# **INSTRUCTIONS FOR POSTER SESSION PRESENTATIONS**

## **Introduction**

These instructions are designed to provide authors with guidance on a poster presentation. Poster presentations are an important part of our meeting. The poster session format provides authors with an excellent opportunity to interact and command greater audience interest than is normally available. By means of illustrations and brief texts mounted on large poster (bulletin) boards, authors will have an opportunity to communicate the results of their work to meeting participants on a one-to-one basis for a longer period than is normally available for oral presentations.

#### **Space Arrangements**

Several rows of poster board holders make up the poster area. Each poster board holder is <u>4</u> feet high by <u>4</u> feet wide. Authors should plan their poster materials to fit this space. An adequate number of poster board will be available for each paper to have a full board. All posters must be self-contained.

## **Supplies Available**

The poster (bulletin) boards will be set up well in advance of the scheduled session. Thumb tacks, push pins, tape, scissors, paper, and felt-tip markers will be available in the session poster room to assist authors in assembling their poster exhibit. No tables, electricity, audiovisual equipment or computers will be available for this session.

## Author's Responsibility

Authors are asked to set up their poster exhibits so they can be ready for observation by the scheduled session time. Authors must be in their assigned poster areas and be available for discussion with attendees during the poster session times listed in the final program. If there are two or more authors present for a paper they may split the time they are present or may all be present for the full period.

## **Suggestions for Presentation**

Poster session authors have two vehicles for presentation of their paper to the audience: (1) visual and oral contact during the poster session, and (2) in addition, manuscript available for publication if the author desires this option.

Visual contact is by the poster itself, which should contain the most important text and illustrations that the author would have in an orally presented paper. The poster exhibit should consist of illustrations (graphs, maps, cross-sections, photographs, etc.) explained by titles and a minimum of text. The use of color illustrations can enhance interest in the poster. As part of the poster exhibit, a sign indicating the paper title, name(s) of author(s), affiliation of author(s), and city and state or country is required. The size and number of items in the exhibit are left to the discretion of the author(s), but the "story" should proceed from left to right, top to bottom with a brief summary/conclusion text at the end. As a general rule, the posters should be made with the same care as would be used for the text of an oral presentation and following the rules for preparation of good slides for a visual presentation – bold, colorful, and uncluttered with unnecessary detail.

Individual poster illustrations should be not less than 8 inches by 10 inches in size. Items may be mounted on colored backing paper if an author desires to have colorful borders around the items. **USE LARGE PRINT**. All lettering should be large enough to be read from about 3 to 5 feet away. Hand lettering may be used, but it should be done neatly using guidelines. Typewritten information is satisfactory; if it is double-spaced and typed with a bulletin typewriter or by computer program giving at least \_ inch high letters. The poster items should be made of lightweight materials so they may be mounted on the bulletin boards with thumbtacks.

For the oral contact with observers, authors should be available to summarize the paper, to answer questions, or to expand on the poster with requested details. During the poster session, authors should try to avoid having their time monopolized by a few observers if other observers are waiting to make contact with the author. If necessary, the author can make arrangements for further discussions at another time.

# From: "Paul Devereux" <devereux@unr.edu>

I have the students in my advanced undergrad methods class do a poster session each semester on the work they have done (they are required to work with a faculty member or outside researcher up to 5hrs/week during the semester). I have attached the poster assignment for you. I modified it from tips provided by the Council on Undergraduate Research. The undergrad poster session has been very successful (even representatives from our state senator's office attends). For a better final product, I would recommend you require that the students give you a mock-up prior to the session this can simpy be in WORD or power point.

You may also want to check out the website for the council on undergraduate research. They do a student poster session on capital hill (I saw that Nevada's senator had attended and is why I invited him to ours) and they also have tips (or did). Involving undergrads in research has been a great experience all around.

#### From Jay Jackson, Indiana-Purdue University

The guidelines from the SPSP conference might be helpful. I pasted them below from http://www.conferencesandmeetings.org/posters.htm. Good luck! Jay

#### **Poster Guidelines and Specifications**

**Effective Posters.** A poster should be complete and self-supporting so that different viewers may read at their leisure. The author should only need to supplement or discuss particular points raised during inquiry. Remember that several people of varying degrees of interest and experience may be viewing your poster at once. Therefore, you will want to make your points as complete and brief as possible.

**Planning.** Posterboards are 4' tall x 8' wide; we recommend using a space of 4' tall x 6' wide for your entire poster. The most effective use of the space would be in grid plan arranged in columns. This prevents viewers from having to cross back and forth in front of each other. Materials should be mounted on colored poster paper or board. Allow for distance when printing and planning layouts. The standard elements are: Introduction, Methods, Results (with supporting figures), and a Conclusion or Summary. Type should be easily seen from a short distance.

Using the guidelines above, the introduction would be placed at the upper left, and the conclusion at the lower right, both in large type. It is not necessary to post a copy of the abstract.

**Illustrations.** Figures should also be easily seen from a distance. Use clear graphics and large type to accomplish this. The main points should be straightforward without extended viewing, but details should be included for those who might wish to discuss it. Because the amount of text is restricted, the figure legend could contain some of the commentary that would usually be contained in the body of a manuscript.

#### Text.

- \* Minimize narrative.
- \* Use large type in short separated paragraphs.
- \* Do not set entire paragraphs in boldface or capital letters.

\* Numbered or bulleted lists are a concise but effective way to convey a series of points.

**Title.** Prepare a banner for the top of the poster indicating the abstract title, author(s) and affiliations(s). Lettering should be about 1 1/4 inches high for the title, 3/4 inches high for the author's names and 1/2 inch high for affiliations.

## From: Jamin Halberstadt, U. of Otago,

We have a 4th year (roughly equivalent to honors undergraduate) poster session in which all students present their work in poster format and answer questions from the interested staff and an external examiner. The posters also stay up for a while to be browsed over the coming weeks. We used to allow students to design their own posters but the variation in design and quality was too great and we ultimately moved to a standard format. Now students submit the text and figures to an administrative person who organizes it all to fit into the standard. I'm attaching my own student's poster if you're interested in what the format actually looks like.

\*\*\*\*

#### From: Helen C. Harton, U. of Northern Iowa

I do poster sessions for the students in my seminar classes. They dress up, I bring in some food, we invite other faculty and dean types--kind of fun. Here is the url with some hints I give them.

#### http://www.uni.edu/harton/Poster.html

I think MPA and maybe Psi Chi also have poster making hints on their websites. And I know there are some other websites like mine out there too, but I can't think of the urls. I think a faculty member in GA somewhere links to my site along with some other poster sites. Maybe you could google "harton" and "psychology" or "poster" and find it.

# From: Janet Swim

\*\*\*\*

# **Poster Guidelines**

The poster should be divided into the following parts:

**1. Title**. Banner across the top, large print authors and affiliation, smaller print but not smaller than the rest of the text.

