

Using a silent language for loquacious students: American Sign Language as a responsive classroom management tool

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Abstract: In this study the use of American Sign Language (ASL) was examined as a classroom management tool. ASL is used as a more equitable tool that works towards Universal Design of Learning (UDL) replacing hand signs that are given meaning by each teacher that applies them. The intervention took place in a second grade classroom, in a public elementary school in Southern Maryland with sixteen students (n=16) and their teacher. One student was absent at the point of data collection. Students were taught ASL signs as an alternative to verbal responses. Both quantitative and qualitative data was gathered in order to examine students' perspective of learning and using ASL in the classroom. The goal of this study was to analyze how ASL performs as a classroom management tool in the eyes of the students.

Introduction

If students were left on their own, student behaviors in school would most likely look quite different than it does when a teacher uses effective classroom management strategies. Not that students are guaranteed to misbehave, but most would probably agree that talking to their best friend is more fun than completing their challenging multiplication worksheet. Students may find sharing personal stories that hold slight relation to the topic more appropriate and more entertaining to share in class. The risk of calling on the hand that decides to share about their relatives' pet that could send them into a spiral is a challenge to avoid especially when the goal is to listen to all students' thoughts. There is no guaranteed way to know what a student wants to share when their hand is raised. Students are learning how to be functioning members of today's society which means that at times they do not realize when it is time to get serious and learn. This is expected and appropriate for this elementary age group. The teacher tackles this social development with strategies that teach when it is appropriate to speak, along with what is appropriate to be spoken aloud. So, what is to be done about a talkative bunch who are struggling to pick up those cues? Classroom management strategies already put in place need to be reviewed: how and what would work better for this particular group? A strategy that keeps or increases participation but decreases disruptions or distractions would be ideal for this group of students. This became the motivation for my project.

During my Masters program, I interned in a second grade classroom in a local public school. My second graders always had a lot to share which can be a double edged sword. I

got to know a lot about them, but they also liked to share at inappropriate times. For example, students raised their hands when asked a question but instead shared a statement. They repeated the same answer that their peers had previously stated. They raised their hands to answer a question but instead answered with a distant, loosely related connection.. They spent a lot of time on their discussions before we could get to the heart of our planned lesson. This put us behind and they ended up missing out on activities they would have enjoyed due to the longevity of their disrupting contributions. Therefore, a change in management strategies was needed. Especially once we had reached the third month of the school year and had improved on appropriate and timely contributions. I, as a first year student teacher, did not have big expectations for how second graders manage their speaking and topic focus; however my mentor teacher confirmed that in her twenty plus years of teaching second grade she described this class as awfully chatty, more so than classes she has had in the past. Therefore, in my original research I intended to understand how to increase student engagement while protecting their current enthusiasm to participate, and also shaping it into a more appropriate form of participation. To do this, I incorporated some basic American Sign Language (ASL) into my teaching when applicable to give students an alternative to their spoken language.

Due to limitations and circumstances beyond my control, one key element of the intended research, the correlation study, did not occur. However, as a result of this, I was able to discover a much more robust student ASL experience. Instead, I was able to analyze student perspectives on learning and using American Sign Language. Students completed surveys in which they answered scale questions as well as visually represented their experiences using ASL.

I had high hopes for this project. One day during a class discussion I was leading, my students kept raising their hands and repeating to each other over and over. Not out of maliciousness, but they all wanted me to know that they too shared the same thought as their peers. Without a second thought I showed them the sign for “same” and explained that if they want to show that they share the same thoughts as their friends in class they could show me this sign and I would understand, and we all would be able to see them. They picked this up instantly. They gave me this sign in conversations even when I did not prompt them. My mentor teacher told me when I am not there they do it with her too. I thought this is a positive sign that they are open and eager to learn more signs and use them when they are applicable. Thus, the goal of this study shifted and focused on analyzing how ASL performs as a classroom management tool in the eyes of the students

Literature review

Aligned with my original research question, this literature review seeks to place my study within the existing body of research. In order to put this study in context, I have looked into research on effective classroom management that keeps student engagement at a high level and allows students to feel like they have contributed in a way that they feel heard but at the same time keep the focus on learning.

What is classroom management?

According to Lepage et al. (2005), classroom management is classically defined as the strategies that teachers use within their classrooms and schools that work to decrease improper student behavior and increase engagement and opportunities to learn. Many current teachers believe that classroom management is needed to combat disruption and improper school behavior in order to guide a learning environment that supports learning and positive behaviors. Specifically, classroom management works to support students' positive classroom outcomes (LePage et al., 2005). This can be carried out in an infinite amount of methods. There are classroom management tools that are studied and considered to be best practice, however there is also value in informal teacher engineered strategies that work best for individual teachers and their unique set of students. These strategies work to support proper school behavior that creates the space for effective learning. That being said, while the classroom management strategies work to support and guide students to proper behavior for the teacher to teach, it really is for student success. The classroom management strategies that teachers decide to use and if they are used effectively are said to have a direct impact on their students' success within their classroom (Gage et al., 2018). This implies that ineffective classroom management could harm the students' chance for success within a classroom. From an educational perspective, one may ask "what are effective classroom management strategies that are considered best practices?"

