

# MCLS Accessibility Workshop

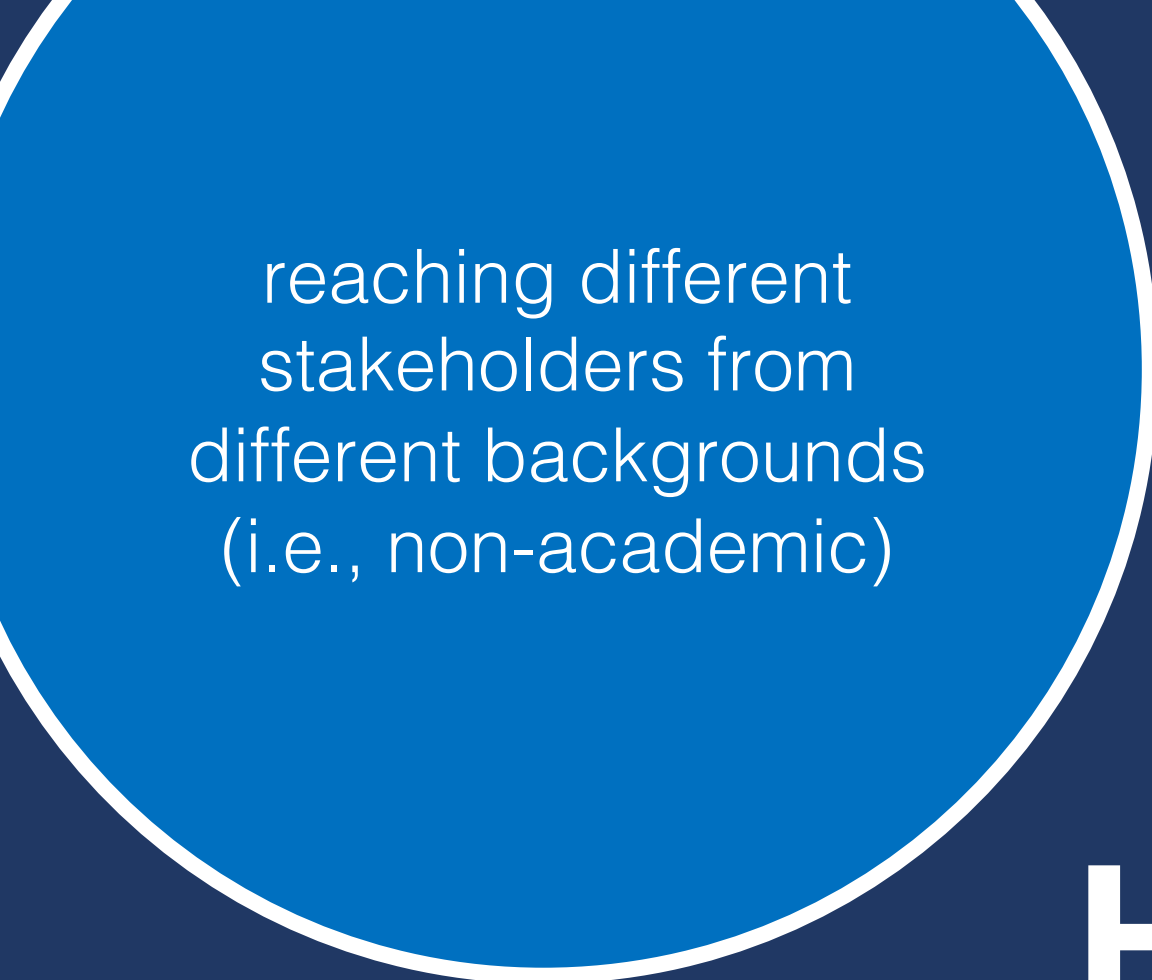
Erin A. Maloney & Fraulein Retanal

**How do I make my  
research more  
accessible?**

# How do I make my research more accessible?

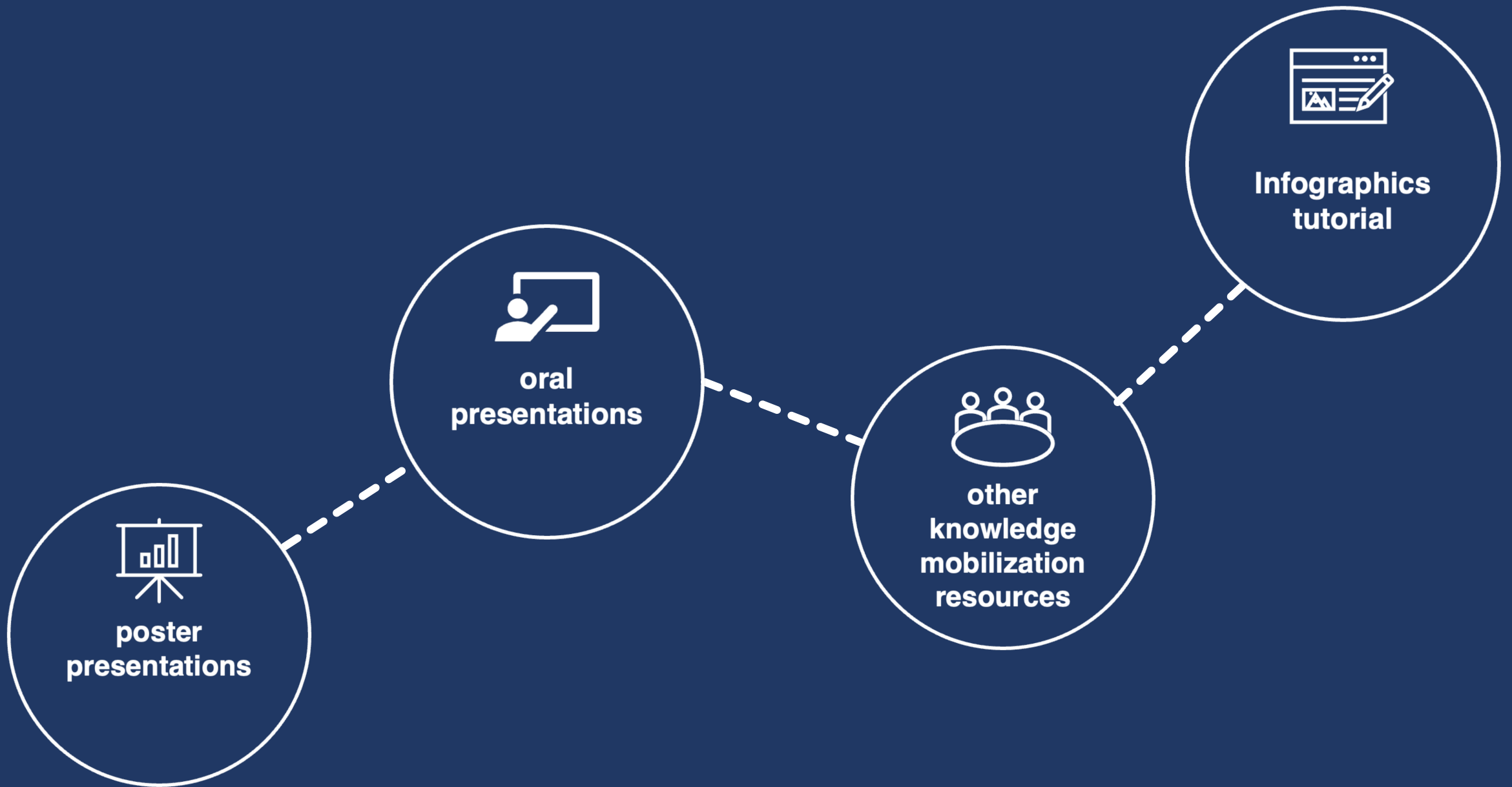


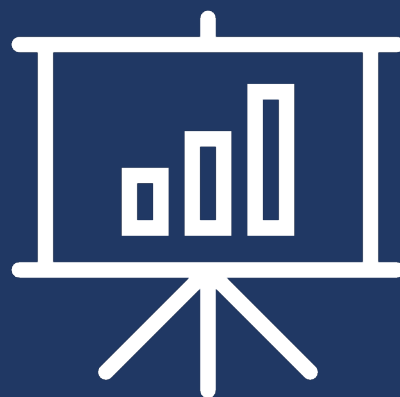
reaching different people  
with different  
exceptionalities



reaching different  
stakeholders from  
different backgrounds  
(i.e., non-academic)