**2. Abstract.** At most two pages larger print then the rest of the text.

3. Introduction.

Purpose--What did you set out to do and why

Hypotheses-- can be placed in bullets

4. Methods. Skip details, e.g., reliabilities, manipulation checks. Just say; they were good.

**5. Results.** Use tables and figures when possible. Highlight most important findings, not all findings Can be organized by hypotheses.

6. Conclusions.

Were your hypotheses supported? (might be able to combine this with results) Future direction Take home message

# General points about the poster

- 1. Dimensions: about 3 feet 8 inches by 5 feet 6 inches
- 2. Make text legible from a distance, at least 20 point font for the smallest font
- 3. Double space text.
- 4. Place sections so people read up and down from left to right.

5. When possible, use bullets, numbered lists, tables, and graphs rather than paragraphs. But make sure these are understandable since you will not have the explanations that you would have with paragraphs.

6. Tell a story

7. Be able to verbally explain your study to people who come to look at your poster and know nothing about your study.

## From: Ladonna Lewis, Glendale Community College

I use the office of teaching resources in psychology website: http://www.lemoyne.edu/OTRP/index.html At that site, there is a link called "hosting a psychology conference", and a document there with the title "How to host a student psychology conference at your college"

That document contains both oral presentation guidelines and poster presentation guidelines and illustrations. I find it very useful and use it in my Research Methods class for their poster presentations. You can download and print materials from this website as long as you give proper credit to the authors and the Office of Teaching Resources.

\*\*\*\*

#### From: Greg Turek, Fort Hays State University

Back when I taught a research methods course, I had a poster session at the end of the semester, during which they presented the research that they had done. I don't think that there are any official standards, which is what I told my students. I prepared them for their endeavor in a few different ways. I began by briefly explain what a poster and poster sessions were, how they are used at psychology conferences. Next, I showed them an example of one of my own posters that I presented at a conference. I also took them around the hallways of the psychology building to see other examples or told them to do so (students/faculty put them up on the walls of the hallways for a while after conferences). Finally, I told them to liken the poster to a extremely condensed version of an APA style paper (which they had already learned about), with an abstract, intro, method, results, and discussion, that is put up for display using larger font, etc. (Although it doesn't map on to the mini-APA-paper thing, posters are often split up into intro, method, results, and conclusion [in place of the discussion] and no abstract, as was the standard at the last SPSP conference.) I also addressed questions as they came up regarding issues like what to include and not include in the various sections. I assume you probably wanted something more concrete, but I hope this helps.

\*\*\*\*

#### From: Pauline Velez, SF State University

As a reference, I recently found the following article. I haven't had a chance to read it, but it might provide you with some useful information.

Marek, P., Christopher, A, & Koenig, C. Applying Technology to Facilitate Poster Presentations. Teaching of Psychology, v29, 2002, p. 70-72.

\*\*\*\*

## From Jeff Joireman:

# **POSTER SESSION GUIDELINES & GRADING CRITERIA**

#### **OVERVIEW**

Frequently, the number of participants at professional psychological conferences sharing the "latest and hottest research" is both energizing and a bit overwhelming. A Poster Session is an efficient means of disseminating the research of many conference participants. To be efficient the poster must summarize the most important details of a study in each of four areas, including the theoretical background, method, results, and meaning/implications of the results. While extracting and presenting the essence a study can be difficult and time consuming, it is at the same time an enjoyable challenge as you try to wrestle with the question, how can I get my point across in approximately 6 pages (abstract, introduction, method, results, discussion, and references).

In preparing the poster, I want you to act as if you were the authors of the study. Thus, instead of saying: *The researchers examined the effects of cigarette ads on beliefs about smoking, you might say, The present study examined the effects of cigarette ads on beliefs about smoking.* 

Now, while I want you to "pretend" to be the authors, I do <u>not</u> want you to simply use their language. <u>Everything</u> should be <u>paraphrased</u>. Paraphrasing is not easy, but it is a very important skill to develop. Rather than sitting in front of the article, and trying to figure out how to "tweak" the language so that it "isn't plariarism", you should read the article several times, put it away, and then write down what they did in your own words.

If you need help on the results. I am quite happy to help out with graphs, interpretations, or whatever you need clarification on. If my office hours do not work, let's arrange a time to meet.

Our work on the poster session will occur in a variety of stages.

#### **STAGE 1** ~ Formation of Groups and Selection of Study

During the first week of class I will ask you to indicate your top three topic preferences. Once you have stated a preference for topics on the hand-out, I will make every effort to group you so that you will have a topic of interest to you, although I cannot promise you will get your first choice. Once you are in your group, the particular study you choose in your area is completely up to you all. However, remember to *keep it simple*. One study will suffice, but if you find a two-study paper that is very interesting, and you feel you can summarize it within the constraints listed below, that's fine. Also, select studies that have results which are easily presented (oneway analysis of variance, two-way analysis of variance).

#### **STAGE 2** ~ *Approval of Study*

On Thursday, October 19<sup>th</sup> your group will turn in to me a *readable* photocopy of the article for approval. The study must not be discussed in "detail" (the definition of which is left to the instructor) in the Franzoi text.

## **STAGE 3** ~ *Progress Report*

On Thursday, November 2<sup>nd</sup>, you will turn in the initial materials for your poster.

On Tuesday, November 7th, we will meet in class to discuss the initial materials for your poster.

#### **STAGE 4** ~ *Poster Session*

On Thursday, November 30th, we will gather for our poster session. The poster session will consist of two mini-sessions, 40 minutes each. During this time, half of your group will walk around, look at the other posters, and gain information relevant to the questions posed by the study's presenters, while the other half will (naturally) be standing by their own poster, conveying information about their study. After this period of time, we will switch. An example poster, suggested measurement dimensions, and grading criteria appear on the next page.

# **GRADING CRITERIA**

# Actual Poster (70 points)

I will be grading your project along the seven dimensions listed below. I will use a 10-point scale for each of the seven dimensions. Thus, my rating of your poster is worth **70 points**.

- 1. Professional Appearance
- 2. Ease of Understanding Abstract
- 3. Ease of Understanding Introduction
- 4. Ease of Understanding Method
- 5. Ease of Understanding Results
- 6. Ease of Understanding Discussion
- 7. Accuracy with which you are able to answer questions about the poster.

## Additional Criteria (30 points)

- 1. Was a photocopy of the article submitted on Thursday, October  $19^{\text{th}}$ ? (Yes = 15 points; No = 0).
- 2. Was a preliminary poster turned in on Thursday, November  $2^{nd}$ ? (Yes = 15 points; No = 0).

