

Working with American Sign Language Interpreters in K-12 Schools: A Pilot Study

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### Abstract

This pilot study aims to identify what information, if any, K-12 teachers receive prior to working with an American Sign Language (ASL) interpreter within Massachusetts' public schools. Participants responded through an online survey in which questions were asked regarding the material they received, an assessment of the success of their interpreted interaction, and their overall experience with ASL interpreters. The study identifies common themes regarding the preparedness of faculty members, and identifies ways of improving interactions overall. In general, this research showed that K-12 teachers had a false perception of communicative success. However, due to the low number of responses, subsequent studies are required in order to draw definitive conclusions. With the goal of improving the quality of access for Deaf students, this research presents ideas for future research regarding how to better prepare teachers working with interpreters in K-12 schools.

The Individuals with Disabilities Education Act (IDEA), is a federal law that requires states and school districts to ensure that children with disabilities receive a “Free Appropriate Public Education in the Least Restrictive Environment” (National Association of the Deaf [NAD], n.d ). This includes the option of interpretation within the classroom, and since the enactment of IDEA, K-12 schools have worked rapidly to fill the immense gap between the need for interpreters and their availability – a gap that still exists today. As a result, schools hire inexperienced interpreters, leaving students with inadequate access to their primary education. According to the Bureau of Labor Statistics (BLS), job growth within the interpreting field is expected to rise 46% from 2012 to 2022, demonstrating the increasing demand of interpreting positions needing to be filled (Bureau of Labor Statistics [BLS], n.d.). While these statistics represent all language interpreters and translators, increasing qualification requirements and the development of ASL interpreting positions in other sectors, such as video relay interpreting has perpetuated the existing shortage of qualified educational interpreters. As a result it can be difficult for schools to provide the necessary support that the teacher/interpreter team would need to communicate effectively. Teachers are less likely to receive notification of an interpreter’s presence, how to work with him or her or how to communicate effectively overall. The following literature review provides examples of how this is detrimental to the student’s success in the classroom. This research aims to identify the information teachers in K-12 schools are given about working with an interpreter, how this can impact communication, and what information is necessary in ensuring seamless communication and the best environment for learning. Furthermore it aims to decipher the party responsible for ensuring that teachers are privy to this information.

## **Review of Literature**

Several studies throughout recent years have detailed the role of the educational interpreter and how interactions in the classroom can benefit from all parties having knowledge regarding the interpreting process as a whole. These studies, “Academic Status and Progress of Deaf and Hard of Hearing Students in General Education Classrooms” (Antia, Jones, Reed, & Kreimeyer, (2009); “Participation of Deaf and Hard-of-Hearing Students in Classes with Hearing Students” (Stinson & Liu, 1999); and “Parallel and Divergent Interpreting in an Elementary School Classroom” (Wolbers, Dimling, Lawson, & Golos, 2012) address much broader themes, as they analyze topics like diverging content in general classroom interpretations, academic progress of Deaf and Hard of Hearing students in the classroom, and factors that affect participation within the classroom. Within each are detailed accounts of what did and did not go well and suggestions for future successful work.

Antia, S., Jones, P., Reed, S., and Kreimeyer, K. analyzed the academic status and progress of Deaf and Hard of Hearing students as compared to their hearing counterparts. The data that were analyzed consisted of teacher ratings, standardized tests, and a measurement system called the Academic Competence Scale of the Social Skills Rating System. The goals of these analyses were to compare academic progress and to find areas in which academic progress can be improved. The study found that in general, Deaf and Hard of Hearing students were one half of a standard deviation behind their hearing peers. Additionally, the study found that one factor impacted academic success to a higher level than all others: communication competency within the classroom. The researchers reported “...successful [Deaf and Hard of Hearing] students had many child, family, and school facilitators in place, whereas unsuccessful students

had few facilitators and many detractors” (4). Facilitators include all members of the academic team, though the study does not specify the roles of these facilitators. This study demonstrates that without an interpreter, students had less success overall. Further in line with this idea, the research goes on to demonstrate that, with an interpreter facilitating, communication competence becomes an important and complex variable to consider. The study explains:

Communication competence is the degree of success in communicating within a specific context. Thus, communicative competence is broader than language ability and could include skills such as using an interpreter, communication assertiveness, communication repair, and the ability to match communication mode and register to one’s audience. The implications of these data are that communicative competence, broadly conceived and exhibited within student’s specific instructional settings, is related to academic success.

