

South Houston High School pre-inquiry- Analysis

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```
library(tidyverse)
library(RColorBrewer)
library(plotly)
library(plyr)
library(gt)
library(stringr)
library(stringi)
library(leaflet)
remotes::install_github("chiouey/mapquesttr")
```

About Dataset The dataset refers to 14 SUPERGirls from South Houston High School. It includes data collected from a pre-inquiry filled out by those Girls.

Looking ahead, of interest in this project will be to apply data preparation to be ready for further analysis, then to apply some EDA, to get all the information about our variable of interest, in addition to visualizing the data.

Here is a glimpse of what we will be working with.

```
data<- readr::read_csv("SOHO pre inquiry--Analysis.csv")
colnames(data)
```

```
## [1] "Name of School"
## [2] "Date"
## [3] "Name of SUPERGirl"
## [4] "Grade"
## [5] "Confident Speaker with others"
## [6] "Problem solver"
## [7] "Work well with others"
## [8] "Interact positively in public setting"
## [9] "Confident in who I am"
## [10] "Ability to verbally communicate well"
## [11] "Can speak up to contribute ideas"
## [12] "Leader in group settings"
## [13] "STEM is fun"
## [14] "Sad feeling if it is the last class in STEM"
## [15] "Real interest in learning STEM"
## [16] "Like to persue STEM pathway"
```

```
summary(data)
```

```
## Name of School      Date      Name of SUPERGirl      Grade
## Length:14          Length:14    Length:14          Length:14
## Class :character    Class :character    Class :character    Class :character
## Mode  :character    Mode  :character    Mode  :character    Mode  :character
##
##
## Confident Speaker with others Problem solver Work well with others
## Min.   :1.000          Min.   :2.000    Min.   :3.000
## 1st Qu.:3.000          1st Qu.:3.000    1st Qu.:3.000
## Median :3.000          Median :3.000    Median :3.500
## Mean   :2.929          Mean   :3.357    Mean   :3.571
## 3rd Qu.:3.000          3rd Qu.:4.000    3rd Qu.:4.000
## Max.   :5.000          Max.   :5.000    Max.   :5.000
## Interact positively in public setting Confident in who I am
## Min.   :2.000          Min.   :3.000
## 1st Qu.:3.250          1st Qu.:3.000
## Median :4.000          Median :4.000
## Mean   :3.786          Mean   :3.821
## 3rd Qu.:4.000          3rd Qu.:4.000
## Max.   :5.000          Max.   :5.000
## Ability to verbally communicate well Can speak up to contribute ideas
## Min.   :2.000          Min.   :2.000
## 1st Qu.:3.000          1st Qu.:3.000
## Median :3.000          Median :3.000
## Mean   :3.357          Mean   :3.143
## 3rd Qu.:4.000          3rd Qu.:4.000
## Max.   :5.000          Max.   :4.000
## Leader in group settings STEM is fun
## Min.   :1.000          Min.   :3.000
## 1st Qu.:2.000          1st Qu.:4.000
## Median :2.000          Median :4.000
## Mean   :2.786          Mean   :4.214
## 3rd Qu.:4.000          3rd Qu.:5.000
## Max.   :5.000          Max.   :5.000
## Sad feeling if it is the last class in STEM Real interest in learning STEM
## Min.   :2.000          Min.   :3.000
## 1st Qu.:3.000          1st Qu.:4.000
## Median :4.000          Median :4.000
## Mean   :3.714          Mean   :4.214
## 3rd Qu.:4.000          3rd Qu.:5.000
## Max.   :5.000          Max.   :5.000
## Like to persue STEM pathway
## Min.   :3.000
## 1st Qu.:4.000
## Median :4.000
## Mean   :4.214
## 3rd Qu.:5.000
## Max.   :5.000
```

```
School_counts<-count(data$`Name of School`)
names(School_counts)[1] <- 'Name of School'
School_counts
```

```
##      Name of School freq
## 1 South Houston HS    14
```

```
Grade_counts<-count(data$Grade)
names(Grade_counts)[1] <- 'Grade'
Grade_counts
```

```
##      Grade freq
## 1  10th    14
```

```
Confident_Speaker_counts<-count(data$`Confident Speaker with others`)
names(Confident_Speaker_counts)[1] <- 'Rankings of Confidently Speaking with others'
```

```
Confident_Speaker_counts$`Rankings of Confidently Speaking with others`[Confident_Speaker_counts$`Rankings of Confidently Speaking with others` == 1]
```

```
Confident_Speaker_counts$`Rankings of Confidently Speaking with others`[Confident_Speaker_counts$`Rankings of Confidently Speaking with others` == 2]
```

```
Confident_Speaker_counts$`Rankings of Confidently Speaking with others`[Confident_Speaker_counts$`Rankings of Confidently Speaking with others` == 3]
```

```
Confident_Speaker_counts$`Rankings of Confidently Speaking with others`[Confident_Speaker_counts$`Rankings of Confidently Speaking with others` == 4]
```

```
Confident_Speaker_counts$`Rankings of Confidently Speaking with others`[Confident_Speaker_counts$`Rankings of Confidently Speaking with others` == 5]
```

```
Ratings <- c("Strongly Disagree-1", " Disagree-2" , " Neutral-3" , " Agree-4" ," Strongly Agree-5")
```

```
colourCount = length(unique(Confident_Speaker_counts$`Rankings of Confidently Speaking with others`))
```

```
getPalette = colorRampPalette(brewer.pal(colourCount, "Set2"))
```

```
p1<-ggplot(Confident_Speaker_counts, aes(x= factor(Confident_Speaker_counts$`Rankings of Confidently Speaking with others`),
      text=paste("Confident in speaking with others:",Confident_Speaker_counts$`Rankings of Confidently Speaking with others`),
      "<br>Count:",freq
    )))
```

```
geom_bar(stat = 'identity',width = 0.6)+
```

```
ggtitle("Rankings of Confidently Speaking with others") +
```

```
scale_y_continuous(breaks=c(1,2,3,4,5,6,7,8,9,10,11,12,13,14))+
```

```
theme_classic()+
```

```
theme(legend.position="none")+
```

```
labs(y="Counts",x="Rankings", caption = "Source: South Houston High school Pre-inquiry") +
```

```
theme(title = element_text(size = 9, face = "bold"),
```

```
  plot.title = element_text(hjust = 0.5),
```

```
  axis.title.x = element_text(size = 8, face = "bold"),
```

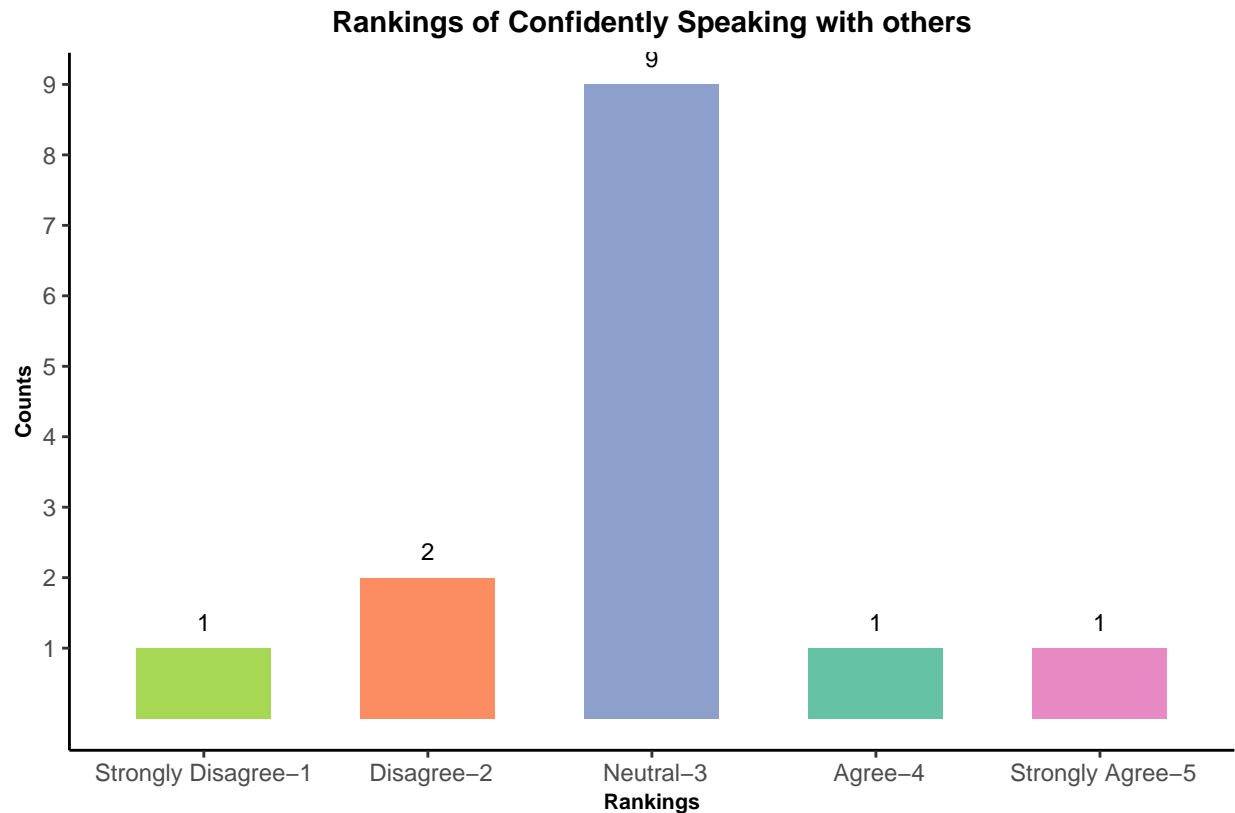
```
  axis.title.y = element_text(size = 8, face = "bold"),
```