According to research, there are many methods of effective classroom management (Gage et al., 2018; Pinto, 2013). Some strategies are more formal than others. Teachers are able to get really creative with their management strategies. It can just depend on the teaching style the teacher tends to lean towards (Pinto, 2013). Pinto (2013) explains teaching management on a scale of three orientations, starting at discipline focused on one end, engagement focused on the other, and rewards and routines in the middle. Pinto (2013) lays out many classroom management strategies; they can be as simple as the classroom layout. This could be seating arrangement, student resource layouts, and overall classroom flow that work on discipline and routine.. Other similar, yet effective strategies include displays, classroom openers, and class routines. Effective classroom management strategies can get more involved such as sunshine calls establishing positive connection with students guardians, class meetings, and creating a positive classroom culture surrounding mistakes (Pinto, 2013).

There are dozens of strategies, the ultimate goal of classroom management is to support student success by creating an opportunity for students to get engaged and learn. In fact, Gage et al. (2018) observed over a thousand teachers across sixty-five elementary schools. They suggest that the classroom management strategies used do not matter as much as how much the strategies are used. They found little to no difference in teachers who used the medium frequency level of strategies but found that high frequency of management use resulted in the most positive change within their classrooms. This supports the idea that there are many classroom management strategies that can be used but it really depends on how effectively the teacher is using them and how often.

Using Classroom Management for a responsive engaged classroom

Student engagement is a common goal of most educators. The goal is to have students go beyond just being on-task completing their work, but immersing themselves in their work, eager to be a part of the lesson. A major part of engagement is participation (Parn, 2006). Participation is an easy concept to understand in theory, suggesting that students pay attention and actively become part of the lesson. In reality, participation in an elementary classroom can vary in many ways. Each student may show participation differently as they have a unique level of comfort with different activities. For example, Kovalainen & Kumpulainen (2007) examined a small sample of seventeen students and their teacher. The researchers decided on a few domains that students may fit into that describe how they may participate. Through their study they found that there are vocal students, who are not afraid to speak within a lesson. Responsive students may add on, but will not begin discussion. There are also bilateral students who may do both. Finally, there are silent participants who may not contribute but are there and are engaged.

According to Marzano & Pickering (2010), the phrase “Highly Engaged Classroom” is a popular one in the education field. It suggests that in order to get engaged and stay engaged, students need to be intrinsically motivated (Marzano & Pickering, 2010). Thus, there is a certain layer of emotional engagement that gets students motivated to join in and is essential to this participation goal (Marzano & Pickering, 2010).

Additionally, total participation and whole-class participation are terms that are connected with this idea of a highly engaged classroom that goes back around to the use of classroom management strategies. Teachers can use certain methods to engage their students or supply them with tools that support them in appropriate ways making them feel comfortable with participating. Responsive classrooms and responsive teaching practices work towards using strategies and methods that support the learning but also put a major support on teachers (Rimm-Kaufman; Sawyer, 2014). The strategies being used in the classroom need to be thoughtfully selected to support students. One common strategy that allows all students a chance to participate and engage in learning topics is whole class discussions.

Why use classroom discussions?

Classroom discussions can be an organized way to see who participates and connects to the activity, in other words, to observe engagement and participation. Discussions give teachers an opportunity to increase who gets to participate and share perspectives that are not just coming from the teacher or lesson (Markee; Kasper, 2004). A common place where whole or small class discussions may take place are in shared classroom spaces such as a main carpet. These can also be held with students at their desks, additionally tables and desks may be moved into a circular formation to have a setup that supports a conversational style of speaking. It can be teacher-lead, but students can also be given the reins and take control themselves. These types of discussions are beneficial to student learning but in order for students to learn they need to participate (Barton, 1995). As mentioned before there are many types of participation ranging from the very vocal student to the silent-yet-engaged (Kovalainen & Kumpulainen, 2007). It is important that all of these students can feel comfortable participating in how they feel is appropriate but also important that they get a chance to do that or get out of their comfort zone and participate in a different way. In order to have total participation, students must have

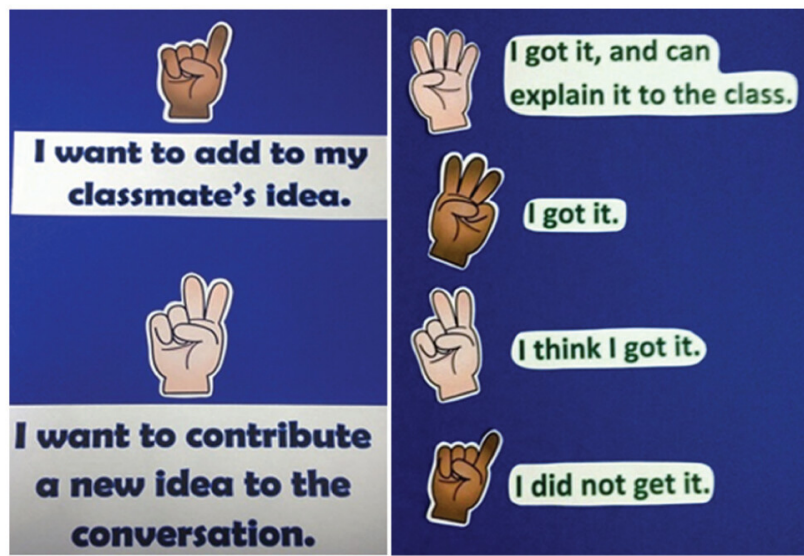
norms and participation methods that support letting others participate and contribute. This leads to the idea of strategies that can be used within class discussions to support all students but keep the engagement up and disruptions low.