# **DISTRIBUTION OF POINTS**

As you know, the poster is worth 100 points total, as indicated above. Once I have arrived at a grade out of 100, <u>you</u> will decide how <u>one half</u> of those points are distributed. For example, assume that Lisa, Bart, Homer, and Marge received 80 points for their Poster Session. Here, each group member would first get 40 points (.5 x 80 group points). Then, each member of the group would be asked (anonymously) to decide what percentage of the remaining 40 points each group member should receive. If you feel everyone contributed an equal share, then you should give each member of your group the maximum number of points (100% of the 40 points). However, if someone in your group was "free-riding," then you might consider giving them less than the total number of points. For example, assume that everyone but Bart worked hard on the project. As a result, Homer judged Bart's performance at 90% (36 points), Marge judged Bart's performance at 80% (32 points), and Lisa judged Bart's contribution at 70% (28 points). The average number of points here = (36 + 32 + 28)/3 = 32. Thus, Bart's total grade on the project would = 72 = [40 group points + 32 individual points].

## **COMPONENTS OF THE POSTER**

Title Header -- Title of study, your names, original authors' names, journal citation (journal, year, volume, pages).

*Abstract* -- Summarize the study <u>in your own words</u>. This should include details on each section of the study (intro, method, results, discussion). 1 PAGE MAX

Introduction -- Summarize the problem, the theory, and the predictions. 2 PAGES MAX

*Method* -- Summarize key information regarding subjects, manipulations, etc. If you have a questionnaire, you might want to summarize it on a separate "appendix page". This way, the reader can chose to look at it if they so desire. 2 PAGES MAX FOR METHOD (up to 2 pages for additional appendixes)

*Results* -- Graphs are an excellent way to summarize results. They are **much better** than tables of numbers. I will give you some guidance on summarizing the statistical tests. 2 PAGES MAX

Discussion - Comment on whether the predictions were supported, and note primary conclusions. 2 PAGES MAX

*References* -- Key references (i.e., ones you considered important enough to include in the introduction). DO NOT simply re-type the list from the article. LENGTH AS NEEDED. SHOULDN'T LIKELY EXCEED 1 PAGE.

#### From: Sally Wall

# **POSTER PRESENTATION GUIDELINES**

## **PARTS OF A POSTER:**

<u>Title, Author, and Affiliation:</u> At a professional meeting, this needs to be readable from 15-20 feet away. The title should appear as a banner across the top of the poster. The lettering here should be in all capital letters and about 1 inch high (72 font or larger). The authors' names and institutional affiliation appear below (they can be in a smaller font or in upper-lower case). If you want to, you can type several words in a line per page, then cut and past them into a banner. With more work, you can get the lines to fit all on one page.

<u>Sections of text:</u> Follow APA format for the parts of a journal article. Include an abstract (same one that you write for your paper), a brief introduction, method (with subheadings), results, discussion. Cite references only if included in your brief introduction and keep to a minimum.

Each of these sections should be substantially shorter than what you have written for a paper. Suggested guidelines: One page of text each for abstract and results, no more than two each for intro, method, and discussion. Consider using bullets and phrases or modified outline rather than complete sentences or paragraphs.

<u>Text format:</u> The sizes of the print in the text should be no smaller than 24-font size. Remember to organize the text in columns to facilitate people moving from left to right while they read your poster.

<u>Tables and Figures:</u> It is expected that you will have some sort of table and/or figure (or possibly photographs) in your poster. You should follow general APA format here, but most conferences do not require strict adherence. You should use printed tables. On figures, you should print as much as you can, but you can **neatly** draw lines where necessary. Don't be afraid to use color here (if you can).

NOTE: There is a web site about poster presentations. The information is good, but it is meant for professional presentations (usually at out-of-town meetings) so it includes some details that you won't really need. Http://www.kumc.edu/SAH/OTEd/jradel/Poster 20% Presentations/PstrStart.html)

For our class posters: Tables will be set up in the old lobby on which you can display your poster. Either fasten your poster to a display board that will stand up unsupported or bring masking tape that will hold your poster to the walls.

#### **SUGGESTIONS FOR PREPARATION:**

#### **General Guidelines:**

There are no hard and fast rules about how to prepare a poster:

• Don't wait until the last minute! Something will always go wrong, and working with enlarged fonts can be difficult. If it's your first, allow at least one week. And don't forget to proofread the final product.

- The print size must be large enough to read from about 3 feet away (minimum 24 font).
- Consider printing your page in landscape orientation rather than portrait.

• If you have trouble fitting information on one page trim the margins and paste on the continuing page.

• Organize your poster in columns not rows.

• Mount the printed pages on lightweight poster board. You can use colors to make the sequence of the poster obvious (e.g. light blue for intro, medium for method, etc.)

• Don't go overboard with color. Bright or fluorescent colors make it hard to concentrate on the content of the poster.

• Use wrapping paper to protect the poster during transport.

• Do not present too much text. This is supposed to be a visual presentation. Suggestion: have about 20% text, 40% graphics, and 40% empty space. Your percentages will depend on your particular presentation.

• Your poster should be self-explanatory so that you can engage in discussion with people who come to look at it.

\*\*\*\*

# **From Beth Bennett:**

# Poster Information for Psychology 425

- 1. A poster contains much less text than a scientific paper or lab report. The poster itself provides the highlights of the story, including graphs and diagrams, while the presenter verbally fills in the details and explains the story to the audience.
- 2. The lengths of the sections of a poster should be approximately:

Title A one-sentence title describing the main message of your poster, the authors' names and professional affiliation(s). Introduction 2-4 paragraphs

Methods	1-2 paragraphs/technique
Results	Figures including titles and descriptive captions ("figure legends").
	There is a brief section here describing the tests you ran and linking them to your Figures. The
	other option is to have a combined Results/Discussion Section by integrating the information in this section into the Discussion Section.
Discussion	Describes your results and conclusions. Conclusions may be stated as a bulleted or numbered list instead of in paragraph form.
References	A list of the references used in your poster, in APA format.

- 3. Results section: The ordering of the figures in the results section should provide the framework of your research "story." Each figure must include a figure number and a descriptive title. There should also be a descriptive figure caption to help people interpret your figure.
- 4. All titles should be as actively descriptive as possible. For example, a poster title such as "Caffeine Consumption is Positively Correlated with Sleeplessness in College Students" is a much better title than "The Effect of Caffeine on College Students." Similarly, a figure title such as "Estradiol stimulates proliferation of MCF-7 breast cancer cells" is much better than "Breast cancer cell proliferation."
- 5. The text used in your poster should be in a "normal" font such as Times or Palatino. Do not use all capitals even for titles because this is too hard to read.

