

The Communications Lab @ HGSE Presents...

“Posterize” Your Poster:

How to Create and Give an
Effective Poster
Presentation

March 11, 2020

ABOUT US

WHAT WE DO

We are a HGSE resource created to help graduate students develop their presentation skills and to provide a space and opportunity for students to cultivate their oral and visual communication skills



1

Workshops



2

Webinars



3

Consultations

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ABOUT US

WHO WE ARE

Ning Zou



Associate Director for Student Academic Services & Learning Design and a research librarian. Ning oversees Gutman Library's Writing Services and the Communications Lab in addition to providing research consultations and leading the library's learning design projects

Preeya Pandya Mbekeani



Doctoral candidate at HGSE and doctoral fellow in the multidisciplinary program in Inequality and Social Policy at the Harvard Kennedy School. Preeya studies inequality in college access and completion for underrepresented students and policies aimed at reducing these disparities

Dylan J. Lukes



Doctoral candidate and Presidential Scholar at Harvard University and HGSE. Dylan studies the economics of education with a focus on technology and learning.

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WORKSHOP AGENDA

01

INTRO TO RESEARCH
POSTERS

02

CREATE YOUR POSTER

03

PRESENTATION
DOS & DON'TS

04

EXAMPLE & RESOURCES

WORKSHOP AGENDA

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INTRO TO RESEARCH
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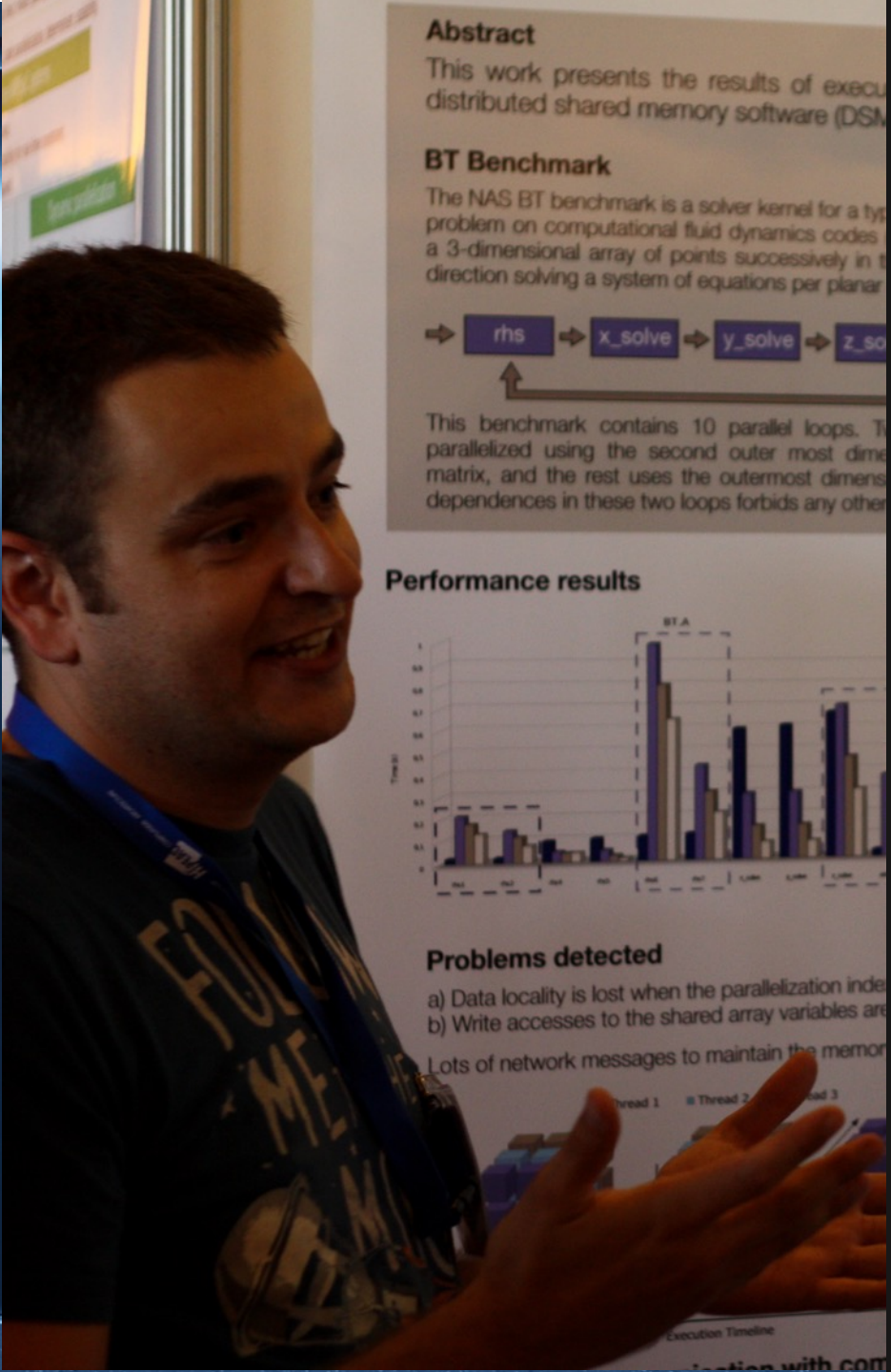
CREATE YOUR POSTER

