Department of Politics
Senior Thesis Poster Session
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Spring 2022

Email: linals@princeton.edu

Office hours: https://wase.princeton.edu/princeton/views/pages/makeappt.php?calid=5051
By appointment, on WASE
Wed 4:30PM-6:30PM
Fri 10AM-3PM

Website: https://politics.princeton.edu/senior-thesis-poster-session

The Department of Politics' Senior Thesis Poster Session takes place every year at the end of the Spring semester. The Poster Session consitutes the conclusion of the thesis and provides the opportunity for graduating seniors to present their research and gather feedback from faculty and colleagues. The poster allows students to describe their theoretical argument and summarize their empirical results. Please note that preparing and presenting a poster is a **requirement** for all Politics seniors. This handout will first summarize the main deadlines and key information on requirements and evaluation of the poster session. Then, you will find a short guide to help you achieve effective scientific communication.

KEY DATES:

INFORMATION SESSION
Attending one of the information sessions is **mandatory***. I will hold two sessions. You may choose the one that best fits your schedule.*

- *Session A:*
  Thursday, February 17, 2022 7:30-8:30PM
  Robertson 023

- *Session B:*
  Friday, February 18, 2022 1:30-2:30PM
  Robertson 023

DEADLINE FOR THE SUBMISSION OF THE POSTER:
Note that this is a **hard deadline***. Failure to meet it will result in steep penalties: 2/3 of a letter grade for the first 24-hour period, and 1/3 for each additional 24-hour period.*

- **Tuesday, April 19 at 12:00PM**
  https://polthesisposters.princeton.edu/student_login.php

POSTER SESSION:

- **Thursday, April 28 from 1:30 to 4:30PM**
  Frist Campus Center Multi-Purpose Rooms (Basement Level)

REQUIREMENTS:

- Submitted by 12:00 pm on April 19 via the online submission system accessed here: https://polthesisposters.princeton.edu/student_login.php

- Submitted in PDF format.

- All posters must be landscape in orientation, with the exact dimensions of 24 × 36 inches.[1]

Note: The Politics Department will handle the ordering of posters and the cost of printing. These are hard deadlines. Failure to meet them will result in steep penalties. Moreover, late submissions may also result in you having to pay to print your own poster ($50-100).

BEST SENIOR THESIS POSTER AWARDS:

- This year, the Department of Politics will give out four Best Senior Thesis Poster Awards.

- Three of the prizes will be awarded by the Department's faculty graders.

- The fourth prize will be awarded by the public. You will get the opportunity to vote for the poster you preferred at the end of the poster session.

- Each award will be worth $500.

EVALUATION CRITERIA:

You will find below the evaluation criteria for the poster: [2]

- Information is accurate and includes an explanation of key concepts and theories, as well as a clear description of the results and the importance of the results.

- The content is clearly and concisely written with a logical progression of ideas and supporting information.

- The abstract describes the basic components of the thesis.

- Graphics are easily viewed and related to the topic, making the material easy to understand.

- Fonts are easily read and appropriate for headings and text.

- The presenter demonstrates full knowledge of the material, can explain and elaborate on content, and competently answers questions.

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[1] This dimension can be set in PowerPoint using the Page Setup menu.
[2] Adapted from Texas Tech University Center for Active Learning and Undergraduate Engagement.

WHAT IS A RESEARCH POSTER?

The poster should summarize your research and effectively convey your question, theoretical argument and main findings. It should be organized and easily readable. You should try to make it as clear and structured as possible. The poster should not be exhaustive but rather should make your audience want to read and learn more about your thesis. Be selective and strategic in the information you choose to highlight in the poster. The poster should be understandable and accessible to an audience unfamiliar with your work.

Space is limited on a poster. You will not be able to cover everything. These questions will help you to identify the key points in your research thesis.

To start building your research poster, begin by asking yourself the following questions:
- What problem did I choose to study? Why is it important?
- What was my theory? What did I want to test?
- What methods did I use?
- What did I find out? Why are my findings interesting/important? What are the implications of my research?