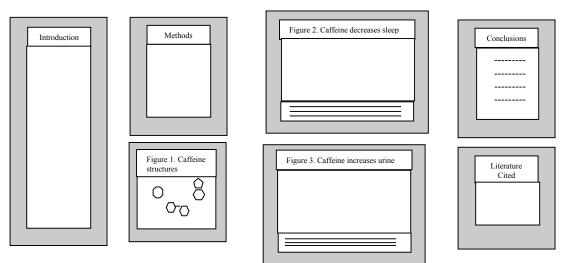
The text of the different sections needs to be readable from different distances:

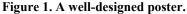
Title	15 feet
Authors names & affiliations	10 feet
Figure titles	6 – 8 feet
Figure captions	3 – 4 feet
Text (intro, etc.)	3 – 4 feet
Text on figures	3-4 feet

- 6. For portability, **make your poster in sections on poster board**. These sections should line up and be arranged in a clear flow pattern that reflects the framework of your story (Figure 1). Your reader should not have to jump around as shown in Figure 2.
- 7. Graphs should fill the page on which they're printed. Axis numbers and labels should be readable at a distance of 3 4 feet. Avoid complex graphs which show too much information (Figures 3 and 4). It is much better to present this information as multiple graphs. The same is true of long tables it is far better to present several smaller tables. Axis should always start at 0, and in keeping with APA style there should be no gridlines and the background should be white.
- 8. Mount the white paper using **double-sided clear tape**. Be sure to use generous amounts of tape on the back of your paper to mount it you do not want your white paper peeling off the posterboard!

\*\*\*\*

Caffeine Consumption is Positively Correlated with Sleeplessness in College Students J. B. Jones, S. R. Gupta, M. H. Mihalovich, and C. K. Epstein. Washington & Jefferson College.





\*\*\*\*

#### From Chuck Walker:

- 1. Recipe for a Poster
- 2. Poster Peer Feedback Form

# 1. A Recipe for a Poster

**Posters are professional.** While posters are not dead and dry, they are also not flamboyant. Avoid bright gaudy colors. They should be printed on heavy stock paper. Hand drawings and hand writing are sloppy and amateurish. Mount the pages of your poster on heavy construction paper or matte board large enough to provide a 1 to 2 inch border or use large sheets of poster board to produce the same effect. Border and background materials should be in neutral colors that contrast pleasantly with your pages. The computer program Power Point has many useful options for planning and constructing professional looking posters.

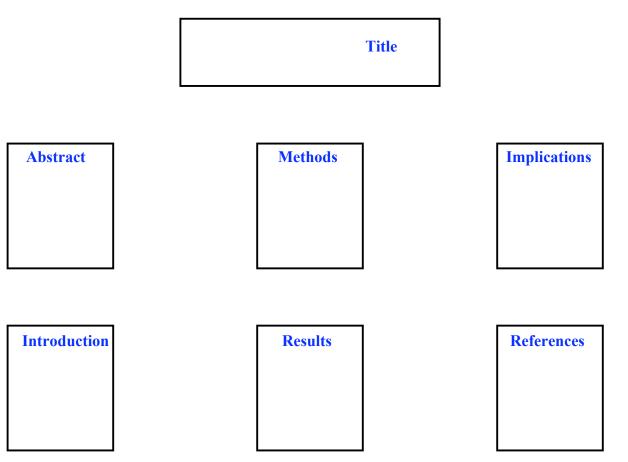
**Posters are concise.** Use no more than six 8 \_ by 11 inch pages to display your report. A seventh page 8 \_ by 14 or 11 by 14 can be added to display the title and author. The total word count should be in the 500 to 750 range.

**Posters are easy to read.** When you write them, delete unnecessary details. Presenters stand near their posters to supply details when asked. Use font sizes 32-36 for headings and 72 and greater for titles. The text should be written in font sizes 20 to 28. Select a style of font that is easy to read standing 6 feet away from the poster.

**Posters are visual.** Use enlarged graphs and tables to display your results. Add drawings, cartoons, photos or other visuals to arouse interest and sharpen clarity. Use colors, but restrict yourself to harmonious 3-

**Posters are in APA Style.** However, bend the rules of APA Style to communicate. Like a full APA Style report, posters include the following sections: *Title, Abstract, Introduction, Methods, Results, Implications,* and *References* (on the back of this sheet see the diagram of a classic poster layout.)

**Posters are social.** Dress professionally when you present your poster and be prepared to answer questions visitors might ask. Posters allow for a more natural form of discourse than speeches or written manuscripts. Relax and enjoy them.



\*\*

\*\* A reference section in a poster should only include 2 or 3 of the most important works cited. It can be skipped altogether if you have copies of a full APA style research report available to handout to interested visitors.

# 2. POSTER PEER FEEDBACK

**INSTRUCTIONS:** On a 3-point scale rate who well a peer has done his or her poster, where 1 = could be improved, 2 = meets criteria, and 3 = exceeds criteria.

**Posters are professional.** While posters are not dead and dry, they are also not flamboyant. Avoid bright gaudy colors. They should be printed on heavy stock paper. Hand drawings and hand writing are sloppy and amateurish. Mount the pages of your poster on heavy construction paper or matte board large enough to provide a 1 to 2 inch border or use large sheets of poster board to produce the same effect. Border and background materials should be in neutral colors that contrast pleasantly with your pages. The computer program Power Point has many useful options for planning and constructing professional looking posters.

**Posters are concise.** Use no more than six 8 \_ by 11 inch pages to display your report. A seventh page 8 \_ by 14 or 11 by 14 can be added to display the title and author. The total word count should be in the 500 to 750 range.

**Posters are easy to read.** When you write them, delete unnecessary details. Presenters stand near their posters to supply details when asked. Use font sizes 32-36 for headings and 72 and greater for titles. The text should be written in font sizes 20 to 28. Select a style of font that is easy to read standing 6 feet away from the poster.

**Posters are visual.** Use enlarged graphs and tables to display your results. Add drawings, cartoons, photos or other visuals to arouse interest and sharpen clarity. Use colors, but restrict yourself to harmonious 3-color schemes and avoid colors that give your poster the look of an elementary school project.

**Posters are in APA Style.** However, bend the rules of APA Style to communicate. Like a full APA Style report, posters include the following sections: *Title, Abstract, Introduction, Methods, Results, Implications,* and *References* (on the back of this sheet see the diagram of a classic poster layout.)

**Posters are social.** Dress professionally when you present your poster and be prepared to answer questions visitors might ask. Posters allow for a more natural form of discourse than speeches or written manuscripts. Relax and enjoy them.

## From Kristi Lemm:

# Replication Reseach Project Psychology 342, Fall 2002 (Instr.: K. Lemm)

#### **Overview**

Your task for this assignment is to replicate an established effect in social cognition, with a small twist. You can choose a study that has been described in your textbook/course packet or in lecture, or a related study from any of the topics we've covered. You may work with a partner or alone. You will collect data and prepare a poster to describe your study, similar to posters that are presented at student research conferences.

