

APPENDIX E: DESIGN REVIEW/EXPERT INTERVIEW SUMMARY

Introduction

The team composed a powerpoint discussing the main design of the counting blocks, explaining the two possible directions. The powerpoint presentation was presented to speech language pathologist Michelle Ricamato in class over a Zoom meeting on October 31, 2023. During the presentation, the team received valuable feedback from Ms. Ricamato and critical concerns were raised by our classmates.

Summary of Feedback

- Be careful of color choices
 - Math explanation should relate to spatial geometry to the numbers themselves rather than having the residents associate numbers with colors.
- Be careful with block geometry (use rectangular prisms/cubes)
 - If we use different geometric shapes (stars vs spheres vs squares, etc.), then the residents may associate the number with the shape, which is incorrect.
- Don't make the blocks hard (wood may be easy to shape but can be dangerous if thrown), or too malleable since that can deform or rip easily.
- Strip down to math concepts (neutrality is key).
- Decreasing the number of blocks to five may increase their effectiveness because developing brains are more capable of subitizing (i.e. determine a quantity without counting) numbers one to five.

Action Plan

- Design blocks to accommodate concerns
 - One color for all the blocks (blue, or black, or solid colors for dignifying capability)
 - One shape type (lengthening rectangular prisms that nest within each other)
 - Plastic + silicone for durability and stimulation
 - Keep peg designs simple as to not increase workload dramatically while allowing us to rapidly tinker with various ideas
 - Determine plan for testing
- Meet with Scott, the Northwestern University Prototyping Specialist, to discuss if the team's design direction with the preferred materials is feasible.
- Send email to Ms. Humphrey regarding critical feedback.