AVAILABLE RESOURCES

There are many online resources to help you organize and design your research poster!

Princeton resources:

- The library has a guide that provides many online resources to get started on poster design: https://libguides.princeton.edu/c.php?g=1124028&p=8198593

- Stokes Viz Hub for individual consultations on quantitative and qualitative data visualization.

- McGraw Center's learning consultations can provide help in developing public speaking skills or on the thesis itself.

- Firestone's Data and Statistical Services (DSS) can help with data cleaning and analysis.

Overleaf/LaTex:[3]

If you are familiar with $\mathrm{L\!^AT_EX}$, check out the templates available on overleaf: https://fr.overleaf.com/gallery/tagged/poster

Note: By scrolling through the template gallery, you will see all kinds of poster templates developed by overleaf users. Ask yourself which ones make you want to know more about the research, which ones you find clear, effective, what seems to work and what does not. Moreover, as you become more familiar with research poster, you will get a better sense of the expectations and figure out your own preferences.

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[3] If you want to discover or learn more about LATEX and overleaf, the following guide should help you get started: https://libguides.princeton.edu/c.php?g=1066954&p=7764046

Powerpoint:

If you have never used LATEX, do not worry! Powerpoint is also a useful tool to create research poster. Templates are also available to create your own poster on powerpoint. For example, the following website provides free examples and tutorials:
https://www.posterpresentations.com/free-poster-templates.html

Note: If templates can be useful tools to get started on the poster, you will have to customize and adjust the layout to fit your own project. A good research poster is one where the design best serves the content. Do not let the form determine the substance. First select what you are going to say in your presentation and then develop a layout that best conveys your findings.

Other online resources:

- A great video on making better scientific posters by Mike Morrison:
  https://youtu.be/1RwJbhkCA58

- Write up of the above video by Inside Higher Ed:
  https://www.insidehighered.com/news/2019/06/24/theres-movement-better-scientific-posters-are-they-really-better

- A template by Morrison:
  https://osf.io/ef53g/

- An R package to make reproducible poster designs using RMarkdown by Brent Thorne:
  https://rdrr.io/cran/posterdown/

- A LaTeX Template by Rafael Bailo: https://github.com/rafaelbailo/betterposter-latex-template

BASIC ELEMENTS OF A RESEARCH POSTER

Your poster should probably include the following information:

- **Title/Author/Affiliation**: Featured in an easy to find location.

- **Abstract:** In 150 words, summarize your research.

- **Body:** What background does the audience need? Provide some additional detail on your methodology.

- **Data/Empirics:** These might include figures, tables, or other visual aids to communicate your results.

- **Conclusion(s):** What should a visitor to your poster take away?

- **References:** Include basic references that are cited in the poster itself. This should not really be more than four or five.

PRE-SUBMISSION CHECKLIST

Identify your audience
- I have thought of specific people who would be interested in my research and how they could make use of it in their own research or lives.
- I have solicited feedback from some of these individuals.
- I have included the necessary background for my audience to understand the main points of my research.

Distill key Concepts
- The text is written without jargon and in simple sentences.
- I can understand the main conclusions at a glance.
- It is clear where I would need to go to get more information.
- I've asked a roommate or friend to read over my poster and explain to me what they think it is about.

Visualize your process
- My data visualizations are consistent with standard practice for similar data and relationships.
- Each plot and the poster itself has a clear and logical sequence that is apparent on initial inspection.
- The colors used in my poster are few, appropriate, and accessible.
- My prose is limited and the text is high-contrast and legible.

Present your story
- My presentation is consistent with the information in the poster.
- The presentation draws on visualizations to show and not just tell what my research says.
- I draw connections to other research or other cases with which my audience will be familiar.
- I encourage active participation of the audience by inviting people to visualize their expectations, to question their assumptions, or through some other means.

