

# Creating posters with the R package posterdown

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DATA3001

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# Non-Cognitive Predictors of Student Success:

## A Predictive Validity Comparison Between Domestic and International Students

Jacob Smith, Dr. Thea Schofield, Dr. Antonio Ibarra, Ianis Choi, Benn Mullins, Dr. Emily Williams

Michigan State University



### Abstract

Given increasing interest in utilizing non-cognitive predictors in the college admissions process and rising enrollment of international students, research is warranted to compare the predictive validity of these measures across domestic and international students. Results indicate some predictive validity differences do exist, and an explanation for this differential validity, as well as a moderator of these relationships, are tested.

### Background

- Though cognitive predictors of student success (e.g. ACT, HSGPA) remain popular, there is increasing interest in non-cognitive predictors of student success (e.g. situational judgement, adaptability), and these have been found to predict student performance (Oswald et al., 2004; Keeney et al., 2009).
- From 05/06 to 15/16 academic year, the number of international students studying in U.S. increased yearly. In 2016, 5.2% of students international with over 1 million enrolled (Institute of International Education, 2016).
- Previous work by Prasad and colleagues (2016) found mean differences in non-cognitive measures across Chinese and Caucasian American students, along with differential validity for a Perseverance non-cognitive measure.
- The current research is an extension of Prasad et al., 2016, exploring differential validity in two large samples of students, testing an explanation for these differences in validity, and testing a possible moderator of these relationships between non-cognitive predictors and GPA.

### Research Question & Hypotheses

*Research Question 1: Will non-cognitive measures display differential validity between domestic and international students?*

- Non-cognitive measures may be functioning as a proxy for English ability.  
H1: Differential validity will be accounted for by English proficiency.

- Non-cognitive predictors may be more important for individuals from a more culturally distant country, as adjustment may be more difficult necessitating greater non-cognitive abilities.  
H2: Non-cognitive measures will exhibit greater validity for international students from more culturally distant countries.

### Method

#### Samples

- Sample 1:* 7702 students at large, Midwestern university  
- 54.1% (4163) female  
- 11.2% (859) international (8.2% Chinese)
- Sample 2:* 7683 students at large, Midwestern university  
- 52.8% (4060) female  
- 13.7% international (10.4% Chinese)

### Method (cont.)

#### Measures:

*Biographical Data* – Standardized inventory of an individual's experiences, attitudes, and behavioral tendencies relevant to college student experience and performance.

- Consists of seven scales: Knowledge, Leadership, Social Responsibility, Adaptability, Perseverance, Continuous Learning, Academic Ethics.

*Situational Judgement Test (SJT)* – Presents typical situations college students would face and possible responses to situation, utilized to measure individuals ability to judge and react appropriately.

*GPA* – 1<sup>st</sup> semester cumulative GPA on 0.0 to 4.0 scale.

*TOEFL* – Standardized test to measure "ability to use and understand English at a university level" (ETS.org).

*International Status* – Dichotomous variable representing international status of student (Sample 1 – Based on residence code, Sample 2 – Based on residence country).

*Cultural Distance* – Euclidian distance between individual's residence country and United States, based on nine GLOBE cultural dimensions (House et al., 2004).

*Perceived Cultural Distance* – 12-item scale measuring perceptions regarding cultural differences between U.S. and home country on variety of aspects (e.g. values and beliefs, family life) (Demes & Geeraert, 2014)

### Results

- Correlations between non-cognitive predictor scores and 1<sup>st</sup> semester GPA (Table 1) indicate stronger relationship for international students on seven of eight measures
- Regression results (Table 2) indicate consistent differential validity for international students for SJT, Continuous Learning, Social Responsibility, and Perseverance.
- Including TOEFL scores in regression, available for a subset of 663 individuals from Sample 1, did not substantially alter standardized regression weights ( $\Delta B = -.012$  to  $.018$ ) (Results not shown).
- Multilevel regression was utilized to test if cultural distance via GLOBE moderated validity for non-cognitive predictors utilizing subset of 765 international students from Sample 1 from 10 countries. Results indicate culture distance did not significantly moderate validity ( $p > .05$ ) (Results not shown).
- Utilizing subset of 73 international students from Sample 2, did not find that perceived cultural distance moderated validity of non-cognitive predictors ( $p > .05$ ) (Results not shown)
- Correlation between GLOBE cultural distance and perceived culture distance  $r = -.113$ , ( $n.s.$ )

Table 1: Relationship Between Non-Cognitive Predictors and 1<sup>st</sup> Semester GPA by Sample.

	Overall Sample 1	Overall Sample 2	Domestic Sample 1	Domestic Sample 2	International Sample 1	International Sample 2
SJT	<b>0.14</b>	<b>0.18</b>	<b>0.08</b>	<b>0.10</b>	<b>0.21</b>	<b>0.24</b>
Knowledge	<b>0.15</b>	<b>0.15</b>	<b>0.13</b>	<b>0.13</b>	<b>0.18</b>	<b>0.19</b>
Leadership	<b>0.06</b>	<b>0.10</b>	<b>0.03</b>	<b>0.06</b>	0.06	<b>0.11</b>
Social Responsibility	<b>0.08</b>	<b>0.10</b>	<b>0.07</b>	<b>0.07</b>	0.02	0.04
Adaptability	<b>0.04</b>	<b>0.07</b>	0.01	<b>0.03</b>	0.06	<b>0.10</b>
Perseverance	<b>0.10</b>	<b>0.12</b>	0.02	<b>0.02</b>	<b>0.16</b>	<b>0.17</b>
Learning	<b>-0.05</b>	<b>-0.05</b>	<b>-0.06</b>	<b>-0.08</b>	<b>0.15</b>	<b>0.14</b>
Academic Ethics	<b>0.11</b>	<b>0.12</b>	<b>0.07</b>	<b>0.09</b>	<b>0.25</b>	<b>0.16</b>
N	7701 to 7702	7683	6842	6632	859	1051

\*\* Bold numbers indicate significant relationships ( $p < .05$ )

Table 2: Moderated Regression Results for Non-Cognitive Predictor Relationships with 1<sup>st</sup> Semester GPA.

