

WHY IS THIS IMPORTANT?

- Constructed response questions reveals student thinking better than traditional multiple-choice
- Professors are limited by large class-size and high time requirement for grading
- Computer Scoring Models (CSMs) automate scoring, making constructed response more accessible.

RESEARCH PROBLEM

- Creating CSMs is time consuming.
- Require Input of human assigned scores and each model has unique issues
- Little is known about how to improve CSMs for text assessments
- Currently new responses are added until the model works.

RESEARCH QUESTION

- Can predictive accuracy scores be used to efficiently improve CSM performance? We hypothesized that using subsets of responses with different predictive accuracies would lead to different CSM performance.

CONCLUSIONS

- CSMs improve more when trained with lower probability responses and higher number of CRs.
- Train CSMs by focusing on responses the computer is less confident about.

FUTURE DIRECTIONS

- Test these conclusion on other data sets and CSMs
- Since models are unique these finding may not always apply.

ACKNOWLEDGEMENTS

EXPERIMENTAL METHODS

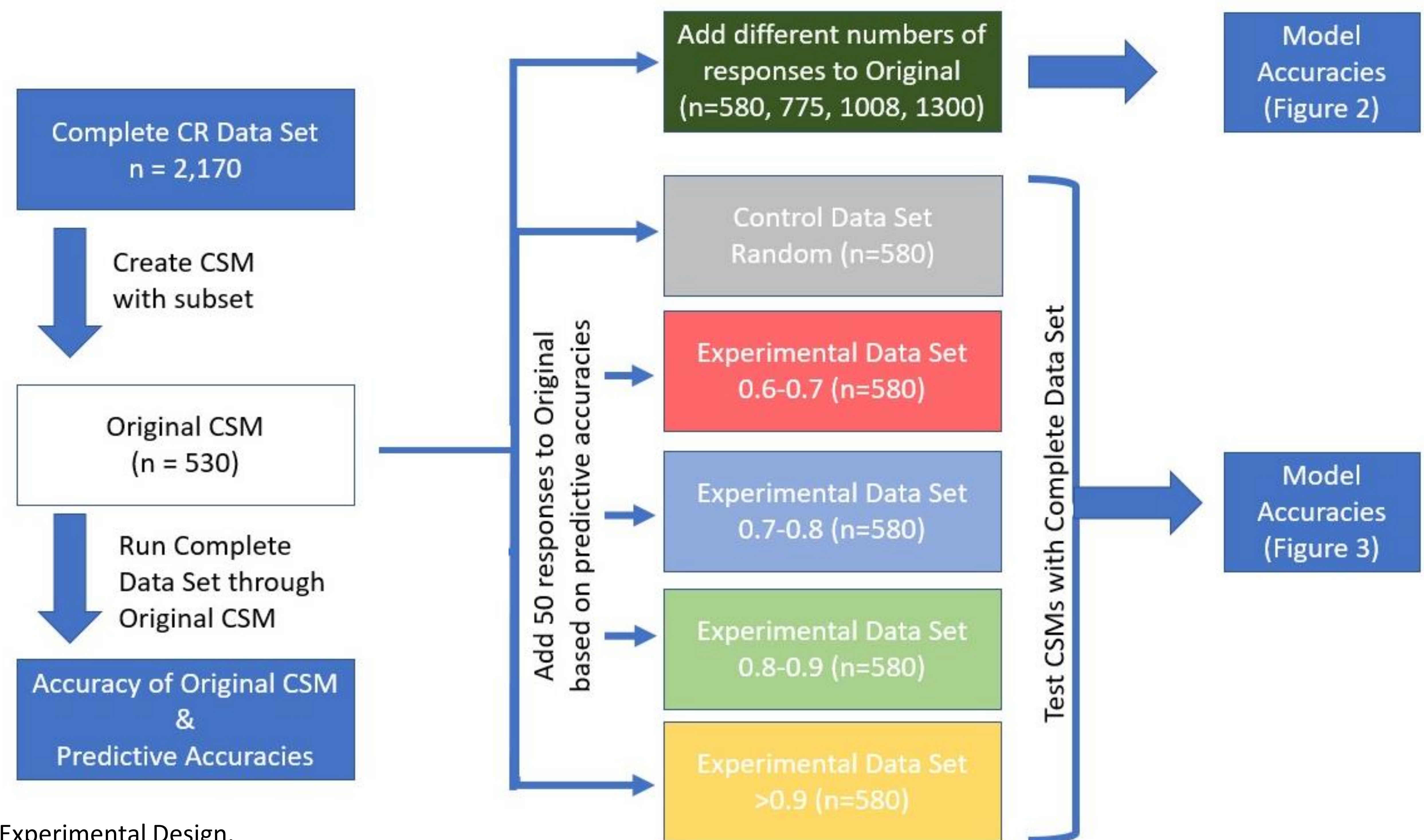


Figure 1: Experimental Design.