#### Choosing a topic

Pick a topic that we've covered so far that interests you. Locate an original article demonstrating a particular effect. Given ethical and time constraints, it will be best if you can choose something where the dependent variables can be collected using questionnaires or simple behavioral observation. Most journal articles include multiple studies and/or manipulate multiple variables within a single experiment. If your article is complex, choose one or two small pieces of the article to attempt to replicate. If you need a reference for a study I described in class, let me know.

Everyone needs to talk to me briefly about the study you will try to replicate. I need to make sure that every study falls within the range of research acceptable to Western's human subjects committee. You should focus on replicating the main findings of the study, however, you should alter the study in some minor way (e.g., by changing the questions to make them relevant to Western students or by adding a condition you think is important).

#### **Data collection**

For this project, it is OK to collect data in a relatively informal manner, using your friends, classmates, roommates, etc. (but do take data collection seriously, or the effect is unlikely to work). The sample size for these replications doesn't need to be as big as the original study, but you should try to have at least 25-30 subjects. If you would like to use the psychology subject pool, talk to me about it.

#### Preparing the poster

The poster you submit for this project will look similar to a poster that you might submit to a student research conference. A good resource to look at for how to make a poster is <u>http://www.kumc.edu/SAH/OTEd/jradel/Poster\_Presentations/PstrStart.html</u>. You can also download an example of a poster from my website, <u>www.wwu.edu/~lemmk</u>. Note that posters for this class should be about 3' X 4', smaller than posters at most conferences. Posters include the same main sections as a research paper: introduction, methods, results, and discussion, but the text of a poster is considerably shorter than a paper. The introduction should describe why this study was originally done – what is the phenomenon that the original research was trying to demonstrate and why is this important? The method section should describe the participants and the procedures used in data collection. The results section must include a detailed description of the results you found. You should compute frequencies or means and standard deviations (whichever is appropriate). Discuss the pattern of responses. Did you replicate the effect? <u>You don't need to do any inferential statistics</u> (you can if you really want to), just describe the trend that you observed. The discussion section should describe what these findings mean. What can this study tell us about how people think about social situations? If your data did not replicate the previous research, what do you think happened? Speculate on what might be different between your study and the original research.

## From Stacey J. Anderson:

Group Research Project for Poster Presentation **Due: Wednesday, July 24** 

#### Overview:

You and a group of your classmates are to design and conduct psychological research project to present at the ATDP Multidisciplinary Poster Session. The topic of the project is to be the topic within the broad field of psychology that holds the greatest interest for you. The topic is intentionally left wide open in order to allow you to explore your interests, express your creativity, and stretch yourselves. The project will culminate in a presentation of a poster you have prepared to display your work, much like a school science fair. Homework #'s 2, 3, and 4 are assigned to assist you through the development and design of your project. Examples of study designs will also be presented in lecture.

#### **Guidelines:**

#### *Poster (size approximately 2 feet x 3 feet, or larger if you like):*

Place the title of your project prominently at the top of the poster board to allow viewers to identify your project easily. Group members' names should appear directly underneath the title.

Prepare all diagrams or charts neatly and legibly beforehand in a size sufficient to be read at a distance of 5 feet. Use creativity by using different font sizes and styles, perhaps even color. Use different colors or textures for each line or bar contained in your graph or chart. You do not need a color printer to do this; you may simply use crayons or colored pens or pencils.

Organize the paper on the poster board so that it is clear, orderly, and self-explanatory. You have complete freedom in displaying your information in figures, tables, text, photographs, etc. The oral presentation must cover the same material as the poster. Label different elements as 1, 2, 3, or A, B, C. This will make it easier for a viewer to easily follow your display.

Include the following sections on your poster:

- Introduction
- Hypotheses
- Methods
- o Results and Conclusions

#### Sections:

Introduction: Summarize the background literature that is relevant to your project. You will need to include three references from psychological journals in this section. Explain how the literature you summarized leads you to pose the research question(s) you pose in your project. What did your project add to the literature on this topic? What questions does the previous literature leave unanswered that your project intended to answer? Hypotheses: Formalize the questions you wish to address using operational definitions of your variables. (Things of this nature will be covered in lecture in Week 1).

Methods: Describe the methods and materials that you used to conduct the study. Consider these questions: What is/are the independent variable/s? What is/are the dependent variables? What are potential confounding variables, and how did you control for them? From what population did you draw your subjects? What procedure did the treatment group/s receive, and what did the control group receive? What measures did you use? (Again, things of this nature will be covered in lecture in Week 1).

Results and Conclusions: Explain what effects or relation/s between variables you found. Consider these questions: What does a significant effect look like in terms of the way you measure your variables? What statistical test/s were appropriate? What do the effects you find mean in plain language? You may use charts, graphs, or other images to clarify your expected findings if you wish.

#### Presentation:

Prepare a poster-sized display of your work according to the above guidelines to be presented at the ATDP Multidisciplinary Poster Session on Friday, July 26, during regular class time.

A.P. Psychology, 2264.1 ATDP Summer 2002 Stacey J. Anderson

#### From Tim Lawson:

#### CREATING YOUR POSTER:

1. Size & Materials - your poster should be the size of two standard pieces of poster board (taped together). Thus, you will at least need two pieces of poster board and some tape. Other ideas for enhancing your poster include: (a) use colored poster board rather than white, (b) use computer-generated letters, rather than handwritten letters for the title, author, and institution, (c) paste the pages of your report onto colored construction paper prior to attaching them to your poster. These are just ideas, not requirements--this is your poster, so be creative!

2. Parts of the Poster - your poster should include your title, name, and institution. It should also include an abstract, introduction, method, results, and discussion (or conclusion) sections. As a general rule, you should not try to fit your whole report on the poster. People do not want to stand there for a long time reading your poster. Thus, you should edit each section of your paper for the poster, providing just enough information for the reader to know the background and purpose of the study, what was done, the major findings, and what the results mean. See the posters in the Behavioral Sciences lab for good examples.

3. Typing the Pages for the Poster - the size of the typeface on the pages of your poster should be much larger than normal. You want a person to be able to easily read your poster from a distance of about 6 feet. Use your favorite word processing software, single space (or use a 1.5 spacing option) the text, use full justification (i.e., align both the right and left margins), and use a large font. Iâ $\in$ <sup>TM</sup>ve found that a font size of 48 points for the title, 36 points for the authorâ $\in$ <sup>TM</sup>s name and institution, and 24 points for the text are adequate (but, again, these are just guidelines not requirements).

#### PRESENTING YOUR POSTER:

Please wear "dressy causal" or semi-formal clothes to your presentation. Students who attend to poster session will be asking you questions about your project, so be prepared to describe your study. Also, it is important that you stand beside your poster so the attendees can talk to you.

## From Jamie McCreary:

#### **Constructing A Research Poster**

General information pertaining to writing style, grammar, editing, and formatting are presented in Chapters 2,3 & 5 of the *APA Publication Manual* 5<sup>th</sup> edition. You are expected to follow these guidelines in all your written work. Also review information specific to the use of Figures & Tables presented in sections 3.76, 3.77, 3.81, 3.84, 3.86 before you submit your poster for grading.