	Sample 1		Sample 2	
	Step 1	Step 2	Step 1	Step 2
SJT	<b>0.08</b>	<b>0.04</b>	<b>0.12</b>	<b>0.06</b>
Knowledge	<b>0.19</b>	<b>0.22</b>	<b>0.17</b>	<b>0.20</b>
Leadership	<b>0.04</b>	<b>0.03</b>	<b>0.07</b>	<b>0.07</b>
	<b>0.05</b>	<b>0.06</b>	<b>0.03</b>	<b>0.05</b>
Social Responsibility				
Adaptability	<b>-0.05</b>	<b>-0.03</b>	<b>-0.03</b>	<b>-0.02</b>
Perseverance	0.02	<b>-0.06</b>	<b>0.04</b>	<b>-0.06</b>
Learning	<b>-0.19</b>	<b>-0.18</b>	<b>-0.22</b>	<b>-0.20</b>
Academic Ethics	0.03	0.00	0.02	0.02
International Status		<b>-0.15</b>		<b>-0.15</b>
SJT X Int		<b>0.04</b>		<b>0.08</b>
Lead X Int		-0.01		0.00
Learn X Int		<b>0.09</b>		<b>0.08</b>
Know X Int		<b>-0.04</b>		<b>-0.02</b>
Adapt X Int		<b>-0.04</b>		0.00
SR X Int		<b>-0.05</b>		<b>-0.06</b>
Pers X Int		<b>0.06</b>		<b>0.07</b>
Ethics X Int		<b>0.08</b>		0.01
R Squared	0.06	0.09	0.08	0.12
N	7700	7700	7670	7670

\*\* Bold numbers indicate significant relationships ( $p < .05$ )

### Discussion

- Results indicate consistent differential validity for some non-cognitive measures for international students, specifically for SJT, Continuous Learning, Social Responsibility, and Perseverance.
- Differential validity for international students does not seem to be the results of functioning as a proxy for English language ability.
- Cultural distance does not seem to moderate validity of non-cognitive measures.

### Implications

- Non-cognitive abilities may be useful in predicting international student performance, but differential validity may be an issue.
- Negative, non-significant relationship between cultural distance via GLOBE scores and perceived cultural distance warrants caution in generalizing country-level scores to individuals.
- More research is warranted to explain differential validity for international students.

### Acknowledgements

I would like to thank Sergio Marquez for assistance in data collection, as well as Jason Huang and Rick DeShon for advice regarding data analyses.

# Overview for today's workshop



Scientific poster designs and formats



Posterdown package what is it?



Using Posterdown- a quick tutorial



Using Posterdown- make your own poster

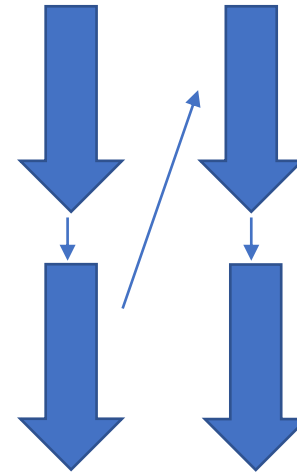
# Antimony of a scientific poster

- ☐ Title
- ☐ Authors and affiliations
- ☐ Abstract/Introduction/Background
- ☐ Objective/Hypothesis
- ☐ Methods
- ☐ Results/Discussion
- ☐ Conclusion
- ☐ References
- ☐ Acknowledgment
- ☐ Lots of graphics

## Goal

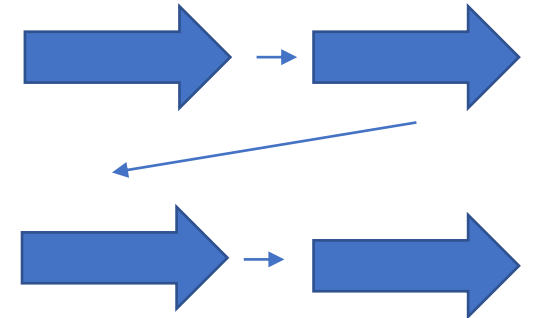
A scientific poster is a visual abstract, a summary of your research.  
Its purpose is to be accessible and to drive attention to your research.

## Layout



or

How does it flow?  
Is it easy to follow?



# What is posterdown?

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## **R package to generate conference posters**

- Created by Brent Thorne (summer 2019)
- Uses 'rmarkdown' and 'pagedown' to generate HTML and PDF posters.
- Load 'library(posterdown)'
- The package has 3 R markdown templates available:
  - I. posterdown\_html
  - II. posterdown\_betterland
  - III. posterdown\_betterport

How can posterdown help you design that perfect poster?



# Posterdown\_html

poster\_height:

“38in”

poster\_width:

“45in”



## Using posterdown to generate reproducible conference posters via RMarkdown > Knitr > Markdown > Pandoc > HTML/CSS > PDF workflow

W. Brent Thorne<sup>1</sup>, William B. Thorne<sup>1</sup>

<sup>1</sup>Department of Earth Science, Brock University



### 1 Introduction

Welcome to posterdown! This is my attempt to provide a semi-smooth workflow for those who wish to take their RMarkdown skills to the conference world. Many creature comforts from RMarkdown are available in this package such as Markdown section notation, figure captioning, and even citations like this one (Allaire, Xie, McPherson, et al. 2018). The rest of this example poster will show how you can insert typical conference poster features into your own document.

#### 1.1 Study Site

Here is a map made to show the study site using ggplot2, ggspatial, and sf and you can even reference this with a hyperlink, this will take you to Figure 1.1 (Dunnington, n.d.; Arnold, n.d.; Pebesma 2018).

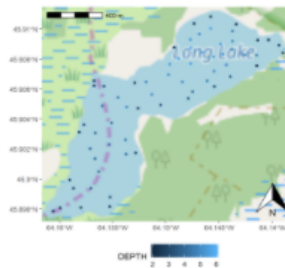


Figure 1.1: Map of Long Lake sample from the ggspatial package.

#### 1.2 Objectives

1. Easy to use reproducible poster design.
2. Integration with RMarkdown.
3. Easy transition from posterdown to thesisdown or rticles (Allaire, Xie, R Foundation, et al. 2018; Solomon 2019).

### 2 Methods

This package uses the same workflow approach as the RMarkdown you know and love. Basically it goes from RMarkdown > Knitr > Markdown > Pandoc > HTML/CSS > PDF. You can even use the bibliography the same way (Turner et al. 2014).

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Quisque auctor lorem ex. Pellentesque tempus accumsan nulla, nec eleifend erat rhoncus vel. Ut commodo metus ipsum, sed accumsan risus placerat ut.

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elementum porta posuere. Nullam interdum, odio at tincidunt feugiat, turpis nisi blandit eros, eu posuere risus felis non quam. Nam eget lorem odio. Duis et aliquet orci. Phasellus nec viverra est. Praesent odio orci, mattis vel mauris nec, consectetur fermentum mauris. Etiam eu hendrerit tortor. Donec mi tellus, efficitur et porttitor eu, auctor eu tellus. Quisque faucibus vestibulum sapien vel lacinia. Ut auctor lorem non interdum blandit.