**How do I make  
research more  
accessible?**





**poster  
presentations**

# 1 HIGH CONTRAST

- Use high contrast colour schemes in slides and posters
- White writing on a dark background is much easier for most visually impaired individuals to read than is dark writing on a white background



# 2 ALTERNATIVE FORMATS

- Put poster online in advance and link with a QR code
- This allows people to download the poster on their own devices which may have accessibility features enabled



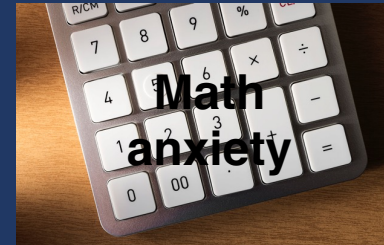


# 3 EASY-TO-READ FONTS & TEXT



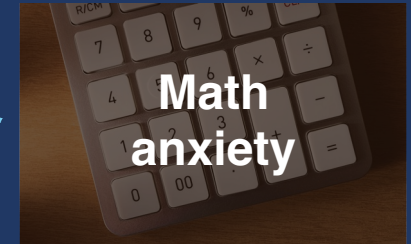
## AVOID

- using underlines or italics
- images behind the text



## USE

- sans serif font of at least 24 points
- increased line spacing
- left or right justified text



# 4 VISUAL INFORMATION

- Describe pertinent parts of graphics and other visuals in words to the extent needed for a visually impaired person to understand





**oral  
presentations**

# 5 AUDIO INFORMATION

- Use the microphones in the rooms
- Repeat questions posed by the audience
- Use closed captioning on videos and consider live closed captioning features in PowerPoint (or other software with such functionality, e.g., Zoom)



# 5 AUDIO INFORMATION

PowerPoint tutorial



Zoom tutorial





**other  
knowledge  
mobilization  
resources**







# Non-copyrighted copy of the article

**The Purdue Online Writing Lab's Sample Title Page:  
Following the American Psychological Association's Guidelines**

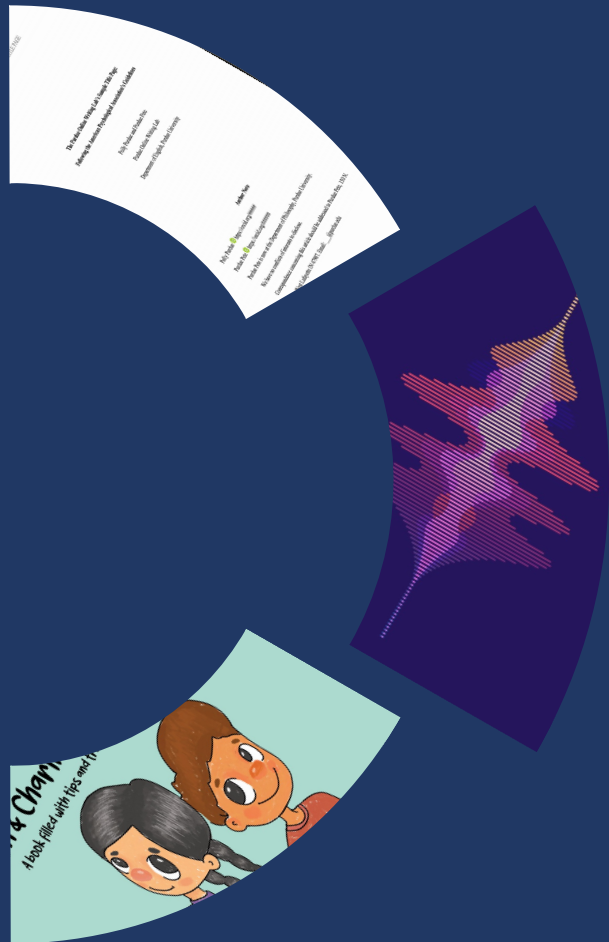
Polly Purdue and Purdue Pete  
Purdue Online Writing Lab  
Department of English, Purdue University