Build the poster
- My poster is in landscape in orientation, with the exact dimensions of 24 × 36 inches.
- My poster is in .pdf format.
- I have marked the submission deadline **April 19 at 12:00 pm EDT** in my calendar.

AN UNDERGRADUATE'S GUIDE TO SOCIAL SCIENTIFIC COMMUNICATION[4]

Learn how to sell your ideas

As a social scientist leaving undergraduate education, you are entering a marketplace of ideas. In that marketplace, as in any marketplace, the products that gain traction are not necessarily the *best* products. They are the products which have the *best marketing*. When it comes to your ideas and your research, you are the only marketer.

Fortunately, the skills involved in marketing are much the same as those you've been developing over the course of your undergraduate education: understanding your audience; breaking down key concepts; as well as verbal, written, and

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[4] These materials were compiled by Benjamin Crisman building off the work of the incredible graduate coordinators who came before me: Sean Luna McAdams, Carissa Tudor, and Elsa Voytas.

graphic communication. Making this poster isn't going to teach you how to do those things from scratch, but rather how to apply the skills you already have to sell your ideas to fellow scholars, policymakers, and lay audiences.

You will acquire the following skills:

• Distillation:

How do you make detailed, rich, and complex ideas easily digestible to both expert and non-expert audiences?

This exercise will teach you how to strip down your argument and findings to the bare essentials, both simplifying the logic and specialized concepts you use to craft your argument and judiciously choosing which aspects of your larger project to emphasize. You will learn to identify the key elements of your research and to synthesize your work to make it exciting and accessible to anyone.

• Visualization:

How can you transform concepts, theories, and findings into visually appealing and intuitive figures, maps, and diagrams?

Making a poster helps you to visualize your argument and determine which kinds of empirical and conceptual visual tools will best communicate your theory and findings. Moreover, effective visualization makes presenting your arguments that much easier.

• Presentation:

How do you effectively and confidently explain your project to people unfamiliar with it? How do you get people to engage with your ideas and get excited about your work?

The poster is fundamentally about effectively communicating your research to an academic audience, getting people excited about it, and responding to their questions and comments. In this guide, we'll remind you what the goals of scientific communication are, what questions you need to ask yourself to deliver on those goals effectively, and how you can use the tools of scientific communication to develop a better senior poster and presentation.

Understand your objective

If the goal of social science is to develop systematic understandings of social phenomena, the goal of social scientific communication, broadly, is to effectively share those understandings with your audience. The reasons you might want to communicate those understandings effectively, however, are many.

By communicating your ideas to an audience, you can:

• Increase knowledge:
Good communication means that not only will your audience be exposed to your ideas and the evidence you have gathered through your research, but they will *remember* them. The more they remember, the more your ideas can be put into practice, advance common knowledge, or be built upon.
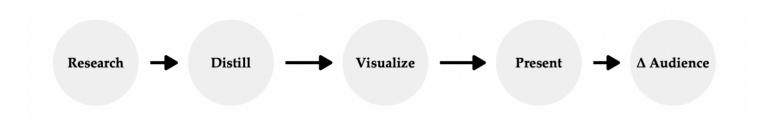
• Change behavior:
Your research probably has some real-world implication. Better communication means that you can be a stronger advocate for specific policies or a more convincing advocate for individual behavior change. Communication is a powerful way to gain influence and affect the world outside of academia.

• **Improve feedback:**

If you communicate your ideas and research clearly and effectively, it will be easier for your peers and advisors to share relevant feedback and improve your research. While writing your thesis, you may have had the impression that research is a solitary venture. However, scientific enquiry is also a collective effort and only goes forward when people exchange ideas, collaborate, read each other and sometime, disagree. When you communicate your ideas, you do not only meet an audience but you also enter a community. Without interaction, ideas cannot spread and science stagnates.