#### Poster Content & Format

A poster is a visual representation of your research. Keep it simple!!! The materials must be comprehensible to the visitor without extensive comments on your part. Since you will be available to elaborate, there is no need to put everything in your poster. A well designed poster includes a short, clear, non-technical description of what you did, why you did it, and what you found. Normally a poster summarizes an entire study or experiment. However, if your project is very complex, it is acceptable to focus on

one aspect of it in your poster (e.g., present only one dependent variable or one set of hypotheses.) However, be prepared to summarize the other aspects of your study for anyone who is interested.

The visitor's initial impression of your work will be based on your writing. It is essential that your materials be free from spelling, punctuation, and grammatical errors. Edit carefully and have other people check over your materials.

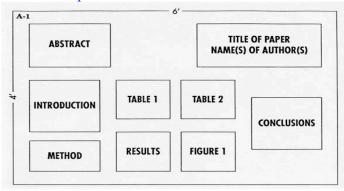
Your poster must be clear, well organized, and easy to read. Material should be printed on white paper in a font that is easily viewed from six feet away. Mount these pages on a poster board that can be displayed on an easel. (Check with your instructor if you do not own an easel.) Your poster board may be in a contrasting color.

The Title, Author and Affiliation should be across the top of the poster. The lettering should be approximately one inch high. You can use commercially available lettering, stenciling, or a quality computer printout.

Arrange your material to be read from top to bottom and left to right. Include an abstract (300 words or less) in the upper left hand corner of your poster. Many people like to include a brief statement of introduction, a list of hypotheses, description of subjects and procedure, a summary of results, and a set of conclusions. You may vary this format in whatever way is necessary to present your study clearly. Provide clear labels for each section of your poster.

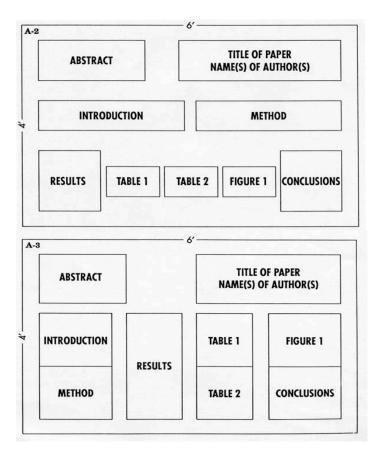
Present your data in summary form, either through graphs or tables. Tables and Figures should be large and attractively presented with clear labels. You may use color in your Figures if you like. Do not duplicate information. Present it either in table or graph form, but not both.

You will pick up an easel for presenting your poster at the Department Office. Many students print out the parts of the poster, back them with colored construction paper, and paste the pieces to a board. You can also construct the poster in Microsoft Publisher and clip the entire prsentation to a poster board. The size should be approximately 3' X 4'. Kinkos will do the printing on large paper for about \$8 (black and white).



#### Sample Poster Formats<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> These were downloaded from the Psi Chi website. Check out the web site for more tips at http://www.psichi.org/conventions/tips.asp



# Poster Appearance

Your poster should be both pleasing and professional in appearance. Do not use handwritten materials. Be creative! Use color where possible. Photographs of subjects and examples of experimental materials add life to the poster. You goal is to make your poster so attractive that people will want to stop and talk to you about your work.

## Supplemental Materials

You should bring copies of your scales and materials with you. Some visitors may want to review them. If possible, bring duplicate packets so that more than one person can review them at a time.

Some presenters also bring a one to two page handout about the study. This presents a brief description of the study and perhaps one primary graph. Handouts are offered to visitors who are particularly interested in your study because it relates to a project they are doing. If you do not bring a handout, you should ask for the person's name and address and send a copy of your paper once it is complete.

## Poster Grading Criteria: 27 Point Maximum

Abstract (3)	Present an abstract summarizing the problem, method, results, and conclusions.
Introduction (3)	Identify the research question and use prior research to build a strong rationale for the hypotheses.
Hypotheses (1)	Present hypotheses that are clear, precise, and well-written.
Method (6)	Provide a precise description of participants, procedures, and materials.
Supplemental Materials (1)	Provide a clean copy of all experimental materials (scales, instructions, etc.) for visitors to review. (Submit with your poster.)
Results (3)	Present all statistical results accurately, using APA Style.
Discussion (3)	Present specific critiques of the study <u>and</u> ideas for conducting future research.
References (1)	Present complete references formatted according to APA Style
Appearance (3)	Construct a poster that is neat, clean, and well-organized. Use appropriate and professional-looking tables and/or figures
Writing (3)	Write clearly and edit carefully for spelling, punctuation, and grammar.

#### **The Poster Session**

The poster session provides an opportunity for students to discuss their research as professionals. Your communication and behavior at the poster session should reflect that fact. First, there must be someone available to greet visitors and answer questions at all times. Second, if you are standing at or near the poster, you must greet and attend to visitors. Don't spend time visiting with your team mates or friends! If you want to take a break, leave the poster area.

Visitors will be looking for information about your project, but may not know what to ask. Your responsibility is to summarize the goals, methods, and results of you research project clearly and concisely. Follow the agenda below to make sure you cover everything:

- 1. Introduce your research question.
- 2. Summarize the most critical empirical research on the topic.
- 3. Explain your hypotheses and the rationale behind them.
- 4. Describe your participants, procedures and materials.
- 5. Describe the results of all statistical tests and state whether they support or refute your hypotheses.
- 6. Discuss the implications of your results for answering the research question.

- 7. Identify several ways in which the research could be improved.
- 8. Explain two ideas for future research.

#### \*\*\*\*

## **Constructing A Research Poster**

General information pertaining to writing style, grammar, editing, and formatting are presented in Chapters 2,3 & 5 of the *APA Publication Manual* 5<sup>th</sup> edition. You are expected to follow these guidelines in all your written work. Also review information specific to the use of Figures & Tables presented in sections 3.76, 3.77, 3.81, 3.84, 3.86 before you submit your poster for grading. Poster Content & Format

A poster is a visual representation of your research. Keep it simple!!! The materials must be comprehensible to the visitor without extensive comments on your part. Since you will be available to elaborate, there is no need to put everything in your poster. A well designed poster includes a short, clear, non-technical description of what you did, why you did it, and what you found. Normally a poster summarizes an entire study or experiment. However, if your project is very complex, it is acceptable to focus on one aspect of it in your poster (e.g., present only one dependent variable or one set of hypotheses.) However, be prepared to summarize the other aspects of your study for anyone who is interested.

The visitor's initial impression of your work will be based on your writing. It is essential that your materials be free from spelling, punctuation, and grammatical errors. Edit carefully and have other people check over your materials.