**Author Note**

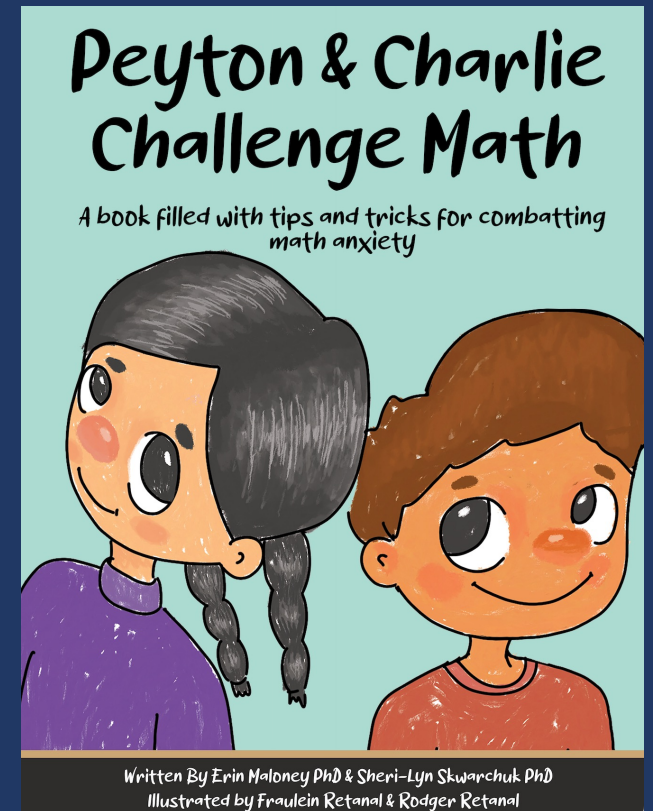
Polly Purdue  <https://orcid.org/#####>  
Purdue Pete  <https://orcid.org/#####>  
Purdue Pete is now at the Department of Philosophy, Purdue University.  
We have no conflicts of interests to disclose.  
Correspondence concerning this article should be addressed to Purdue Pete, 150 N.  
University St., West Lafayette IN 47907. Email: [\\_\\_\\_\\_@purdue.edu](mailto:____@purdue.edu)



