Figure 5

Overview

This script takes a data frame produced by sizes_plots.qmd and outputs a figure that adheres to PLOS submission guidelines.

Import packages and utilities

```
project_root <- here::here() # requires that you be somewhere in the
# project directory (not above it)
# packages
suppressMessages(source(file.path(project_root, "scripts/packages.R")))
# functions and objects used across scripts
suppressMessages(source(file.path(project_root, "scripts/utils.R")))
```

Load data

```
# This poorly named function from utils.R
# is basically just read.csv with my data path in there
acad_counts <- load_qualtrics_data(file.path("data_for_plots/project_sizes_acad.tsv"))
staff_counts <- load_qualtrics_data(file.path("data_for_plots/project_sizes_staff.tsv"))
```

```
#my_colors <- c("#D6604D", "#FDDBC7", "#D1E5F0", "#4393C3")
#acad_colors <- c("#71190d", "#db060b", "#ee8026", "#f7ca46")
acad_colors <- c("#1a7937", "#5bae60", "#acd49f", "#d9f0d4")
staff_colors <- c("#1964b0", "#427dbf", "#77aadd", "#c3e5f0")
```

Reorder factor levels

```
ordered_freqs <- c(
  "Never",
  "Relatively infrequently",
  "Occasionally",
  "Relatively frequently"
)

ordered_sizes <- c(
  "Small",
  "Medium",
  "Large"
)

acad_counts$frequency <- factor(
  acad_counts$frequency,
  levels = ordered_freqs
)

acad_counts$size <- factor(
  acad_counts$size,
  levels = ordered_sizes
)

staff_counts$frequency <- factor(
  staff_counts$frequency,
  levels = ordered_freqs
)

staff_counts$size <- factor(
  staff_counts$size,
  levels = ordered_sizes
)
```

Plot

```
p_acad <- stacked_bar_chart(
  acad_counts,
```

```
  x_var = "size",
  y_var = "n",
  fill = "frequency",
  title = "Frequency of contribution by\nproject size: academics",
  ylabel = "Percent of responses",
  proportional = TRUE,
  #show_legend = FALSE,
  legend_text_size = 6,
  margin_vals = c(0.1, 0.1, 0.1, 0.1),
  plot_title_size = 7,
  y_axis_text_size = 6,
  y_axis_title_size = 6,
  x_axis_text_size = 6,
  cpalette = acad_colors
)

p_acad <- p_acad +
  scale_y_continuous(labels = scales::percent)


p_staff <- stacked_bar_chart(
  staff_counts,
  x_var = "size",
  y_var = "n",
  fill = "frequency",
  title = "Frequency of contribution by\nproject size: non-research staff",
  ylabel = "Percent of responses",
  proportional = TRUE,
  #show_axis_title_y = FALSE,
  legend_text_size = 6,
  margin_vals = c(0.1, 0.1, 0.1, 0.1),
  plot_title_size = 7,
  y_axis_text_size = 6,
  y_axis_title_size = 6,
  x_axis_text_size = 6,
  cpalette = staff_colors
)

p_staff <- p_staff +
  scale_y_continuous(labels = scales::percent)
```

Combine onto one plot and save

```r
p_combined <- patchwork::wrap_plots(
  p_acad,
  plot_spacer(),
  p_staff
) +
  plot_layout(widths = c(1, 0.1, 1))

ggsave(
  filename = file.path(FIGURE_PATH, "fig5.tif"),
  plot = p_combined + plot_annotation(tag_levels = "A") & theme(plot.tag = element_text(size
  device = "tiff",
  width = 5.2, height = 2.5, units = "in",
  dpi = 450,
  compression = "none",
  bg = "white"
)
```