How do teachers use hand signs in the classroom?

In classroom discussion and in overall classroom management hand signals are a method that can be found in many K-12 classrooms. Hand signals are a way that teachers manage participation and contributions in the classroom. They are commonly used as talk signs within discussions. It is a silent, responsive method which would reduce verbal communication. Using hands to express how they feel about a discussion point replaces the chance to go off on a distracting story. It is a quick response that uses no sound. This silent communication creates a new channel for learning to take place on, and is considered a very underused communication method (Neil, 2019). This also gives the teacher the opportunity to check all of their students' participation, easily being able to see if they have enough hand responses. Teachers then can call on a student to elaborate on their response if they feel it would be helpful to do so. The students are seen and acknowledged, and the teacher is heard and facilitates a (hopefully) more manageable class. Hand signals seem to be a very appropriate tool that fulfills the goal of engaging students to participate, allowing all types of student participants to feel comfortable participating, and supports the teacher as a responsive classroom tool.

Hand signals increase engagement and therefore decrease disruptions or off-topic discussion (Marzano & Pickering, 2010). Many teachers use the number of fingers for responses; "hold up one finger if you think the answer is A" would be a common way this would be used (See figure 1) (Nagro et al., 2018). For teachers who want to go beyond this, there already is an entire language devoted to using hands to communicate the same as, and sometimes more effectively than, spoken language. Sign language already has hand signs readily available to be used by anyone willing to learn it. Instead of making up a new hand signal code why not be inclusive and responsive and teach sign language signs from the start? In this case, ASL.

Figure 1: *example of teachers' personalized hand signal key for their classroom.*



Why may it be more beneficial to use American Sign Language?

American Sign Language (ASL) falls under the classroom management strategy of hand signals. It is still a silent communication tool. Instead of just using hand signals as a representation for management cues, ASL provides students with the opportunity for learning another language while completing the same objectives. Lawrence (2007) reviewed several older studies within their review and found that there seems to be an “overwhelmingly positive” result when ASL is used in classroom settings. ASL captures students’ attention, and goes beyond the signs their teacher requires them to do. Furthermore, it provides students with a basic introduction to the language of the deaf population. Most students are inexperienced in ASL, therefore acquiring ASL will be an additional language for them to learn. Sign language, like many other languages, is easier to acquire during younger years of life (Lillo-Martin; Henner, 2021). Due to this, introducing students in elementary school can be beneficial to them as it may occur more naturally to them than for adults.

ASL is considered to be endangered, meaning there is a threat of being slowly dissolved and not considered a prominent language for people to learn (Snoddon; De Meulder, 2020). Snoddon & De Meulder (2020) noted that a common misconception is that ASL is disappearing because it is passed on only within deaf and hard of hearing communities. However, looking into the numbers, indicates a decrease in the number of people learning and using signs. Using ASL in elementary school can plant a seed and grow perspective. Furthermore, using ASL within a classroom brings recognition and expanded worldview to students. Culturally responsive ASL incorporation would introduce students to the culture and lifestyle of the people who use ASL as their language or as a language to assist them in their daily lives. ASL is known to assist many types of learners, not just deaf or hard of hearing individuals, students with verbal impairments or that have trouble communicating such as some individuals with Autism Spectrum Disorder use ASL as a common support (Mancini, 2005). This makes ASL use a more equitable classroom

management technique than just using teacher made hand signs. Using ASL instead of hand signs also works towards the Universal Design for Learning (UDL) which works towards using tools that some students may find a necessity in the classroom but at the same time benefits all students (Morin, 2019). This makes UDL tools a no-brainer to use in the classroom changing the perspective to “why wouldn’t I” instead of “why should I” when it comes to responsive practices.

In conclusion, the use of ASL still has the same effective impacts as hand signals as a classroom management tool. It still allows a silent form of communication that decreases verbal disruptions and the chance of students going off topic. It increases the chance for participation that is accessible for most students. ASL opens up the accessibility and equitability even more than hand signs as it reaches more populations of students that may already need ASL as a support or students who just find ASL a beneficial tool to have. ASL also opens the door to increasing culturally responsive teaching by incorporating more perspective into the classroom. The ultimate perspective of this review being that ASL may be a more equitable and effective approach to using hand signs as a classroom management tool to decrease disruptions and increase engagement in a classroom discussion setting.