Each of these objectives in some way involve making changes in your audience –in how they view the world, their place in it, or policies which can influence specific aspects of it. Consequently, we need to understand who our audience is, what we are trying to communicate to them, and why it might be important to them. From there, we can work our way backwards from that change through to the original research to figure out how to best advance our goals.

The chronological order of events leading up to these objectives often follows the path delineated below:

Research ➡ Distill ➡ Visualize ➡ Present ➡ Δ Audience

We will start with an exercise designed to help us identify and understand our audience. If we can understand the audience, we can design our presentation and poster to help them better retain relevant information about our research and hopefully use it to improve their research or their lives. We'll quickly see how achieving this in turn depends on creating accessible and engaging visuals centered around clear concepts. Finally, we'll provide you with some resources to help you construct the digital version of your poster.

STEP !: Identify your audience

Thinking about who your audience may be is important at all stages of the research process, but is particularly important in the production of audience-facing materials like posters, presentations, or blog posts/editorials. Here, we present three questions that can help you think about your audience and things you'll need to keep in mind to communicate to them effectively. Asking these questions will also help you identify what points from your research you should emphasize and how you should go about explaining it. Should your presentation be more or less technical? Shorter or longer? Focused on the research itself or the policy implications?

Here are some useful questions to get started:

• **Q1:** *Who did you have in mind when you started the project?*

This exercise gives you a starting point for sharing your ideas and getting feedback prior to the poster session. If these are the people who will find your research useful, you're doing them a favor by showing it to them. Even if they have criticisms, you're learning how your project can be improved to better meet the needs of your audience. The process of research is rarely a once-and-done deal.

• **Q2:** *What is the minimum background information my audience will need to understand my research?*

As a social scientist, you also have the burden of providing enough context for your research and this too will vary across audiences. In the poster session you will be presenting to an audience whose technical knowledge is likely high but whose case-knowledge of your specific question is likely lower.

• **Q3:** *What findings from my research will be the most useful to this audience?*

Finally, ask yourself what aspect of your research the audience will find the most useful. This question will help you prioritize which parts of your research you'll want share with your audience. Your poster will be limited in size, but even small posters can include *too much* information which means your audience won't know which parts to take-in. Therefore, we need to simplify and distill our thesis into a few key concepts.

STEP 2: Distill key concepts

People's time, attention spans, and information processing capacity are limited. This means that you need to identify the single most important concept, statement, or finding from your research that you can say with certainty (or with characterized uncertainty, we are scientists after all). Again, this single thing may change with respect to your audience. Policymakers don't care that natural splines may be a consistent way of estimating local treatment effects in regression discontinuity designs. They care that you found a better way of evaluating whether or not their policies are working. For an audience of political methodologists, the reverse is probably true.

Think about how you would feel if you were in the audience. While you may feel that you want to include everything in your poster and that it is difficult to omit certain aspects of your project, try to imagine yourself in the audience. We all have had the experience of listening to a presenter who has to rush or gives so much detail that we lose track of the main argument. How much did you retain from such presentations? Distillation is about finding the right balance between rigor and clarity.

So, ask yourself:

• **Q1:** *What is the most important thing for this audience to take away from this interaction?*

Usually that comes in one of two forms. Either, you are reporting the direct results of your research ("Increasing access to *X* improves *Y*") or you are using your research to make a point about the world ("The new budget limits access to *X* and here's why that's important."). In both cases, your research provides the basis for argument, but the emphasis on design and implications is different. For the poster session, it should probably be the former as you're speaking to fellow political scientists. When you have your one idea, write it in a single easy to understand sentence. Make it as short as possible. Discard adverbs and jargon. For a research presentation like a conference or poster session, this single sentence can often be used as your title.

Once you have said the thing you want to say, you need to back it up. Naturally, it's taken you fifty pages or more to back it up in your thesis, but you can use the structure of your thesis as a starting point. Conduct a similar exercise for each section of your paper – the background, the methodology, the findings, the limitations– and write a new, single-sentence heading for each section.