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EXAMPLE & RESOURCES

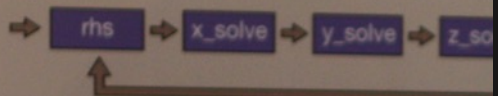


Abstract

This work presents the results of executing distributed shared memory software (DSM)

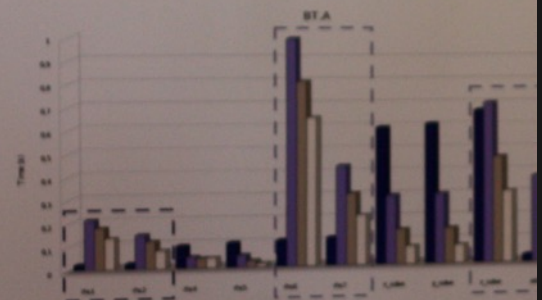
BT Benchmark

The NAS BT benchmark is a solver kernel for a typical problem on computational fluid dynamics codes. It solves a 3-dimensional array of points successively in the x, y, and z direction solving a system of equations per plane.



This benchmark contains 10 parallel loops. The x and y loops are parallelized using the second outer most dimension of the matrix, and the rest uses the outermost dimension. The dependencies in these two loops forbids any other parallelization.

Performance results



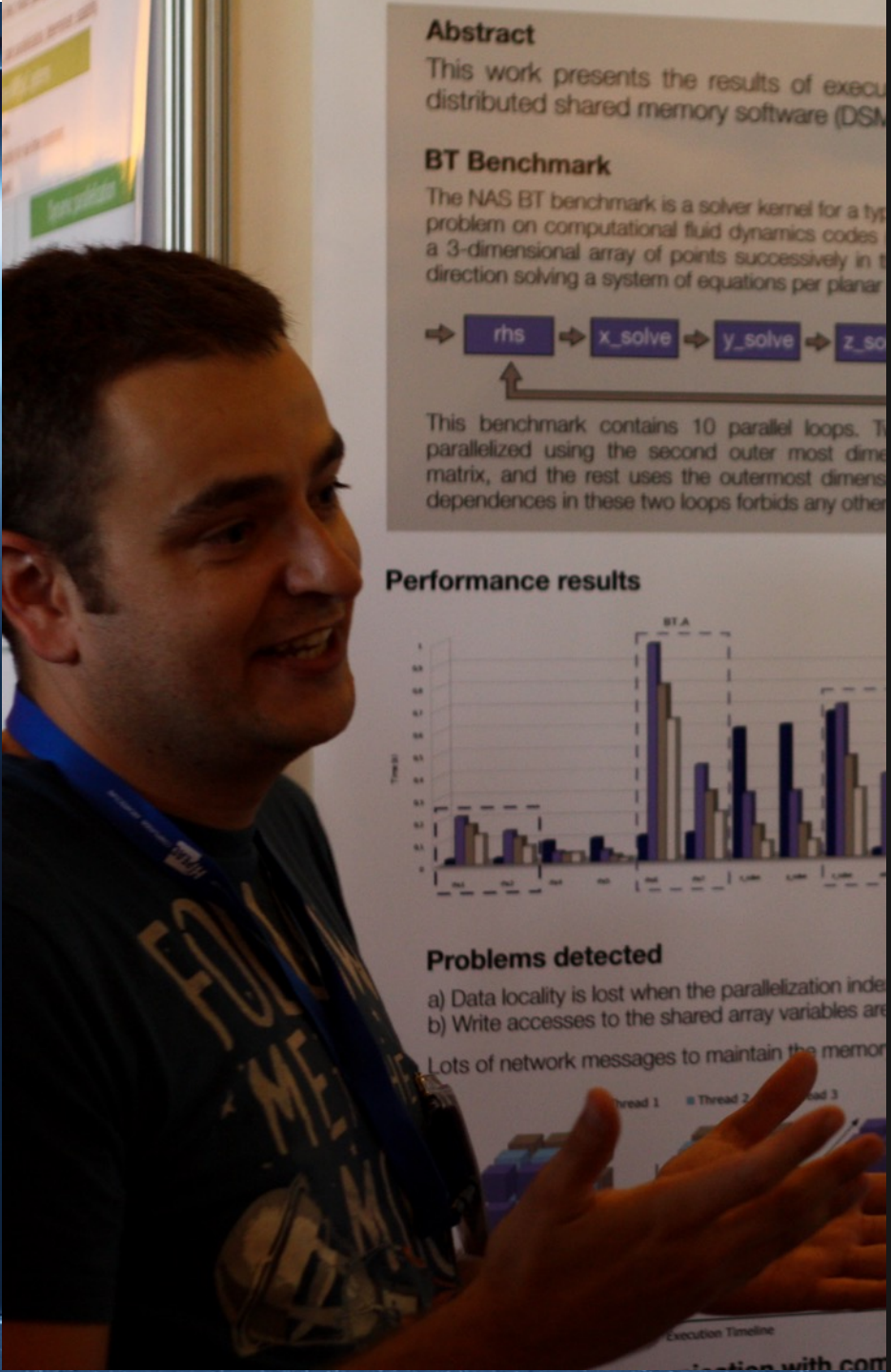
Problems detected

- a) Data locality is lost when the parallelization index is not a multiple of the number of processors.
 - b) Write accesses to the shared array variables are not atomic.
- Lots of network messages to maintain the memory consistency.

INTRO TO RESEARCH POSTERS

WHAT IS A RESEARCH POSTER?

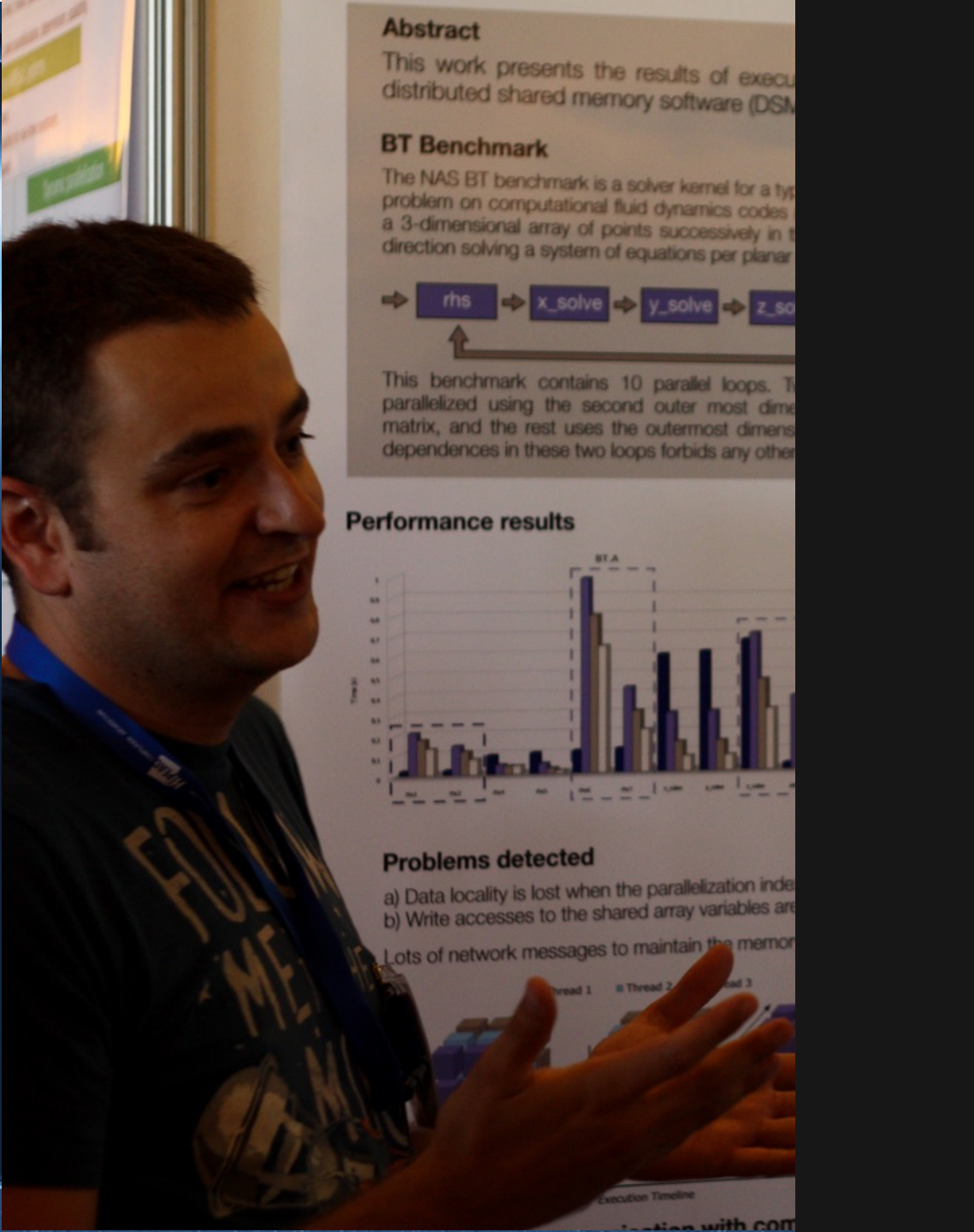
- **Concise summary of information to publicize your work and generate discussion**
 - Content is a mix of text and figures
 - Includes graphs, charts, tables, etc.
 - Visually appealing
- **Researcher stands by the display**
 - Other participants view presentation and interact with author