### 3 Results

Usually you want to have a nice table displaying some important results that you have calculated. In posterdown this is as easy as using the kable table formatting you are probably use to as per typical RMarkdown formatting. I suggesting checking out the kableExtra package and its in depth documentation on customizing these tables found here (Zhu 2019). Hopfully I can make this with an inline reference like, Table 3.1.

Table 3.1: Table caption.

Sepal.Length	Sepal.Width	Petal.Length	Petal.Width
5.1	3.5	1.4	0.2
4.9	3.0	1.4	0.2
4.7	3.2	1.3	0.2
4.6	3.1	1.5	0.2
5.0	3.6	1.4	0.2

Look at this animation (Pedersen and Robinson 2017) !!!! Figure 3.1.

```
library(ggplot2)
library(gganimate)
library(gapminder)
```

```
ggplot(gapminder, aes(gdpPerCap,
                      lifeExp,
                      size = pop,
                      colour = country)) +
  geom_point(alpha = 0.7, show.legend = FALSE) +
  scale_colour_manual(values = country_colors) +
  scale_size(range = c(2, 12)) +
  scale_x_log10() +
  facet_wrap(~continent) +
  # Here comes the gganimate specific bits
  labs(title = "Year: {frame.time}",
       x = "GDP per capita",
       y = "Life expectancy") +
  transition_time(year) +
  ease_aes("linear")
```

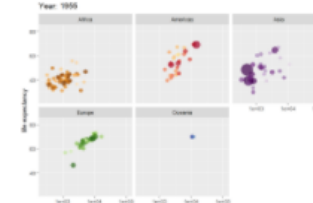


Figure 3.1: WOW THIS IS AN AWESOME GIF!

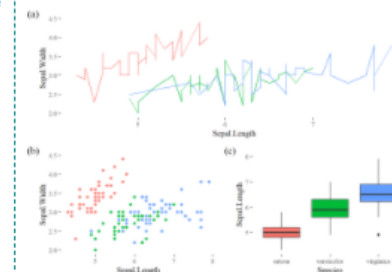


Figure 3.2: Using ggplot and patchwork to generate a layout of multiple plots in one figure. The iris dataset was used to generate (a) a line graph, (b) a scatterplot, and (c) a boxplot all together!

### 4 Next Steps

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aliquam placerat augue at velit tincidunt semper. Donec elementum porta posuere. Nullam interdum, odio at tincidunt feugiat, turpis nisi blandit eros, eu posuere risus felis non quam. Nam eget lorem odio. Duis et aliquet orci. Phasellus nec viverra est. Praesent odio orci, mattis vel mauris nec, consectetur fermentum mauris. Etiam eu hendrerit tortor. Donec mi tellus, efficitur et porttitor eu, auctor eu tellus. Quisque faucibus vestibulum sapien vel lacinia. Ut auctor lorem non interdum blandit.

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### 5 Conclusion

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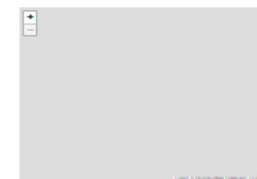


Figure 5.1: Here is a leaflet figure which will run as expected online, when printed it will take the last state it is left in before choosing to print.

### References

- Allaire, JJ, Yihui Xie, Jonathan McPherson, Javier Luraschi, Kevin Ushey, Aron Atkins, Hadley Wickham, Joe Cheng, Winston Chang, and Richard Iannone. 2018. *R Markdown: Dynamic Documents for R*. <https://rmarkdown.rstudio.com>
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- Turner, Kevin W, Brent B. Wolfe, Thomas W. D. Edwards, Trevor C. Lantz, Richard I. Hall, and Guillaume Larue. 2014. "Controls on Water Balance of Shallow Thermokarst Lakes and Their Relations with Catchment Characteristics: A Multi-Year, Landscape-Scale Assessment Based on Water Budgets, Tracers and Remote Sensing in Old Crow Flats, Yukon (Canada)." *Global Change Biology* 20 (3): 1585–1603. <https://doi.org/10.1111/gcb.12465>
- Zhu, Hao. 2019. *KableExtra: Construct Complex Table with 'Kable' and Pipe System*. <https://cran.r-project.org/package=kableExtra>

# Posterdown\_betterland

poster\_height:  
"32in"

poster\_width:  
"46in"

## A Better Reproducible Poster Title

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<sup>2</sup> Department of Graphics and Layouts, University of Toronto, Canada

### Introduction

This is the `posterdown_betterland` template for the `{posterdown}` package! I was inspired by the twitter thread of [Mike Morrison](#) and wanted to apply the `#betterposter` concept to the reproducible (yet simple to use) functionality of the `{posterdown}` package ([Thorne 2019](#)). If you are not an R user don't sweat as you do **NOT** need to use it at all! Feel free to use only the Markdown functionality of this package :)

### Methods

1. Install R and `posterdown`, see [github](#)
2. Open the `posterdown_betterland` template
3. Make all your poster dreams come true!

### Results

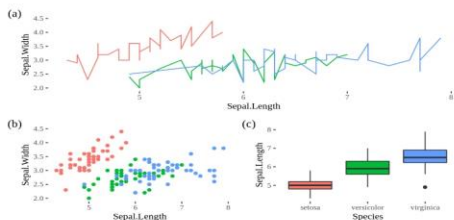


Figure 1: Using `ggplot` and `patchwork` to generate a layout of multiple plots in one figure ([Pedersen 2017](#)).

Make better posters  
with  
RMarkdown +  
posterdown.

Transition from  
poster to  
manuscript with  
ease!



### More Figures and Tables

Table 1: Here is a caption for the table made with the `[kableExtra]` package ([Zhu 2019](#)).

Sepal W	Sepal L	Petal W	Petal L	Species
5.1	3.5	1.4	0.2	setosa
4.9	3.0	1.4	0.2	setosa
4.7	3.2	1.3	0.2	setosa
4.6	3.1	1.5	0.2	setosa
5.0	3.6	1.4	0.2	setosa

```
library(ggplot2)
library(ggspatial)

load_longlake_data()

ggplot() +
  theme_minimal() +
  layer_spatial(longlake_depthdf,
    aes(colour = DEPTH)) +
  annotation_scale(location = "tl") +
  annotation_north_arrow(location = "br") +
  theme(legend.position = "bottom")
```

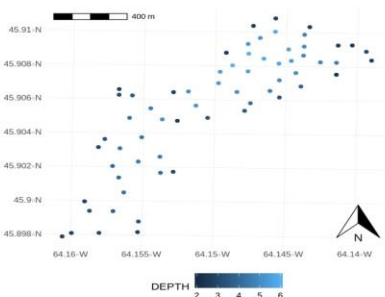


Figure 2: Map of Long Lake sample from the `ggspatial` package ([Dunnington, n.d.](#)).