Research Questions

In this study I originally introduced some ASL vocabulary to my loquacious second graders to see if this diminished their off-task talk and increased their participation. As the intervention advanced, the focus shifted to focus on students' perspective on the experience and concept of using ASL. In this study, I looked to answer the following questions:

1. What are students' perspectives on learning and using American Sign Language in the classroom?

Proof of concept will also be analyzed with these essential skill questions:

1. Can 2nd graders use ASL at appropriate times?
2. Can 2nd graders reproduce ASL signs?
3. Can 2nd graders identify signs when shown to them?

Intervention

This intervention took place throughout the spring in a second grade classroom of 17 students. A new student joined after the intervention started and while they still learned sign in class, their data was not included. No pre-testing was conducted, as most students did not possess previous knowledge of ASL. Students were introduced to ASL throughout the intervention. In addition to the language, students were also exposed to ASL culture to ensure there was an appropriate culturally responsive approach to this intervention.

Throughout the following weeks students were introduced to sign as they appropriately fit into the lessons that were taught. For example, signs were planned out for lessons, and used within class discussions in appropriate context. Students had the opportunity to use signs throughout classroom discussions. The tentative goal was twenty signs as the baseline. However, this decreased while the intervention occurred to increase the quality and the proficiency they signed based on what is deemed appropriate by class skill and context. This worked to serve the students appropriately with the signs in a

naturally occurring way instead of forcing them to memorize a list and threatening engagement.

Qualitative data were collected throughout the intervention to track what signs were beneficial to the classroom and how the students made progress. Quantitative data was collected by the proof of concept and student survey. The Proof of Concept tested students taking a ASL knowledge quiz to ensure skills were picked up, this tested if students could use, remember, and identify the signs that were introduced throughout the intervention which addresses research question number one. Student opinion was collected through the student survey. to gain perspective of how ASL was used in the classroom and what students thought of their experience.

Methods

Building upon existing research, I sought to expand the field by conducting an intervention incorporating some basic American Sign Language (ASL) into teaching a second grade class. The study took place in a second grade classroom with the number of participants being sixteen second grade students (n=16). Parental consent, and the approval of the study by the local school system was required for participation. The classroom teacher (female teacher with 22 years of experience) was in the room throughout the intervention to work with students, and oversee instruction. This study took place over a few months in the spring of 2024. Qualitative data and the quantitative data were collected/analyzed. Proof of concept data was collected through a quiz that asked students to identify signs, produce signs, and understand appropriate context for certain signs. Additionally, students completed a survey to gather perspective. They answered two scale signs 1(not a lot)-5 (a lot) two yes or no questions, one visual drawing response, and one optional recommendation question. The study posed the following research questions:

1. What are students' perspectives on learning and using American Sign Language in the classroom?

Proof of concept will also be analyzed with these essential skill questions:

- A. Can 2nd graders use ASL at appropriate times?
- B. Can 2nd graders reproduce ASL signs?
- C. Can 2nd graders identify signs when shown to them?

Data sources

In accordance with my first set of research questions the table below shows the intended measures that were originally planned to produce data. This has since been changed (see table B).

Table A: *Original research questions and data sources (has been changed)*

Data source 1	Data source 2	Data source 3
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Research question 1 Does ASL intervention change the number of disruptions?	Behavior scale do students replace verbal output with ASL	Observation of students using hand signs	Journal
Research question 2 Does intervention increase total participation	Observation as students are learning and using signs. Completion of worksheets or any materials assigned for intervention	Behavior scale Total participation numbers	Journal
Research question 3 Proof of Concept	Observing if students use appropriate signs at appropriate times	Can students identify signs and reproduce signs? Exam/checkpoint	Students Opinion collection

Given the new research question what are students perspectives on learning and using American Sign Language in the classroom the table below represents the methods used to collect data.

Table B: *Updated research questions and data sources*

	Data source 1	Data source 2	Data source 3
Research question 1 What are students perspectives on learning and using ASL in the classroom?	Student survey questions	Student survey visual representation of experience	Observation
Research question 3 Proof of Concept	Quiz: Can they produce sign?	Quiz;Can students identify signs being shown to them?	Can students say what sign goes with what context?

Data Collection

Data were collected through several modes. Students completed a checkpoint at the end of the intervention as the proof of concept (Appendix B). Students were pulled aside at the end of the day and tested to see if they could recall and reproduce signs. This analyzed if ASL was the accurate variable that was being tested opposed to an unconsidered factor.

This worked to confirm that students were in fact learning ASL so they do in fact have the knowledge to be producing opinions about using American Sign Language. Additionally, students completed a qualitative opinion piece (Appendix A). They were asked questions in order to gain their perspective on their experience with learning and using ASL in their class. They answered two scale signs 1(not a lot)-5 (a lot) two yes or no questions, one visual drawing response, and one optional recommendation question. Lastly, a journal was kept throughout the intervention to gather qualitative data through observations and discussions.