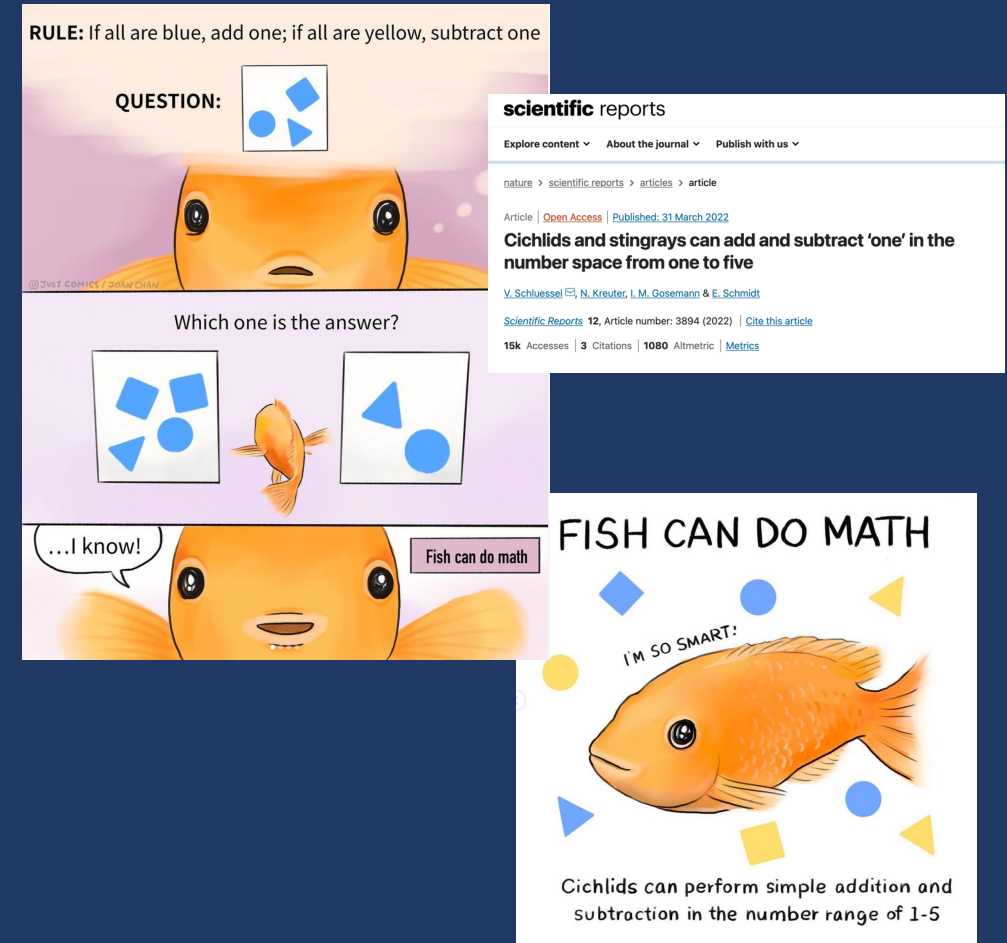
# Audio recording of articles



# Children's book



# Comics or Illustrations



Instagram: @justcomics\_official

# Infographics

Quarterly Journal of Experimental Psychology  
<https://doi.org/10.1177/17470218231174339>

## Transcoding of French numbers for first- and second-language learners in third grade

Anne Lafay, Emmanuelle Adnen, Sabrina Di Lonardo  
Burr, Heather Douglas, Kim Provost-Laroque,  
Chang Xu, Jo-Anne Lefevre, Erin A. Maloney, Helena  
P. Osana, Sheri-Lynn Skwarchuk, and Judith Wylie

### Previous Research

- Transcoding is the process of translating between spoken and written numbers, and it is correlated with other mathematical skills.
- Vocabulary has shown to be related to performance in mathematical tasks such as word-problem solving that, like transcoding, require language skills.
- Vocabulary skill, number naming, and number writing are related.

### What did we ask?

This study investigated the link between the French number writing and language skills of first and second language French learners third graders.

- Are second-language French learners less accurate in their transcoding than first-language French learners?
- Is there a relationship between French number writing and language skills of children learning math in French in 3rd grade?
- Would children produce more errors in transcoding with complex decade numbers (numbers containing 70-99) than simple decade numbers?

### How did we do it?

- 49 students in the third grade (aged 7-9 years) learning math in French participated in this study.
- Two language groups were created: First-language French learners and second-language French learners.
- Children completed tests of their number transcoding abilities: tests of their linguistic abilities (receptive vocabulary, receptive syntax, and phonological awareness and word reading), and tests of their working memory.

### What did we find?

- This study found that both first- and second-language learners in 3rd grade were able to recognize and transcode French numbers from symbolic to non-symbolic forms.
- First-language learners showed faster and more accurate performance than second language learners in the linguistic tasks, but not the transcoding tasks.
- Receptive vocabulary knowledge was the only linguistic skill related to children's number transcoding.
- Both first- and second-language learners found complex decade numbers challenging and their performance was related to their general vocabulary skills.

### Take away Message

It is important to understand the relationship between linguistic skills, transcoding, and language backgrounds so that students can receive the tailored support and interdisciplinary collaboration required to help them succeed and improve their learning.

Brought to you by Dr. Erin Maloney's Cognition and Emotion Lab at the University of Ottawa and the Language Learning and Math Achievement Project

Education Sciences, 11(10), 620  
DOI: <https://doi.org/10.3390/educsci11100620>

## Controlling-Supportive Homework Help Partially Explains the Relation between Parents' Math Anxiety and Children's Math Achievement

Retanal F., Johnston N. B., Di Lonardo Burr S. M., Storozuk A., DiStefano M., & Maloney E. A. (2021)

### Previous Research

- Math anxiety** (feelings of apprehension or fear about math) can negatively impact math attitudes and outcomes. When higher math anxious parents frequently help with math homework, their children have lower math scores and higher math anxiety at the end of the school year compared to children of lower math anxious parents.
- Autonomy supportive help** (when parents allow their child to direct the homework-helping interaction) has been shown to positively predict grades, SAT math scores, and growth in math performance.
- Controlling support** (when parents direct the homework-helping interaction) has been linked to lower intrinsic math motivation and lower math achievement for children.