```
  legend.position="none",
```

```
  panel.grid.minor = element_blank())+
```

```
geom_text(aes(label = signif(freq)),position=position_dodge(0.9),vjust = -1, size=3)
```

```
p1+scale_fill_manual(values = getPalette(colourCount))
```



Source: South Houston High school Pre-inquiry

```

Problem_solver_counts<-count(data$`Problem solver`)
names(Problem_solver_counts)[1] <- 'Rankings of Ability to solve problems'

Problem_solver_counts$`Rankings of Ability to solve problems`[Problem_solver_counts$`Rankings of Ability to solve problems`=="Strongly Disagree-1"]
Problem_solver_counts$`Rankings of Ability to solve problems`[Problem_solver_counts$`Rankings of Ability to solve problems`=="Disagree-2"]
Problem_solver_counts$`Rankings of Ability to solve problems`[Problem_solver_counts$`Rankings of Ability to solve problems`=="Neutral-3"]
Problem_solver_counts$`Rankings of Ability to solve problems`[Problem_solver_counts$`Rankings of Ability to solve problems`=="Agree-4"]
Problem_solver_counts$`Rankings of Ability to solve problems`[Problem_solver_counts$`Rankings of Ability to solve problems`=="Strongly Agree-5"]

Ratings <- c(" Disagree-2" , " Neutral-3" , " Agree-4" ," Strongly Agree-5")

colourCount = length(unique(Problem_solver_counts$`Rankings of Ability to solve problems`))
getPalette = colorRampPalette(brewer.pal(colourCount, "Set2"))
p1<-ggplot(Problem_solver_counts, aes(x= factor(Problem_solver_counts$`Rankings of Ability to solve problems`),
                                     text=paste("Ability to solve problems:",Problem_solver_counts$`Rankings of Ability to solve problems`),
                                     y= Problem_solver_counts$`Counts`,"<br>Count:",freq
                                     )))
p1+
  geom_bar(stat = 'identity',width = 0.6)+
  ggtitle("Rankings of the ability to solve problems`") +
  scale_y_continuous(breaks=c(1,2,3,4,5,6,7,8,9,10,11,12,13,14))+
  theme_classic()+

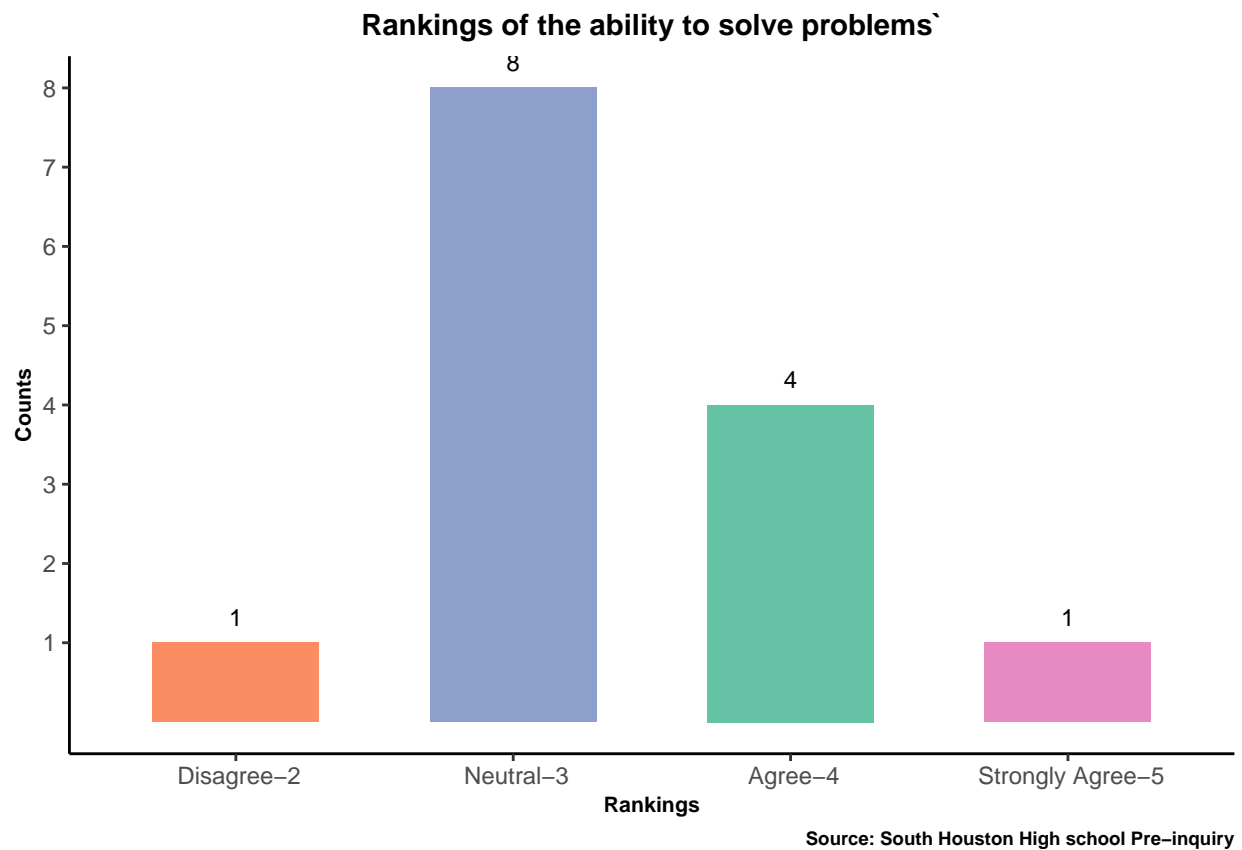
```

```

theme(legend.position="none")+
labs(y="Counts",x="Rankings", caption = "Source: South Houston High school Pre-inquiry") +
theme(title = element_text(size = 9, face = "bold"),
      plot.title = element_text(hjust = 0.5),
      axis.title.x = element_text(size = 8, face = "bold"),
      axis.title.y = element_text(size = 8, face = "bold"),
      legend.position="none",
      panel.grid.minor = element_blank())+
geom_text(aes(label = signif(freq)),position=position_dodge(0.9),vjust = -1, size=3)

p1+scale_fill_manual(values = getPalette(colourCount))

```



```

well_workers_counts<-count(data$`Work well with others`)
names(well_workers_counts)[1] <- 'Rankings of working well with others'

well_workers_counts$`Rankings of working well with others`[well_workers_counts$`Rankings of working well with others`=="Neutral-3"]
well_workers_counts$`Rankings of working well with others`[well_workers_counts$`Rankings of working well with others`=="Agree-4"]
well_workers_counts$`Rankings of working well with others`[well_workers_counts$`Rankings of working well with others`=="Strongly Agree-5"]

Ratings <- c("Neutral-3", "Agree-4","Strongly Agree-5")

