

ChatGPT Use in K-12 Education in Texas



This project was *not* created with assistance from AI.

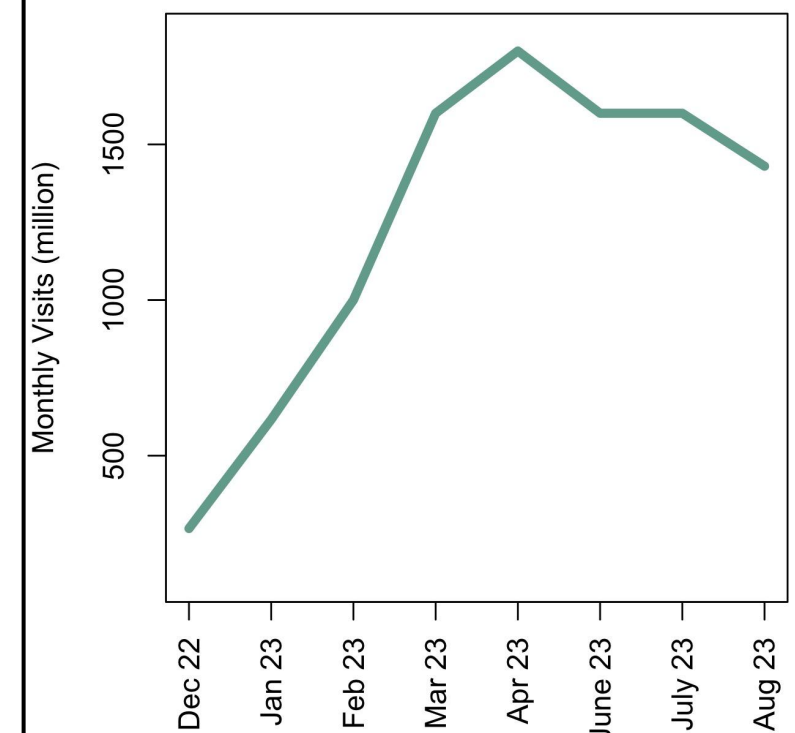
Introduction

The usage of ChatGPT has skyrocketed in the past couple of years. Since last spring semester, my teachers started introducing ChatGPT and most of my classes had at least 1 assignment with it in the last 2 years. This made me curious on how other TX schools utilize this tool in classrooms.

Key Questions:

- Usage and policy with ChatGPT differ for public and private schools?
- Years of teaching experience affect implementation of ChatGPT in classrooms? Are there differences with grade levels or subjects?
- From teachers' perspectives, what effects does ChatGPT have on students' learning?
- How do educators predict the tool will impact the future? Are there benefits? Drawbacks? Concerns?

ChatGPT monthly visits over time

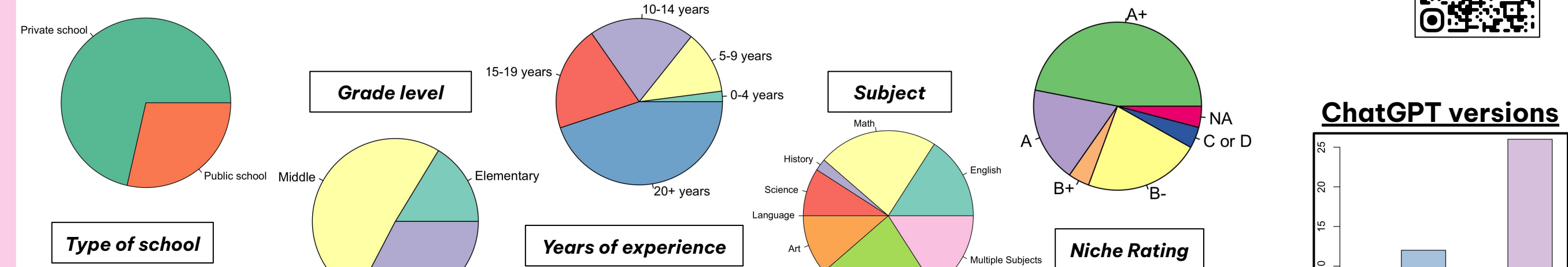
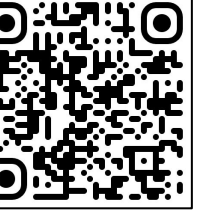


(Source: Reuters)