INTRO TO RESEARCH POSTERS

ACADEMIC CONFERENCE POSTER SESSIONS

- **All major conferences have poster sessions**
 - Often used to showcase early stage work
- **Opportunity to present yourself and your ideas**
 - Gain experience presenting
 - Networking opportunity
 - Participants may be future collaborators, colleagues or employers

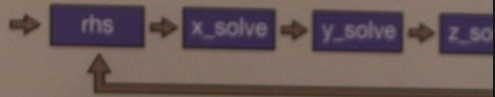


Abstract

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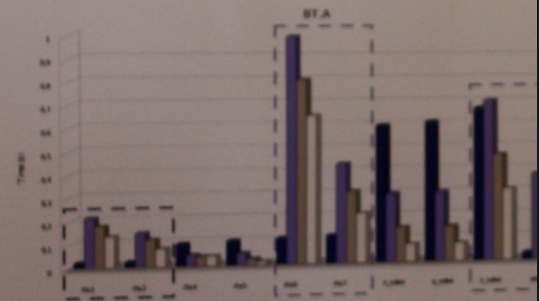
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This benchmark contains 10 parallel loops. The x and y loops are parallelized using the second outer most dimension of the matrix, and the rest uses the outermost dimension. The dependencies in these two loops forbids any other parallelization.

Performance results



Problems detected

- a) Data locality is lost when the parallelization index is not aligned with the data layout.
 - b) Write accesses to the shared array variables are not atomic.
- Lots of network messages to maintain the memory consistency.

INTRO TO RESEARCH POSTERS

POSTER BASICS

- **Typical poster sizes**
 - 18" x 24" for easel signs
 - 36" x 48" for medium size posters
 - 48" x 60" for large posters
- **Word count**
 - 800 – 1000 words total
 - This includes labels describing figures and graphs
- **Font**
 - At least 20pt. Titles and headings 40-50pt font
 - Should be readable from 3-5 feet away

WORKSHOP AGENDA

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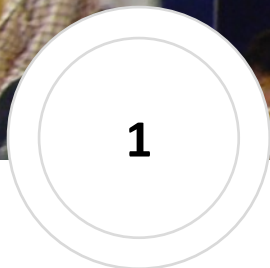
PRESENTATION
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EXAMPLE & RESOURCES

CREATE YOUR POSTER

YOUR POSTER IN 5 STEPS



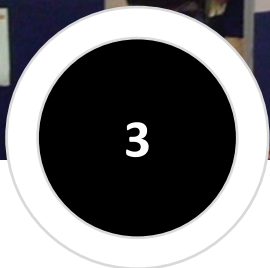
PREPARE

- What is the most important or interesting finding from your research?
- Consider your audience and conference requirements



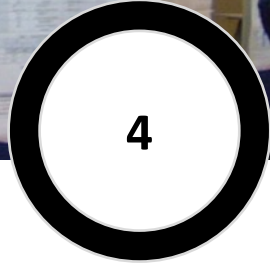
ORGANIZE

- Organize your information
- Be brief and concise—this is not a journal article or paper



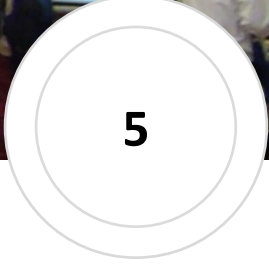
DESIGN FOR IMPACT

- How can you visually share your research?
- Use graphs, figures, charts, and images



CREATE

- Find an online template or create your own
- Multiple software options



PRINT

- Professional printing for conferences
- Trifold with print outs may be sufficient for course poster sessions

DESIGNING FOR IMPACT

STEP 1 PREPARE

This is an essential first step to designing and delivering an effective poster presentation.



a

WHO IS YOUR AUDIENCE?