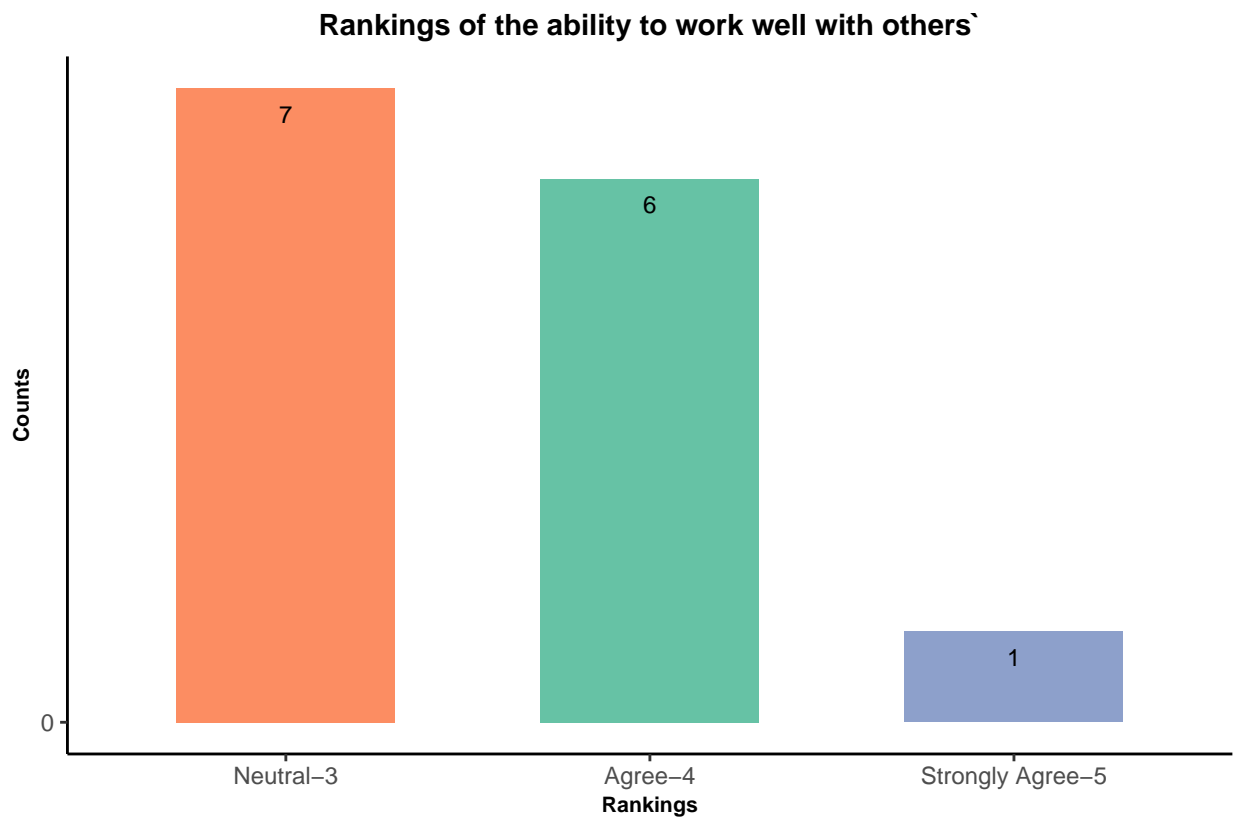
```

```

colourCount = length(unique(well_workers_counts$`Rankings of working well with others`))
getPalette = colorRampPalette(brewer.pal(colourCount, "Set2"))
p3<-ggplot(well_workers_counts, aes(x= factor(well_workers_counts$`Rankings of working well with others`),
    text=paste("Ability to work well with others:",well_workers_counts$`Rankings of working well with others`),
    y= paste("Count:",freq)))+
  geom_bar(stat = 'identity',width = 0.6)+
  ggtitle("Rankings of the ability to work well with others") +
  scale_y_continuous(breaks=c(0,10,20))+
  theme_classic()+
  theme(legend.position="none")+
  labs(y="Counts",x="Rankings", caption = "Source: South Houston High school Pre-inquiry") +
  theme(title = element_text(size = 9, face = "bold"),
    plot.title = element_text(hjust = 0.5),
    axis.title.x = element_text(size = 8, face = "bold"),
    axis.title.y = element_text(size = 8, face = "bold"),
    legend.position="none",
    panel.grid.minor = element_blank())+
  geom_text(aes(label = signif(freq)),position=position_dodge(0.9),vjust = 2, size=3)

p3+scale_fill_manual(values = getPalette(colourCount))

```



Source: South Houston High school Pre-inquiry

```

positive_interactors_counts<-count(data$`Interact positively in public setting`)
names(positive_interactors_counts)[1] <- 'Rankings of ability to positively interact in public'

positive_interactors_counts$`Rankings of ability to positively interact in public` [positive_interactors_counts$`Rankings of ability to positively interact in public` == "Disagree-2"]
positive_interactors_counts$`Rankings of ability to positively interact in public` [positive_interactors_counts$`Rankings of ability to positively interact in public` == "Neutral-3"]
positive_interactors_counts$`Rankings of ability to positively interact in public` [positive_interactors_counts$`Rankings of ability to positively interact in public` == "Agree-4"]
positive_interactors_counts$`Rankings of ability to positively interact in public` [positive_interactors_counts$`Rankings of ability to positively interact in public` == "Strongly Agree-5"]

Ratings <- c("Disagree-2","Neutral-3", "Agree-4","Strongly Agree-5")

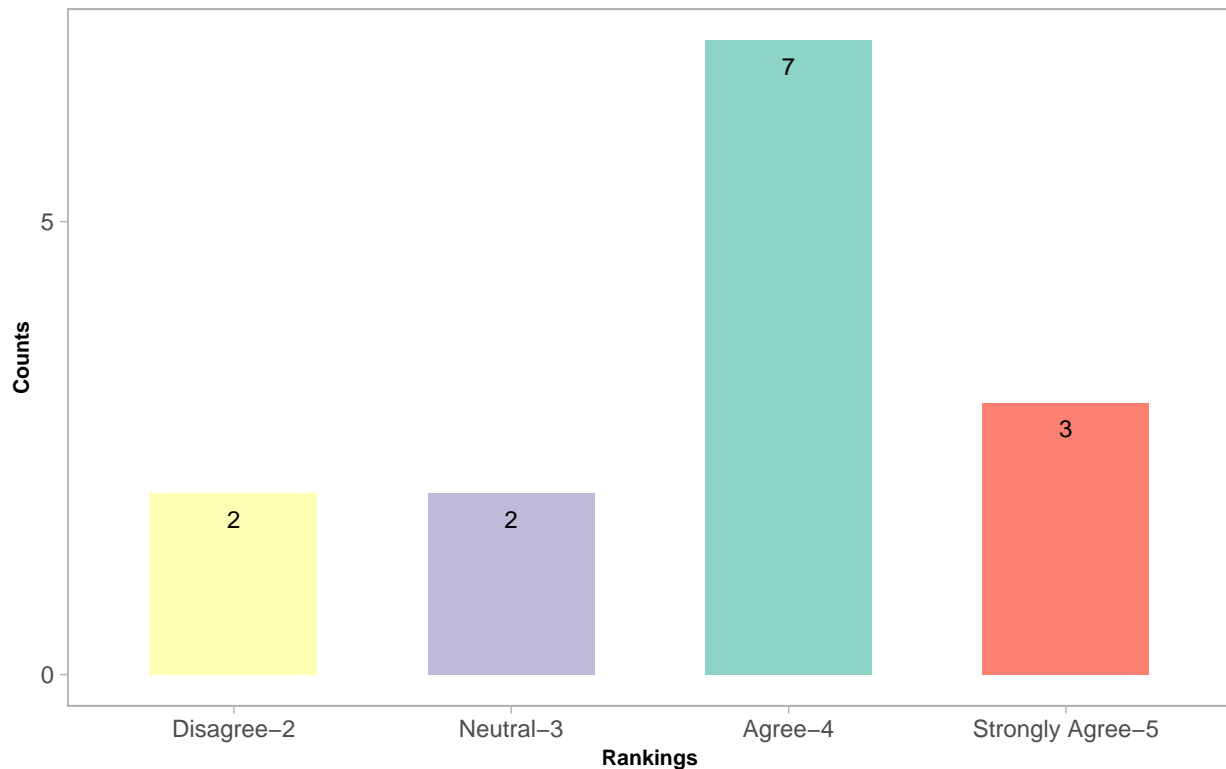
colourCount = length(unique(positive_interactors_counts$`Rankings of ability to positively interact in public`))
getPalette = colorRampPalette(brewer.pal(colourCount, "Set3"))
p3<-ggplot(positive_interactors_counts, aes(x= factor(positive_interactors_counts$`Rankings of ability to positively interact in public`),
      text=paste("Ability to to positively interact in public settings:",positive_interactors_counts$`Rankings of ability to positively interact in public`),
      "<br>Count:",freq
    ))+