### What did we ask?

What is the relation between parents' math anxiety, their homework-helping styles (autonomy-supportive vs controlling-supportive), and their children's math achievement?

### How did we do it?

Parents (N=247) of children in grades 6 to 8 completed measures of their homework-helping style, math anxiety, general anxiety, and math performance. Parents were also asked to report their child's grades in math in order to gauge children's math achievement.

### What did we find?

Parents' math anxiety was **negatively related** to their children's math achievement. High math anxious parents reported using both autonomy-supportive and controlling supportive homework-helping strategies. Interestingly, however, **only the controlling supportive homework-helping strategy explained the negative relationship** between parents' math anxiety and their children's math achievement.

### Why is this important?

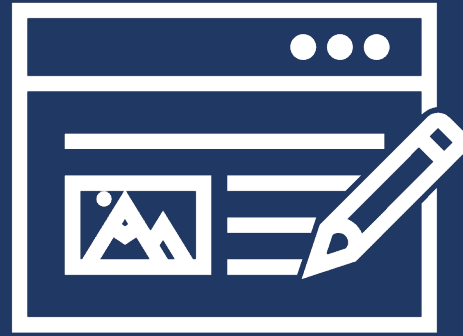
The results of this study support the theory that one reason why homework-help from high math anxious parents can negatively impact children's math achievement and math attitudes, is because **math anxious parents are more controlling in homework-helping interactions** than low math anxious parents. Interventions seeking to improve child math achievement of parents with high math anxiety should consider **teaching parents to use less controlling-supportive homework-helping strategies.**

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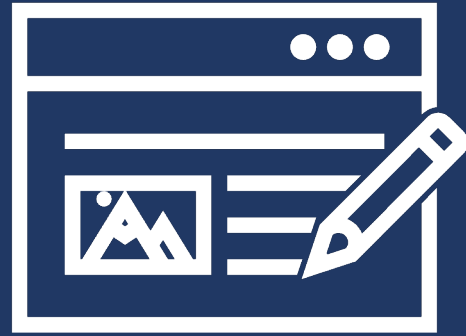


# Artificial Intelligence (AI)





# **Infographics tutorial**



# Infographics tutorial

# Preparing the content



- **Know your audience:** Other researchers? Non-researchers?
- **Headers and sub headers**
  - Previous Research
  - Research question
  - Methodology
  - Results
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# Preparing the content



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# Size matters!

- **Infographic Sizes:** varies depending on the website

Facebook	For Posts	1200 x 628 pixels
	For Story	1080 x 1920 pixels
Twitter	For Posts	1200 x 675 pixels (or aspect ratio of 16:9)
LinkedIn	For Posts	1104 x 736 pixels

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- **Font Size Hierarchy**
  - The title, header, and the main text should be different sizes
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# Visuals