- Effective communication begins by knowing your audience
- Are you presenting to academics, colleagues, and/or practitioners?

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b

WHAT IS YOUR KEY FINDING?

- What is the one thing you most want people to know after viewing your poster?
- Develop a key focus item (e.g., figure, graph, statement) to represent this

c

WHAT ARE THE REQUIREMENTS?

- Know the expectations in terms of poster size and formatting

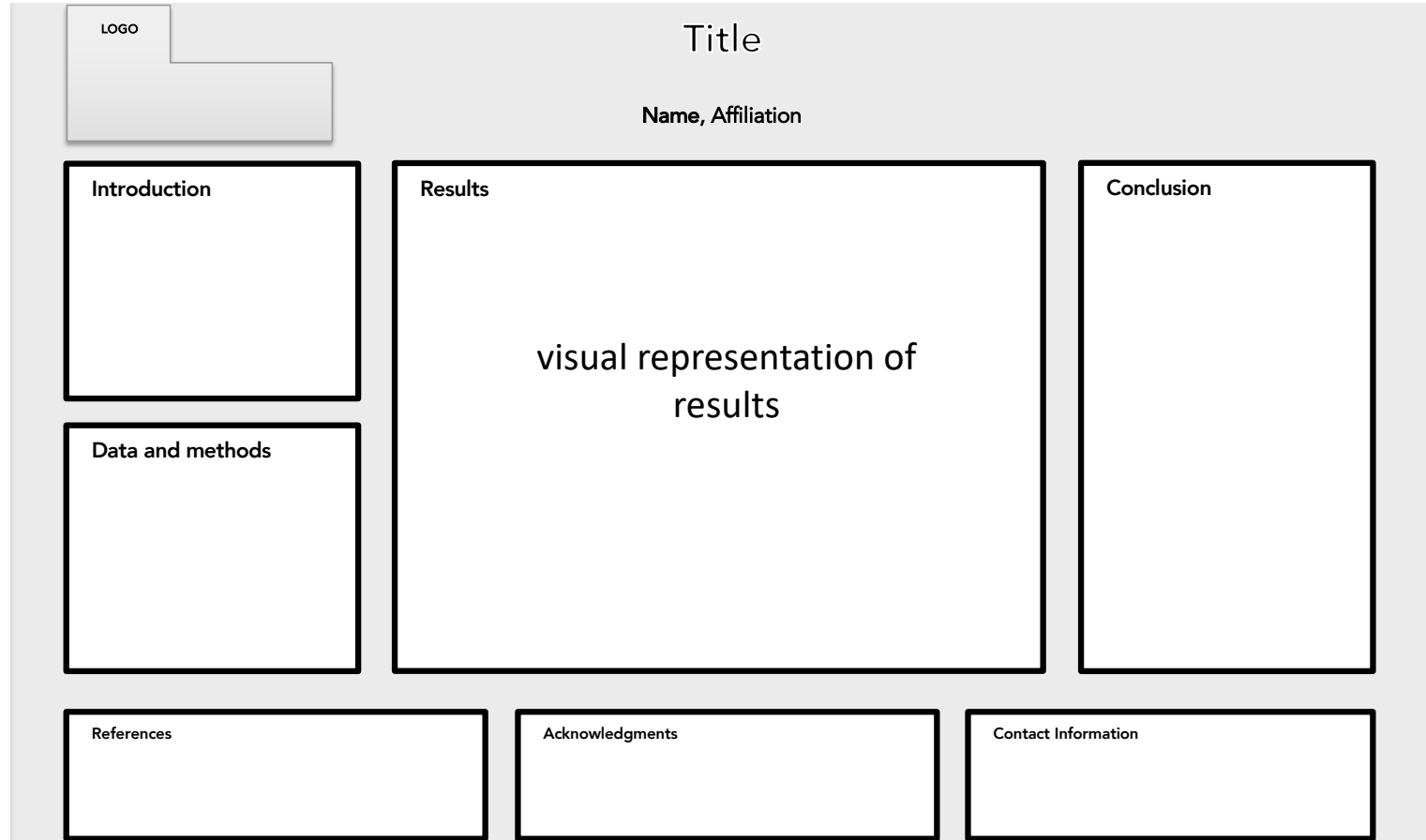
DESIGNING FOR IMPACT

STEP 2 ORGANIZE

Decide how you will group the information you want to share. Research posters have typical sections; although, some variation is normal.