  geom_bar(stat = 'identity',width = 0.6)+
  ggtitle("Rankings of the Ability to positively interact in public settings") +
  scale_y_continuous(breaks=c(0,5,10))+
  theme_light()+
  theme(legend.position="none")+
  labs(y="Counts",x="Rankings", caption = "Source: South Houston High school Pre-inquiry") +
  theme(title = element_text(size = 9, face = "bold"),
        plot.title = element_text(hjust = 0.5),
        axis.title.x = element_text(size = 8, face = "bold"),
        axis.title.y = element_text(size = 8, face = "bold"),
        legend.position="none",
        panel.grid.major = element_blank(),
        panel.grid.minor = element_blank())+
  geom_text(aes(label = signif(freq)),position=position_dodge(0.9),vjust = 2, size=3)

p3+scale_fill_manual(values = getPalette(colourCount))

```

Rankings of the Ability to positively interact in public settings



Source: South Houston High school Pre-inquiry

```

confidenciy_counts<-count(data$`Confident in who I am`)
names(confidenciy_counts)[1] <- 'Rankings of Confident in who I am'

confidenciy_counts$`Rankings of Confident in who I am` [confidenciy_counts$`Rankings of Confident in who I am`
confidenciy_counts$`Rankings of Confident in who I am` [confidenciy_counts$`Rankings of Confident in who I am`
confidenciy_counts$`Rankings of Confident in who I am` [confidenciy_counts$`Rankings of Confident in who I am`
confidenciy_counts$`Rankings of Confident in who I am` [confidenciy_counts$`Rankings of Confident in who I am`

Ratings <- c("Neutral-3","Neutral-Agree","Agree-4","Strongly Agree-5")

colourCount = length(unique(confidenciy_counts$`Rankings of Confident in who I am`))
getPalette = colorRampPalette(brewer.pal(colourCount, "Set2"))
p3<-ggplot(confidenciy_counts, aes(x= factor(confidenciy_counts$`Rankings of Confident in who I am`,Ratings),
                                text=paste("Confident in who I am:",confidenciy_counts$`Rankings of Confident in who I am`
                                "<br>Count:",freq
                                )))
  geom_bar(stat = 'identity',width = 0.6)+
  ggtitle("Rankings of Confident in who I am") +
  scale_y_continuous(breaks=c(0,5,10))+
  theme_light()

```

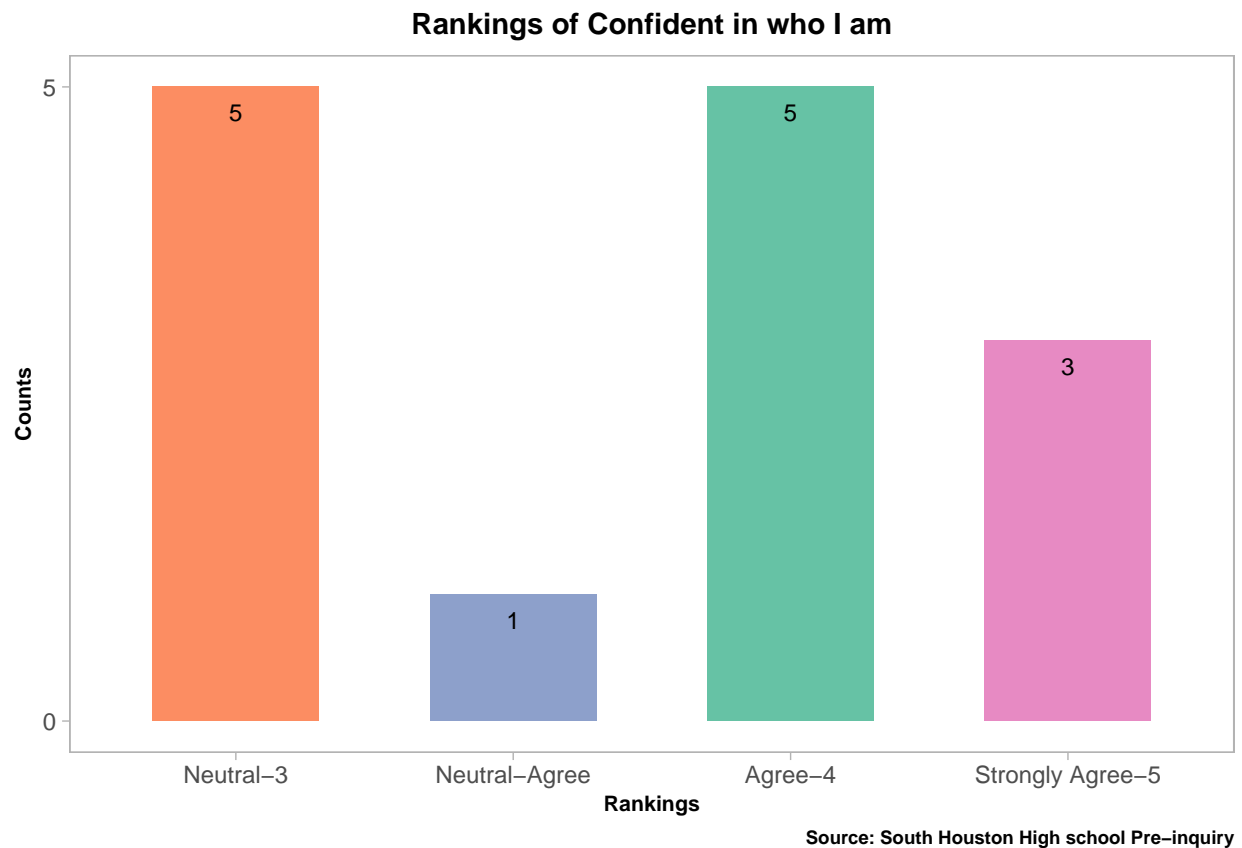


```

theme(legend.position="none")+
labs(y="Counts",x="Rankings", caption = "Source: South Houston High school Pre-inquiry") +
theme(title = element_text(size = 9, face = "bold"),
      plot.title = element_text(hjust = 0.5),
      axis.title.x = element_text(size = 8, face = "bold"),
      axis.title.y = element_text(size = 8, face = "bold"),
      legend.position="none",
      panel.grid.major = element_blank(),
      panel.grid.minor = element_blank())+
geom_text(aes(label = signif(freq)),position=position_dodge(0.9),vjust = 2, size=3)

p3+scale_fill_manual(values = getPalette(colourCount))

```



```

communication_counts<-count(data$`Ability to verbally communicate well`)
names(communication_counts)[1] <- 'Rankings of ability to verbally communicate well'

communication_counts$`Rankings of ability to verbally communicate well` [communication_counts$`Rankings
communication_counts$`Rankings of ability to verbally communicate well` [communication_counts$`Rankings
communication_counts$`Rankings of ability to verbally communicate well` [communication_counts$`Rankings
communication_counts$`Rankings of ability to verbally communicate well` [communication_counts$`Rankings

```