(16)

This research explains how faculty knowledge of working with an interpreter and understanding the specific factors that interpreters must employ for accurate communication, will greatly affect the communication competency of the student and therefore aid in academic success overall, given that the interpreter is competent. The study continues by explaining that teachers are unable to affect where students come from, their histories, or their demographics, in order to positively affect their educational success. They can, however,

...focus on communication skills and communication supports that influence success.

Communication skills should, of course, include language and reading skills, which are the traditional focus for teachers of Deaf and Hard of Hearing students, but might also include strategies for using interpreters effectively, participating in classroom

discussions, repairing communication breakdowns, and self-advocating to improve communication environments. Teachers of Deaf and hard of Hearing students should ensure that appropriate communication supports (such as interpreters) are in place and should work with general education teachers to change aspects of the classroom environment and activities for students having difficulty with classroom communication participation. (17)

In essence, this study found that recognizing the interpreters' contribution to the classroom and understanding how to work with them directly will greatly affect the academic success of Deaf and Hard of Hearing students in the classroom. All parties involved, including the student, the teacher and the interpreter, must have the communication competency necessary for successful interactions.

Wolbers, K., Dimling, L., Lawson, H., and Golos, D. delve deeper into the topic. Researchers tested, analyzed, and discussed the implications of divergent or parallel material presented by interpreters within the general education classroom. The researchers worked to define the roles of educational interpreters, as well as the responsibility and difficulty that such roles involve. Conflict and difficulty can arise when interpreters are required to perform more duties than just interpreting, which can occur if those involved in an interpretation need information on how to work with an interpreter. The researchers write:

While some educational interpreters are responsible only for interpreting in the classroom, others are frequently required to fill a myriad of roles there... These duties might involve serving as... a Deaf awareness advocate and accessibility expert, or an educational team member. It can be argued that it is difficult enough to interpret in a

classroom without adding extra responsibilities that detract from the interpretation. Some say it is unethical to perform different roles at the same time. (50)

This demonstrates that although interpreters are often required to perform other duties, such as informing participants of what their role is and how to communicate effectively, it is detrimental to the interpretation. Based on these two studies, it is clear that not only is a lack of information regarding interpreting and the Deaf student known to cause difficulty in the quality and accuracy of communication between participants and their individual successes, but it also creates difficulty for the physical and literal interpreting process that the interpreter experiences. If all parties were given even the most basic information about interpreted interactions, the interaction would likely have greater success overall. The researchers continue:

Certain roles may be appropriate for interpreters to fill by virtue of their unique position of working between distinct languages and culture; however, these roles are not typically filled during active interpretation in the classroom. For example, interpreters are privy to a variety of information that is not accessible to a teacher who is neither fluent in ASL nor familiar with the challenges of a visuospatial interpretation. Such information concerns issues such as the effectiveness of communication access...difficulties with multiple visual aids or lag time, student world knowledge gaps, and student language ability gaps. Unfortunately, because this information is often not communicated to the classroom teacher, a false appearance of equal access can be created. Therefore, communication and collaboration among school professionals, including teachers, administrators, and interpreters, is essential to the education of d/Deaf and hard of hearing students. (50-51)

It is critical to understand that teachers rarely receive the necessary information for successful interactions, leading them to believe that the interaction is indeed successful when it is not. This false appearance of success has a negative impact, which will be discussed further in this pilot study. The pilot study not only questions the preparatory material received by K-12 teachers prior to an interpreted interaction or having a Deaf student in their class, but also questions the respondents on what they believe could have gone better during the interaction. The research conducted by Wolbers et al. states that in their study, "... each of the seasoned teachers...stated that it was their first time having an interpreter in the classroom. They were unaware of steps they could have taken to assist the classroom interpreter and improve delivery of the message to the student" (60). This information shows that in addition to the misconception that interactions happen successfully, teachers are also unclear about how to improve the interactions that they do perceive as less than successful. This is critical, as a knowledge base of how interpreters function could give teachers the resources they need to analyze an interaction for issues and errors, and foster an environment that would repair such issues.