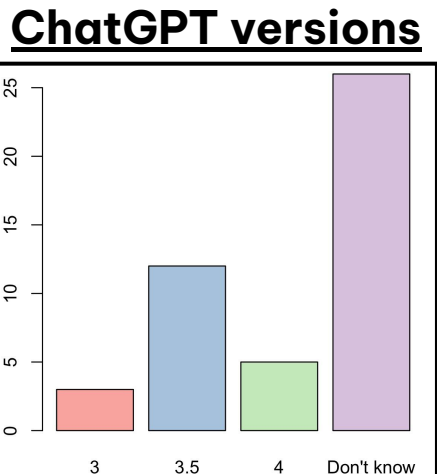
Survey & Data

- Collected data through a survey sent out via email to principals of randomly selected private and public schools in Texas (rural and urban areas).
- Total 49 teachers responded (see pie charts).

Scan to see the form that collected data:

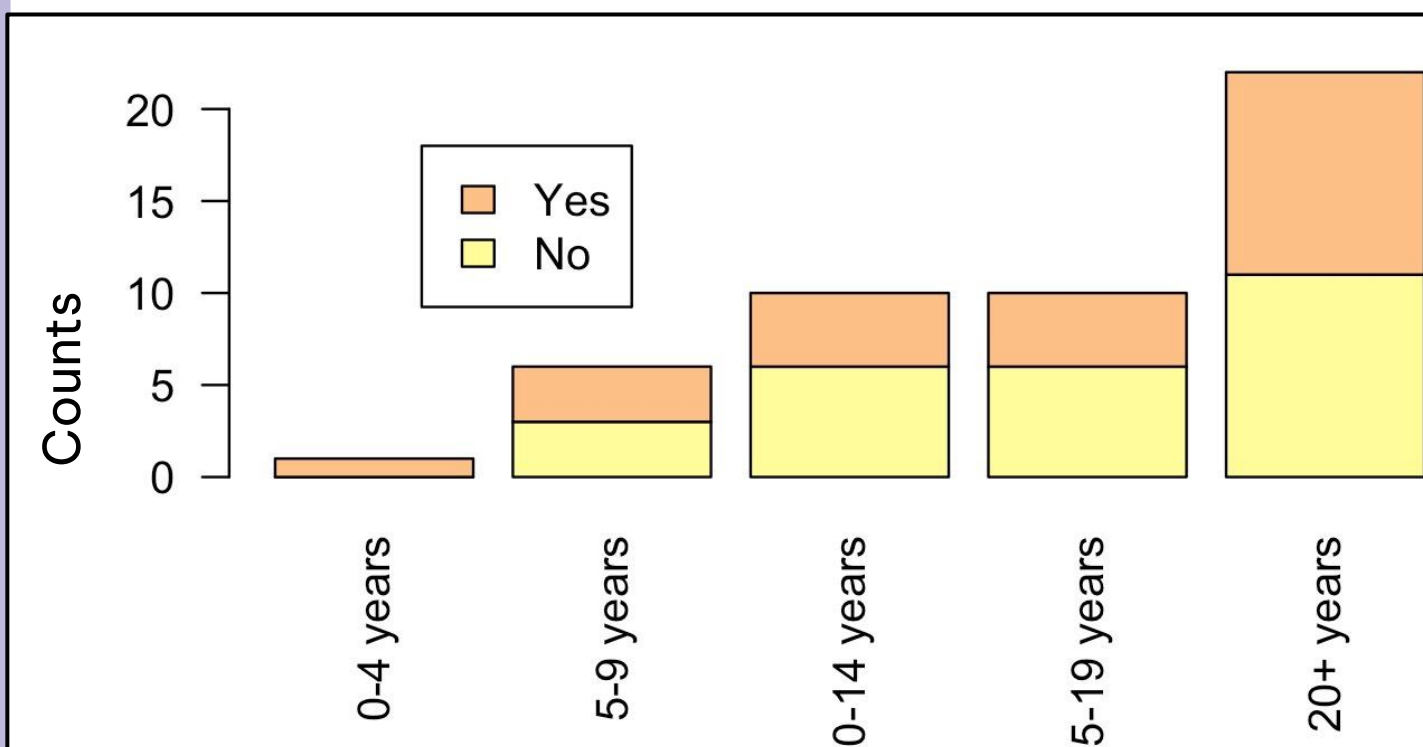


The bar graph (on the right) shows counts of educators that use each version of ChatGPT (46 out of 49). Interesting to note more than half did not know which version they use or had used.

