



ST. CATHERINE UNIVERSITY

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The Effects of Using American Sign Language
Signs with Montessori Elementary Children

Rachel Murnane and Lisa Wolfe

April 29, 2019

Why Sign with Elementary Children?



❖ The Research Question

Will the use of American Sign Language signs with Montessori lower elementary hearing children impact the noise level produced in the classroom, while remaining respectful of the children's need to work in small groups and communicate freely?

❖ How we chose it

- Trouble maintaining noise levels conducive to concentration and productivity
- Second plane characteristics, small group work, the need to communicate
- ASL's potential to reduce noise levels

❖ Why it's important

- Noisy learning environments negatively effect child development.
- Loud volume levels distract both children and educators.
- Little research on teaching hearing elementary children ASL exists.

Literature Review Findings ~ Connection to Montessori

- ❖ Sensitive Period
- ❖ Freedom to Speak
- ❖ Buzz of Activity
- ❖ Use of Language in the Elementary
- ❖ Connection of Speech to Gestures



Literature Review Findings ~ The Impact of Teaching Sign Language

- ❖ Provides academic and social/emotional support for all children
- ❖ Boosts inclusivity and community in the classroom
- ❖ Offers additional avenue for classroom management
- ❖ Helps children pay attention, focus, and concentrate
- ❖ Appeals to active, kinesthetic, and movement-based learning styles, and is a visual and sensorial mode of transmitting information
- ❖ As children sign, they “become active participants in learning” (Daniels, 1994).



Research Process

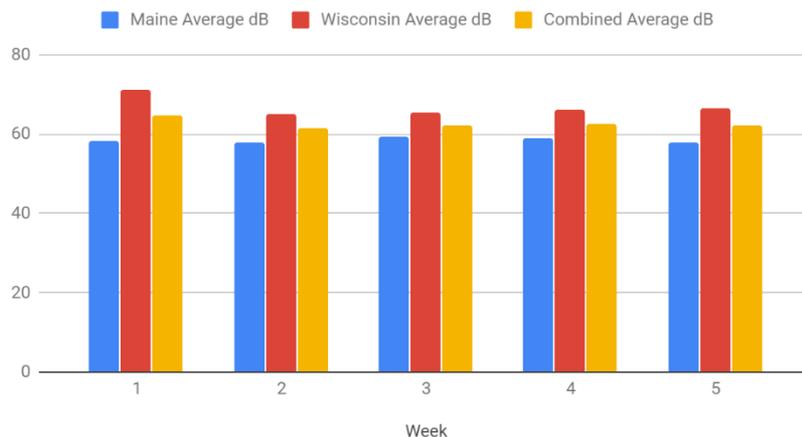
- ❖ The project was performed in two lower elementary classrooms (1st-3rd grade); one at a private Montessori school, with 28 hearing children, and one at a public Montessori school, with 34 hearing children.
- ❖ Data measured using four tools; a decibel measuring app, observation form, tally sheet, and a structured discussion.
- ❖ Three-period lesson Montessori methodology
- ❖ Decibel measuring app recorded in five minute intervals, four times during the work period, two days a week, for a duration of five weeks



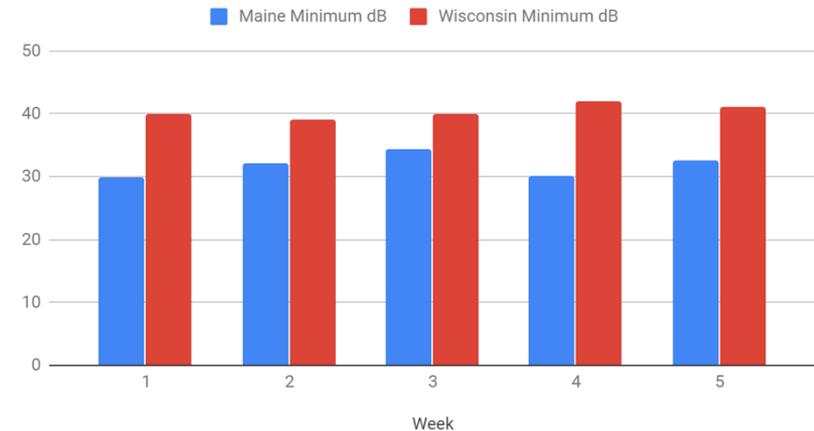
Findings and Analysis ~ Impact on Noise Level

- In both classrooms, change in noise level was minimal, a 2% decrease overall.
- In Wisconsin, after four weeks of intervention, a 7.8% decrease in overall noise level occurred.
- In Maine, after four weeks of intervention, the result was a 3.8% increase in overall noise level.