Another study worked to identify what factors in the classroom promote or inhibit participation by Deaf and Hard of Hearing students with their hearing peers. The researchers gathered and analyzed data, including data from focus groups, to come to an agreement on what changes would foster more communication and participation between Deaf and non-Deaf students in the classroom. Though the focus groups were less concerned with teacher-student interactions, and more concerned with student-student interactions, the data are still critically important, as they can apply to other interactions with an interpreter present. The study found that:

Efforts to increase participation may have greater success if professional staff employ specific strategies to foster positive interaction. One strategy for classroom teachers is to explicitly suggest to all the student specific procedures that will help the Deaf/Hard of hearing student better follow communication. For example, the teacher may explain the need to be aware of the lag-time when there is an interpreter and the need for pause between speaking turns. (Stinson & Liu, 192)

The idea of teachers facilitating communication through providing knowledge and awareness to the non-Deaf students in the classroom requires that the teacher have prior knowledge of these aspects of interpreted communication. With that, it is extremely clear that this base knowledge affects the success of such interactions in the classroom. Some of the specific knowledge and strategies that would aid in communication, as detailed in the study, include "...knowing how to establish and maintain eye contact with the Deaf/Hard of Hearing student, sensitivity to the student's efforts to communicate, and having some knowledge of sign language and of deaf culture" (Stinson & Liu, 193). Thus, it is imperative that teachers obtain this type of information prior to an interaction with an interpreter. Overall, the study found that "...the regular classroom teacher and the school administration can help provide a positive classroom experience for Deaf/Hard of hearing students by creating awareness of deafness among hearing students" (Stinson & Liu, 198). Each of these findings supports the notion that teachers should receive preparatory information prior to the initial interaction with the interpreter. In order to foster communication and participation in the classroom among students, it must first be fostered and understood among the faculty employing it.

### Questions for Analysis

The present research study addresses the following questions:

1. *What information, if any, do teachers and staff members of K-12 schools in Massachusetts receive regarding upcoming interpreted interactions, and what is the source of this information?*

Due to the large number of schools and school districts in Massachusetts, it was predicted that while schools within each district would operate in a similar fashion regarding interpreting, there would be clear differences in how each individual district approached interpreting services in their schools. It was hypothesized that, in general, teachers would not be informed of upcoming interpreted interactions, and if they were informed, the information would be limited to time and place, rather than to the role of the interpreter and to elements that affect the success of an interaction.

2. *How does the information or lack of information impact the success of interactions?*

Research shows that interpreted situations can be severely impacted by a lack of communication competence on any or all of the parties involved (Antia, S.D. et al, 2009). The lack of knowledge of interpreter roles, cultural aspects, and linguistic necessities, erode the possibility of a successful interaction. The prediction in this study was that most, if not all schools would respond with reports of unsuccessful interactions with Deaf students and interpreters.

3. *Whose responsibility is it to ensure that teachers have the necessary resources to work effectively with an interpreter?*

Lastly, this study attempted to identify the person or people that should be responsible for providing teachers with information on working with an interpreter. The options considered were the schools, the Massachusetts Commission for the Deaf and Hard of Hearing, the Registry of Interpreters for the Deaf, the National Association of the Deaf, and the interpreter.

## **Method**

### **Participants**

Massachusetts currently has 401 school districts, each comprised of between one and more than one hundred schools (List of School Districts in Massachusetts, n.d.). In this study, half of these districts were randomly selected, resulting in a query of over 200 districts and more than 800 individual schools. By utilizing each district's home page, the email address of a head figure in each district's main office was located. The goal was to send a recruitment letter to the Director of Special Education in each district; however in a few cases, locating such a director was not possible. In an effort to reach someone with similar authority, Administrative Assistants, Superintendents, Special Service Coordinators, and Directors of Student Services (when the Director of Special Education was unavailable) were contacted. The request was that district officials would forward our survey to the teachers of every school in their district that may have worked with an ASL interpreter within the last six months. It was assumed that if this occurred, several thousand responses were possible. The result was far fewer, and when the survey came to a close there was only a total of 41 responses. All participants were teachers in a K-12 school in

Massachusetts; for anonymity purposes, information identifying the survey participants' school district was not disclosed. However, the survey asked participants to classify the school in which they work as being in an urban, suburban, or rural area, and what grade levels they typically are involved in. Additionally, since the survey was sent out to all faculty members, these "teachers" may have been teacher's assistants, teachers, principals, or otherwise.