SAMPLE LAYOUT



Poster template from: <https://colinpurrington.com/tips/poster-design>. This template and others are downloadable.

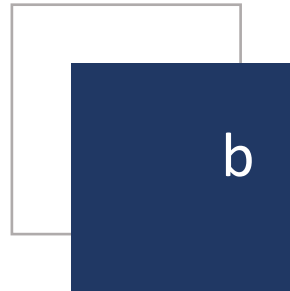
DESIGNING FOR IMPACT

STEP 3 DESIGN FOR IMPACT

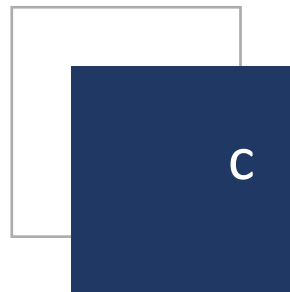
Careful design of your poster will help you achieve maximum impact. Graphics, layout, colors, and fonts should all be carefully selected.



- ### VISUALS
- Whenever possible, use figures instead of text
 - Display main results in a carefully designed figure
 - Fonts and colors should be consistent
 - Web images may be pixelated when enlarged



- ### USE PHRASES FOR HEADINGS
- Title should hint at conclusion
 - For Results Section and Figures, use short phrases that convey key information as your headings



- ### LEAVE SPACE
- A cramped poster is hard to read
 - Leave white space and align text and images
 - Use lists instead of blocks of texts

DESIGNING FOR IMPACT

STEP 4 CREATE

Posters can be created using existing online templates or by creating your own layout in a software program of your choice.

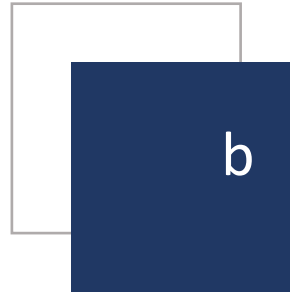
CREATE



POSTER TEMPLATES

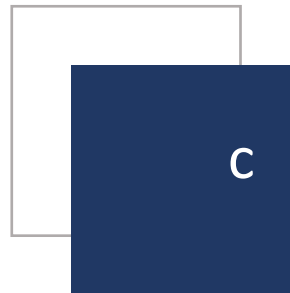
- Many online sites with downloadable templates

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CREATE YOUR OWN

- Posters can be designed in various software applications
- Powerpoint, LaTeX, InDesign, etc.



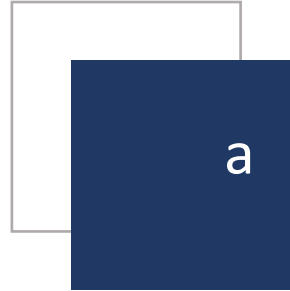
WORKING IN POWERPOINT

- Poster size (in inches) can be customized in Page Setup
- Create your own template using text boxes

DESIGNING FOR IMPACT

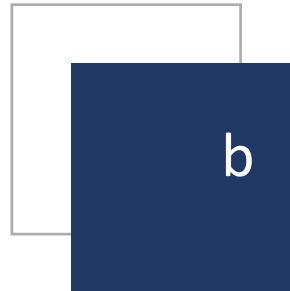
STEP 5 PRINT

There are several options for printing and displaying your poster. Factors to consider are cost, transport, and setting.

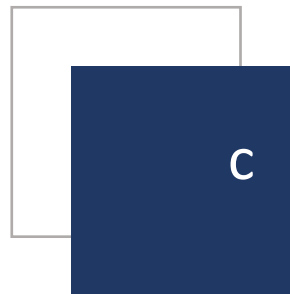


- ### PROOFREAD
- Print out a single page version
 - Review and get feedback from others
 - Save as PDF for printing

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- ### PROFESSIONAL PRINTING
- On-campus or private printing – two options: paper or fabric
 - Paper requires transport in a tube
 - Fabric can be folded and packed in luggage



- ### CONSIDER A TRIFOLD
- Attach printouts to a poster board
 - More affordable option for class presentations

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POSTER DOS & DON'TS

DO #1

Prepare Remarks

- **Succinct description of your research**
 - Designed to engage audience
- **Use a “hook”**
 - Provocative statement
 - Ask a question



POSTER DOS & DON'TS

DO #2

Be Passionate

- **Does your verbal description convey your work's import?**
 - Good content and design may not be enough
- **If you're not excited, your listener probably won't be either**



