

TEACHING STATISTICS STUDENTS ABOUT ACCESSIBILITY

Helping our students become better, more inclusive members of society by teaching content beyond our curriculum.

KELLY SPOON
Associate Professor,
Mathematics



FUNDED BY 
Teach Access is a non-profit 501(c)(3) organization collaborating with education, industry, and disability advocacy organizations to address the critical need to enhance students' understanding of digital accessibility as they learn to design, develop, and build new technologies with the needs of people with disabilities in mind

INTRODUCTION

To increase awareness of accessibility knowledge for students, created a standalone module on accessible statistical displays. As the descriptive statistics section of the course is the one most likely to be used by students later in their education and career paths, this is a crucial place to promote accessibility in the course. Additionally, many of the principles of accessible data visualization, such as providing a stand-alone summary to help those who may be visually impaired, also reinforce students' understanding of the statistical concepts.

OBJECTIVE

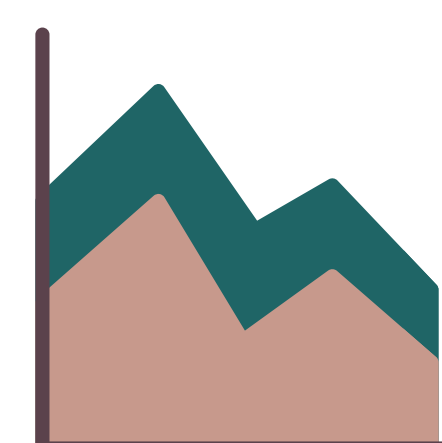
Introduce students to accessibility basics that they will be able to use in future courses and jobs.



DISCUSSION BOARD

Find a display of data out in the world and consider how well the creator communicated their story.

- Display of data identified and provided, along with accessible link.
- Reasonable purpose provided for inclusion of display in storytelling process.
- Meaningful assessment of general communication standards.
- Meaningful assessment of accessibility standards.
- Appropriate alt text provided.



ACTIVITIES

To assess student understanding of both the statistical concepts and accessibility topics in the module, there were two activities designed.

ACCESSIBILITY PROJECT



Design a study to look at accessibility in a space of your choosing. WILL USE ALT TEXT FOR FUTURE PHOTOS ON PROGRAMS OR WEBSITE DESIGNS

CONTENT

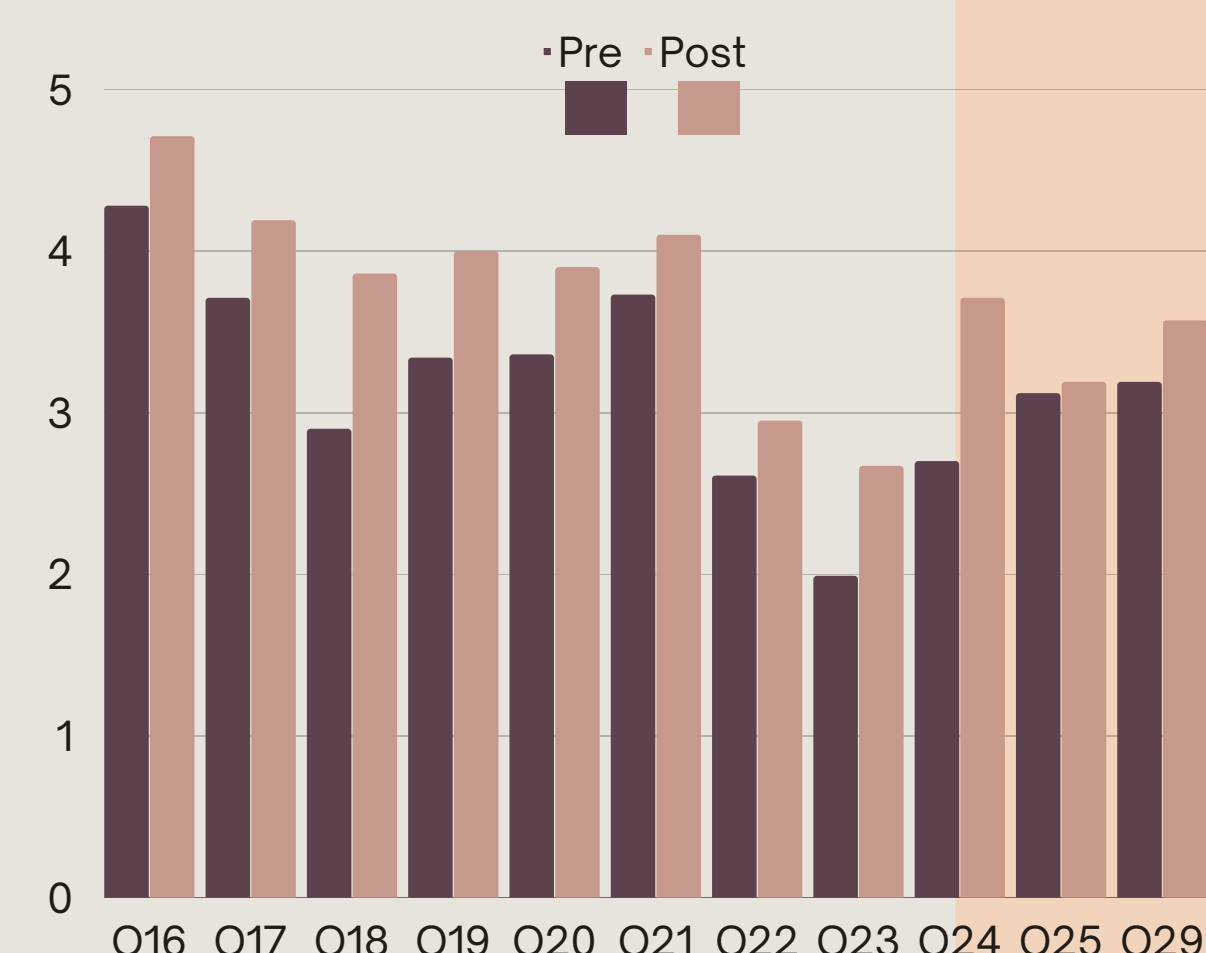
With the data displays module, a page on **Accessibility in Data Visualizations** was created, including content on the following accessibility considerations:

- Alt text
- Color choices
- Accessible tables
- Headings
- Descriptive Links

The goal was to educate students about necessary considerations for people using Screen Readers and who are color-blind.

RESULTS

Survey Question (1-5 Likert Scale)	Pre Mean	Post Mean
Given an example of inclusive or universal design	2.90	3.86
Consider accessibility and universal design during the design process	2.70	3.71
Give an example of how accessible technology is used by people with disabilities	3.34	4.00



CONCLUSION

Student awareness and understanding of accessibility considerations increased based on the Teach Access Accessibility Grant Pre- and Post-Course Surveys.

STUDENT VOICE

Give one example of how you will apply what you learned about accessible design and development in your future education, career or personal life.

THE IMPORTANCE OF ALT TEXT, I USE IT IN ALL OF MY UPLOADED IMAGES NOW. ALSO COLORBLIND SAFE COLORS FOR CHARTS AND GRAPHS

I honestly think just being cognizant is the first and one of the most important step. We are often ignorant to struggles we don't feel ourselves.

I WILL USE ALT TEXT FOR FUTURE PHOTOS ON PROGRAMS OR WEBSITE DESIGNS

LINK TO CREATED MATERIALS

<https://tinyurl.com/accessibilityinstats>