### **Development of Survey**

The survey was created in an effort to be completed as efficiently as possible by respondents. The survey consisted of 15 total questions, some of which were embedded with "skip logic" allowing the survey technology to move a participant past a question that did not apply to them based on their previous answer(s). In order to ensure that the data received was relevant and unbiased, participants were limited to responding only about interactions that had occurred within the last six months. If participants responded that they had not worked with interpreters within the last six months, the survey immediately came to a close. The survey was conducted through Qualtrics, an online survey program. The Northeastern University National Interpreter Education Center's Qualtrics account was utilized in order to have access to analysis tools after the closing of the survey (Qualtrics, Provo, UT). Some survey questions permitted participants to provide text answers in addition to selecting one or more options to respond to the question. These responses were taken into consideration under the "other" field of the questions.

All participants responding to the survey were only able to access it after providing consent. The Independent Review Board at Northeastern approved the consent form. Any participant who did not provide such consent was unable to continue to the first survey question. Additionally, participants could elect to leave any question unanswered. Recorded responses

were held within the Qualtrics database, password protected, and available only to the researchers.

### **Procedure**

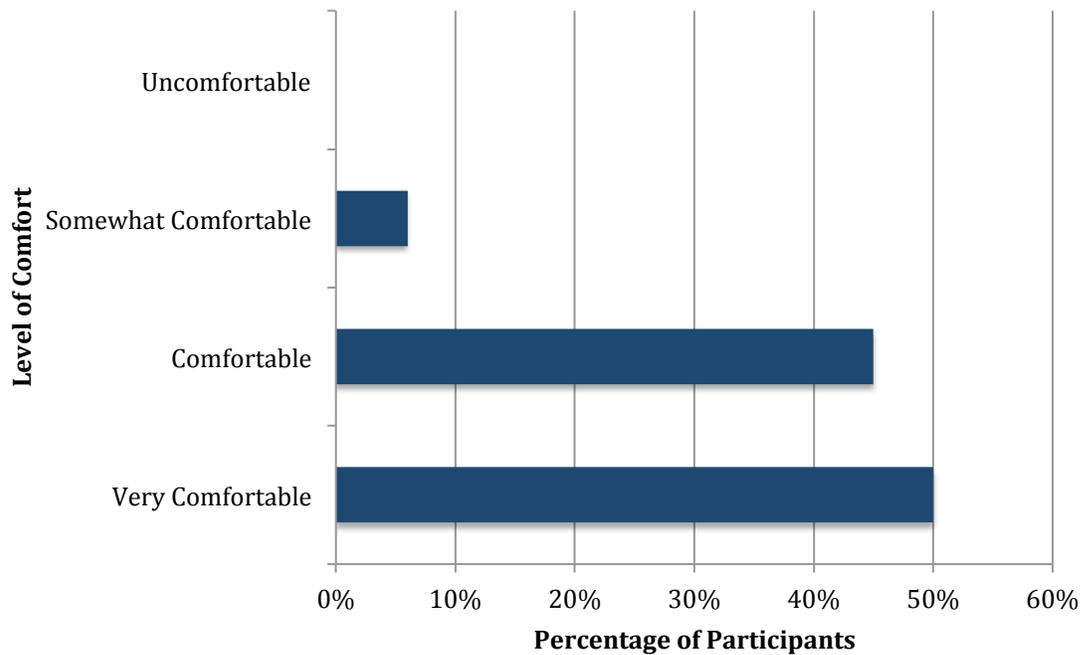
Recruitment emails were sent to the Directors of Special Education (and limited others) in 201 of the 401 randomly selected Massachusetts school districts. Emails were sent individually, each addressed specifically to the respondent. A survey link was attached, along with a request to forward the link to teachers. Additionally, the letter contained contact information for the principal investigator, primary researchers as well as the Independent Review Board that approved our research and survey.

The survey was activated on March 17, 2015 and was closed on April 10, 2015.

### **Analysis of Data**

The survey initially asked respondents for consent, which all 41 respondents gave. Next, the survey aimed to eliminate participants who had not worked with an interpreter within the six months prior. Of the 41 participants, 49% of them had not worked with an interpreter within the previous six months, leaving those who had at only 20 responses. Given that the goal of this research was to deduce what preparatory information is given to those working with interpreters, the data analysis was based on the 20 participants that met the survey criteria. The following two questions revolved around grade level taught/worked with, and how the school was classified. Given that, the analysis begins at question five, which asks whether the participants' most recent interaction with an ASL interpreter was their first time. Interestingly, 68% of the participants had worked with an interpreter before, leaving 32% that had not.