### References

- Dunnington, Dewey. n.d. `ggspatial: Spatial Data Framework for Ggplots`. <https://github.com/jacobmimberg/ggspatial>.
- Pedersen, Thomas Lin. 2017. *Patchwork: The Compose of Ggplots*. <https://github.com/thomasp85/patchwork>.
- Thorne, W. Brent. 2019. *Posterdown: An R Package Built to Generate Reproducible Conference Posters for the Academic and Professional World Wide Powerpoint and Pages Just Wont Cut It*. Vol. 0.1.2. <https://github.com/brentthorne/posterdown>.
- Zhu, Hao. 2019. *KableExtra: Construct Complex Table with 'Kable' and Pipe Syntax*. <https://CRAN.R-project.org/package=kableExtra>.

# Posterdown\_betterport

poster\_height:  
"48in"

poster\_width:  
"36in"

Make better posters with RMarkdown + posterdown.

Transition from poster to manuscript with ease!

## A Better Reproducible Poster Title

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<sup>1</sup> Department of Earth Sciences, Brock University

<sup>2</sup> Department of Graphics and Layouts, University of Western Ontario

<sup>3</sup> Another Institute of a place where work gets done, Earth, Milky Way

### Introduction

This is the posterdown.betterland template for the {posterdown} package! I was inspired by the twitter thread of Mike Morrison and wanted to apply the #betterposter concept to the reproducible (yet simple to use) functionality of the {posterdown} package (Thorne 2019). If you are not an R user don't sweat as you do NOT need to use it at all! Feel free to use only the Markdown functionality of this package :)

HTML documents such as this allow for "live" posters (aka GIFs or embed videos etc), see Figure 1 below for an example of a study site map made using the {ggspatial} or Figure 2 for an example using the {gganimate} package by (Pedersen and Robinson 2017). I can even change the order of the figures in the poster and {posterdown} will take care of the formatting of Figure numbers for you, see Figure 1.

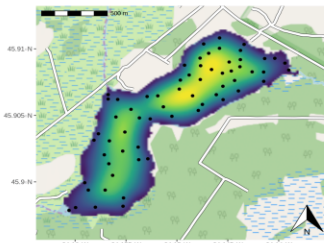


Figure 1: Map of Long Lake example from the ggspatial package (Dunnington, n.d.).

### Methods

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2. Open the posterdown.betterland template
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### Results

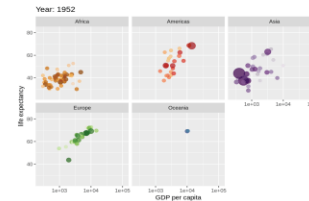


Figure 2: WOW THIS IS AN AWESOME GIFT

```
library(tidyverse)
library(patchwork)
library(ggthemes)

theme_set(theme_gray() + theme_tufte() +
  theme(legend.position = "none"))

base <- ggplot(iris, aes(x = Sepal.Length,
  y = Sepal.Width,
  colour = Species))

p_point <- base + geom_point()
p_line <- base + geom_line()
p_area <- base + geom_area()
p_box1 <- ggplot(iris) +
  geom_boxplot(aes(x = Species,
    y = Sepal.Length,
    fill = Species))

p_box2 <- ggplot(iris) +
  geom_boxplot(aes(x = Species,
    y = Sepal.Width,
    fill = Species))

p_line +
  (p_point + p_box1) +
  plot_layout(ncol = 1) +
  plot_annotation(tag_levels = "a",
    tag_prefix = "(",
    tag_suffix = ")")
```

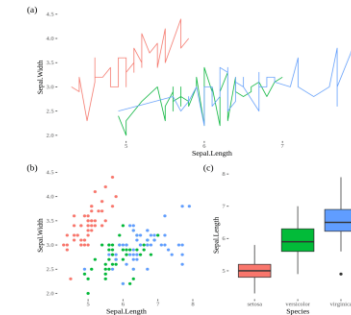


Figure 3: Using {ggplot} and {patchwork} to generate a layout of multiple plots in one figure (Pedersen 2017).

### More Figures and Tables

Table 1: Here is a caption for the table made with the {kableExtra} package (Zhu 2016)

	Sepal W	Sepal L	Petal W	Petal L	Species
1	5.1	3.5	1.4	0.2	setosa
2	4.9	3.0	1.4	0.2	setosa
50	5.0	3.3	1.4	0.2	setosa
51	7.0	3.2	4.7	1.4	versicolour
101	6.3	3.3	6.0	2.5	virginica
102	5.8	2.7	5.1	1.9	virginica

A BIG thank you to Romain Leasur and Yihui Xie for their wonderful work on {pagedown} which had made this poster possible (Xie and Leasur, n.d.)!

### References

- Dunnington, Drew. n.d. *ggspatial: Spatial Data Framework for ggplot2*. <https://github.com/patrickdun/ggspatial>.
- Pedersen, Thomas Lin, and David Robinson. 2017. *gganimate: A Grammar of Animated Graphics*. <http://github.com/thomasp82/gganimate>.
- Thorne, W. Brent. 2019. *posterdown: An R Package Built to Generate Reproducible Conference Posters for the Academic and Professional World Were PowerPoint and Paper Just Went Out R*. Vol. 0.1.3. <https://github.com/brentthorne/posterdown>.
- Xie, Yihui, and Romain Leasur. n.d. *Pagedown: Paginate the HTML Output of R Markdown with Cms for Print*. <https://github.com/yihui/pagedown>.
- Zhu, Hao. 2016. *kableExtra: Construct Complex Table with 'kable' and Pipe Syntax*. <https://CRAN.R-project.org/package=kableExtra>.