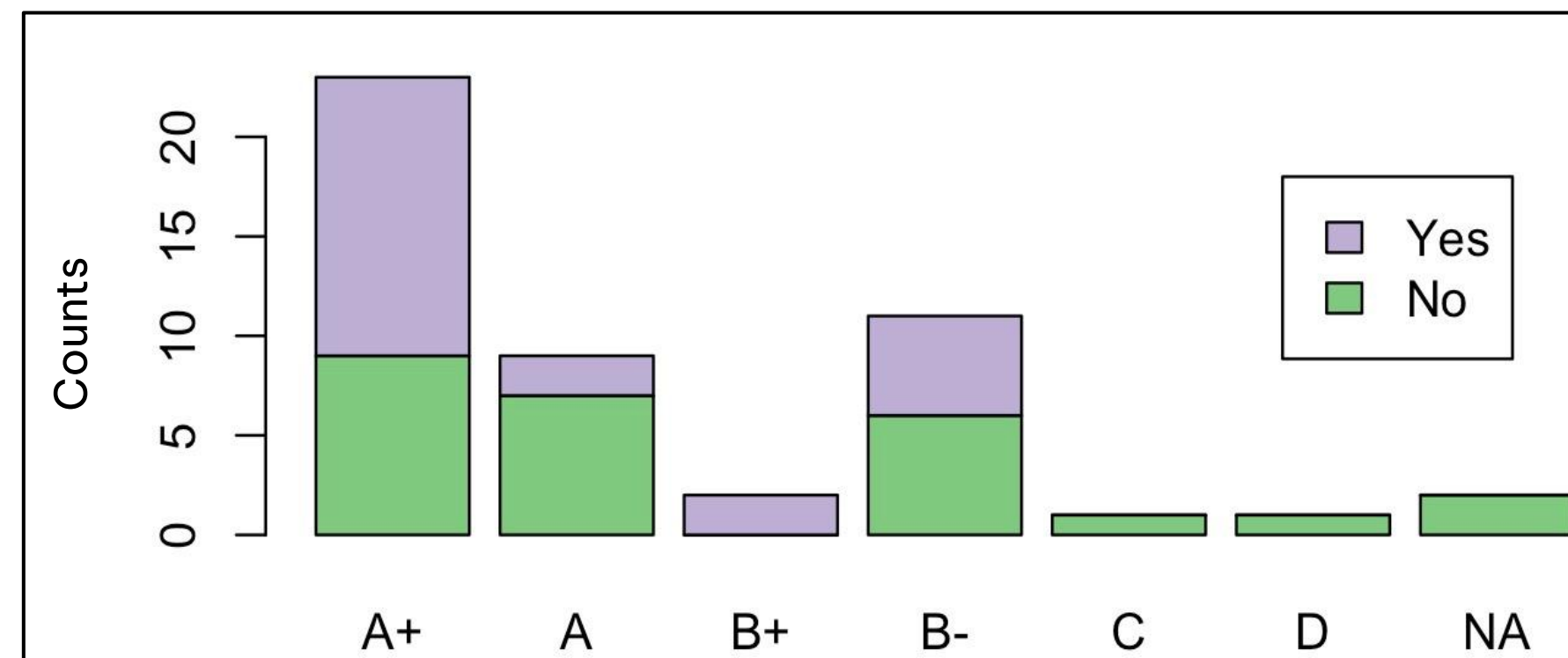


ChatGPT Incorporation in the Classroom

- Out of 49 teachers, 23 use ChatGPT in classrooms.
- Except new teachers (<5 years experience), more than half in each group had **not** yet incorporated ChatGPT.
- Most that had not incorporated ChatGPT in the classroom stated that they plan to do so in the future.
- Higher rated schools had more examples of ChatGPT incorporation.

