To determine if there is evidence that the gap between males and females in reading grew from 2013 to 2015, we need to analyze the difference in the mean scores and their standard errors for both years.

First, let's calculate the gender gap for each year:

- \*\*2013:\*\*

- Male mean score: 256

- Female mean score: 268

- Gender gap in 2013 = Female mean - Male mean = 268 - 256 = 12

- \*\*2015:\*\*

- Male mean score: 258

- Female mean score: 268

- Gender gap in 2015 = Female mean - Male mean = 268 - 258 = 10

Next, we need to determine if the change in the gap from 12 to 10 is statistically significant. We can do this by calculating the standard error of the difference in the gaps.

The standard error of the difference in means can be calculated using the formula:

\[ SE(\text{difference}) = \sqrt{SE\_1^2 + SE\_2^2} \]

For the gender gap, we apply this formula to the standard errors of the male and female means:

- \*\*2013:\*\*

- \( SE\_{\text{male, 2013}} = 1.4 \)

- \( SE\_{\text{female, 2013}} = 1.3 \)

- \( SE\_{\text{gap, 2013}} = \sqrt{(1.4)^2 + (1.3)^2} = \sqrt{1.96 + 1.69} = \sqrt{3.65} \approx 1.91 \)

- \*\*2015:\*\*

- \( SE\_{\text{male, 2015}} = 1.4 \)

- \( SE\_{\text{female, 2015}} = 1.3 \)

- \( SE\_{\text{gap, 2015}} = \sqrt{(1.4)^2 + (1.3)^2} = \sqrt{1.96 + 1.69} = \sqrt{3.65} \approx 1.91 \)

Now, we calculate the standard error of the difference in the gaps between 2013 and 2015:

\[ SE(\Delta \text{gap}) = \sqrt{SE\_{\text{gap, 2013}}^2 + SE\_{\text{gap, 2015}}^2} = \sqrt{(1.91)^2 + (1.91)^2} = \sqrt{3.65 + 3.65} = \sqrt{7.3} \approx 2.70 \]

The change in the gap from 2013 to 2015 is:

\[ \Delta \text{gap} = 10 - 12 = -2 \]

To test if this change is statistically significant, we perform a z-test:

\[ z = \frac{\Delta \text{gap}}{SE(\Delta \text{gap})} = \frac{-2}{2.70} \approx -0.74 \]

The critical value for a two-tailed test at the 0.05 significance level (assuming a normal distribution) is approximately ±1.96. Since our calculated z-value of -0.74 falls within this range, we fail to reject the null hypothesis.

\*\*Conclusion:\*\* There is not sufficient evidence to conclude that the gap between males and females in reading grew from 2013 to 2015. The observed change in the gap is not statistically significant at the conventional 0.05 level.