section! Missing important descriptions of your IVs and DVs or presenting them in a confused manner will lower your score in this section.
* Results Section: I expect the following format **(10 points)**:
* The results are the hardest part of this paper, and your lab powerpoints will help you with this part of the paper (also refer to the crash course statistics quizzes, which walk you through similar analyses. They will help!).
* Write **Results** at the top of this section, center it, and use boldface. This section comes at the end of the methods section, so the results section DOES NOT start on its own page.
* For the results section, include statistics about the most important variables in your study, including your IV (Apology condition – Sincere, Insincere, and No Apology) and the DVs that you feel are most important to your hypotheses. There are several important DVs in your survey, including all of those in Part II (regarding apologies) and several DVs in Part III (Charlie impressions). Note that some instructors may not do this Twitter Apology study at all, but the results section should follow the same guidelines regardless of your study topic.
* Specifically, **you must run at least three different analyses on three different dependent variables**. One analysis must be a chi square for the question asking participants to recall which hashtag they saw (our manipulation check, which looks at three options for the Part V nominal variable), one must be a One Way ANOVA, and the third can be either an ANOVA or a *t*-test. For the One Way ANOVA, I recommend looking at Question #7 in Part II, which focuses on whether Charlie’s apology seemed sincere. Questions #1 and #5 from Part II are also good, as both look at important apology elements. Your third analysis can be either an ANOVA or a *t*-test, and the dependent variable you analyze is up to you (it just needs to have an interval or ratio based scale). Analyze a dependent variable that you think is important (and one that helps you address an element you might have looked at in your study one literature review). Note: Although you can run a *t*-Test for this third analysis, I do not recommend it. A *t*-Test only looks at two conditions, but there are three conditions in your study (sincere, insincere, and no apology), so ignoring one of them doesn’t make empirical sense. Why collect data for one condition and ignore it? If you do use a t-Test, just note that you cannot look at the same DV with both your *t*-Test and the ANOVA. We count the number of DVs that you analyze – NOT the number of statistical tests you run!
* Below are three of the tests that you can run in your results section.
* **Chi square**: Your first analysis will be a chi square, which you use if your DV is nominal (yes / no, or male / female, or Caucasian / African American / Hispanic, etc.). In our case, we have our “Hashtag recall” question in Part V, which has three levels. So let’s discuss the chi square, which doesn’t look at mean or average scores, but instead counts how many responses there actually are compared to how many are expected
* Consider the DV in Part V of your questionnaire – “Without looking back, what hashtag did Charlie end the Twitter post with? (*Mark one with an X*)” The options were #SorryNotSorry, #SorrySorrySorry, or #WhatsDoneIsDoes. Here, you can run a chi square looking at the frequencies of the three answer options
* We are interested in the chi square (*χ*2) and *p* value. We also provide percentages for each of our groups rather than means and *SDs,* since we need interval or ration variables for those. There are two ways to analyze a chi square:
* 1). Easy Way: Look at how many in each category recall seeing that hashtag. That is, “Using apology condition as our independent variable (sincere, insincere, or no apology) and recall of the hashtag Charlie used as the dependent variable, we saw a significant effect, *χ*2(4) = 68.49, *p* < .001. Most “Sincere” condition participants recalled #SorrySorrySorry (98%); most “Insincere” condition participants recalled #SorryNotSorry (96%); and most “No apology” condition participants recalled #WhatsDoneIsDone (90%). Cramer’s V was strong. This indicates that participants saw our manipulation as intended.”
* Note: Cramer’s V is good for a 3 X 3 design. Here, we have three conditions and three hashtags, so 3 X 3
* 2). Hard Way: You can look at correct versus incorrect recall. This is a bit trickier to run in SPSS, since you first need to add ALL those who correctly remembered the hashtag (Sincere participants who recalled #SorrySorrySorry + Insincere participants who recalled #SorryNotSorry + No apology participants who recalled #WhatsDoneIsDone) and compare them to people who were incorrect in their recall.
* In this instance, you wouldn’t want the chi square to be significant. That is, “Using apology condition as our independent variable (sincere, insincere, or no apology) and recall of the hashtag Charlie used as the dependent variable, we did not see a significant effect *χ*2(4) = 1.49, *p* > .05. Cramers V was weak. This indicates that there was no difference between those who got the attention check question correct across the three different conditions.”
* My advice is to go with the chi square option in a. 1). Above, though either is acceptable
* Make sure to italicize the *χ* and *p*
* **ANOVA**: Since you have a condition independent variable with three levels (e.g. Sincere, Insincere, or No Apology), the most appropriate test is a One-Way ANOVA when your DV is on an interval or ratio scale (like a 0 to 5 scale or a 1 to 6 scale). Your lab and lecture powerpoints show you how to conduct an ANOVA, but there are some guidelines I want to give you about how to write your results. Below, I am going to walk you through an analysis specific to your Twitter Apology paper.