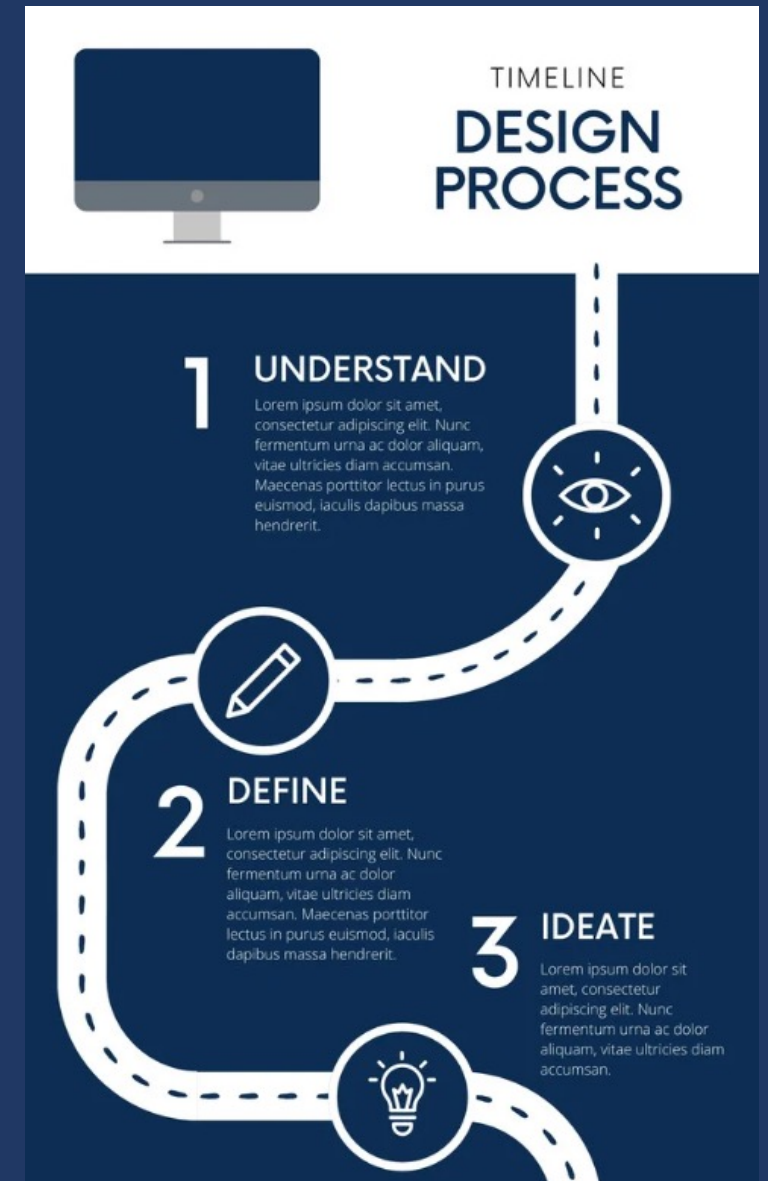
- Organizing the infographic
  - Colour Blocking