Data Analysis

This was an exploratory study that examined students' perspective of ASL use in the classroom. Both qualitative and quantitative data was be collected. The averages of quantitative data were be collected and compared. Qualitative data was interpreted and categorized by theme.

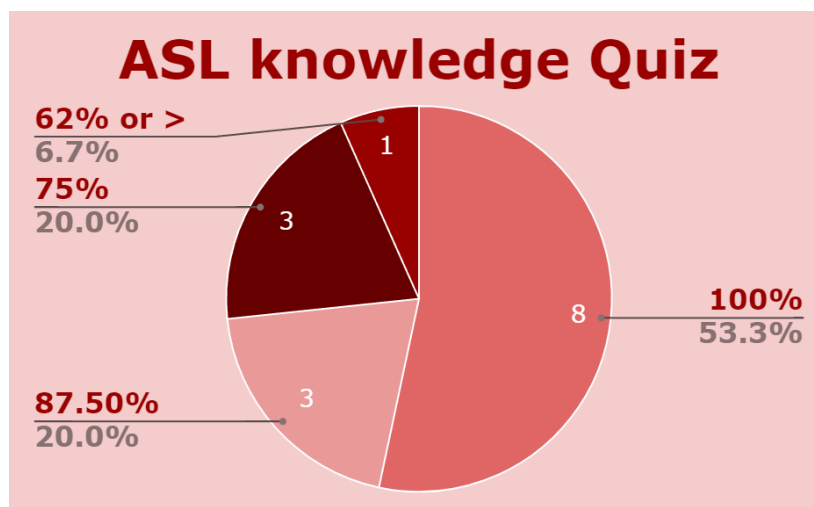
Validity Concerns

Throughout the intervention and data collection phase, there was debriefing with the mentor teacher within the classroom during data collection in order to increase perspective and check bias. The proof of concept represented very strongly that students did learn the ASL in the intervention and could recall and produce it accurately. This rejected the possibility that students did not pick up or use sign language in class, which would have suggested that ASL was not a skill that the students could accurately give their opinions on since they would have had minimal experience or accurate knowledge surrounding ASL.

Results

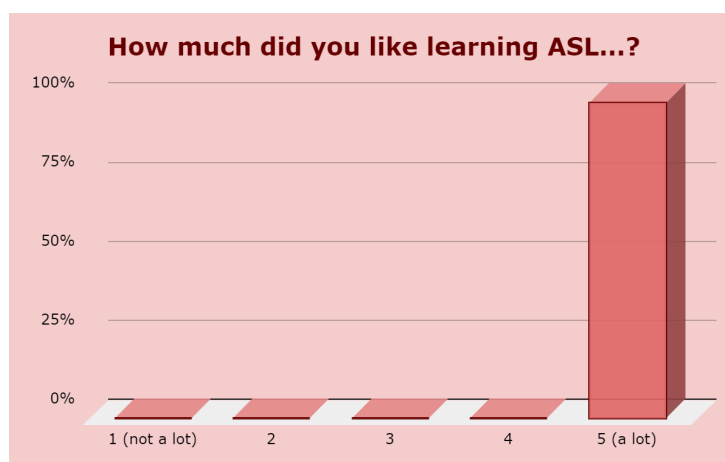
After analyzing the data collected from the American Sign Language knowledge quiz, over half the class received a perfect score (See figure 2). One student received a score below 75% in which the student's IEP for language should be considered. One-hundred percent of the students received a score that would be considered passing. One weak point the students showed in the knowledge quiz was understanding what sign to produce when given a certain scenario giving context when to use a sign, they had to produce the correct sign for that scenario.

Figure 2: Pie chart depicting the percent of students (n=15) receiving each score on a ASL knowledge quiz out of 8 points.



Analyzing the student survey revealed very positive perspectives on using and learning ASL. Students were asked how much they liked learning ASL on a scale of 1(not a lot)- 5 (a lot), 100% of the class responded with five they liked learning ASL a lot (see figure 3).

Figure 3: Bar Graph depicting students responses to “how much did you like learning ASL on a scale of 1(not a lot)- 5 (a lot)”