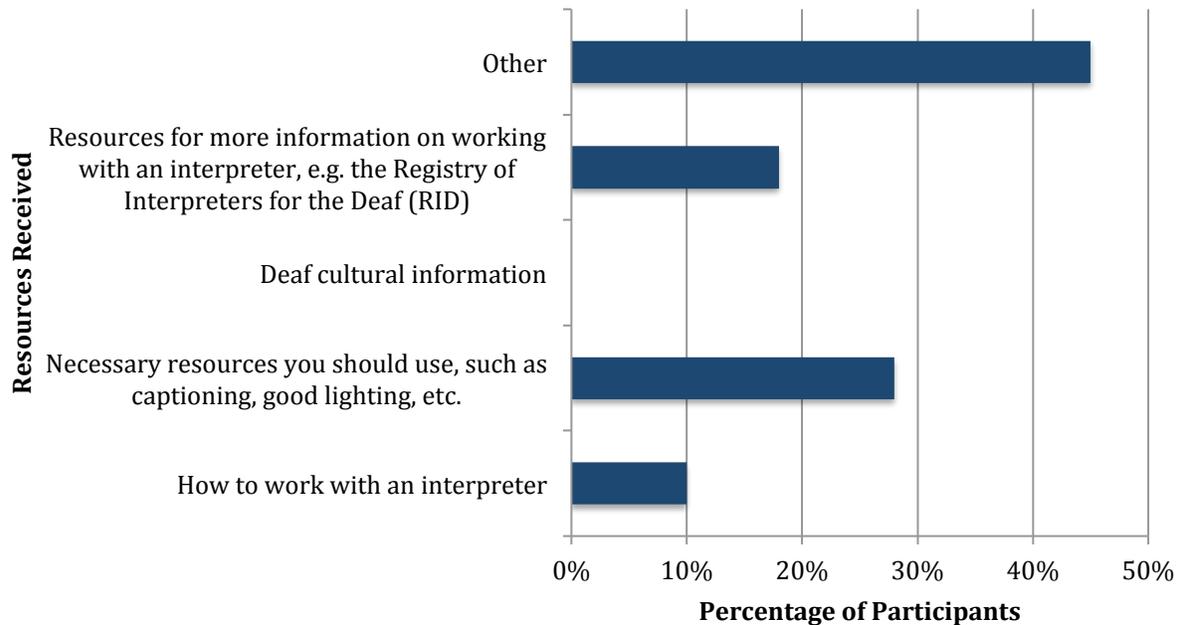
Participants were asked, despite their answer to the previous question, whether or not the interaction was a comfortable experience. Responses were as follows:



*Figure 1.* Comfort level of participants working in ASL interpreted interactions.

Figure 1 demonstrates that in general, responses as a function of reported comfort level ranged from “comfortable” to “very comfortable.” Only six percent of responses yielded a “somewhat comfortable” answer.

Of the respondents, 89% reported having received information prior to the interaction. Participants responded that the information was received from one of two places: the school or the Deaf student’s parents. This data is from question nine:



*Figure 2.* Information received by participants prior to working in an ASL interpreted interaction.