* First, note that there are several dependent variables to choose from. For my example analysis below, I want to focus on Part II in your survey (Apology variables). Since each of the eight questions in that section are scaled variables that range from 1 to 6, each uses an interval scale, which is perfect for an ANOVA.
* Second, given that this study has one IV with three levels and we will look at one DV at a time, a One-Way ANOVA is the best test to use to see if there are significant differences among the three levels of the IV for that one DV. We look first at the ANOVA table (or *F* table) and focus on the between subject factor. We note the degrees of freedom, the *F* value itself, and the *p* value. (We’ll get into two-way ANOVAs later in this course, but here we only have one independent variable, so it is a One-Way ANOVA. Yes, we have three levels to our IV, but it is still only one IV).
* Third, if the *p* value is significant (less than .05), we have one more step to take. Since this is a three-level IV, we need to compare mean A to mean B, mean A to mean C, and mean B to mean C. We do this using a post hoc test (try using Tukey!). That will tell us which of the means differ significantly. You then write up the results. For example, let’s say I ran an ANOVA on the dependent variable “Charlie’s apology seemed sincere”. My write up would look like the paragraph below (though note that I completely made up the data below, so don’t copy the numbers!) …
* Significant Finding:
* Using apology condition (sincere v. insincere v. no donation) as our independent variable and ratings of “Charlie’s apology seemed sincere” as the dependent variable, we found a significant condition effect, *F*(2, 203) = 4.32, *p* < .05. Tukey post hoc tests showed that participants agreed that the apology was more sincere in the sincere condition (*M* = 5.56, *SD* = 1.21) than participants in both the insincere condition (*M* = 2.24, *SD* = 0.89) and the no apology condition (*M* = 3.23, *SD* = 0.77). Participants also thought the no apology was more sincere than the insincere apology, thus supporting our prediction.
* Note there are lots of possible outcomes. The one above essentially says that the sincere condition was rated as more sincere than the no apology and insincere conditions, and that the no apology was rated as more sincere than the insincere apology (In other words, Sincere is greater than no apology, which is greater than insincere, or S > N > I). However, we might also find that NONE of the three conditions differ from each other, so they are all equal (S = N = I) or we might find that two conditions differ from the third (S = N > I), so Sincere and No apology don’t differ from each other, but both are rated more sincere than the insincere apology.
* Non-Significant Finding:
* Using apology condition (sincere v. insincere v. no apology) as our independent variable and ratings of “Charlie’s apology seems sincere” as the dependent variable, we failed to find a significant effect, *F*(2, 203) = 2.32, *p* > .05. Participant ratings of sincerity did not differ between the sincere (*M* = 4.45, *SD* = 1.21), insincere (*M* = 4.24, *SD* = 0.89) and no apology (*M* = 4.23, *SD* = 0.77) conditions. This fails to confirm our prediction that participants would find the apology more sincere in some conditions versus others.
* Make sure to italicize the *F*, *p*, *M*, and *SD* (as in the example)
* Pretty simple, right! I require that you run an ANOVA on at least one variable from Part II.
* For your second ANOVA, you can run it on another Part II dependent variable or one from Part III. The choice is yours. My recommendation is to do another from Part II, since that section focuses on apologies (the main element of your hypotheses), but it might also be interesting to look at a Charlie impression questions from Part III. The choice is up to you.
* Note that you could also run a *t*-Test on one of the Part II or Part III dependent variables, looking only at two conditions (e.g. Sincere versus Insincere, or Insincere versus No Apology). However, it makes more sense to look at all three conditions this semester since you collected data for all three conditions. Still, let me give you some insight into the t-Test.
* ***t*-Test**: If you have only two levels to your IV (e.g. Sincere and Insincere only), things are even more simple. However, I do NOT expect you to run a *t*-Test since your study has three study levels.
* Note once again that a *t*-Test looks at differences between only two groups. Your lab presentations tell you how to run a *t*-Test, but you can do it on your own as well (you can even run this if your study originally has three levels to the IV – when you go into the *t*-Test menu in SPSS, choose “define groups” and select 1 and 2 (Sincere = 1 and Insincere = 2). This will let you look at two of the groups! You could also select “2 and 3” or “1 and 3” where the No apology = 3).
* Rather than an *F* value, we will look at the *t* value in the *t*-Test data output. Here, we have one number for the degree of freedom, we have the *t* value, and we have the *p* value.
* The nice thing about a *t*-Test is that since you only have two groups, you do not need a post hoc test like Tukey (you only need that if you have to compare three means. Here, we only have two means, so we can just look at them and see which one is higher and which is lower when our *t*-Test is significant). Then just write it up …
* “Using apology condition (sincere v. insincere) as our independent variable and ratings of “Charlie’s apology seemed sincere” as our dependent variable, we failed to find a significant condition effect, *t*(203) = 1.12, *p* > .05. Participants in both the sincere condition (*M* = 4.56, *SD* = 1.21) and insincere condition (*M* = 4.24, *SD* = 0.89) rated the sincerity of Charlie’s apology similarly.