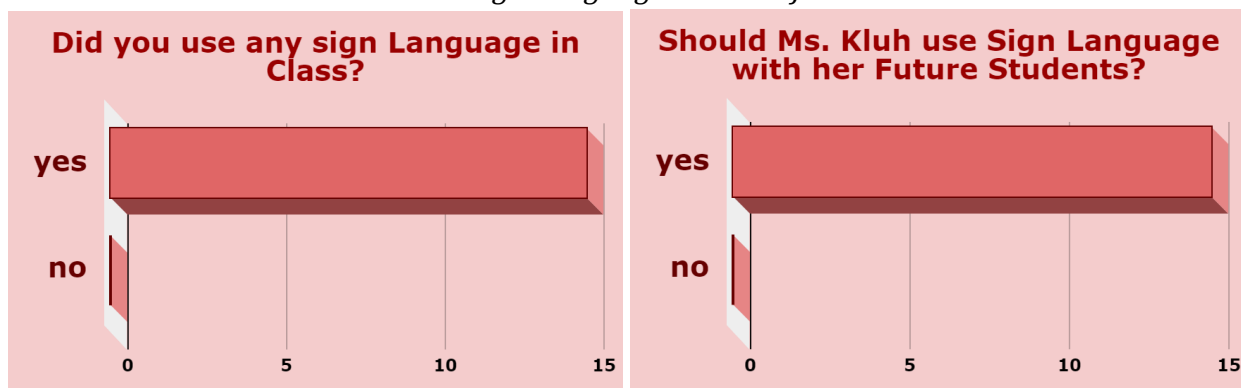
Students were then asked how helpful they thought ASL was to them. The question was answered on a scale of 1 (not at all) to 5 (it was very helpful). This question resulted in mixed results as about half of students responded with a five they found ASL very helpful. The second highest occurring answer was four, five students said that they found ASL only kind of helpful to them. Only three students responded with a three or less on the scale. No students responded with one, saying that ASL was not helpful to them at all (See figure 4).

Figure 4: Bar Graph depicting students responses to “Do you think ASL was helpful to you” on a scale of 1(not at all)- 5 (it was very helpful)”



Students then answered two yes or no questions. First, students answered if they used any Sign Language in class. One hundred percent of the students said that they did use sign language in class. Next, students answered if they thought the student teacher should use Sign Language again with her future students. One hundred percent of students said that ASL should be used again with other students in the future (see figure 5).

Figure 5: Bar Graphs depicting students' responses to yes or no questions "did you use any ASL in class?" and "Should Ms. Klueh use Sign Language with her future students?"



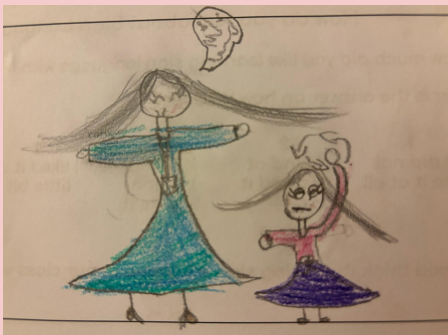
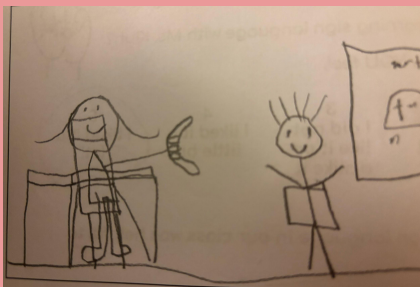
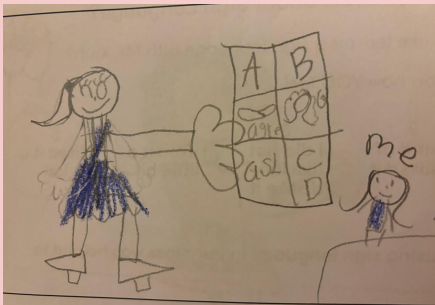
Students then completed a visual representation of their experiences using and learning American Sign Language in the classroom. After collection, students drawings were analyzed for common recurring themes. Major themes included a character using accurate signs learned in the intervention, 67% of students drawings fit in that theme. Second, 27% of students used the "agree sign" in their drawings. Third, 33% of students included the reference posters used in the classroom during the intervention. These posters were also up at the time of students completing their drawings. Fourth, 73% of students included two or more characters showing ASL as a clear communication device. Fifth, 33%

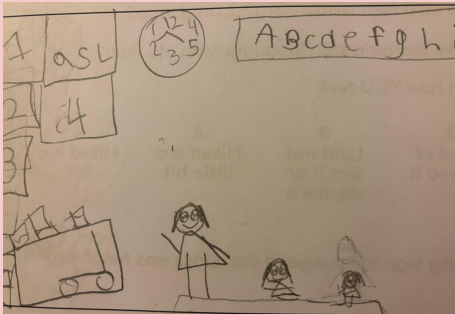
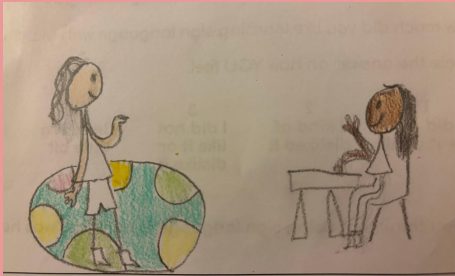
of students represented the carpet as the main place ASL took place in the classroom. Lastly the sixth theme was including the teacher Ms. Klueh in their drawings, 60% of students added the teacher as a significant figure in their ASL learning experience.

Table 3: Themes and averages found in students drawings from student survey

Table 3

Themes presented in student drawings.

