

UPEI UNIVERSITY of Prince Edward ISLAND | Psychology 102 Research Component

Department of Psychology

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Important:

- All lab reports in Psychology 102 are to be *typed and will be submitted online*.
- Due to online lab submissions: all Labs MUST have your name and Student ID

Introduction

Every student of psychology, regardless of his/her area of specialized interest, such as animal behaviour, development of children, physiology, personality, counselling, etc. must become familiar with the scientific methods of psychology. From such knowledge, the student may develop an understanding of both the topics researched in psychology and the techniques employed to study them.

The essence of scientific inquiry in psychology involves the description and experimentation, explanation and prediction of human behaviour.

Descriptions of behaviour depend on careful and systematic observations. These observations may take place in a lab or in some more natural setting - a classroom, a residence, a mall, etc. The observations may be either direct or indirect measures of behaviour, such as timing speed of response, or number of words forgotten, or readings on a polygraph (lie detector) test, or attitude scores on a questionnaire.

Different types of experimental approach are used to make observations. These are usually situations chosen or devised by the researcher to facilitate observation of behaviour. Situations may vary from an individual 'case study' to a national survey involving thousands of participants. Situations may be very unstructured such as with naturalistic observations or they may involve a very controlled set of conditions such as in an experiment in a sound-proof lab room.

Based on the systematic observations made in an experimental situation, the researcher attempts to develop an explanation of the behaviour observed and from this to arrive at a prediction of future behaviour in similar situations.

This making of a prediction (referred to as your hypothesis) and the subsequent testing and retesting of this hypothesis is the critical element of the scientific method. Hypotheses which prove correct lead to the development of comprehensive theories of human behavior, while those which do not are replaced with new predictions and tests.

Another key aspect of scientific research is the important idea that information must be reported to allow for impartial scrutiny by others. In preparing a research report in psychology, it is essential to follow what is known as **APA style**. The *American Psychological Association* (APA) has published a guideline for report

writing that all psychologists follow very closely. There are literally tens of thousands of psychology journal articles published each year. If each author used his or her own unique style, it would be very confusing reading through a number of articles. In order to enable readers to be as efficient as possible, these articles all share the APA style.

Three of the most important aspects of APA style report writing:

1) *Concise and Efficient Writing*

Reports should be informative, as thorough and detailed as necessary, and yet as concise and efficient as possible. This combination of thoroughness and conciseness takes some practice.

2) *Cite Your Sources*

Any information (either a direct quotation or paraphrasing of an idea) included in a report which comes from another source must be credited. The APA style uses the citation system (instead of footnotes) in which the author's last name and the date are given in the text, like this:

Other research (Jones & Jones, 1996) has shown ...

Brown (1997) reported that ...

3) *APA Format*

Reports abiding by APA formatting follow a fairly strict order of presentation:

1. Title page (Title, author, class)
2. Abstract (Brief summary)
3. Introduction (Explains the topic, states the IV, DV, and hypothesis)
4. Method (Describes how the study was done)
5. Results (States how the study turned out)
6. Discussion (Gives your explanations of the results and your conclusions)
7. References (Formal listing of all references used in the report)
8. Appendix (Additional information not included in the report)

Important details regarding Introductory Psychology lab reports:

- In order to introduce you to aspects of the scientific method in psychology and to gain practice in preparing research reports, you will complete a few research exercises in conjunction with your introductory psychology course. The methodology to use in each case is given to you (in this document) and you only need to follow the directions. The purpose of these small demonstration experiments is not to conduct original, in-depth research, but simply to introduce you to the techniques used and types of topics studied in psychological research. These demonstration experiments have been evaluated by the departmental ethics review. However, if you or your participant(s) have any concerns, please bring them to the attention of the instructor.
- For introductory research reports, an Abstract is *not necessary*, but an Appendix showing your formulas and calculations *is required*.
- Information from two reference sources must be included. The reference source(s) should contain information relevant to the topic of your research (not just a dictionary or encyclopedia). Ideally this will be an article documenting past research that is relevant to your topic. The findings of this research would be discussed in the introduction (always with proper in-text citations) in full citations to these articles would be

properly formatted in the references section. *A more thorough explanation of report writing is included at the end of this outline.*

- Again this semester, you are required to complete *four assigned projects*. Each of which involves gathering and reading relevant research work conducted by others on the topics you will be studying, some experimental research of your own in a research paper summarizing this. Each of your exercises this semester aims to allow you some “hands-on” experience with research.