Your poster must be clear, well organized, and easy to read. Material should be printed on white paper in a font that is easily viewed from six feet away. Mount these pages on a poster board that can be displayed on an easel. (Check with your instructor if you do not own an easel.) Your poster board may be in a contrasting color.

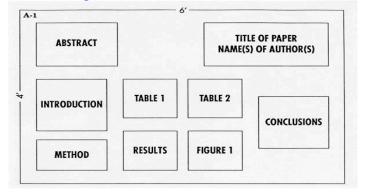
The Title, Author and Affiliation should be across the top of the poster. The lettering should be approximately one inch high. You can use commercially available lettering, stenciling, or a quality computer printout.

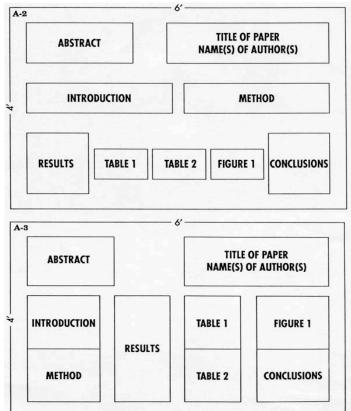
Arrange your material to be read from top to bottom and left to right. Include an abstract (300 words or less) in the upper left hand corner of your poster. Many people like to include a brief statement of introduction, a list of hypotheses, description of subjects and procedure, a summary of results, and a set of conclusions. You may vary this format in whatever way is necessary to present your study clearly. Provide clear labels for each section of your poster.

Present your data in summary form, either through graphs or tables. Tables and Figures should be large and attractively presented with clear labels. You may use color in your Figures if you like. Do not duplicate information. Present it either in table or graph form, but not both.

You will pick up an easel for presenting your poster at the Department Office. Many students print out the parts of the poster, back them with colored construction paper, and paste the pieces to a board. You can also construct the poster in Microsoft Publisher and clip the entire prsentation to a poster board. The size should be approximately 3' X 4'. Kinkos will do the printing on large paper for about \$8 (black and white).

# Sample Poster Formats<sup>2</sup>





<sup>&</sup>lt;sup>2</sup> These were downloaded from the Psi Chi website. Check out the web site for more tips at http://www.psichi.org/conventions/tips.asp

## Poster Appearance

Your poster should be both pleasing and professional in appearance. Do not use handwritten materials. Be creative! Use color where possible. Photographs of subjects and examples of experimental materials add life to the poster. You goal is to make your poster so attractive that people will want to stop and talk to you about your work.

# Supplemental Materials

You should bring copies of your scales and materials with you. Some visitors may want to review them. If possible, bring duplicate packets so that more than one person can review them at a time.

Some presenters also bring a one to two page handout about the study. This presents a brief description of the study and perhaps one primary graph. Handouts are offered to visitors who are particularly interested in your study because it relates to a project they are doing. If you do not bring a handout, you should ask for the person's name and address and send a copy of your paper once it is complete.

Abstract (3)	Present an abstract summarizing the problem, method, results, and conclusions.
Introduction (3)	Identify the research question and use prior research to build a strong rationale for the hypotheses.
Hypotheses (1)	Present hypotheses that are clear, precise, and well-written.
Method (6)	Provide a precise description of participants, procedures, and materials.
Supplemental Materials (1)	Provide a clean copy of all experimental materials (scales, instructions, etc.) for visitors to review. (Submit with your poster.)
Results (3)	Present all statistical results accurately, using APA Style.
Discussion (3)	Present specific critiques of the study <u>and</u> ideas for conducting future research.
References (1)	Present complete references formatted according to APA Style
Appearance (3)	Construct a poster that is neat, clean, and well-organized. Use appropriate and professional-looking tables and/or figures
Writing (3)	Write clearly and edit carefully for spelling, punctuation, and grammar.

# Poster Grading Criteria: 27 Point Maximum

## **The Poster Session**

The poster session provides an opportunity for students to discuss their research as professionals. Your communication and behavior at the poster session should reflect that fact. First, there must be someone available to greet visitors and answer questions at all times. Second, if you are standing at or near the poster, you must greet and attend to visitors. Don't spend time visiting with your team mates or friends! If you want to take a break, leave the poster area.

Visitors will be looking for information about your project, but may not know what to ask. Your responsibility is to summarize the goals, methods, and results of you research project clearly and concisely. Follow the agenda below to make sure you cover everything:

#### From Sue Boland:

#### **INSTRUCTIONS FOR POSTER PRESENTATION**

Students enrolled in Experimental Psychology, completing independent studies, and doing internships are participating in a "Student Poster Day" sponsored by the Psychology department. If you are presenting the results of a research study, read sections A and B. If you are presenting an internship experience, read sections A and C.

#### **A. General Instructions**

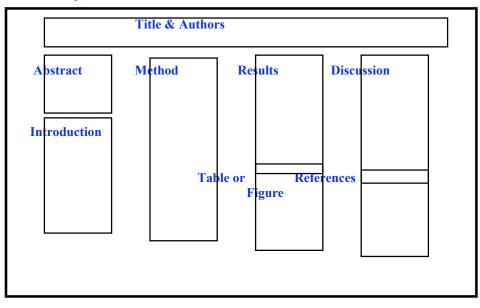
For a poster presentation you prepare a written summary of your research project or internship experience for people to read and discuss. The summary will consist of paper sheets with large print, attached to a poster board.

There are several sections to a poster. For example, for a research study you need the title and author(s), abstract, introduction, method, results, conclusion and references. A poster is similar to a written report, but much briefer. You cannot provide all the information from your paper in a poster, so you must choose the most important information to present. Ask yourself, "What would I need to know if I were viewing this material for the first time?", and then state that information clearly. Keep it simple and be selective.

The poster board you will be using is approximately 28 inches by 40 inches (comes in two pieces). The poster board is supplied by the Psychology department. Prepare a label indicating a) the title of your paper and b) the author(s) for the top of the poster board. Also label each section of your presentation.

Keep in mind that your poster will be read from distances of two feet or more. All lettering should be 1/4 inch high or higher. If you are using a word processor or computer, choose a font that is easy to read, and make sure the print is dark. If you do not have access to a computer, a copying machine can be used to magnify the print.

A sample poster arrangement appears below. The sequence of your presentation should be easy to follow. Note: Posters for internships will have different sections.



#### **B.** Poster for a Research Study

Students enrolled in Experimental Psychology (PSYC409) are required to participate by presenting a poster. Group projects are represented by one poster prepared by the group. Participation counts for 20 points toward your final course grade. A poster for a research study should have the following sections:

**<u>Title</u>**: The title page should contain the title, the author's names and institutional affiliation. The title should clearly state what the poster is about; avoid statements that begin with "an experiment of" or "an investigation of". Be concise; the title should be no longer than 10 to 12 words.