PRELIMINARY FINDINGS

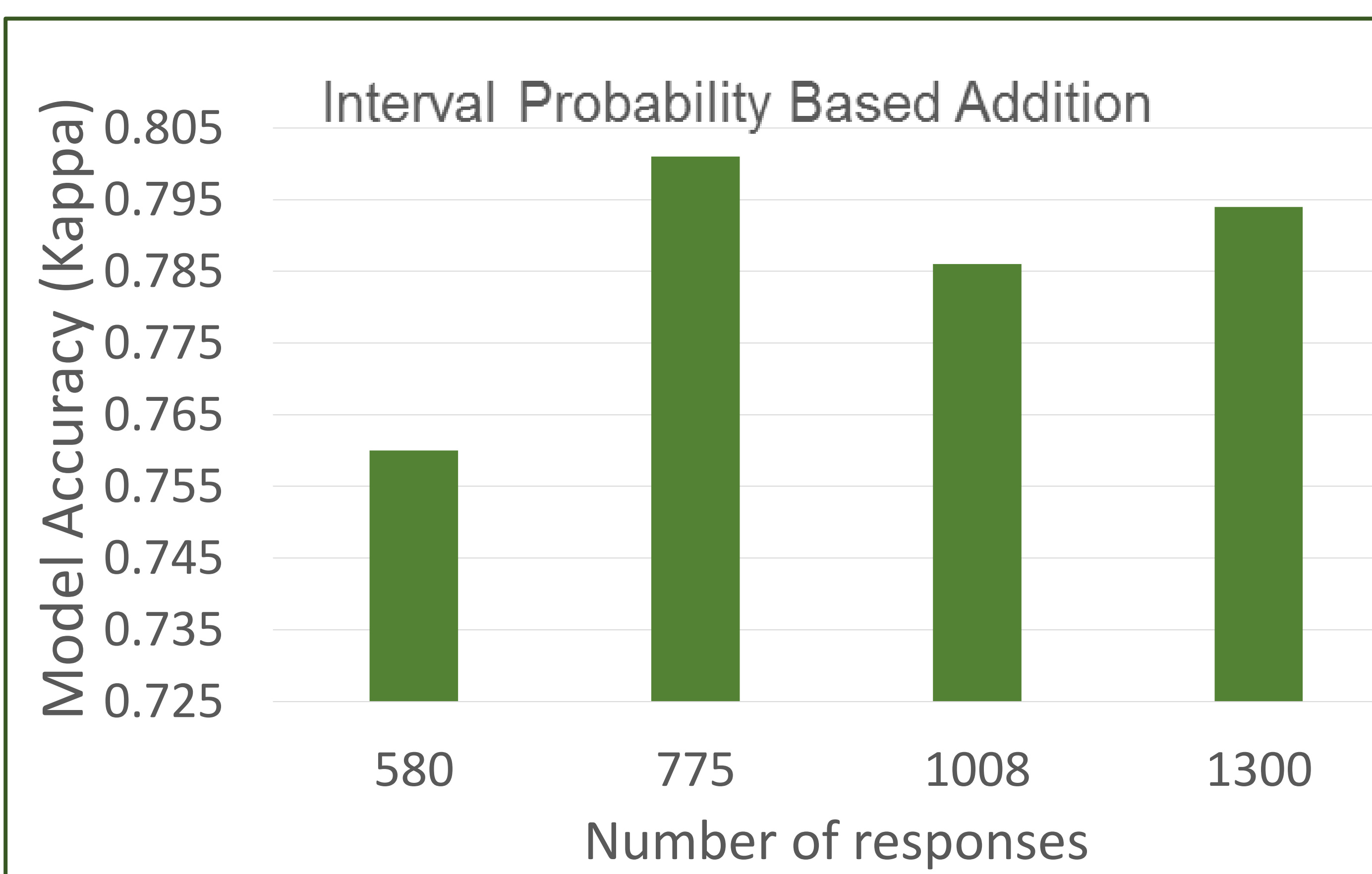


Figure 2: Lower probability responses showed the most improvement. As response probability grew the model improvement decreased.