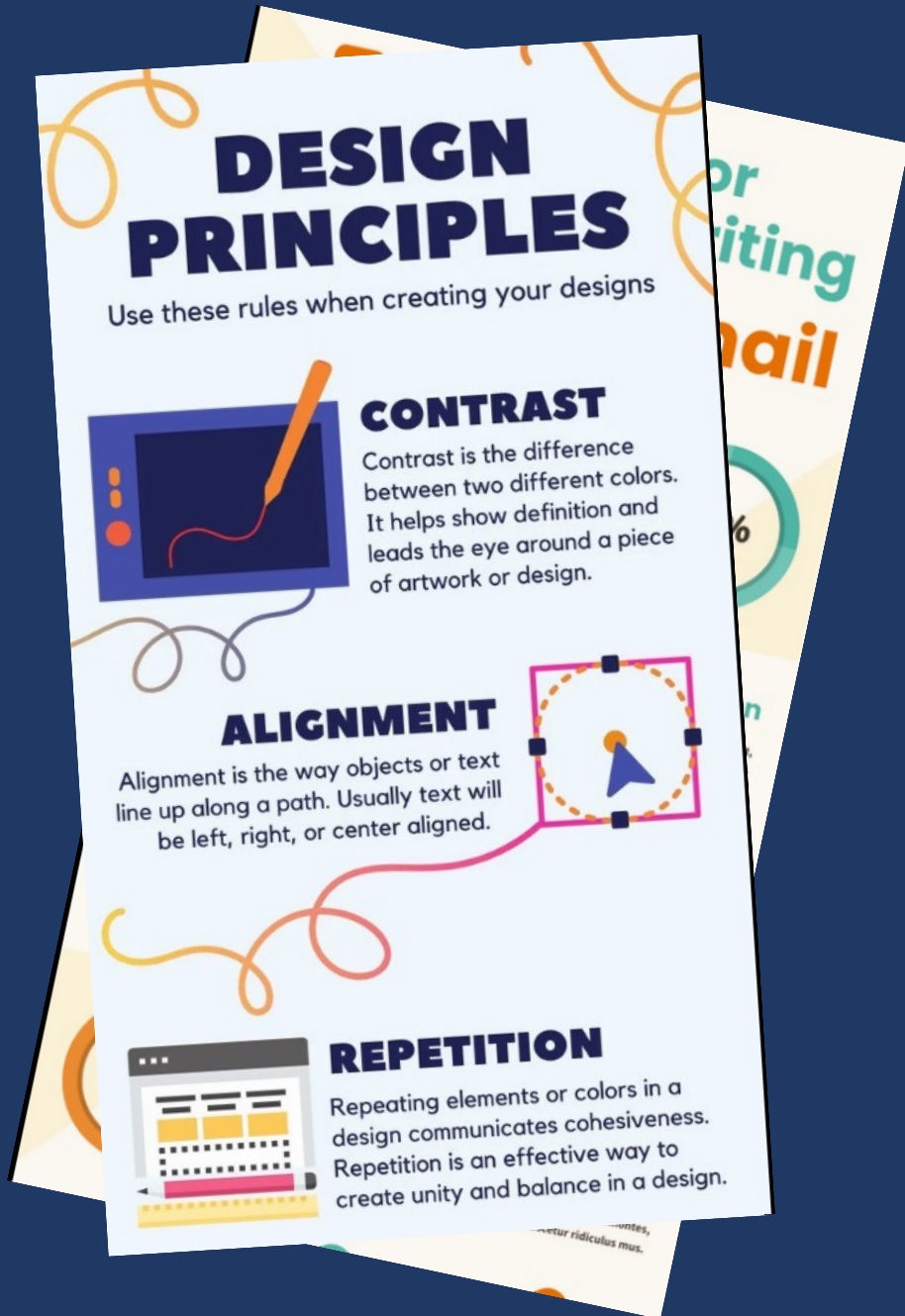
# Visuals

- Organizing the infographic
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# Visuals

- Organizing the infographic
  - Colour Blocking
  - Timeline/Sequencing
  - Spacing



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# Visuals

- Organizing the infographic
  - Colour Blocking
  - Timeline/Sequencing
  - Spacing
  - Switch header font colours


Tip: use pinterest for ideas!






# Visuals

- Diverse Images
  - E.g., same-gender parents, racial and gender diversity
- High Contrast!



uOttawa




HELP US  
**DEVELOP TOOLS TO  
HELP YOU HELP  
YOUR CHILD WITH  
HOMEWORK**

Parents will receive \$30 as compensation and children will get to choose a small toy as a thank you.  
Principal Investigator: Erin A. Maloney, PhD


**WHO ARE WE  
LOOKING FOR?** We are looking for a parent or guardian and their 8-10 year old child. Both the parent and child must speak English.

**WHERE DO YOU  
HAVE TO GO?** The research can take place at the University of Ottawa, at participants' homes, or at a convenient public place (e.g., local library).

**WHAT DO YOU  
HAVE TO DO?** Parents and their child will complete a series of math, English, and emotion questions. Parents will also watch a 3 minute video on a topic that their child's age group is currently learning in school while their child completes fun activities like drawing and memory apps. This visit is expected to take about 1 hour.



**SCAN HERE TO  
SIGN-UP:**



**CONTACT INFORMATION**

For more information, please contact our lab coordinator at:

- celaboratory@uottawa.ca
- 613-562-5800 ext. 4844

This project has received ethics approval from the University of Ottawa's Research Ethics Board (REB#XXXX)

# SUMMARY

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- **Diverse Images**
  - E.g., same-gender parents, racial and gender diversity
- **High Contrast!**

Tip: use [pinterest](#) for ideas!

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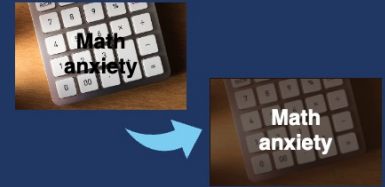
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