POSTER DOS & DON'TS

DO #3

Engage Your Audience

- **Introduce yourself**
- **Invite questions or feedback**
- **Share your contact information**
 - Include it on your poster
 - Bring business cards
- **Bring a notepad**
 - For taking notes, jotting down ideas



020

POSTER DOS & DON'TS

DO #4

Anticipate Questions

- **Brainstorm potential questions**
 - Solicit help from colleagues/friends
- **Be up-to-date on relevant recent research**



POSTER DOS & DON'TS

DO #5 Be Confident

- **Hone your non-verbal communication**
 - Stance
 - Posture
 - Eye contact
- **Nerves**
 - Being nervous \neq lacking confidence
 - Poster sessions are a good option for those who are less comfortable presenting to large groups



POSTER DOS & DON'TS

DON'T #1 “Wing” It

- **Practice, Practice, Practice**
 - With others
 - By yourself
- **Be rehearsed and polished, but not overly so**
 - Sharp and professional
 - BUT don't be a robot. It's a conversation.



POSTER DOS & DON'TS

DON'T #2

Use Notes

- **Don't read word-for-word from your poster**
 - The audience can read faster than you can talk
 - Boring – great way to lose participants' attention
- **Do use notes or an outline to develop your remarks**



POSTER DOS & DON'TS

DON'T #3

Block Your Poster

- **Stand to one side**
 - This allows people to read it
 - If you're presenting as a group, make sure there's enough space for everyone
- **Use your fingers to point out parts of your poster**
 - Your poster is a visual aid



POSTER DOS & DON'TS

DON'T #4 Plagiarize

- **Written text and visuals should be your own**
 - Cite others' work appropriately
 - Credit co-authors, contributors, funders, etc.
- **Avoid copyright infringement with any images**



POSTER DOS & DON'TS

DON'T #5

Forget ...

- **Water**
 - Poster sessions can be loud and noisy
 - You'll have to project your voice
- **Comfortable shoes**
 - You'll be standing for several hours
- **To arrive early**
 - Give yourself time to get set up
 - Get comfortable in your space



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EXAMPLE & RESOURCES

Income-Based Gaps in Parental Engagement During Adolescence

Samuel J. Smith
Graduate School of Education

Motivation & Research Questions

Income-based college attainment gaps have grown in the United States over the last forty years (Bailey & Dynarski, 2011). This trend is alarming because it suggests that the increases over the past few decades in family income inequality will continue for the next generation.

College-attainment gaps have grown at the same time that income inequality has increased, but income inequality alone does not explain their growth. One complementary explanation is widening differences by income in parental investments in their adolescents' education and cognitive development.

The empirical evidence indicates there are growing differences between upper-income and college-educated parents, on the one hand, and lower-income and less-educated parents, on the other hand, in investments of time and money in their children. However, little is known about parental investments and engagement in activities focused on fostering adolescents' cognitive development and education.

Research questions:

1. What are the trends by family income in parental involvement in the educational development of their adolescents?
2. Have income-based parental involvement gaps grown over time?

Data & Sample

The data come from two National Center of Education Statistics (NCES) surveys of high school students: the National Education Longitudinal Study of 1988 (NELS:88, high school class of 1992) and the Education Longitudinal Study of 2002 (ELS:2002, high school class of 2004).

Sample sizes are 16,450 and 14,450, for NELS and ELS, respectively.

Outcome Measures:

Five student- and parent-reported measures of parental involvement (proportions):

Student Reported:

1. Parents think attending college after high school is most important
2. Discussed attending college with parent
3. Taken/plans to take college entrance exam, and
4. Discussed school courses with parents

Parent Reported:

5. Taken steps to financially prepare for teen's postsecondary education

Methods

I estimate levels of parental involvement by family income percentile rank and income-based gaps based on a method developed by Reardon (2011). This method allows one to estimate an income distribution from a set of ordered income categories and results in estimates of the percentile ranks corresponding to the categories.

I fit a cubic regression model predicting a given parental investment from family income percentile rank (IncP):

$$Y = a + b\text{IncP} + c\text{IncP}^2 + d\text{IncP}^3 + \epsilon$$

From the fitted parameters, I estimate average levels of parental investments at the 10th, 50th, and 90th percentile ranks of the family income distribution and test differences in levels between cohorts.