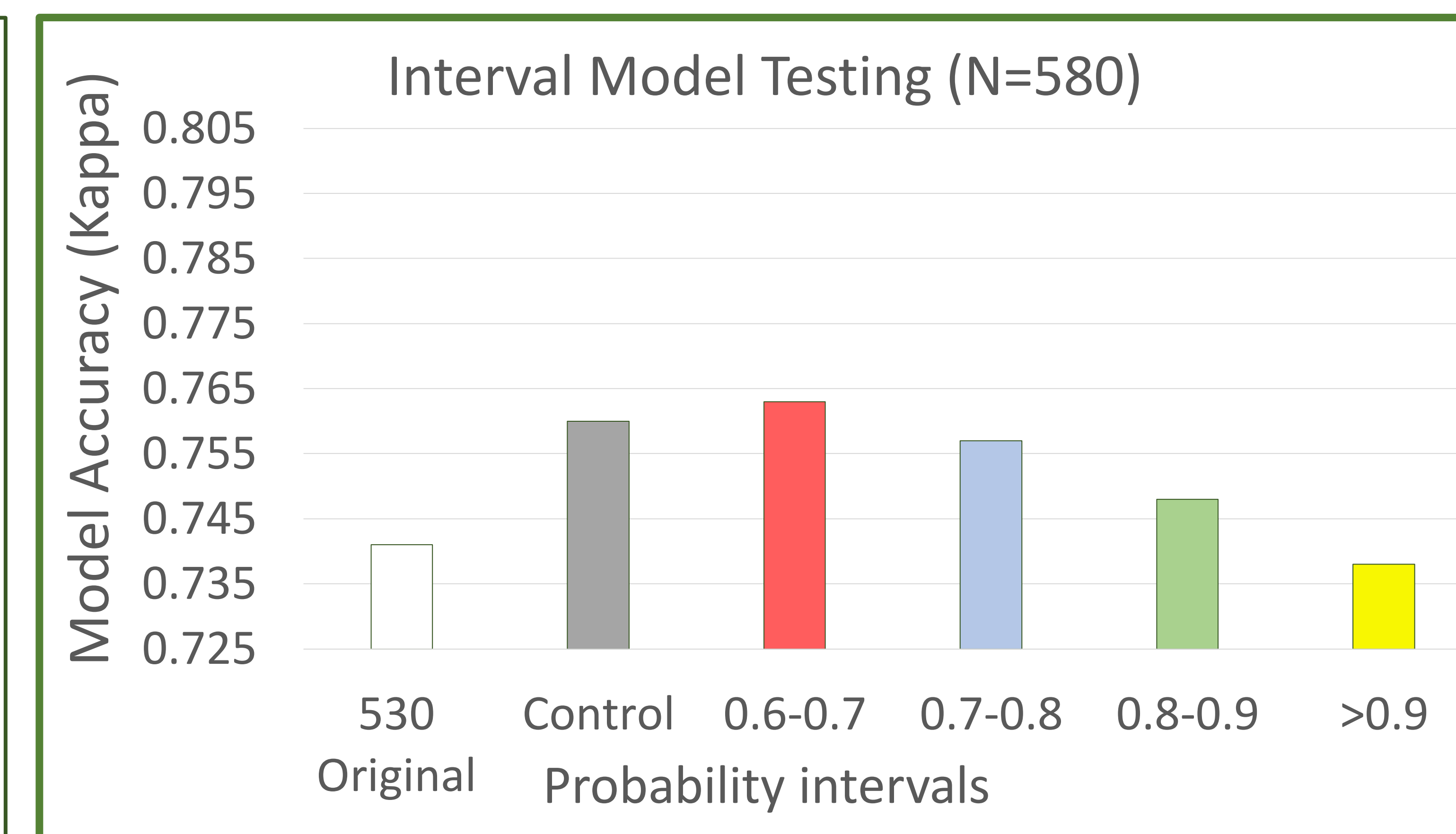


Figure 3: Higher number of responses had the biggest improvement. Different interval probabilities with varying number of responses added.