```

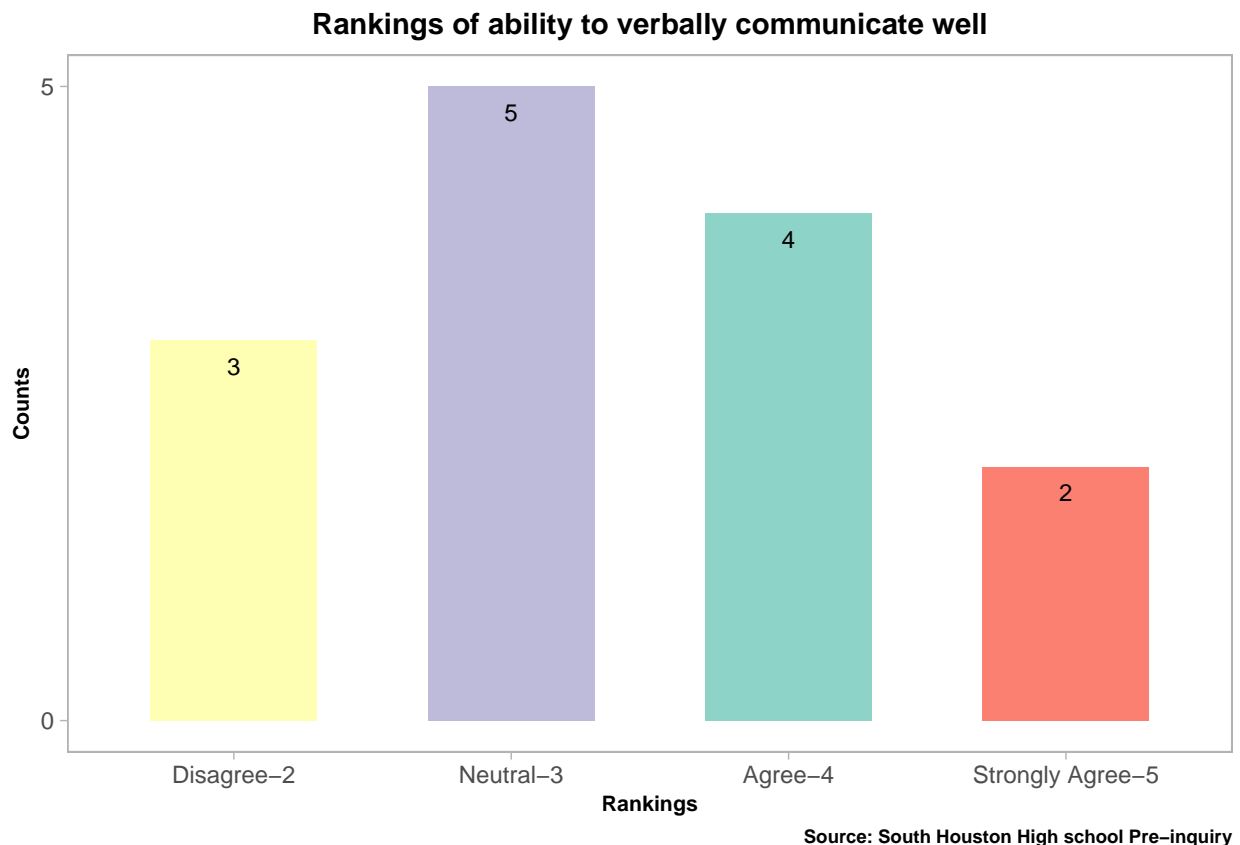
Ratings <- c("Disagree-2","Neutral-3","Agree-4","Strongly Agree-5")

colourCount = length(unique(communication_counts$`Rankings of ability to verbally communicate well` ))
getPalette = colorRampPalette(brewer.pal(colourCount, "Set3"))
p3<-ggplot(communication_counts, aes(x= factor(communication_counts$`Rankings of ability to verbally communicate well`,
      text=paste("Ability to verbally communicate well:",communication_counts$`Rankings of ability to verbally communicate well`),
      "<br>Count:",freq
    ))) +

  geom_bar(stat = 'identity',width = 0.6)+
  ggtitle("Rankings of ability to verbally communicate well") +
  scale_y_continuous(breaks=c(0,5,10))+
  theme_light()+
  theme(legend.position="none")+
  labs(y="Counts",x="Rankings", caption = "Source: South Houston High school Pre-inquiry") +
  theme(title = element_text(size = 9, face = "bold"),
        plot.title = element_text(hjust = 0.5),
        axis.title.x = element_text(size = 8, face = "bold"),
        axis.title.y = element_text(size = 8, face = "bold"),
        legend.position="none",
        panel.grid.major = element_blank(),
        panel.grid.minor = element_blank())+
  geom_text(aes(label = signif(freq)),position=position_dodge(0.9),vjust = 2, size=3)

p3+scale_fill_manual(values = getPalette(colourCount))

```



```

speakup_counts<-count(data$`Can speak up to contribute ideas`)
names(speakup_counts)[1] <- 'Rankings of ability to speak up to contribute ideas'

speakup_counts$`Rankings of ability to speak up to contribute ideas` [speakup_counts$`Rankings of ability to speak up to contribute ideas`==1]
speakup_counts$`Rankings of ability to speak up to contribute ideas` [speakup_counts$`Rankings of ability to speak up to contribute ideas`==2]
speakup_counts$`Rankings of ability to speak up to contribute ideas` [speakup_counts$`Rankings of ability to speak up to contribute ideas`==3]
speakup_counts$`Rankings of ability to speak up to contribute ideas` [speakup_counts$`Rankings of ability to speak up to contribute ideas`==4]

Ratings <- c("Disagree-2","Neutral-3","Agree-4")

colourCount = length(unique(speakup_counts$`Rankings of ability to speak up to contribute ideas` ))
getPalette = colorRampPalette(brewer.pal(colourCount, "Set2"))

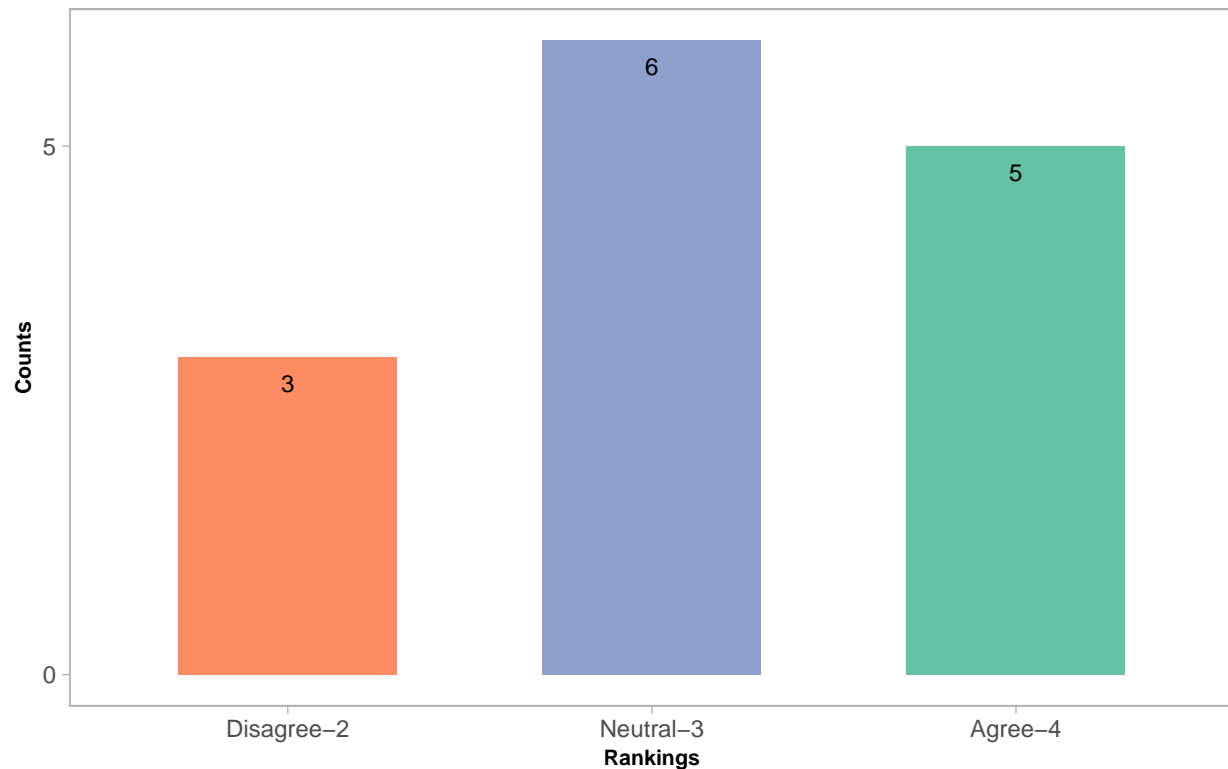
p5<-ggplot(speakup_counts, aes(x= factor(speakup_counts$`Rankings of ability to speak up to contribute ideas`),
                                text=paste("Ability to speak up to contribute ideas:",speakup_counts$`Rankings of ability to speak up to contribute ideas`),
                                "Count:",freq
                                ))+

  geom_bar(stat = 'identity',width = 0.6)+
  ggtitle("Rankings of ability to speak up to contribute ideas") +
  scale_y_continuous(breaks=c(0,5,10))+
  theme_light()+
  theme(legend.position="none")+
  labs(y="Counts",x="Rankings", caption = "Source: South Houston High school Pre-inquiry") +
  theme(title = element_text(size = 9, face = "bold"),
        plot.title = element_text(hjust = 0.5),
        axis.title.x = element_text(size = 8, face = "bold"),
        axis.title.y = element_text(size = 8, face = "bold"),
        legend.position="none",
        panel.grid.major = element_blank(),
        panel.grid.minor = element_blank())+
  geom_text(aes(label = signif(freq)),position=position_dodge(0.9),vjust = 2, size=3)

p5+scale_fill_manual(values = getPalette(colourCount))

```

Rankings of ability to speak up to contribute ideas



Source: South Houston High school Pre-inquiry