I compute gaps in parental investments (90/10, 90/50, and 50/10) and associated standard errors for each cohort. For example, the 90/10 gap is calculated as follows:

$$\begin{aligned} \delta_{90/10}^{90} &= [\hat{Y}|\text{IncP} = .9] - [\hat{Y}|\text{IncP} = .1] \\ &= [\hat{a} + \hat{b}(.9) + \hat{c}(.81) + \hat{d}(.729)] - [\hat{a} + \hat{b}(.1) + \hat{c}(.01) + \hat{d}(.001)] \\ &= .8\hat{b} + .8\hat{c} + .728\hat{d} \end{aligned}$$

Results: Income-Based Trends

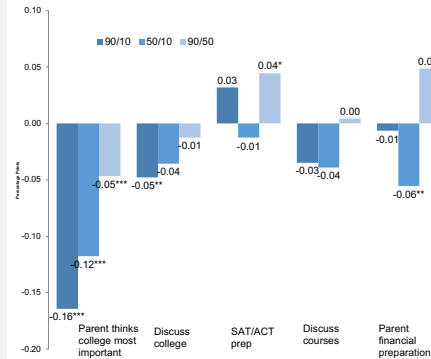
Parental engagement and investment have increased for more recent cohort, with larger increases among low- and median-income families.

	1992	2004	Δ	1992	2004	Δ	1992	2004	Δ
	10th Percentile			50th Percentile			90th Percentile		
Student-Reported Measures									
<i>Grade 10</i>									
Parents think attending college after high school is most important	0.60	0.77	0.17***	0.75	0.80	0.05***	0.87	0.86	0.01
Discussed going to college with parents	0.80	0.84	0.04*	0.87	0.87	0.00	0.94	0.93	-0.01
<i>Grade 12</i>									
Discussed school courses with parents	0.64	0.72	0.08***	0.73	0.78	0.05***	0.82	0.87	0.05***
Has taken or plans to take SAT/ACT preparation	0.56	0.57	0.01	0.56	0.56	0.00	0.67	0.72	0.05*
Parent-Reported Measure									
Taken steps to financially prepare	0.26	0.31	0.05**	0.49	0.48	-0.01	0.73	0.77	0.04**

*p < .05 **p < .01 ***p < .001

Results: Income-Based Gaps

90/10 engagement gaps are stable across cohorts, with two exceptions: student-reported parental aspirations and discussing college.



Conclusions

Results suggest:

- Rising levels of parental investments over time, particularly among low-income families.
- No evidence of widening differences over time between high- and low-income families in parental investments in their adolescents' education and cognitive development.

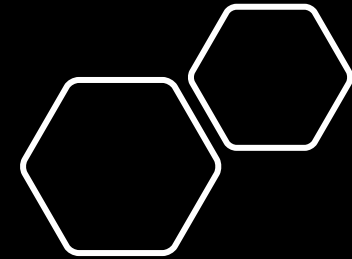
Future work:

- Examine differences in intensity of parental involvement by income.
- Examine association with college attainment.

Further exploration of these relationships can contribute to understanding growing income-based educational attainment gaps.

Contact Information

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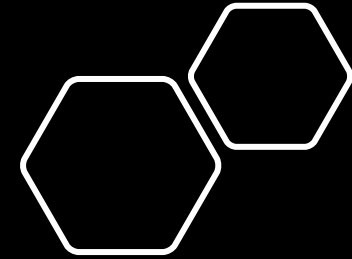
EXAMPLE

Strengths

- Clear organization
- Text boxes are aligned
- Includes white space
- Consistent fonts and color scheme

Weaknesses

- Graph or figure rather than table of results
- Introduction is text heavy
- More catchy title/headings



EXAMPLE

Resources

Harvard Shields

- University shield: <https://guidelines.hwp.harvard.edu/veritas-and-school-shields>
- School shields: <https://guidelines.hwp.harvard.edu/school-shields>

On-Campus Poster Printing

- Lamont Library Media Lab: <https://library.harvard.edu/services-tools/large-format-printing>
- Department of Molecular Biology: <https://mcbgraphics.fas.harvard.edu/>

Poster Templates

- Colin Purrington: <https://colinpurrington.com/tips/poster-design/>
- Overleaf: <https://www.overleaf.com/gallery/tagged/poster>



THANK YOU

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References

- NYU Libraries (2020, January 2). How to create a research poster: Poster basics. <https://guides.nyu.edu/posters>
- Purrington, Colin (2019). Designing conference posters. Accessed <https://colinpurrington.com/tips/poster-design/>
- University of Guelph Teaching Support Services (n.d.). Effective poster design. Accessed from: <http://www.soe.uoguelph.ca/webfiles/agalvez/poster/>
- University of Cincinnati (2016). Creating poster presentations using Power Point 2010. Accessed from: <https://grad.uc.edu/content/dam/refresh/grad-62/docs/prof-devel/expo/Creating-Poster-Presentations-Using-PowerPoint-2010.pdf>