* “Using apology condition (sincere v. insincere) as our independent variable and ratings of “Charlie’s apology seemed sincere” as our dependent variable, we found a significant condition effect, *t*(203) = 7.12, *p* < .05. Participants rated the apology as more sincere in the sincere condition (*M* = 5.23, *SD* = 0.21) than in the insincere condition (*M* = 3.34, *SD* = 0.89).
* Repeat for other dependent variables
* Make sure to italicize the *t*, *p*, *M* , and *SD* (as in the example)
* Statistics order recommendation: For this paper, start your results section with the chi square (your manipulation/attention check). Then talk about your main analyses. Make sure the analyses line up with your hypotheses.
* There is no page minimum or maximum for the results section, though I would expect it to be at least a paragraph or two for each dependent variable
* Tables **(4 points)**
* I want to make sure you are including the correct numbers in your results section, so I want you to include all relevant SPSS tables for each of your analyses.
* Table 1: Include your tables for age, gender, and ethnicity.
* Table 2: Include your tables for your chi square and the crosstabs
* Table 3: Include your tables for your first dependent variable (This must be an ANOVA table, the descriptive statistics table for that ANOVA, and the post hoc test whether it is significant or not)
* Table 4: Include your tables for you second dependent variable (If it is a t-Test, include *t*-Test tables here. This would involve both the descriptives for the *t*-Test and the *t*-Test output itself. Again, though, I prefer that your second analysis also be an ANOVA and NOT a *t*-Test
* Table 5: (If applicable)
* Table Placement: Although the 7th Edition of the APA Publication manual allows you to place your tables at either the end of the manuscript (in a series of appendices) or embed it within the text itself, we prefer the latter placement option. That is, include your table(s) immediately after your table callout. That means that you will include your participant tables (for age, gender, and ethnicity) immediately after the participant section (and before the methods / procedure section). You will include your chi square tables (including the crosstabulation table, chi square table, and symmetric measures table) right after the callout. For the ANOVA, once again use a table callout. Then copy the ANOVA tables (descriptive statistics, ANOVA table, and post hoc tables) immediately after the callout. See the example paper for a visual aide.
* Hint: The best way to get these tables is to copy them directly from SPSS. In the SPSS output, right click on the table, copy it, and then paste it into your paper after the callout. (If you double click the table in SPSS, you can adjust the width of cells or even delete some of the columns). Another alternative is to use a “snipping” tool (search “snipping tool” in Microsoft Word to find it). You can highlight an area on any computer page and save it as a picture. Copy the picture and paste it into your table pages. Easy!
* I’m not worried if your table spills over onto multiple lines. If it spills over, that is fine. I just need to see the full table
* Make sure to give a proper name to each table (e.g. **Table 1**) followed by a good description of what is in the table in italics (e.g. *Study One Demographics*)
* Each table is flush left, as is the title. See the example paper for a visual aide
* Discussion Study One **(2 points)**
* In this section, tell me about your findings and if they did or did not support your results. It might help to refer back to your hypotheses “We expected to find A, but instead we found B” or “We predicted A, and results supported this hypothesis.” Explain using plain English why you think your study turned out the way it did.
* IMPORTANT – Do NOT give me statistics again here. I can find those in your results section. Here, all I want is a plain English summary of your findings.
* Also, don’t give me results for a DV if you did not run an analysis on that DV. Only tell me about the results you actually looked at in the results section.
* There is no length requirement for this section, but I recommend at least four or five sentences
* Overall writing quality **(3 points)**
* Make sure you check your paper for proper spelling and grammar. The FIU writing center is available if you want someone to look over your paper (an extra eye is always good!) and give you advice. I highly recommend them, as writing quality will become even more important on future papers. I also recommend visiting the FIU Research Methods Help Center if you need additional guidance with writing or statistical analyses. Also, remember to upload this paper through the Pearson writer before uploading to Canvas!
* Make sure to use the past tense throughout your paper. You already did the study, so don’t tell me what participants are going to do. Tell me what they already did!

**Other Guidelines for Paper II – Methods and Results (Study One)**

* 1). Page size is 8 1/2 X 11” with all 4 margins should be one inch. You **must** use a 12-point font in Times New Roman.
* 2). PLEASE use a spell checker and the grammar checker to prevent errors. Proofread everything you write. I actually recommend reading some sentences aloud to see if they flow well, or getting family or friends to read your work.
* Use the Paper II Checklist before you turn in your paper to make sure it is the best paper you can write!
* Finally, go look at the supporting documents for this paper. Like Paper I, there is a checklist, a grade rubric, and an example paper for Paper II. All will give you more information about what we are specifically looking for as well as a visual example of how to put it all together in your paper. Good luck!