These are worth 15 % of the course grade.

Bonus marks: You may earn extra marks toward your final lab grade (to bring the total up to 15/15) by participating as a subject in approved research projects conducted by students and/or faculty. These ‘bonus’ experiments occur from time to time throughout the semester and you will be given the opportunity to participate if you wish (the maximum number of bonus points you can add on is 5).

Marking

- Psychology majors working with a scoring template will do the evaluations of the reports. A copy of these templates will be provided to you to help you to understand exactly what is expected of you. They will be very strict in their demands so be certain you have all the project work completed – and on time !
- The due dates for each assignment are listed and are very firm. For this reason, try to complete assignments a bit early to avoid being too late.
- With a little diligence, all students should be able to earn a very good lab mark for this course.
- Lab exercises are meant to help you accumulate experience with research, over the semester. Feedback from earlier exercises is assumed to be applied to later ones.
- Experience has shown that students who do not score well have committed one of two fatal errors: (a) they failed to complete/submit assignments on time, or (b) they copied the report rather than doing their own, leading to a grade of “F”.

Overview / Review of Research Methods

If you have done lab work previously, this will be an opportunity to review aspects of experimentation. If this is your first experience with research, this will provide you with all the basic information you need to begin.

There are a number of aspects of research with which you should become familiar. These include learning the terminology of experiments, the techniques of analyzing and displaying results, and the process for discovering and reporting on information relevant to your research topic.

Some of the key concepts you must know are as follows: Independent variable, Dependent variable, and Hypothesis.

Collecting data and reporting your findings:

Data collected during your research will need to be analyzed and reported. More complex inferential statistical analysis is left to another course, but you should become familiar with the basic techniques of descriptive statistics and of graphing. Descriptive statistics are simply scores that summarize your data. The principal descriptive score is called the *mean*. The mean is the term for what we normally call the average. To get the mean of a group of numbers, you simply add them together and divide by the number of scores. This can be shown using the following symbols:

$$M = \frac{\sum(X)}{N}$$

$$\mathbf{M}(\text{Mean}) = \sum(\text{Sum of } \mathbf{X}(\text{the scores}) / (\text{divide by } \mathbf{N}(\text{number of scores}))$$

A second important descriptive statistic is the Standard Deviation. This tells you how much, on average, the numbers in your list vary from the mean. So if you were to say “it was about 20° Celsius this week, give or take 2° or 3°,” you could also say (provided that you had a temperature reading for each day and used these calculations) “the Mean temperature was 20° with a Standard Deviation of +/- 2.5°:

$$SD = \sqrt{\frac{(X - M)^2}{N}}$$

The formula for the Standard Deviation is as follows:

To calculate the Standard Deviation:

1. Subtract the mean from each score in your list: (X - M). This generates a new list of numbers. (This shows you how far each number is from the mean/average)
2. Square each of these numbers in this new list: (X - M)². This generates a third list of numbers. (This eliminates any negative numbers but makes the numbers much larger)
3. Calculate the Mean of the numbers in this third list (this tells you how far *on average* all of the numbers are from the mean);
4. Calculate the square root of the Mean generated in step three (this brings the previously squared numbers back down to the original scale for comparison). This gives the Standard Deviation (SD).

While the mean gives you one number to describe the centre of the scores, the standard deviation gives you one number to describe how widely spread out all the scores are around the centre.