# Layout

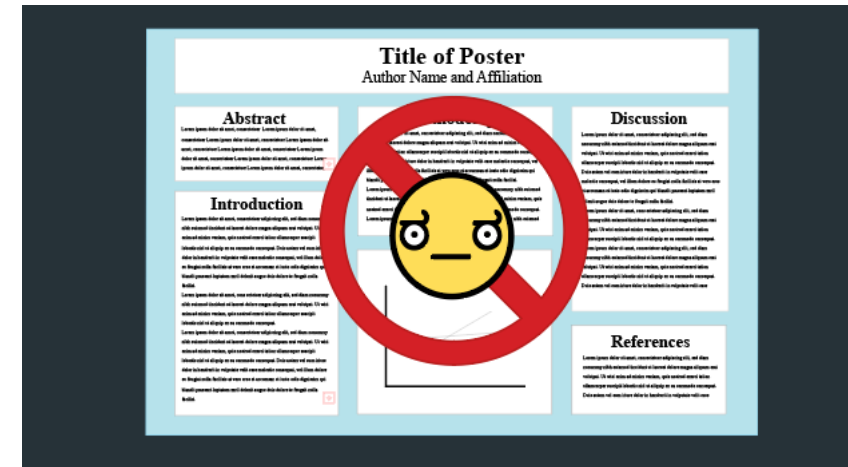
- ❖ betterland and betterpost have a “main” section that are larger than typical conference posters
- ❖ Both have a “body” that appear smaller than typical conference posters
- ❖ Both have a QR code

## Why so different?

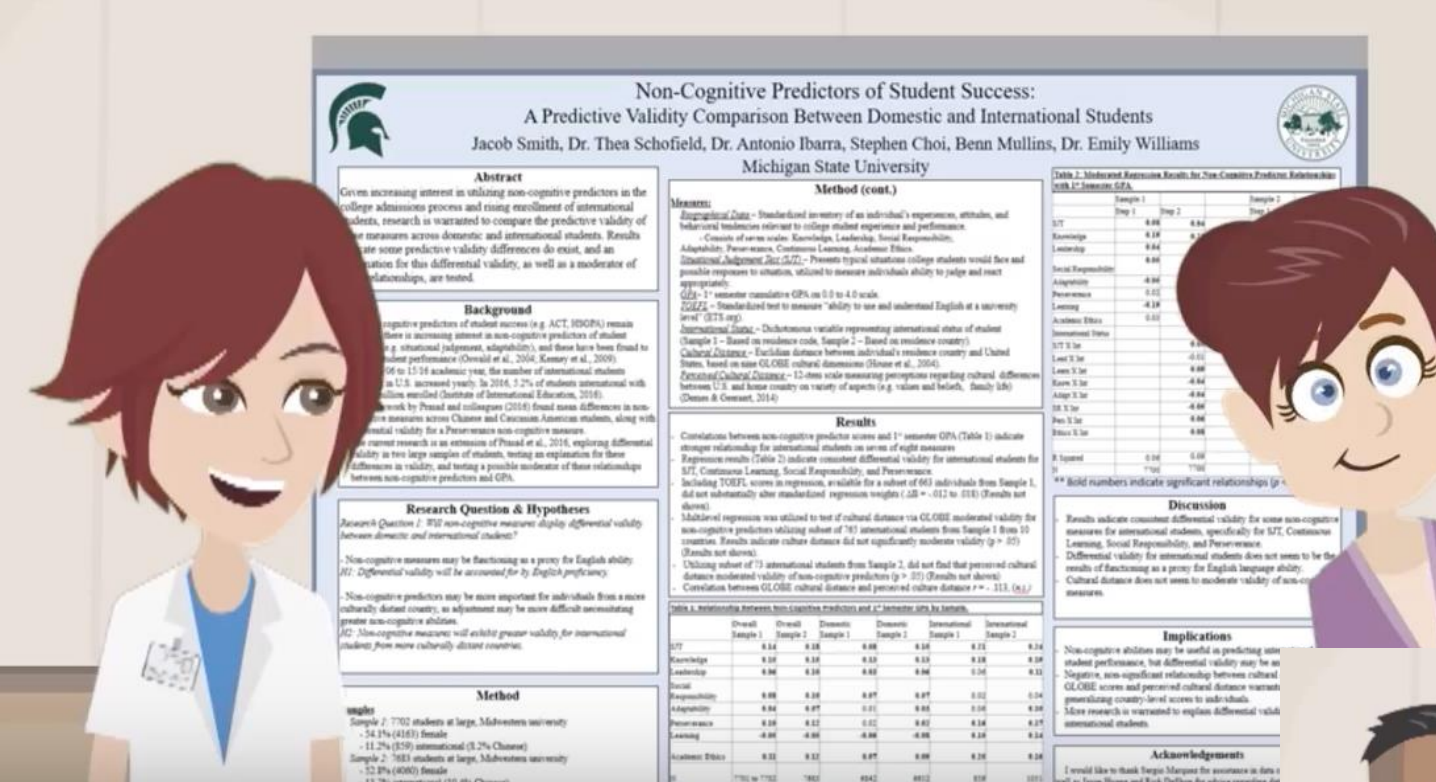
## Inspiration

Tweet from Mike Morrison (March 25, 2019)

“Let's fix academic posters! Prepping a poster for [#SIOP19](#) and sick of the old "wall-of-text" poster design? Watch this cartoon to see a new, faster approach to designing research posters. Includes templates. [#betterposter](#) <https://youtu.be/1RwJbhkCA58>”