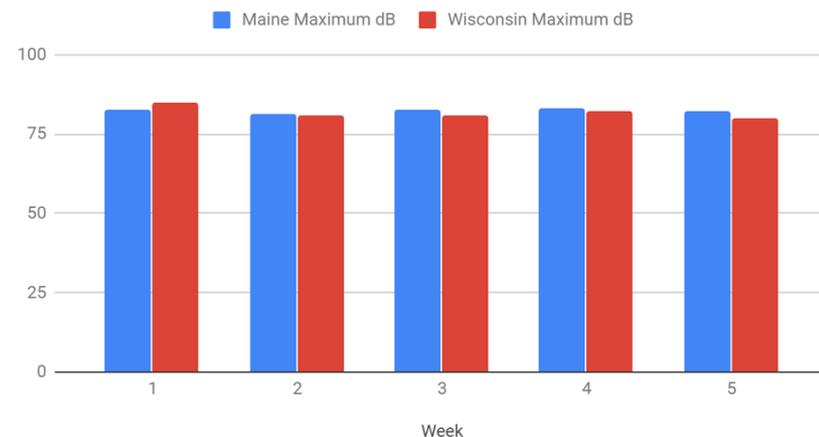
Change in Weekly Average dB Levels



Maine Minimum dB and Wisconsin Minimum dB



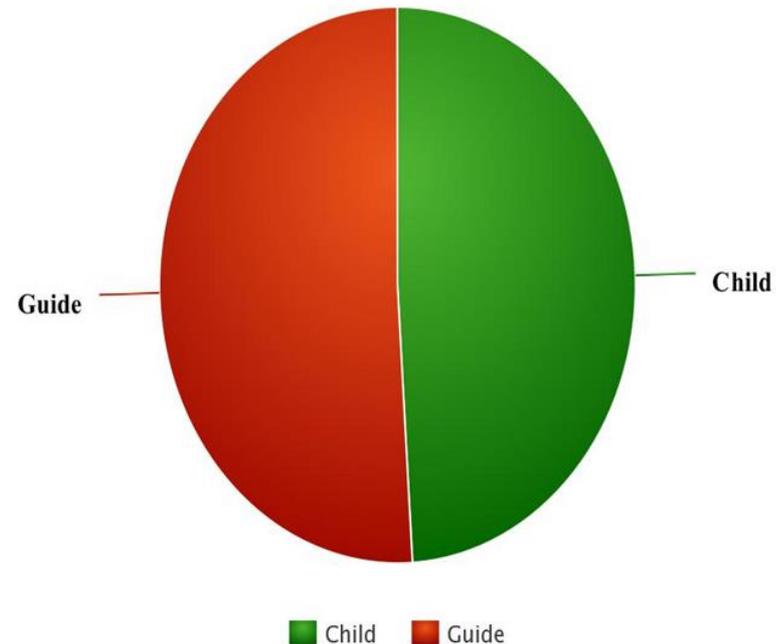
Maine Maximum dB and Wisconsin Maximum dB



Findings and Analysis ~ Frequency of Target Behavior (Sign Usage)

- ❖ Researchers noted overall frequency of sign usage by children as low. In Maine, children were observed signing at a slightly higher frequency than the guide; in Wisconsin, the opposite was true.
- ❖ Combined average showed children signed 49% of the time, guide signed 51% of the time.
- ❖ *Hello* was the sign most frequently used.

Who was using ASL signs in the classroom more frequently?



Findings and Analysis ~ Conclusion

- Children's Perspectives on Learning ASL
 - ❖ Generally claimed to enjoy learning ASL signs
 - ❖ Practiced new signs immediately without being prompted
 - ❖ Continued practicing new signs after lesson was complete
 - ❖ Requested signs in addition to those taught during the lessons
 - ❖ Expressed desire to make full sentences using ASL signs

- Researcher's Observations and Reflections
 - ❖ Correlation between perceived noise level and actual decibel readings
 - ❖ Connections made between the gesture and the meaning of the signs
 - ❖ Positive associations of otherness and inclusiveness through exposure to ASL lessons



How will these results impact our future teaching?

- ❖ Children responded positively to directions given using ASL signs. We plan to use ASL signs to help ensure the classroom runs smoothly, and discourage disruptive behavior.
- ❖ Second plane children are drawn to codes and language. We wish to increase exposure to foreign languages and other forms of communication present throughout human history and around the world.
- ❖ The intervention granted children opportunities to discuss exceptionalities. We wish to encourage this dialogue.



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