Graphing your collected data:

To display and visually compare the results of a study, you would present a graph of the findings. A simple-to-construct yet informative type of graph is called a bar graph, like this:

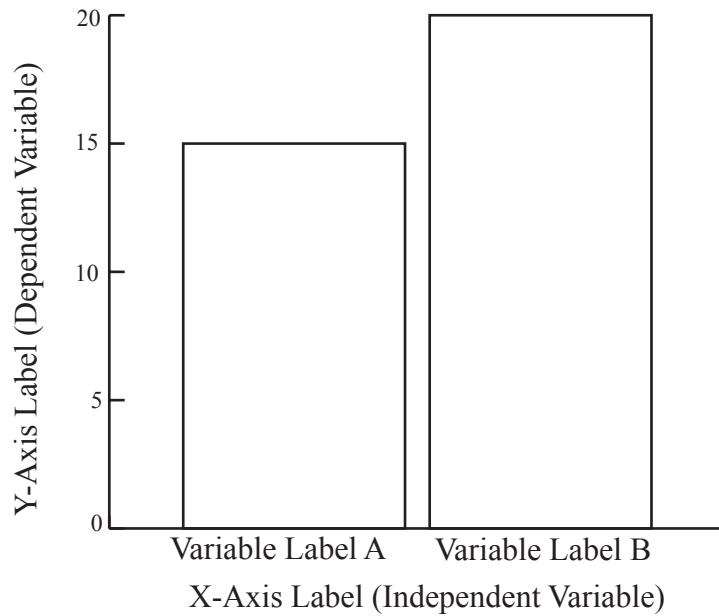


Figure 1. Title of the figure (only first letter and proper nouns are capitalized).

In this example graph, the means of the 2 sample groups were calculated as : $A = 15$ and $B = 20$. Each bar is drawn on the graph up to the level of the mean score for that group. Notice that the bottom of the graph (called the X-axis) and the left side of the graph (called the Y-axis) each require a brief label describing what the axis represents. Note also that the graph must have a title. Your title should describe the content of your graph. A proper title is most easily written by combining the labels from the X-axis and Y-axis.

Relative Age Effect Study Assignment #1.

(Due date : Thursday, July 16)

Our date of birth does not predetermine what we become (regardless of what the astrologers may say). But, it is possible that birth date may combine with other circumstances to produce some noticeable effects. Age grouping of students entering school, or youngsters participating on sports teams, is done to 'try to be fair' to all. It may be, however, that some are being disadvantaged simply because of an 'unlucky' birth date. In activities (most obviously sports) where individuals directly compete and maturation and physical ability are assets, an older child has a clear advantage. Someone with a 'lucky' birth date just after the cut-off date has almost a year's headstart over someone with an 'unlucky' birth date just before the cut-off date.

Because different activities have different cut-off dates, we will focus on only one - hockey. The purpose of this exercise is to see whether being born in the first third of the year (January to April) is 'luckier' than being born in the last third of the year (September to December). Male hockey players in Canada are grouped by age up to the Junior level. If a "relative age effect" influences which players succeed and continue in the sport, it should be possible to find it at the Junior level. Your task is to find the roster of Canadian Junior hockey teams (such as the Abbies or Rocket) showing their birth dates. Even better, if you can, try to find the roster of a league All-Star team to use. Such lists are available, with a bit of searching, from the internet. In any case, you will need to count the number of players whose birth dates are from January to April and the number from September to December. Since there is a great deal of variation between individual people and even between teams, it is unlikely that you would find that everyone was born at the first of the year and no one at the last. Instead, you will be looking to see if there is a preponderance of one over the other.

Because you are using limited data, the significance of the results is not critical for this demonstration exercise; means and standard deviations are not needed for this project. Simply calculate the proportions (or percentages) of players from the first third of the year and the last third. For example, if your two groups (first and last) total 20 players and their numbers were 15 to 5, the percentages would be :

$$15 \text{ (subset of the total)} / 20 \text{ (total)} \times 100 = 75 \%$$

$$5 \text{ (subset of the total)} / 20 \text{ (total)} \times 100 = 25 \%$$

These percentages would be represented in your graph. You should locate references related to the idea of relative age effects in sports and other aspects of life.