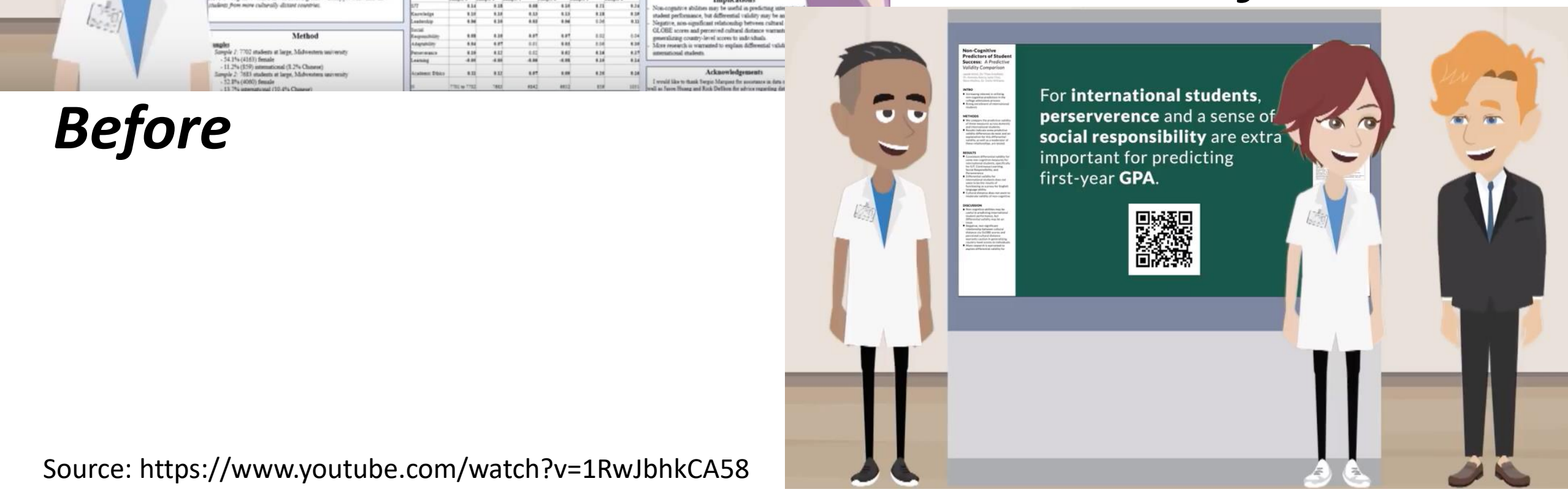






**Before**

**After**





# Make better posters with RMarkdown + posterdown.

```
1 |---
2 main_topsize: 0.2 #percent coverage of the poster
3 main_bottomsize: 0.1
4 #ESSENTIALS
5 title: '**A Better Reproducible Poster Title**'
6 author:
7   - name: '**W. Brent Thorne**'
8     affil: 1
9     main: true
10    orcid: '0000-0002-1099-3857'
11    twitter: brentthorne18
12    email: bthorne2@brocku.ca
13   - name: Another G. Contributor
14     affil: 2
15     main: true
16     email: 'ag.con@posterdown.net'
17   - name: Person Three
18     affil: 3
19   - name: Person Four
20     affil: 2
21   - name: Person Five
22     affil: 3
23   - name: Person Six
24     affil: 3
25   - name: A. Seventh Author
26     affil: 2
27 affiliation:
28   - num: 1
29     address: Department of Earth Science, Brock University
30   - num: 2
31     address: Department of Graphics and Layouts, University of Posters; Canada
32   - num: 3
33     address: Another Institute of a place where work gets done, Earth, Milky Way
34 main_findings:
35   - "Make **better posters** with RMarkdown + **posterdown**."
36 logoleft_name: https&#58;//raw.githubusercontent.com/brentthorne/posterdown/master/images/betterhexlogo.png
37 logoright_name: https&#58;//raw.githubusercontent.com/brentthorne/posterdown/master/images/betterhexlogo.png
38 logocenter_name: https&#58;//raw.githubusercontent.com/brentthorne/posterdown/master/images/qr-code-black.png
```

## A Better Reproducible Poster Title

W. Brent Thorne<sup>1, ①</sup>

✉ @brentthorne18

✉ bthorne2@brocku.ca

Another G. Contributor<sup>2</sup>

✉ ag.con@posterdown.net

Person Three<sup>3</sup> Person Four<sup>2</sup> Person Five<sup>3</sup> Person Six<sup>3</sup> A. Seventh Author<sup>2</sup>

<sup>1</sup> Department of Earth Science, Brock University

<sup>2</sup> Department of Graphics and Layouts, University of Posters; Canada

<sup>3</sup> Another Institute of a place where work gets done, Earth, Milky Way

even reference to the figure automatically like this, `Figure  
\\ref(fig:irisfigure)`, Figure 1.

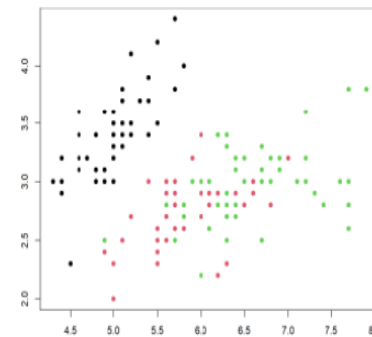


Figure 1: Here is a caption for the figure. This can be added by using the "fig.cap" option in the R code chunk options, see this link from the legend himself, Yihui Xie.

4.4	2.9	1.4	0.2	setosa
4.9	3.1	1.5	0.1	setosa
5.4	3.7	1.5	0.2	setosa
4.8	3.4	1.6	0.2	setosa
4.8	3.0	1.4	0.1	setosa
4.3	3.0	1.1	0.1	setosa
5.8	4.0	1.2	0.2	setosa

## References

Thorne, Brent. 2019. Posterdown: Generate PDF Conference Posters Using R Markdown. <https://github.com/brentthorne/posterdown>.  
Xie, Yihui, Roman Loefer, Brent Thorne, and Yanyang Tan. 2021. Rpostdown: Facilitate the HTML Output of R Markdown with CSS for Print. <https://github.com/rstudio/rpostdown>.

Maybe you want to show off some of that fancy code you spent so much time on to make that figure, well you can do



```

39 output:
40   posterdown::posterdown_betterport:
41     self_contained: false
42     pandoc_args: --mathjax
43     number_sections: false
44 bibliography: packages.bib
45 link-citations: true
46 ---
47
48 ```{r, include=FALSE}
49 knitr::opts_chunk$set(echo = FALSE,
50                       warning = FALSE,
51                       tidy = FALSE,
52                       message = FALSE,
53                       fig.align = 'center',
54                       out.width = "100%")
55 options(knitr.table.format = "html")
56 ```
57
58 # Introduction
59
60 This is the `posterdown_betterport` template for the {posterdown} package! I was
61 inspired by the twitter thread of [Mike
62 Morrison](https://mobile.twitter.com/mikemorrison/status/1110191245035479041) and
63 wanted to apply the `#betterposter` concept to the reproducible (yet simple to use)
64 functionality of the {posterdown} package [R-posterdown]. If you're not an R user
65 don't sweat as you do **NOT** need to use it at all! Feel free to use only the
66 Markdown functionality of this package :)
67
68 ```{r, include=FALSE}
69 knitr::write_bib(c('posterdown', 'rmarkdown', 'pagedown'), 'packages.bib')
70 ```
71
72 ## Objectives
73
74 1. Pick a template layout.
75 2. Write/ create your poster content distraction free.
76 3. Let posterdown do its thing!
77
78 # Methods
79
80 I will show here how to include poster elements that may be useful, such as an
81 equation using mathjax:
82
83 ```
84 $$
85 E = mc^2
86 $$
87 ```
88
89 
$$E = mc^2$$

90
91 To reference a citation you can add your `.bib` file to the working directory and
92 name it in the YAML metadata or generate an automated one as done here, then you
93 only need to reference the label value in the `.bib` file. For example this package
94 is built on top of the wonderful {pagedown} package and I will cite it at the end of
95 this sentence using this in the rmd `[@R-pagedown]` [R-pagedown].

```

## Introduction

This is the `posterdown_betterport` template for the {posterdown} package! I was inspired by the twitter thread of Mike Morrison and wanted to apply the `#betterposter` concept to the reproducible (yet simple to use) functionality of the {posterdown} package (Thorne 2019). If you're not an R user don't sweat as you do **NOT** need to use it at all! Feel free to use only the Markdown functionality of this package :)

## Objectives

1. Pick a template layout.
2. Write/ create your poster content distraction free.
3. Let posterdown do its thing!

## Methods

I will show here how to include poster elements that may be useful, such as an equation using mathjax:

$$E = mc^2$$

To reference a citation you can add your `.bib` file to the working directory and name it in the YAML metadata or generate an automated one as done here, then you only need to reference the label value in the `.bib` file. For example this package is built on top of the wonderful {pagedown} package and I will cite it at the end of this sentence using this in the rmd `[R-pagedown]` (Xie et al. 2021).