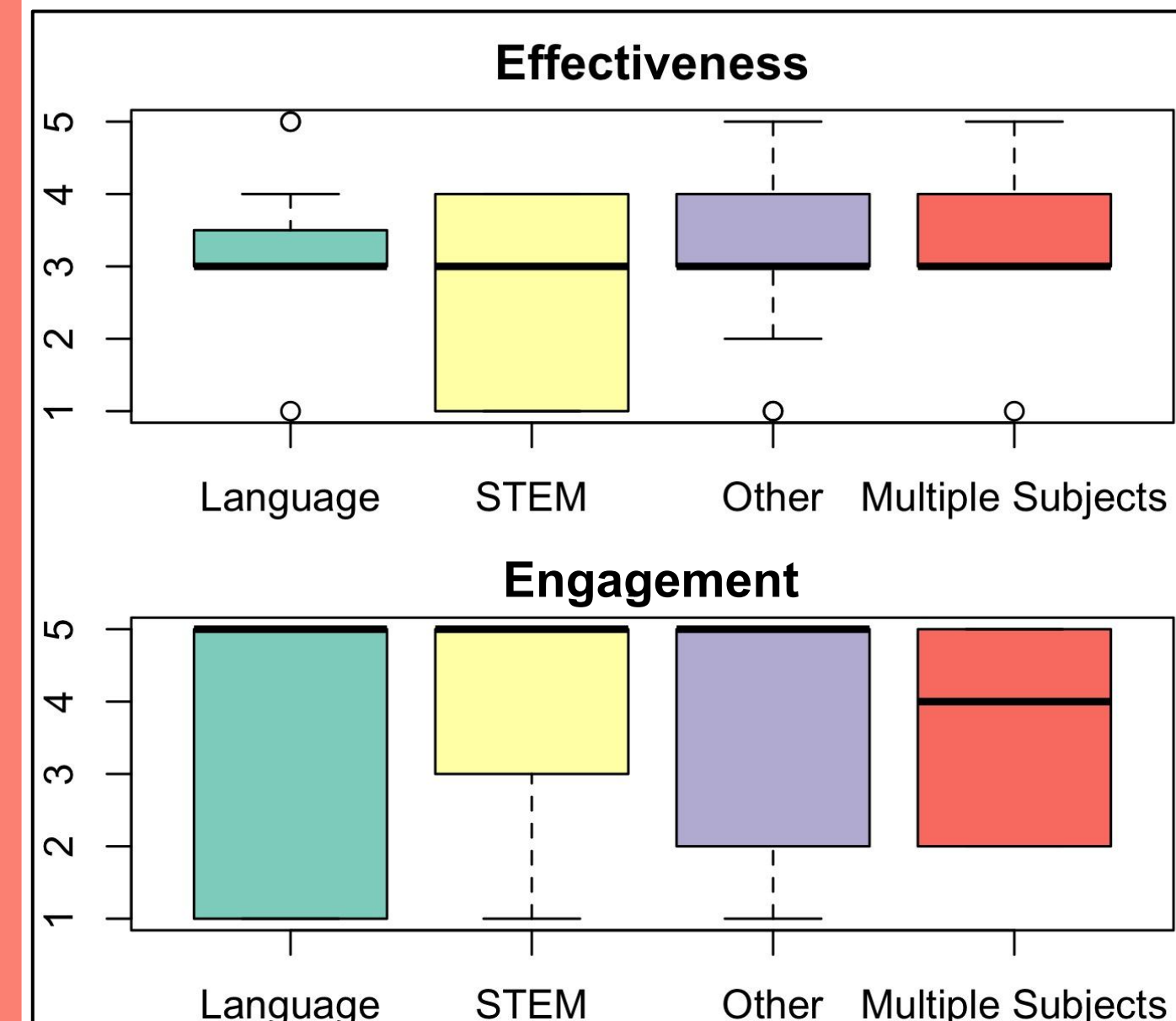


Incorporation vs. Years of Teaching Experience



Incorporation vs. Niche Rating

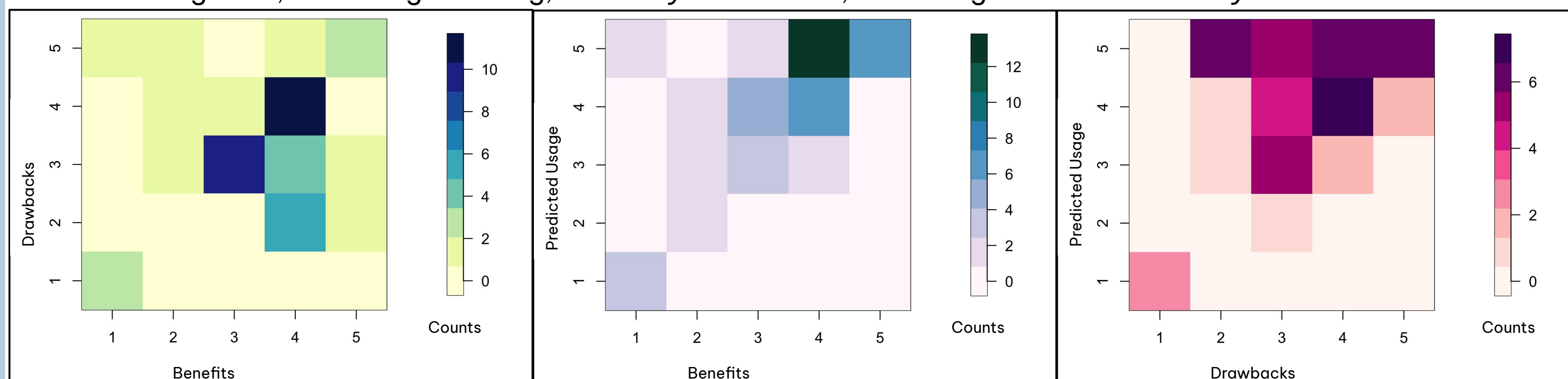
Subject Correlation with Effectiveness and Engagement