Use the data to report in the APA style. Whereas learning how to report studies in APA is large function of these labs, you will be marked on formatting. Pay attention to detail.

For this assignment, submit a report with:

- ***all sections of an APA style report as outlined in this manual (see pg 15)***

Content Analysis of Aggression in TV Programs

Assignment # 2

(Due date : Thursday July 30)

Daily we read in our newspapers or see or hear on the news of violence of all sorts-wars, murders, etc. But paradoxically, while we fear the escalating violence that we are being exposed to, at the same time we voluntarily expose ourselves to witnessing violence. Motion pictures that portray extreme forms of violence are often box-office successes while sports with high violence potential such as roller derby, pro football and mixed martial-arts are increasing in popularity. Perhaps we fear uncontrolled violence that might be directed against us, but are attracted to controlled, 'safe' violence presented in a form that is not personally threatening.

The question remains of whether, by exposing ourselves to materials with aggressive content, we do not become more aggressive ourselves in some way. Many people are concerned about the possibility that viewing aggression on television may facilitate subsequent aggressive behavior. The issue is complex. There may be social modelling of aggressive behavior or it may just be that a regular diet of media violence leads to a 'psychic numbing' in which viewers are less upset by violence because they can detach themselves at an emotional level from the events witnessed.

This research study centers on analyzing and categorizing the extent and quality of aggression in children's TV programs. Before attempting to relate viewing of aggression with actual aggressive behavior, it is necessary to determine if what is viewed is actually aggressive. If it is, of what kind? How much of it is there? What are the filmed consequences for the aggressive characters?

In order to develop an idea of how aggressive children's programs are, you are required to conduct content analysis of two types of television shows: one aimed at children and one action-type show aimed at an adult audience.

Your data collection would proceed as follows:

You would decide upon two one-hour television shows: One hour of children's cartoons (this could be two half-hour shows) and a one-hour adult action-style television show. Using an Observation Record Form for each show, tally the incidence of each category of aggression, as well as the consequence of each aggressive act. (This form is provided on p9) Before collecting your 2 one-hour samples, practice making the observations so you can make the discriminations and judgements called for with ease while observing the ongoing scenes. In order to do this you will have to prepare operational definitions (with an example) for each of the four categories of aggression. These definitions and examples are to be included in your Appendix section.

- If you have access to a VCR or DVD recorder, you may find it advantageous to record a program for later viewing so that you may review segments for more accurate scoring. Also be aware that some television shows may be found online.
- Your quantitative analysis and graph will primarily be a **comparison of total scores**. **Means and SDs are not necessary**. You could however note differences in the 'quality' of aggression which you observed in the shows as part of your Discussion.
- You should locate references related to the idea of aggressive behavior and TV.
- Use the data to report in the APA style. Whereas learning how to report studies in APA is large function of these labs, you will be marked on formatting. Pay attention to detail.

For this assignment, submit a report with:

- **all sections of an APA style report as outlined in this manual (see pg 15)**

Observation Record Form

Observer: _____

Date: _____

Program Info:	Frequency of...			
	Interpersonal Direct Physical Aggression:	Interpersonal Indirect Physical Aggression:	Property Destruction:	Verbal Aggression:

Consequences of Aggression for Aggressive Character			
Negative:	Positive:	None:	Other:

Experiment 3 comes from an experiment presented in:

Volckmann, J.P., Volckmann, D.B. & Zimbardo, P.G. (1975). *Working with psychology*. Glenview, Illinois: Scott, Foresman and Co.

Summary of research work required for Psychology 100

1. Complete report: Relative Age Effect
Due date : July 16
2. Complete report: Content Analysis of Aggression in TV Programs
Due date : July 30

Reports are worth 7.5 pts each = 15% of mark for the course.

- All lab reports are to be submitted online as PDF files. Full instructions on how to submit them will be provided on the course Moodle site.
- You will have until the end of the day on the day that the assignment is due to upload your assignment. Please account for potential technical difficulties submit your assignment as early as possible.
- Students are encouraged to assist one another in conducting the research work. However, each student must write and submit his or her own individual report.