```
Leaders_counts<-count(data$`Leader in group settings`)
names(Leaders_counts)[1] <- 'Rankings of ability to lead in group settings'

Leaders_counts$`Rankings of ability to lead in group settings` [Leaders_counts$`Rankings of ability to lead in group settings` == "Disagree-2"]
Leaders_counts$`Rankings of ability to lead in group settings` [Leaders_counts$`Rankings of ability to lead in group settings` == "Neutral-3"]
Leaders_counts$`Rankings of ability to lead in group settings` [Leaders_counts$`Rankings of ability to lead in group settings` == "Agree-4"]
Leaders_counts$`Rankings of ability to lead in group settings` [Leaders_counts$`Rankings of ability to lead in group settings` == "Strongly Disagree-1"]
Leaders_counts$`Rankings of ability to lead in group settings` [Leaders_counts$`Rankings of ability to lead in group settings` == "Strongly Agree-5"]

Ratings <- c("Strongly Disagree-1","Disagree-2","Neutral-3","Agree-4","Strongly Agree-5")

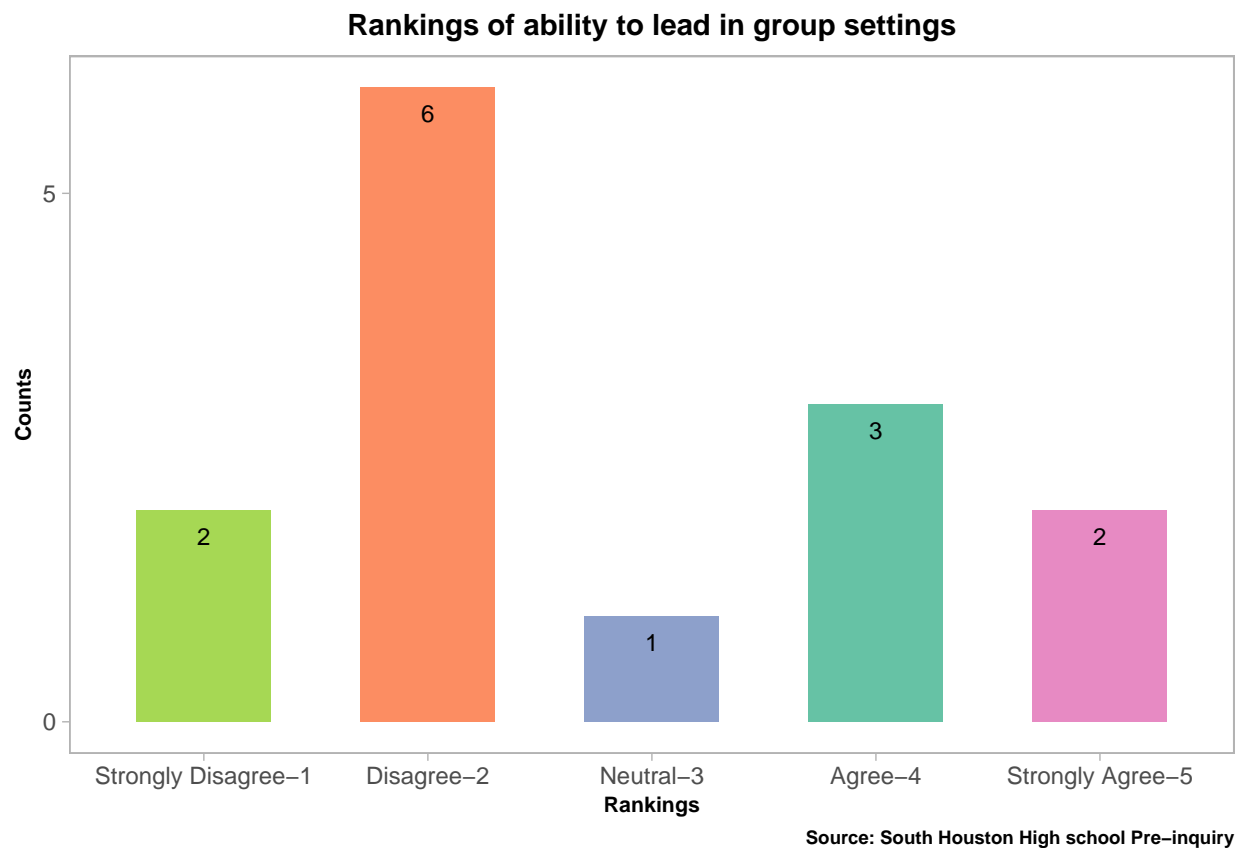
colourCount = length(unique(Leaders_counts$`Rankings of ability to lead in group settings`))
getPalette = colorRampPalette(brewer.pal(colourCount, "Set2"))
p3<-ggplot(Leaders_counts, aes(x= factor(Leaders_counts$`Rankings of ability to lead in group settings`),
                              text=paste("Ability to lead in group settings:",Leaders_counts$`Rankings of ability to lead in group settings`),
                              y= Leaders_counts$`Rankings of ability to lead in group settings`))
  geom_bar(stat = 'identity',width = 0.6)+
  ggtitle("Rankings of ability to lead in group settings") +
  facet_wrap(~Ratings, scales = 'free')
```

```

scale_y_continuous(breaks=c(0,5,10))+
theme_light()+
theme(legend.position="none")+
labs(y="Counts",x="Rankings", caption = "Source: South Houston High school Pre-inquiry") +
theme(title = element_text(size = 9, face = "bold"),
      plot.title = element_text(hjust = 0.5),
      axis.title.x = element_text(size = 8, face = "bold"),
      axis.title.y = element_text(size = 8, face = "bold"),
      legend.position="none",
      panel.grid.major = element_blank(),
      panel.grid.minor = element_blank())+
geom_text(aes(label = signif(freq)),position=position_dodge(0.9),vjust = 2, size=3)

p3+scale_fill_manual(values = getPalette(colourCount))

```



```

Fun_counts<-count(data$`STEM is fun`)
names(Fun_counts)[1] <- 'Rankings of STEM is fun'

Fun_counts$`Rankings of STEM is fun`[Fun_counts$`Rankings of STEM is fun`==3]<-"Neutral-3"
Fun_counts$`Rankings of STEM is fun`[Fun_counts$`Rankings of STEM is fun`==4]<-"Agree-4"
Fun_counts$`Rankings of STEM is fun` [Fun_counts$`Rankings of STEM is fun` ==5]<-"Strongly Agree-5"

```