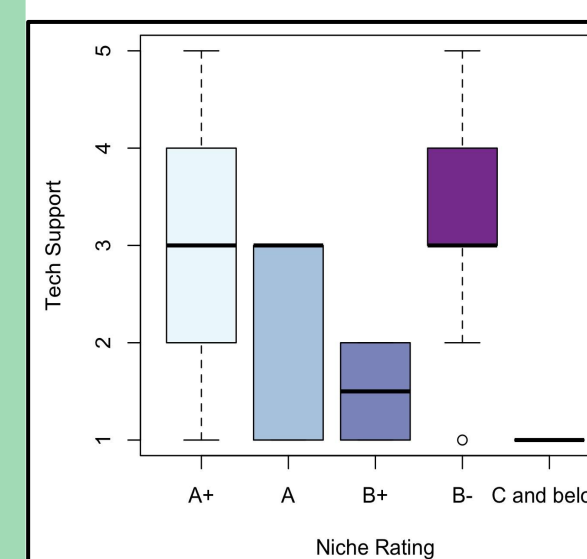
- Comparison with the effectiveness of the tool and the student response or engagement per each subject
- 1-5 scale with 5=extremely effective/excellent & 1=not at all/poor
- All subjects had the same median of 3 for effectiveness. STEM had the largest variation.
- Language, STEM, and Other subjects had median of 5. Language had the largest variation.

Benefits, Disadvantages, and Predicted Future Usage

- Many teachers found benefits and disadvantages at the same time for ChatGPT use in K-12 education.
- Teachers, who saw great benefits, predicted greater future usage. There was a greater variety for drawbacks still with greater predicted future usage.
- Comments from teachers:
 - **Benefits:** asset for lesson plans, creating assignments
 - **Disadvantages:** cheating, ethics, misinformation, ineffective usage, improper guidelines, a substitute for critical thinking skills, not enough training, too many math errors, not enough research currently



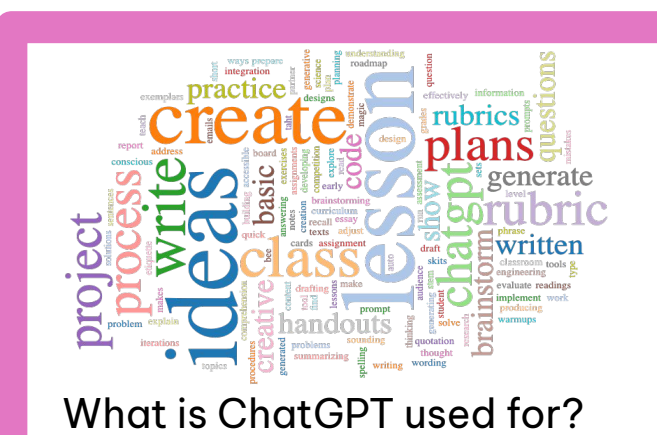
Conclusion & Discussion



In TX, ~50% of K-12 teachers use or used ChatGPT in classrooms. Teachers are willing to use, yet tentative due to limited resources (e.g., tech support) and research. **Limitations of this study:** Originally, the project aimed at comparing TX and CA; however, there was no response from teachers in CA. For TX, the majority of responses are from Houston (potential bias). **Future work:** How does TX compare to other states?

Acknowledgements

This project would not be possible without the survey help and guidance from Mr. Vinnie Vrotny and the helpful comments and guidance from Dr. Sonia Clayton.



Links

Niche Rating Site:

<https://www.niche.com/k12/search/best-schools/>

ChatGPT Logo (not for commercial use):

<https://pixabay.com/vectors/chatgpt-chatgpt-logo-chatgpt-icon-7977357/>

All graphs done in R