Theme	Representative Drawing	Occurrence	
Character using accurate sign		10/15	67%
Character using Agree Sign		4/15	27%
Reference Posters		5/15	33%

Communication with at least 2 or more People		11/15	73%
Using sign on central carpet		5/15	33%
Included Ms. Klueh		9/15	60%

Implications

After examining the results of the proof of concept, it became clear that students walked away from the intervention with the expected knowledge surrounding American Sign Language. All students received a passing score showing that they have some command over the concept of ASL. Almost all students could show a sign that they liked the best and the meaning to it. This connects right back to emotional engagement and feeling personal connection to the material. Most students could also very easily identify signs that a teacher modeled for them. There was one common weak spot where students struggled to come up with a sign when given a scenario for context. For example, several of the students were asked “if you were on the carpet and had the same answer as someone else what sign would you show” while most of the students if not all could show agree when asked directly for “agree” many could not produce the sign when not directly asked for it but instead was given context. This suggests that while students are learning signs the intervention did not get to a point where students could be using signs in a more natural way or feel confident using signs on their own accord without prompting for an exact sign.

Examining the results of the student survey questions it is very clear that students had an all around positive perspective on using and learning ASL. All of the students said

that they enjoyed learning ASL. They had a great experience and from the observation of them learning and using it they were always extremely eager to learn and use it. There were very few issues in the classroom with behaviors or engagement when it was time to learn any ASL or use ASL in the lesson. At times students would get almost too invested in ASL and want to show other signs they have seen before in their personal lives or ask to see many more signs. Question two asked for the students' thoughts on how helpful the ASL was to them. This received the widest range of responses. While most students responded with kind of helpful or extremely helpful, there were three students that felt like it was just in the middle or a little bit unhelpful to them. This is a completely valid response and reasonable when thinking about the bigger picture of using ASL. There were not a ton of lessons surrounding how ASL could be applicable outside the classroom. Even inside the classroom ASL was never a grade and never was a tool that was required for tests or assignments. While they all found it extremely fun it was not as useful to them which seems very accurate to the experience. The students then answered two yes or no questions. Both received 100% for yes when asked if one they used ASL and two if it should be used again with future students.

These results just confirm that positive experience these students had with this intervention. Every student said that they used ASL and that can be confirmed by observing the class during the intervention. At some point every student either used ASL because they wanted to or because they were asked directly for it. There was never a time that students had to be forced into using sign or talked to for not participating ASL was something the students all willingly participated at whatever level they were able to. When students were filling in the final question about if future students should learn ASL. Two students were overheard saying that they were going to say No because it was a special experience for just their class and me, their teacher. They thought other classes would enjoy it but they felt a special connection to the intervention and the time the teacher put into doing it with them. This again goes to support this overall overwhelmingly positive response and perspective from the students. They experienced that personal connection with something not every class was doing even others in their grade level, they felt special and connected to things bigger than them.

Other major data sources unexpectedly came from the students' visual representation of their experiences in the intervention. This drawing prompt was initially designed to give students a break from completing an exam like survey and writing questions. However, after looking back on them they became much more valuable to the study. The students found a way to express how they felt about the experience and the things they valued in their experience even if they were not aware of it themselves. Students were able to produce amazingly accurate drawings of accurate sign language. Agree was a common occurring sign which is to be expected as it was the first sign that the class learned, it was used by far the most, and was around for the longest time. Students also showed that a teacher that models ASL was hugely significant to their experience. Students showed that they valued the resources such as the reference posters for the signs learned and many included the central carpet where a lot of the ASL use took place. A significant theme was students' representation of using ASL between two or more characters. This suggests that students see ASL as a clear communication device that is available to them as an active user.

Limitations

There were a few limitations to this study. First, a student transferred into the class right around the time the intervention started. After some observation it was clear that they had some prior use of ASL, after asking the student they said they had used at least the "agree" sign in a prior classroom. This may have had a slight impact on data surrounding the accuracy of ASL knowledge quiz and if that student already had opinions on learning ASL from their prior experience.

Additionally when it came to data, the opportunity to study a class of this size was very personalized and beneficial but the small size could also be considered a limitation. To further support this study additional research would need to be done, ideally with a wide range of classes and grade levels in elementary education.

A third limitation was the unexpected reality that observation scales done by a third party observing the classroom was unrealistic for this setting. The reality of teaching in a public elementary school is that there is always something for every person in the building to be doing. This prevented other parties from taking any additional data using previously created behavior scales. Another limitation to consider is the nature of the intervention schedule, it was done over three months with several breaks where the researcher leading the intervention was not in the classroom. This put a noticeable impact on students' use of ASL as the other teacher did not use and ask for the same amount of ASL use. This may have had an impact on the ASL knowledge skills scores.

Future Directions

When considering the future of this research, I would absolutely do it again and would recommend it to other teachers to try as well. It became more than just a study. It became a special connection between me and the students. Some students felt more connected to ASL than others but overall they all enjoyed it and had a lot of fun. There was something about learning American Sign Language. There is still vocabulary but unspoken, there are still ways to ask questions, share connections, and address concerns but unspoken. Students seemed to like that more than using their voices. If anything, the intervention suggested that even if the sign was not the most accurate from the students or if there were not a lot of signs learned overall, the experience was full of engaged students who felt special and were eager to learn.