```

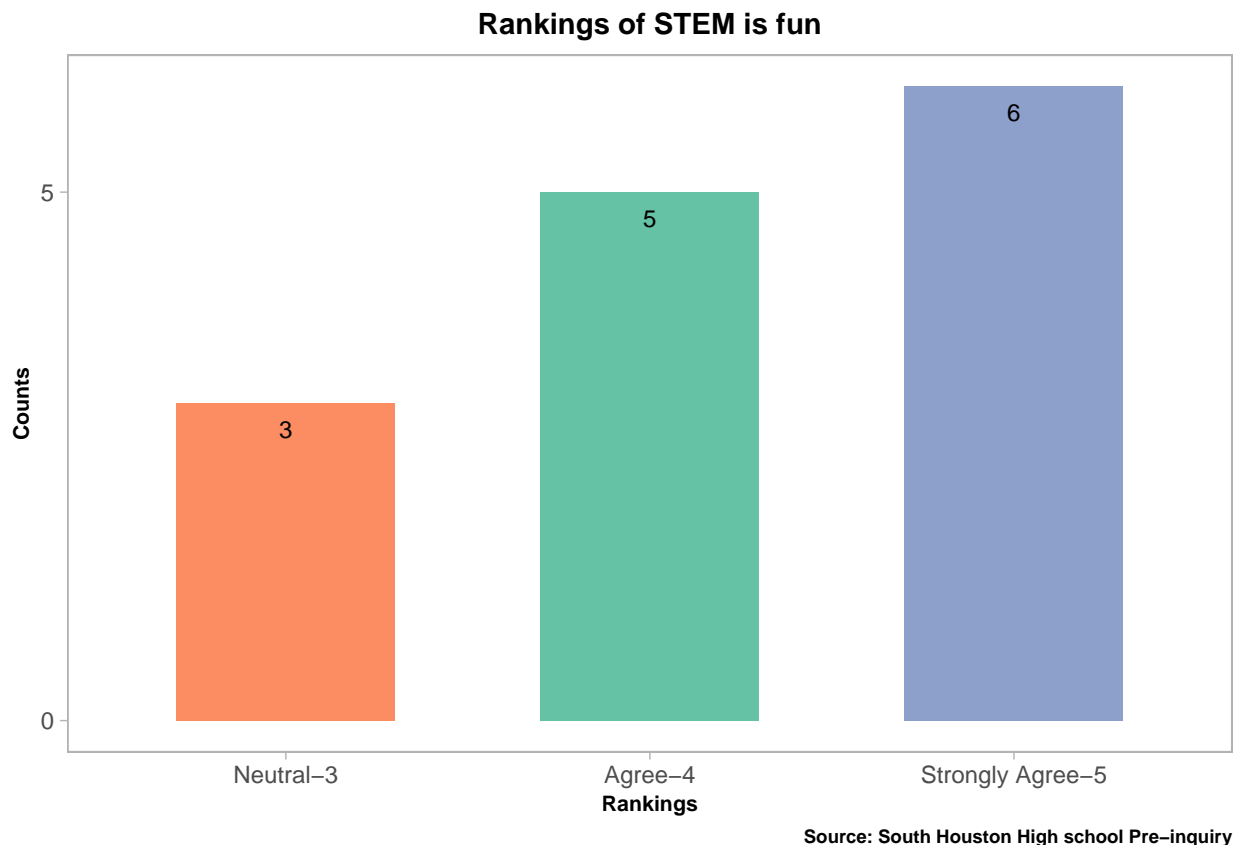
Ratings <- c("Neutral-3","Agree-4","Strongly Agree-5")

colourCount = length(unique(Fun_counts$`Rankings of STEM is fun`))
getPalette = colorRampPalette(brewer.pal(colourCount, "Set2"))
p3<-ggplot(Fun_counts, aes(x= factor(Fun_counts$`Rankings of STEM is fun`,Ratings ) , y=freq, fill= Fun.
      text=paste("STEM is fun:",Fun_counts$`Rankings of STEM is fun`,
        "<br>Count:",freq
      )))

geom_bar(stat = 'identity',width = 0.6)+
ggtitle("Rankings of STEM is fun") +
scale_y_continuous(breaks=c(0,5,10))+
theme_light()+
theme(legend.position="none")+
labs(y="Counts",x="Rankings", caption = "Source: South Houston High school Pre-inquiry") +
theme(title = element_text(size = 9, face = "bold"),
      plot.title = element_text(hjust = 0.5),
      axis.title.x = element_text(size = 8, face = "bold"),
      axis.title.y = element_text(size = 8, face = "bold"),
      legend.position="none",
      panel.grid.major = element_blank(),
      panel.grid.minor = element_blank())+
geom_text(aes(label = signif(freq)),position=position_dodge(0.9),vjust = 2, size=3)

p3+scale_fill_manual(values = getPalette(colourCount))

```



```

Sad_counts<-count(data$`Sad feeling if it is the last class in STEM`)
names(Sad_counts)[1] <- 'Sad feeling if it is the last class'

Sad_counts$`Sad feeling if it is the last class`[Sad_counts$`Sad feeling if it is the last class`==2]<-
Sad_counts$`Sad feeling if it is the last class`[Sad_counts$`Sad feeling if it is the last class`==3]<-
Sad_counts$`Sad feeling if it is the last class`[Sad_counts$`Sad feeling if it is the last class`==4]<-
Sad_counts$`Sad feeling if it is the last class`[Sad_counts$`Sad feeling if it is the last class` ==5]<-

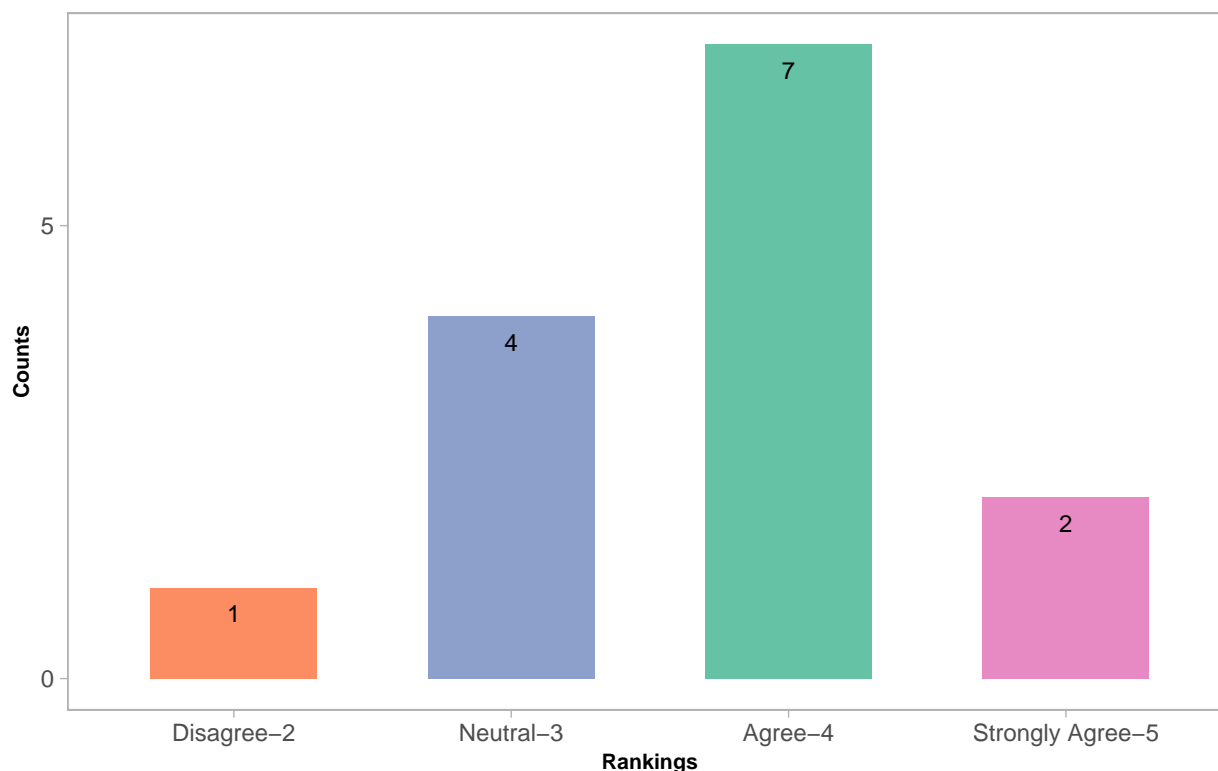
Ratings <- c("Disagree-2","Neutral-3","Agree-4","Strongly Agree-5")

colourCount = length(unique(Sad_counts$`Sad feeling if it is the last class`))
getPalette = colorRampPalette(brewer.pal(colourCount, "Set2"))
p3<-ggplot(Sad_counts, aes(x= factor(Sad_counts$`Sad feeling if it is the last class`,Ratings ) , y=freq,
                                text=paste("Sad feeling if it is the last class:",Sad_counts$`Sad feeling if it is the last class`,
                                "<br>Count:",freq
                                )))
  geom_bar(stat = 'identity',width = 0.6)+
  ggtitle("Sad feeling if it is the last class in STEM") +
  scale_y_continuous(breaks=c(0,5,10))+
  theme_light()+
  theme(legend.position="none")+
  labs(y="Counts",x="Rankings", caption = "Source: South Houston High school Pre-inquiry") +
  theme(title = element_text(size = 9, face = "bold"),
        plot.title = element_text(hjust = 0.5),
        axis.title.x = element_text(size = 8, face = "bold"),
        axis.title.y = element_text(size = 8, face = "bold"),
        legend.position="none",
        panel.grid.major = element_blank(),
        panel.grid.minor = element_blank())+
  geom_text(aes(label = signif(freq)),position=position_dodge(0.9),vjust = 2, size=3)

p3+scale_fill_manual(values = getPalette(colourCount))

```

Sad feeling if it is the last class in STEM



Source: South Houston High school Pre-inquiry