Plagiarism

Copying of reports is a form of plagiarism and is therefore forbidden.

From the University calendar:

As a community of scholars, the University of Prince Edward Island is committed to the principle of academic integrity among all its participants. Academic dishonesty as defined in this Regulation will not be tolerated and, within the constraints of this Regulation and Academic Regulation 12, the University supports instructors in their efforts to deal effectively with cases as they may arise from time to time.

- Actions which constitute academic dishonesty are considered an offence within the University and include:
 - * plagiarism, which occurs when: a student submits or presents work of another person in such a manner as to lead the reader to believe that it is the student's original work; self-plagiarism is the submission of work previously submitted for academic credit without prior approval of the professor;
 - * cheating on tests or examinations, including giving false reasons for absence;
 - * falsifying records or submitting false documents, including falsifying academic records, transcripts or other University documents, or misrepresenting one's credentials; or other academic misconduct such as the unauthorized use of recording devices or the unauthorized acquisition of computer software or other copyright material.
- When there is reasonable evidence to support an allegation of academic dishonesty, the matter shall be discussed with the student at the earliest opportunity. A written record of the incident and the response of the University will be sent to the student and to the appropriate Chairperson and Dean, and will be placed by the Dean on the student's file in the Office of the Registrar.
- One or more of the following sanctions may be imposed, depending on the seriousness of the offence:
 - * the instructor, within his/her authority for assignment of course grades, may impose:
 - » a reprimand;
 - » assignment of a mark of zero or a failure for the piece(s) of work under review;
 - » assignment of a grade of "F" in the course in which the offence was committed;
 - » suspension of privileges in cases where the offenses have involved misuse and/or abuse of the library, computer or other University Resources;
 - * the Dean, in consultation with the Department where appropriate, may recommend to the President suspension or expulsion from the University;
 - * the President may impose suspension or expulsion from the University;
 - * the Senate may withhold or revoke a degree, diploma, or certificate.
- The student has the right to appeal through the provisions of Academic Regulation 12.

Guidelines for APA style Research Reports in Introductory Psychology

The goal of writing a research report is to describe clearly to the reader exactly what you did, why you did it, what you found, and what your findings mean. You should write clearly and concisely. You are required to complete your reports in a **simplified version of APA style**. Following are general outlines of the main elements to include in your research report and what these sections should contain:

Title page:

- Title of Experiment
- Your Name and Student Number
- Psychology class number and section (A, B or C)

Introduction:

The point of the introduction section is to introduce the reader to the field being studied by discussing the topic at hand and discussing past research in the area are presenting their findings (specifically, two studies for these assignments). Based on past research and your ideas on the subject, you would then outline the specifics of your study. This would include specifically identifying variables that play a role in your study (the independent variable and dependent variable) and you would hypothesize as to what you think the results would look like based on the data you will collect. Be very specific here and only hypothesize about outcomes that will be addressed by the data you are collecting.

To summarize, this section must contain:

- An introduction to the topic in general.
- A discussion of past research. Specifically, details and findings from two related studies. These must be cited properly with APA format in text citations and must be listed in the reference section.
- A detailed outline of your study which itself must include: a statement of the dependent and independent variables and a hypothesis (a prediction in advance of running the study of what you think the results will be)

Method:

Here you specify exactly how you carried out the study. It is very important that this section be precise enough so that a reader would be able to exactly replicate your study based on these descriptions. This section traditionally contains three subsections:

1. **Participants** : Identify your subjects (university students, children, a certain strain of rats or whatever). People are participants; animals are subjects.
2. **Apparatus and Materials** : If you used any equipment, you specify what it was (e.g. a Skinner box, a memory drum). If you used other kinds of materials, describe what they were (e.g. attitude questionnaires).
3. **Procedure** : Describes each step of your procedure in detail (exactly how you collected the data and under what conditions). If you used animals, describe the exact steps you took in running them. If you used human participants, describe your procedural steps from instruction through debriefing.

