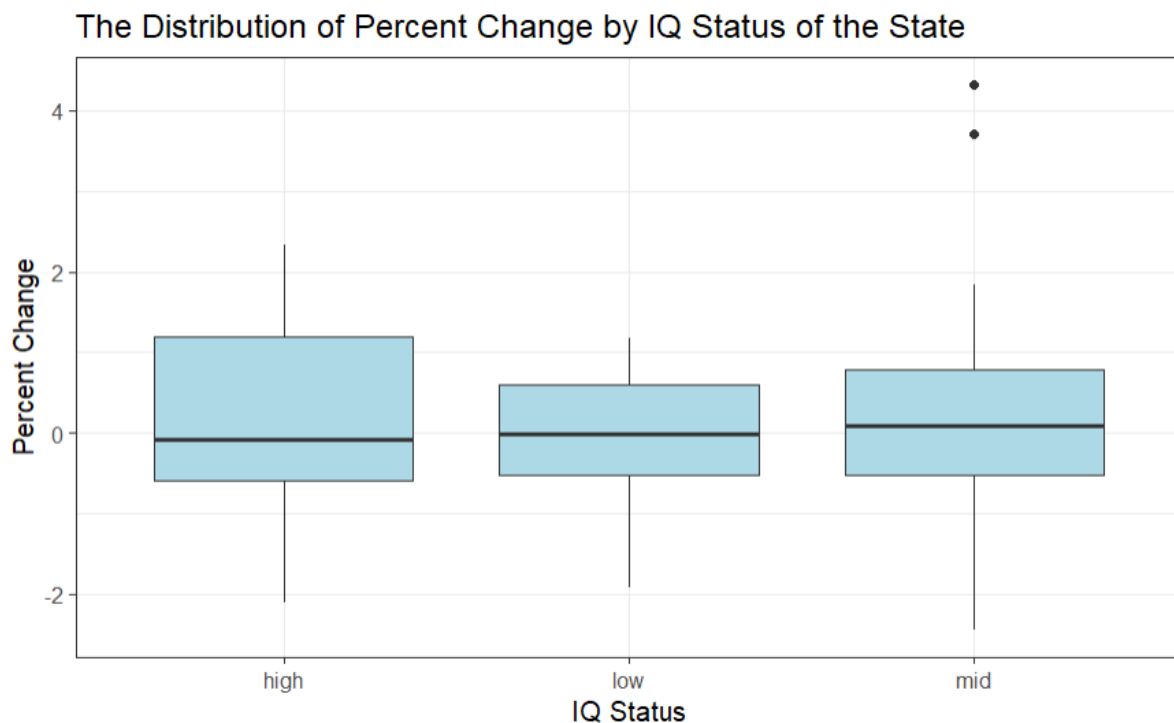


# Visualization 3

```
```{r}
ggplot(data = df_merged, aes(x = IQ_status, y = per_change_students)) +
  geom_boxplot(fill = "lightblue") +
  theme_bw(base_size = 12) +
  labs(title = "The Distribution of Percent Change by IQ Status of the State",
       x = "IQ Status", y = "Percent Change")
```
```



## Background Information

- The visualization above depicts the distribution of IQ Status per state in the United State as a percentage change.
- The three box plots represent the varied IQ percent change among individuals in the United States, with the upper 25% of the states with a high average IQ located in the box plot labeled high, the middle 50% of the states with a medium average IQ located in the box plot labeled mid, and the lower 25% of the states with low average IQ located in the box plot labeled low.

## Takeaways

This particular visualization depicts the **contrast** among IQ Statuses between states in the US. As seen in the visualization there is a direct correlation among the states with high average IQ statuses, with an increased percentage change among individuals in these particular states, whereas there is a lower percentage change among individuals located in states with roughly the average IQ status, and the lowest percentage change among individuals in the states with the lowest average IQ. In addition to the first visualization, we have more compelling evidence that a positive on the population change would allow the higher demands for the teachers which can lead to a positive influence on the education quality. The education quality itself can be examined through a higher IQ.