```
Interest_counts<-count(data$`Real interest in learning STEM`)
names(Interest_counts)[1] <- 'Interest in learning STEM'

Interest_counts$`Interest in learning STEM`[Interest_counts$`Interest in learning STEM`==3]<-"Neutral-3"
Interest_counts$`Interest in learning STEM`[Interest_counts$`Interest in learning STEM`==4]<-"Agree-4"
Interest_counts$`Interest in learning STEM`[Interest_counts$`Interest in learning STEM` ==5]<-"Strongly Agree-5"

Ratings <- c("Neutral-3","Agree-4","Strongly Agree-5")

colourCount = length(unique(Interest_counts$`Interest in learning STEM`))
getPalette = colorRampPalette(brewer.pal(colourCount, "Set2"))
p3<-ggplot(Interest_counts, aes(x= factor(Interest_counts$`Interest in learning STEM`,Ratings ) , y=freq)) +
  text=paste("Interest in learning STEM:",Interest_counts$`Interest in learning STEM`,"<br>Count:",freq)
  geom_bar(stat = 'identity',width = 0.6)+
  ggtitle("Interest in learning STEM") +
  scale_y_continuous(breaks=c(0,5,10))+
  theme_light()+
  theme(legend.position="none")+
```

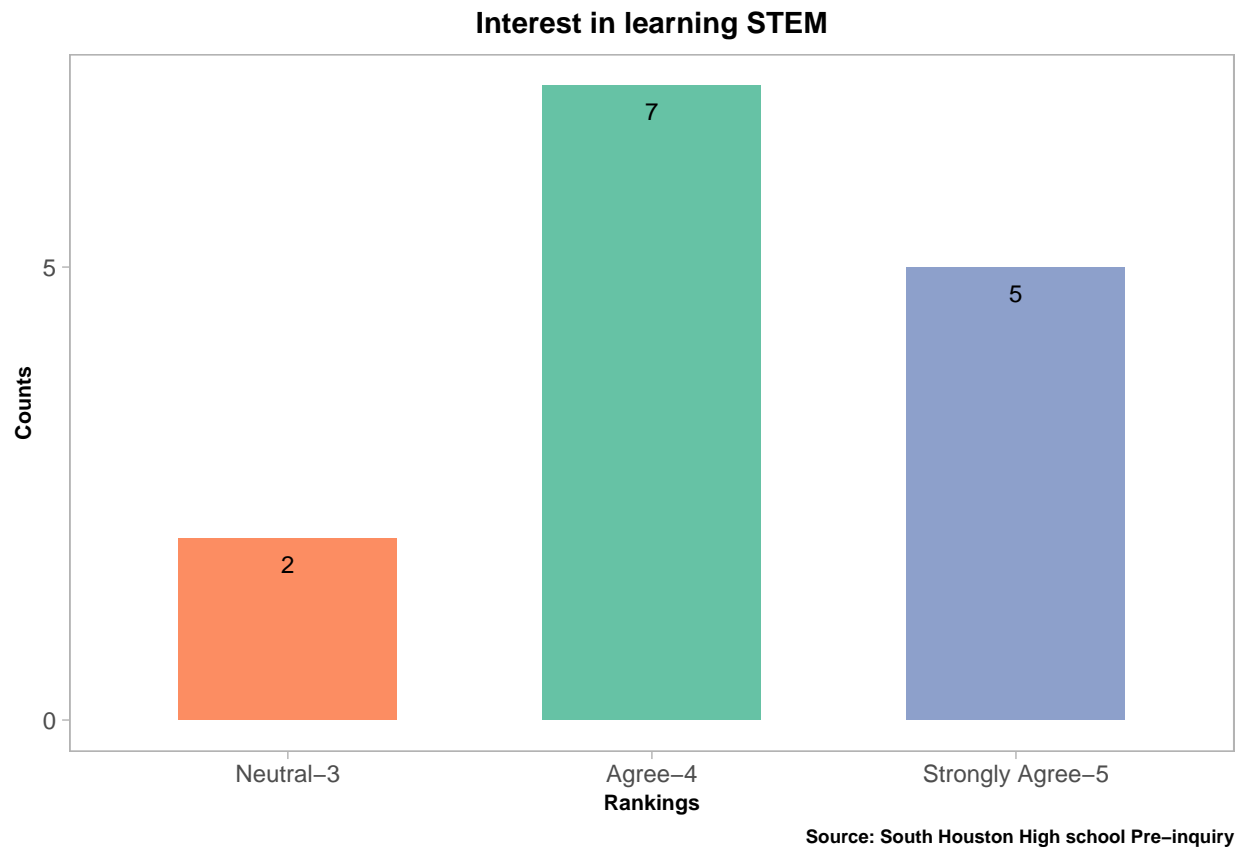


```

labs(y="Counts",x="Rankings", caption = "Source: South Houston High school Pre-inquiry") +
theme(title = element_text(size = 9, face = "bold"),
      plot.title = element_text(hjust = 0.5),
      axis.title.x = element_text(size = 8, face = "bold"),
      axis.title.y = element_text(size = 8, face = "bold"),
      legend.position="none",
      panel.grid.major = element_blank(),
      panel.grid.minor = element_blank())+
geom_text(aes(label = signif(freq)),position=position_dodge(0.9),vjust = 2, size=3)

p3+scale_fill_manual(values = getPalette(colourCount))

```



```

Pathway_counts<-count(data$`Like to persue STEM pathway`)
names(Pathway_counts)[1] <- 'Like to persue STEM pathway'

Pathway_counts$`Like to persue STEM pathway`[Pathway_counts$`Like to persue STEM pathway`==3]<-"Neutral-3"
Pathway_counts$`Like to persue STEM pathway`[Pathway_counts$`Like to persue STEM pathway`==4]<-"Agree-4"
Pathway_counts$`Like to persue STEM pathway`[Pathway_counts$`Like to persue STEM pathway`==5]<-"Strongly Agree-5"

Ratings <- c("Neutral-3","Agree-4","Strongly Agree-5")

colourCount = length(unique(Pathway_counts$`Like to persue STEM pathway`))

```

```

getPalette = colorRampPalette(brewer.pal(colourCount, "Set2"))
p3<-ggplot(Pathway_counts, aes(x= factor(Pathway_counts$`Like to persue STEM pathway`,Ratings ) , y=freq)) +
  text=paste("Like to persue STEM pathway:",Pathway_counts$`Like to persue STEM pa
    "<br>Count:",freq
  )))

geom_bar(stat = 'identity',width = 0.6)+
ggtitle("Like to persue STEM pathway") +
scale_y_continuous(breaks=c(0,5,10))+
theme_light()+
theme(legend.position="none")+
labs(y="Counts",x="Rankings", caption = "Source: South Houston High school Pre-inquiry") +
theme(title = element_text(size = 9, face = "bold"),
  plot.title = element_text(hjust = 0.5),
  axis.title.x = element_text(size = 8, face = "bold"),
  axis.title.y = element_text(size = 8, face = "bold"),
  legend.position="none",
  panel.grid.major = element_blank(),
  panel.grid.minor = element_blank())+
geom_text(aes(label = signif(freq)),position=position_dodge(0.9),vjust = 2, size=3)

p3+scale_fill_manual(values = getPalette(colourCount))

```