Results:

The purpose of this section is to present as clearly as possible your observations. This section is not merely a set of tables or figures. Rather, it is a verbal description of what was found relevant to the question(s) asked. Tables and/or figures are included to supplement the verbal description. Descriptive statistics such as means and standard deviations are extremely helpful in reducing your raw data to meaningful expressions that should allow you to communicate the essence of your findings efficiently and effectively. You must report descriptive statistics in paragraph style.

For Introductory Psychology reports, you are expected to include at least one graph of the results unless you are given specific instructions otherwise.

In the results section, you should *refrain from making any interpretations of your data*. You should only make statements which describe your data. For example, if your data show that the performance of some subjects is clearly superior to others, it is legitimate to express that fact. It is not appropriate, however, to make further interpretations of the fact, such as, that the superior subjects ‘learned more’ or were ‘more motivated’ than the others. This latter form of interpretation should be reserved for the Discussion section of the paper.

Discussion:

One of the primary purposes of this section is to discuss how the results of the study relate to the hypothesis presented in the Introduction. You need to arrive at a conclusion about your hypothesis (specifically, did the data support or reject it) and to provide your explanation(s) for the outcome of the experiment.

The final purpose of the Discussion section is examine ways in which your study could be improved and/or expanded. Try to think of some changes (other than just adding more subjects) which you might apply to improve the study.

In addition to the four major sections of a report, you must include two others:

References:

For Introductory Psychology reports, you are expected to find some relevant reference material to include in your report. You should list the source(s) of the information which you used in your report. Locate research articles for references, rather than a dictionary, encyclopaedia, news stories, generic website or Wikipedia references. *The proper APA format for references must be followed (see p6).*

Appendix:

The appendix section must contain:

- a copy of the data sheet used to collect the data used in your experiment (if one was used)
- a table of the data that was collected
- the formulas and all the calculations used to generate the descriptive statistics that provided the results of this experiment (will usually be the means and standard deviations of the data you collect)

The language in APA style reports must avoid any possible sexist or ethnic bias - specific APA guidelines are available in the APA publication manual and can be found in many locations online.

Papers should be neat, double-spaced, and typed

Sample APA Paper

The Title of the Paper
 Studne Name
 Student ID #
 Class Section

pg#

The Title of the Paper

This is the introduction section of the report. It could be about one page in length. Instead of using the heading Introduction for this section, it should begin by repeating the complete title. Immediately following this section comes the Method section.

Method

Participants:

(Description of the participants: demographics, age, gender etc. A description of how these participants were chosen.)

Apparatus and/or Materials:

(a detailed description of the materials and equipment used in the study)

Procedure:

(A detailed description of how the study was carried out. Detailed enough that one could replicate the study from this description)

Results

pg#

(This is to be a written statement of the results. If required by the particular assignment, you would state the means and standard deviations and sentence format. You should refer to supplementary information whenever appropriate. This may be a table of numbers (see Table 1) or may be a graph of the results (see Figure 1).

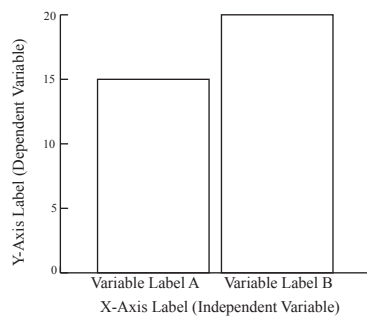


Figure 1. Title of the figure (only first letter and proper nouns are capitalized).

Discussion

pg#

The Discussion should tie together the report and should most importantly, state whether the findings stated in the results section support or reject the hypothesis put forth in the introduction. The ensuing discussion could then be related to possible interpretations of the data, outcomes, possible changes to or enhancements of the current study and/or suggestions for future research. This section will normally be about one to two pages in length.

The following sections of the report (References, Tables, Figures) are presented on later pages.