<u>Abstract</u>: This is a brief statement of your method (what you did), your results (what you found) and your conclusions (what it means).

Introduction: Clearly state what you expected to find in your study and why you

expected to find it. Cite relevant literature. An introduction in a poster is usually much shorter than one in a research report. <u>Methods</u>: Include information about your subjects, any apparatus or measures you used and your procedure.

**<u>Results</u>**: Report the results of the statistical analysis of your data.

**Discussion**: Interpret your results, state whether your hypotheses were supported and discuss the meaning and implications of your findings.

#### C. Poster for an Internship

A poster presentation of an internship should have the following sections:

<u>**Title**</u>: The title pages should contain the phrase, "Internship at \_\_\_\_\_\_", with the space filled in by the official name of the internship site. It should also contain your name and institutional affiliation (i.e., Lock Haven University).

<u>Abstract</u>: This is a brief description of the internship location, your duties at the internship, and that you gained by doing the internship.

Site: Give a general description of the internship site, noting the population served and its goals.

**Duties**: Describe your duties at the internship, including your main responsibilities and the activities you most regularly engaged in. **Discussion**: Comment on what you gained from doing this internship. Include references to whether or not you would recommend this internship to other students.

\*\*\*\*

From: <u>Vaughn</u>

# Poster Presentation Due Friday, December 14 Grade Value: 50 Points

In a poster session, researchers display summaries of their research (or in your case, proposed research) on poster boards, providing essential details of the background, methodology, (predicted) results, and implications. The researchers then stand with their posters to provide details, answer questions, and discuss their work with interested persons. Not only do poster sessions give the researchers who are presenting their studies an opportunity to meet others who are interested in their topic, but they often serve as a social hour in which convention attendees gather to interact with one another.

#### **GUIDELINES FOR FORMAT (10 points, or 20%)**

<b>Size of poster</b> ( <i>3 points</i> ):	
No smaller than a	a standard piece of poster board
No larger than 3	X 5 feet (which would be about 15 sheets of letter-sized paper,
plus a ba	anner for your title [your banner would go on the top of the poster])
Font size: Your font shou	Ild be easily readable at 3-5 feet distance (4 points)
Suggestions:	
You do	not have to use Times Roman Font. Be creative if you want!
	Just remember: people do need to be able to read your poster.
The foll	owing are size suggestions for Times Roman Font, because it was
	easiest to choose just one font style for these examples.
a)	Body of your text: 20-point Times New Roman
b)	Titles of sections (Background, Method, Results, Implications):
	somewhat larger, and in bold face print
c)	Title of your poster: very large font, and in bold face print.
With all	this large font, you will probably find it helpful to select
	<pre><pre><pre><pre><pre><pre><pre>for the page will be printed "on its side", like the pages in the posters you saw in class). That will allow you to get more words on a page.</pre></pre></pre></pre></pre></pre></pre>
<b>Overall impression</b> : (3 pa	
· · ·	Id look nice. If you want to include photographs, color, etc. on
	ster, you are welcome to do so. Feel free to be creative! But you do not have to turn this into a
	wn art project, especially if you are not artistically inclined. A clean, simple poster can be as
	re as an artsy one.
You may either w	vrite in short paragraphs, or use bullets to list short sentences. It
	you. Either way, keep your writing concise and your organization clear.

## **GUIDELINES FOR CONTENT (40 points, or 80%)**

#### **Background**

Maximum length: two sheets of letter-sized paper Grading: 10 points What is the problem or issue that you are addressing? (3 points) What does past research have to say about it? (you will have to be very brief!) (4 points) What is your hypothesis? (3 points)

#### Method

Maximum length depends on the experiment Grading: 10 points How many participants will you have and, generally speaking, who will they be? (2.5 points) What is the design of your proposed study? (2.5 points) What will your procedure be? (2.5 points) If you have photographs as stimuli, you should consider showing them on your poster. Similarly, if you have paragraph-long descriptions as your stimuli, you should consider showing them on your poster. What are your dependent variables? (2.5 points)

# **Results and Figure(s)**

Maximum length depends on the experiment Grading: 10 points Do you describe the most important predicted results of your experiment? (5 points) Does your figure(s) have a title on it? Are the figure and the words on it big enough to read easily? (5 points)

#### Implications

Maximum length: two sheets of letter-sized paper Grading: 10 points How might your study help resolve the original problem? (5 points) What conclusions and theoretical implications could you draw from your experiment, bearing in mind possible limitations of the study? (5 points)

#### **Grading Sheet for Poster Session**

Presenter(s): FORMAT (10 points, or 20%) Size of poster (3 points):	
No smaller than a s	standard piece of poster board
No larger than 3 X	5 feet
Font size: font should be easily	y readable at 3-5 feet distance ( <i>4 points</i> )
Suggestions:	
You do n	not have to use Times Roman Font. Be creative if you want!
	Just remember: people do need to be able to read your poster.
The follo	owing are size suggestions for Times Roman Font, because it was
	easiest to choose just one font style for these examples.
d)	Body of your text: 20-point Times New Roman
e)	Titles of sections (Background, Method, Results, Implications):
	somewhat larger, and in bold face print
f)	Title of your poster: very large font, and in bold face print
With all	this large font, you will probably find it very helpful to select <paper landscape="" size:=""> (page will be printed "on its side", like the pages in the posters you saw in class). That will allow you to get more words on a page.</paper>

**Overall impression**: (3 points)

The poster should look nice. If you want to include photographs, color, etc. on

your poster, you are welcome to do so. But a clean, simple poster can be as attractive as an artsy one.

- You may either type up short paragraphs, or use bullets to list short sentences. It
  - is up to you. Either way, keep your writing concise and your organization clear.

#### CONTENT (40 points, or 80%)

#### Background

Maximum length: two sheets of letter-sized paper

(3 points) What is the problem or issue that you are addressing?

- (4 points) What does past research have to say about it? (you will have to be very
- brief!)

\_(3 points) What is your hypothesis?

#### Method

Maximum length depends on the experiment

- (2.5 points)How many participants will you have and, generally speaking, who
- will they be?
- (2.5 points) What is the design of your proposed study?
  - (2.5 points) What will your procedure be?

If you have photographs as stimuli, you should consider showing them on your poster.

- Similarly, if you have paragraph-long scenarios as your stimuli, you
  - should show them on your poster.
- (2.5 points)What were your dependent variables?

#### **Results and Figure(s)**

Maximum length depends on the experiment

- (5 points) Do you describe the most important predicted results of your
- experiment?
- (5 points) Does your figure(s) have a title on it? Are the figure and the words on it big enough to read easily?

#### Implications

Maximum length: two sheets of letter-sized paper

(5 points) How would your study help resolve the original problem?

(5 points) What conclusions and theoretical implications could you draw from your experiment, bearing in mind possible limitations of the study?