References

- Barton, J. (1995). Conducting effective classroom discussions. *Journal of Reading*, 38(5), 346-350.
- Gage, N. A., Scott, T., Hirn, R., & MacSuga-Gage, A. S. (2018). The relationship between teachers' implementation of classroom management practices and student behavior in elementary school. *Behavioral disorders*, 43(2), 302-315.
- Kovalainen, M., & Kumpulainen, K. (2007). The social construction of participation in an elementary classroom community. *International Journal of Educational Research*, 46(3-4), 141-158.
- Lawrence, C. D. (2001). Using Sign Language in Your Classroom.
- LePage, P., Darling-Hammond, L., Akar, H., Gutierrez, C., Jenkins-Gunn, E., & Rosebrock, K. (2005). Classroom Management. In L. Darling-Hammond & J. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 327-357).
- Lillo-Martin, D., & Henner, J. (2021). Acquisition of sign languages. *Annual Review of Linguistics*, 7, 395-419.
- Mancini, L. S. (2005). *A Positive Sign: An Overview of the Benefits of Signing in the Classroom*. Lawrence Erlbaum Associates Publishers.
- Markee, N., & Kasper, G. (2004). Classroom talks: An introduction. *The Modern Language Journal*, 88(4), 491-500.
- Marzano, R. J., & Pickering, D. J. (2010). *The highly engaged classroom*. Solution Tree Press.
- Morin, A. (2019). *What is universal design for learning?* Understood.
<https://www.understood.org/en/articles/universal-design-for-learning-what-it-is-and-how-it-works>
- Nagro, S. A., Hooks, S. D., Fraser, D. W., & Cornelius, K. E. (2018). Whole-Group Response Strategies to Promote Student Engagement in Inclusive Classrooms. *TEACHING Exceptional Children*, 50(4), 243-249. <https://doi.org/10.1177/0040059918757947>
- Neill, S. (2019). *Classroom nonverbal communication*. Routledge Revivals.
- Parn, L. (2006). An in-depth study of student engagement. University of Nebraska - Lincoln
- Pinto, L. E. (2013). *From discipline to culturally responsive engagement: 45 classroom management strategies*. Corwin Press.
- Snoddon, K., & De Meulder, M. (2020). Introduction: Ideologies in sign language vitality and revitalization. *Language & Communication*, 74, 154-163.
<https://doi.org/10.1016/j.langcom.2020.06.008>
- Rimm-Kaufman, S. E., & Sawyer, B. E. (2004). Primary-Grade Teachers' Self-Efficacy Beliefs, Attitudes toward Teaching, and Discipline and Teaching Practice Priorities in Relation to the "Responsive Classroom" Approach. *The Elementary School Journal*, 104(4), 321-341. <http://www.jstor.org/stable/3202945>

Appendix A: Student Opinion piece (oral exam)

Name _____ Date _____ Number _____



How do you feel about Sign Language?

1. How much did you like learning sign language with Ms. Kluh?

Circle the answer on how YOU feel.

- | | | | | |
|-----------------------------|--------------------------|---------------------------------------|----------------------------|----------------------|
| 1 | 2 | 3 | 4 | 5 |
| I did not like
it at all | I kind of
disliked it | I did not like
it or dislike
it | I liked it a
little bit | I liked it a
lot! |

2. Do you think that using sign language in our class was helpful to you?

- | | | | | |
|--|---|--|---|---|
| 1 | 2 | 3 | 4 | 5 |
| Sign
Language
DID NOT
help me at
all | Sign
Language
was not that
helpful for
me | Sign
Language
was not
helpful but
also not the
worst. | Sign
Language
was a little
helpful for
me | Sign
language
was so
helpful to
me! |

3. Did you use any sign language in class with Ms. Kluh?

Yes

No

4. Should Ms. Kluh use sign language with her future students?

Yes

No

Draw a picture of how you used sign language in class.

On the lines below write any feedback you have for Ms. Klueh about learning or using sign language.

Appendix B: Proof of concept

This is a pull out check point for each student participating in intervention. This will test the ASL knowledge skills built from the completed ASL intervention.

Quick intro for students (this does not need to be followed exactly like this): Hi, we are going to do a quick check on some of the sign language we have been using in class. This is just to see what you know a “no stress test, just do your best”

Okay? Do you have any questions before we start?

First I am going to ask you to sign for me:

1. Can you show me your favorite sign we have learned so far?
 - a. What does that mean?
2. Can you show me the sign for *(pull from list)*?
3. If someone had the same answer as you can you show me what sign you would use?

Now I am going to sign for you, and you are going to try to remember what it means:

4. Can you tell me what this sign *(pull from list)* means?

Proof of Concept: Score Sheet

1.	Showed sign +1	Knew meaning +1	/2	Recall signs without prompt
2.	Could Show sign asked for +2		/2	Can recall sign with prompt
3.	Can use the appropriate sign +1	Knew meaning/name of sign	/ 2	Can use sign in appropriate context
4.	Can recognize the sign +1	Knew the meaning +1	/2	Can identify signs from other people
			Total	/8