References

(see formatting on page 6)

Appendix A

(In this class you are required to show all of formulas and calculations used to describe the data collected in the experiment. As well, you should provide an example of any data collection sheets that were used in the table of the data collected)

Psychology 101 Research

Psychology 101/102 Lab Reports

Sample Grading Template for Exercises 3-5

Title / ID# / Class section (10%)

A title, student ID# and class section all present	10
Missing one of title, ID# or class section	6
Missing two of title, ID# or class section	3
* No reduction of mark for inclusion of name (but the paper cannot be returned)	

Introduction (15%)

Well organized, clearly written introduction free of writing errors, introducing topic of research, properly citing two sources which are listed in the references section, reporting the findings from the first of those references, reporting the findings from the second of those references, stating the independent variable, stating the dependent variable, stating the hypothesis	15
Well organized, clearly written introduction free of writing errors, including six of the seven points noted above	13
Well organized, clearly written introduction free of writing errors, including five of the seven points noted above	11
Well organized, clearly written introduction free of writing errors including four of the seven points noted above	9
Clearly written introduction, free of writing errors, including three of the seven points noted above	6
Clearly written introduction, free of writing errors, including one or two of the seven point noted above	3
No introduction:	0

Method:

Well organized, clearly written method section free of writing errors, containing clear guidelines as to which pictures were included or omitted	15
Well organized, clearly written Method free of writing errors, but the guidelines used to choose the pictures is unclear	12
No Method section:	0

Results and Graph (20%)**Written statement of results (5%)**

Well organized, clearly written statement of results, including means and standard deviations, free of writing errors	5
Statement of results that is ambiguous or contains writing errors	3

Psychology 101 Research

Statement of results that omits either means or standard deviations or that seriously misinterprets the data	0
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Complete graph (15%)

Complete graph with figure number, title, axis X label, variable labels, axis Y label, interval labels, control bar drawn to the correct level of the mean; experimental bar drawn to correct level of the mean	15
Graph missing one of the 8 elements above	13
Graph missing two of the 8 elements above	11
Graph missing three of the 8 elements above	9
Graph missing four of the 8 elements above	8
Graph missing five of the 8 elements above	6
Graph missing six of the 8 elements above	4
Graph missing seven of the 8 elements above	3
Graph missing eight of the 8 elements above	2

Discussion (15%)

Well organized, clearly written discussion free of writing errors, relating to the topic of research, and the hypothesis.	15
Well organized, clearly written discussion, relating to the topic of research, and the hypothesis but with writing errors.	10-13
Discussion related to the topic of research and to the hypothesis, but with organizational difficulties and writing errors.	8-10
Clearly written discussion free of writing errors, but not adequately addressing the topic of research or the hypothesis	5-8
Discussion not adequately addressing the topic of research or the hypothesis and with organizational difficulties and writing errors	1-5
No discussion:	0

Two relevant references listed (15%)

Two relevant references listed, both perfectly formatted according to the instructions in the lab handout for 101/102	15
Two relevant references, one perfectly formatted and one with small errors in formatting	12
Two relevant references, both with small errors in formatting	10
Two relevant references, one perfectly formatted and one with multiple errors in formatting	10
Two relevant references, one with small errors in formatting and one with multiple errors	7
Two relevant references, both with multiple errors in formatting	5
One relevant reference only, perfectly formatted	5
One relevant reference only, with small errors in formatting	7
One relevant reference only, with multiple errors in formatting	3
No relevant references	0

Note: to be credited, a reference must be cited in the paper

Psychology 101 Research

Appendix (10%)

Appendix provided showing correct calculations for mean and standard deviation for both groups	10
Appendix provided, with correct mean and standard deviation for one group and modest calculation error leading to incorrect mean and/or standard deviation for other group	8
Appendix provided, with modest calculation errors leading to incorrect means and/or standard deviations for both groups	6
Appendix provided with two correct means, one correct standard deviation, but errors in method of calculation leading to one incorrect standard deviation	4
Appendix provided with correct means but errors in methods of calculation of standard deviation leading to incorrect standard deviations for both groups	2
Appendix provided, but incorrect method of calculation.	0
No appendix provided	0