To get a better understanding of how to include features like these please refer to the {posterdown} wiki.

```

94 # Results
95
96 Here you may have some figures to show off, bellow I have made a scatterplot with
the infamous Iris dataset and I can even reference to the figure automatically like
this, Figure \@ref(fig:irisfigure), Figure \@ref(fig:irisfigure).
97
98 ```{r, irisfigure, fig.cap='Here is a caption for the figure. This can be added by
using the "fig.cap" option in the r code chunk options, see this
[link](https://yihui.name/knitr/options/#plots) from the legend himself, [Yihui
Xie](https://twitter.com/xieyihui).', out.width="80%"}
99 par(mar=c(2,2,0,1))
100 plot(x = iris$Sepal.Length, y = iris$Sepal.width,
101      col = iris$Species, pch = 19, xlab = "Sepal Length",
102      ylab = "Sepal width")
103
104
105 Maybe you want to show off some of that fancy code you spent so much time on to make
that figure, well you can do that too! Just use the 'echo=TRUE' option in the r code
chunk options, Figure \@ref(fig:myprettycode)!
106
107 ```{r myprettycode, echo=TRUE, fig.cap='Boxplots, so hot right now!', fig.height=6,
out.width="80%"}
108 #trim whitespace
109 par(mar=c(2,2,0,0))
110 #plot boxplots
111 boxplot(iris$Sepal.width~iris$Species,
112        col = "#008080",
113        border = "#0b4545",
114        ylab = "Sepal width (cm)",
115        xlab = "Species")
116
117
118 <p class="force8break"></p>
119 <div><br></div>
120 <div><br></div>
121 <div><br></div>
122 <div><br></div>
123 <div><br></div>
124 <div><br></div>
125 <div><br></div>
126 <div><br></div>
127
128
129 How about a neat table of data? See, Table \@ref(tab:iristable):
130
131 ```{r, iristable}
132 knitr::kable(
133   iris[1:15,1:5], format = "html",
134   caption = "A table made with the **knitr::kable** function.",
135   align = "c", col.names = c("Sepal <br> Length",
136                               "Sepal <br> width",
137                               "Petal <br> Length",
138                               "Petal <br> width",
139                               "Species"),
140   escape = FALSE)
141
142
143 # References
144

```

These are line breaks.  
They are your friend

Here you may have some figures to show off, bellow I have made a scatterplot with the infamous Iris dataset and I can even reference to the figure automatically like this, `Figure \@ref(fig:irisfigure)`, `Figure 1`.

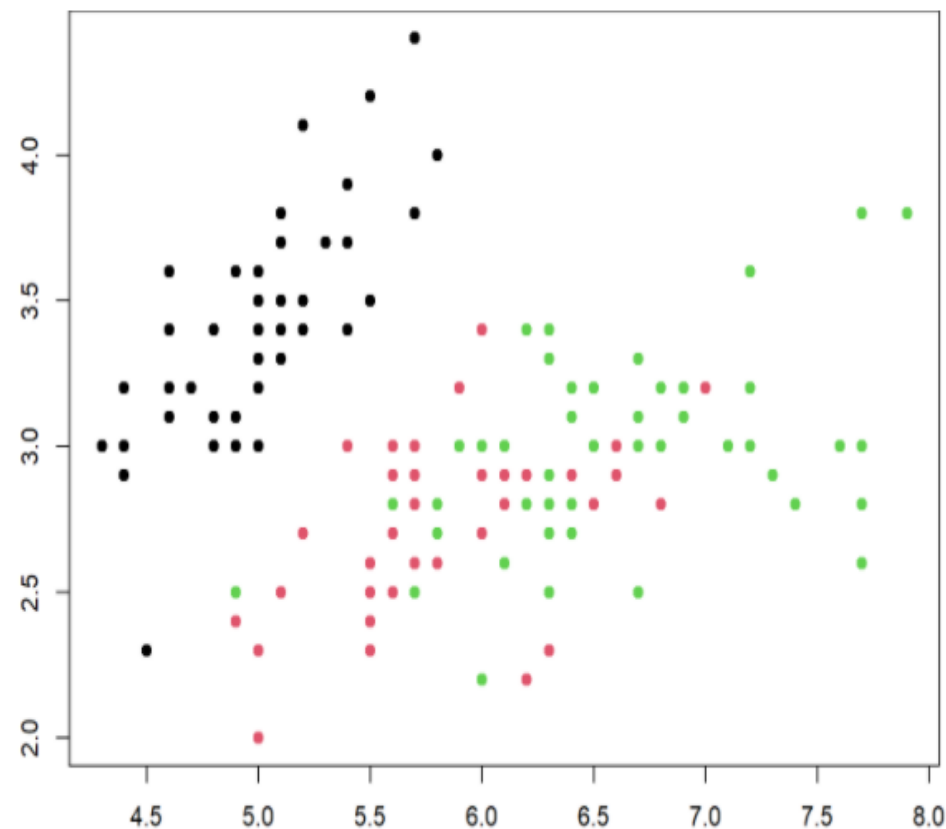


Figure 1: Here is a caption for the figure. This can be added by using the `"fig.cap"` option in the r code chunk options, see this [link](https://yihui.name/knitr/options/#plots) from the legend himself, Yihui Xie.



# Customizing your poster:

<https://github.com/brentthorne/posterdown/wiki>

← → ↻

github.com/brentthorne/posterdown/wiki

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🔔 Issues 27

🔗 Pull requests 3

🔄 Actions

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📖 Wiki

🔒 Security

📊 Insights

Home


Brent Thorne edited this page on Jun 18, 2019 · 2 revisions

Welcome to the posterdown wiki!

The concept of posterdown is to just generate reproducible content (ie conference posters) and let this package take care of the formatting 🎨. With that said you can go deep into customization if you so choose. To help guide those who wish to add a personal touch please read through the extensive options in this wiki! For any options that do not exist please feel free to request changes or report issues [here](#).

Please see the wiki pages for each individual poster template as there can be minor differences (albeit I am working on minimizing them) and design accordingly!

If you are new to R or rmarkdown in general there are plans to make a "Starters Guide" in this wiki, but in the mean time you can get the gist of it on my youtube channel [here](#).



▼ Pages 6

Find a Page...

▼ Home

Welcome to the posterdown wiki!