• **Q2:** *How would I explain this to my roommate who doesn't study social science?*

A way to validate whether or not you've done this successfully is to show your new outline –composed of single sentences– to a friend who has never read a single political science article would understand. The outcome of this exercise can act as the basis for sequencing your poster and presentation.

STEP 3: Visualize your process

The purpose of visualization is to help tell the story of how you came to your conclusions. Showing quantitative data is one way. If the audience can *see* that data points line up the way you predict, your argument will be more compelling. If you use a qualitative approach, you can use visualization to illustrate your process.
Visualization can also efficiently provide lots of information to your audience in a structured way. Instead of reading a page of prose on your methodology and interpretation of the coefficients of a regression, an added variable plot provides the audience much of what they need to know about your methodology in a single glance.

Tip 1: *There are standard ways to visualize most relationships.*

A first step is identifying the right tools for the data you have or the story you want to tell. Below we list some common relations and some potential ways to visualize them. There are many resources online from which to take inspiration (we list some of these below). However, a good starting point for individualized feedback is the Stokes Viz Hub service offered virtually through Stokes library.

Comparison	Grouped bar chart, circular area chart (over time or for many variables), line chart (over time)
Relationship	Scatter plot (two variables), bubble plot (three variables), added variable plot (marginal effect)
Distribution	Histogram, density plot, scatter plot (2 variables), 3d area plot (3 variables)
Composition	Stacked bar chart (relative differences), stacked area chart (absolute differences), pie chart (share of total), waterfall chart (accumulation)
Process	Flow chart, Gantt diagram, decision tree, game tree, timeline, mind-maps

Tip 2: *Think about organization and hierarchy*

English readers most often read text and images top-to-bottom, left- to-right. However, this can be subverted through variation in size and color. Look at your poster or individual plot and consider which aspects draw your eye first, second, and third. Does this sequence match with the narrative of your presentation and thesis? Find the design that helps you to achieve clarity and best fits the structure of your argument.

Tip 3: *Be intentional with style and color*

Your color choices should be few, appropriate, and accessible. Too many colors can confuse the audience and create a disconnect be- tween related parts. Colors should try to reflect underlying concepts and build off existing associations. Also consider whether or not your color choices are accessible to those with colorblindness and limited vision and ensure that text and background colors have high contrast

STEP 4: Present your story

Presenting well is a skill that will serve you well regardless of what you want to do when you leave Princeton. Keep these tips in the back of your mind as you think about designing your poster and how you will present it.

Tip 1: *Place the main idea front and center*

In both your poster and the presentation, you want to take advantage of the first few moments of the audience's attention. If you only have 30 seconds to explain what you've done and why it's important to them, use it as effectively as possible by telling them what you found and how you found it. You can use the single-sentence summaries you created earlier to guide your hook. Now that you've provided the main idea, the audience has a frame of reference for the rest of your talk on which you can build.

Tip 2: *Show, don't just tell*

People are much better at remembering pictures compared to words. In addition to walking through your research narratively. It can help to have a single 'visual abstract' or image to which you or the audience can refer. For instance, if your research is based on a regression discontinuity, a single image can help the viewer understand your design, assumptions, and findings.

Tip 3: *Draw connections to familiar ideas*

In order to help cement ideas in the minds of the audience, make connections between your work and concepts the audience will find familiar. Think of your friend's bad start-up idea: "It's like Uber, for cats.' ' It might not be a good idea, but you know exactly what it does and how it might work because you know what Uber is and how *it* works. We can do the same for research by tying your paper to the work you cite or by highlighting the applicability of your research to recent news stories.

Tip 4: *Encourage active participation*

It can be difficult to rouse a sleepy audience. However, people retain information better when they are actively engaged. Use explicit calls to action get your audience engaged. Use eye contact. Ask your audience to visualize expectations or question assumptions. Poll the audience on the applicability of your research to their own lives. Convince them that it is important. Find creative ways to make them feel included and affected by the topic.