▶ Installation & Usage Guide

▶ posterdown\_betterland

▶ posterdown\_betterport

▶ posterdown\_html

▶ Showcase

Clone this wiki locally

https://github.com/brentthorne/pos

📄

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# Customizing your poster

## Main Section

YAML Option	Default Value	Description
main_fontfamily	"Special Elite"	Font family for the main text generated using the <code>main_findings:</code> option. Standard HTML fonts or google fonts can be used.
main_textcol	"#FFFFFF90"	Text colour for the main findings text. Can use HEX values as well as extra 2 digits for transparency if desired.
main_textsize	"170px"	Font size for the middle text generated by <code>main_findings:</code> .
main_findings	<i>none</i>	String containing the sentence found in the main section of the poster which is the "take home message". There can be multiple sentences used and you can even add an image in there (see the latest template for example) if you wish to emphasis a final figure of something along those lines.
logoleft_name	<i>none</i>	Path to the image file or url if you wish to include a logo in the bottom left corner of the main section.
logoright_name	<i>none</i>	Path to the image file or url if you wish to include a logo in the bottom right corner of the main section.

## Body Section

YAML Option	Default Value	Description
body_bgcol	"#FFFFFF"	Background colour of the poster's body.
body_textsize	"45px"	Size of any paragraph text found in the poster.
body_textcol	"#000000"	Colour of the body text.
title_textsize	"125pt"	Text size for the poster title if title is given.
author_textsize	"1.17em"	Text size for author output (this is only for the option where author has <code>main: true</code> ).
authorextra_textsize	"35px"	Text size of all author names if they are not listed as <code>main:true</code> .
affiliation_textsize	"25px"	Text size of the affiliation output.
affiliation_textcol	"#00000060"	Colour of the affiliation text output.
caption_textsize	"20pt"	Text size for any caption text generated by figures or tables in the document.
reference_textsize	"20px"	Text size of the automated Reference section if used.

## Other Useful Options

These are found in typical RMarkdown documents but may be useful when generating a conference poster:

YAML Option	Default Value	Description
link-citations	false	Will make inline citations a clickable link which will direct the reader to the appropriate portion of the "References" section.
bibliography	<i>none</i>	File path to a <code>.bib</code> bibliography file if needed.
csl	<i>none</i>	File path to a <code>.csl</code> file which will change the citation style for the document, many options can be found at on the <a href="#">Zotero Styles Repository</a>

# Resources

To customize your posters, go to:

- <https://github.com/brentthorne/posterdown/wiki>

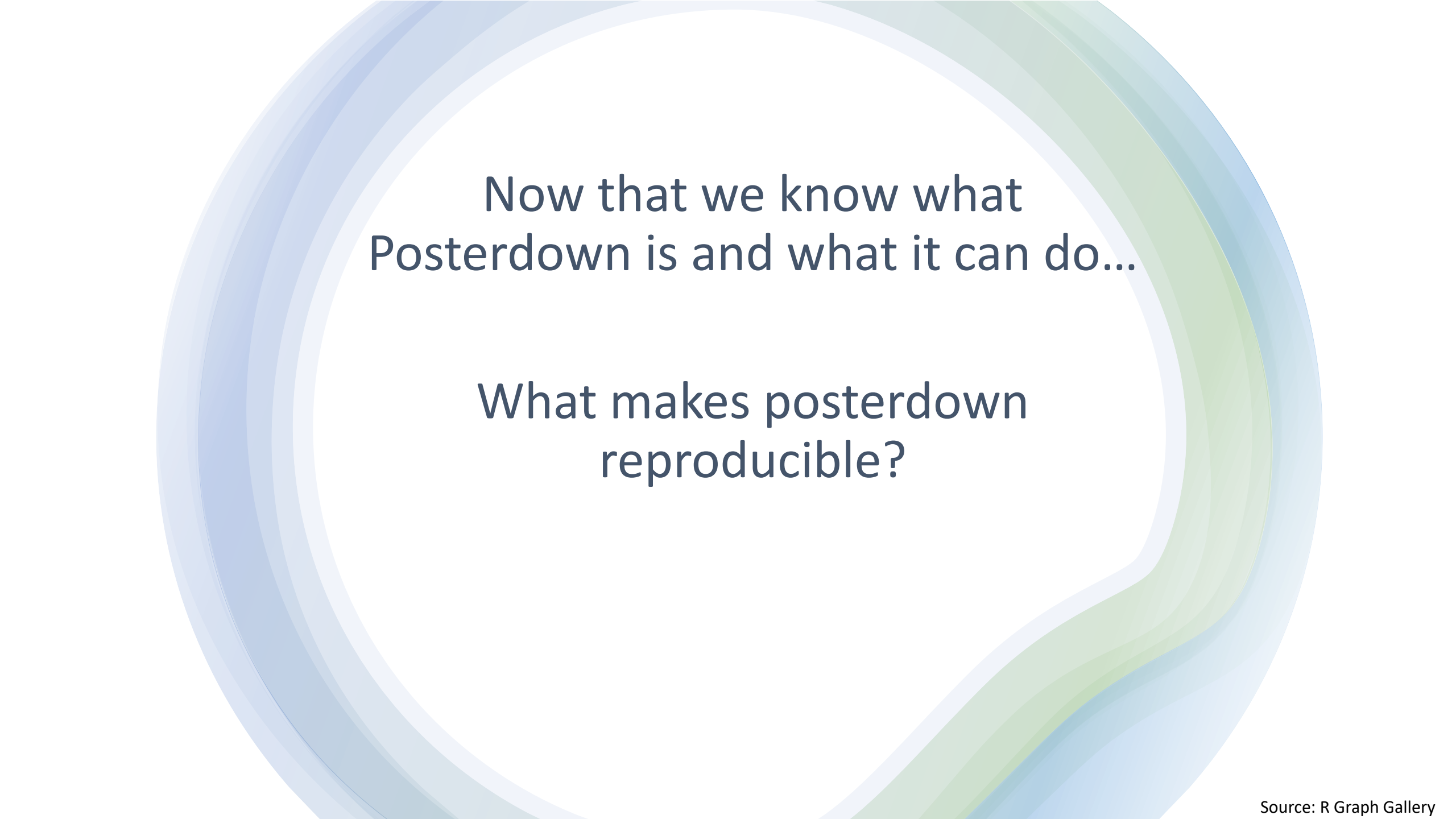
To watch Mike Morisson's full video:

- <https://www.youtube.com/watch?v=0yAleykkRhw>

Zotero for managing publications

- <https://www.zotero.org/>



The background features a series of concentric circles in shades of blue and green, with a wavy line cutting through them from the bottom right.

Now that we know what  
Posterdown is and what it can do...

What makes posterdown  
reproducible?



Any questions  
before we start  
on our posters?

---