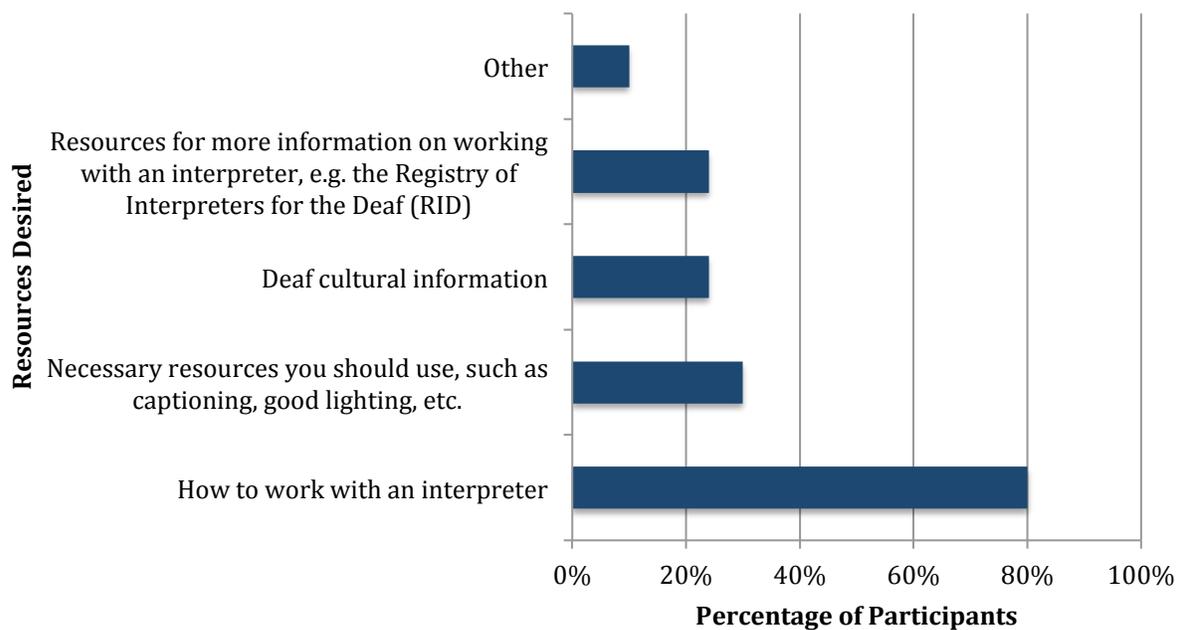
Figure 2 provides a variety of responses selected by the participants. Those who reported in the “other” category responded with the following information:

- [H]ow to contact to schedule a meeting, how many interpreters would be necessary due to the high number of participants
- Website for interpreter request
- An interpreter will be in your room.
- Just notification

The responses to this question were void of “Deaf cultural information” and were comprised primarily of the responses shared in the “other” category. Only one participant reported having received information on how to work with an interpreter. The majority of responses noted that faculty members were simply informed that an interpreter would be present,

but were provided with no information on how to work with them or the wherewithal to communicate effectively with the Deaf consumer.

Despite the lack of information received by the participants prior to the interaction, 100% reported that the interaction was successful in question 10. Question 11 asked whether there were certain elements that went poorly during the interaction, but only seven percent of participants responded. It is unclear why the majority of participants chose not to answer this question. Of the few responses, it was reported that there were too many interruptions during the interaction, with additional responses reported in the “other” category without entering a text answer. Despite the low response rate to this question, on the following question asking whether receiving more information on working with an interpreter would have been helpful, an overwhelming 67% of respondents answered yes. Question 13 addresses what would have been helpful to receive prior to the interaction, and participants responded with the following:



*Figure 3.* Types of information that participants think would have aided in the success of their interaction had it been provided.

The “other” response by one participant specified a need to understand “what the interpreter’s role is.” Overall, Figure 3 demonstrates that participants reported wanting a variety of information types, ranging from cultural needs to online resources to simply interacting with an interpreter in the room.

The final two questions of the survey addressed whether or not the participant felt comfortable addressing concerns or questions toward the interpreter. Only 7% of participants reported discomfort when directing questions toward the interpreter. Of the given answer choices, some reported that there was insufficient time to ask questions, while others reported in the “other” category and filled in their own response, for example, s/he “didn’t want to make her feel like I was ‘checking up’ on her.” The majority of participants indicated feeling very comfortable directing their questions toward the interpreter.

## **Findings**

After considering the data, we return to the questions asked at the beginning of the study.

1. *What information, if any, do teachers and staff members of K-12 schools in Massachusetts receive regarding upcoming interpreted interactions and what is the source of this information?*
2. *How does the information or lack of information impact the success of interactions?*
3. *Whose responsibility is it to ensure that teachers have the necessary resources to work effectively with an interpreter?*

Of the respondents who reported to have received information prior to working with an interpreter, 45.5% of them claim that the information was simply notification that an interpreted interaction would take place. This percentage shows that nearly half of the respondents received no substantial information that would benefit the communication between participants. Figure 4 examines the kinds of information received in comparison to where the information came from. Our findings show that information given by the Deaf student’s parents was in regards to the student’s needs for environmental resources and accessibility. The remainder of responses, which included notification, how to work with an interpreter, and external resources, were provided by the schools themselves. Additionally, no participants received information regarding Deaf culture. It is important that teachers, on a basic level, have the understanding that Deaf culture is separate and different from the general non-Deaf society. Though it is the responsibility of the interpreter to culturally mediate, teachers must have some general knowledge of a Deaf student’s cultural background in order to provide greater understanding and connection for all parties.

		What did this information entail?					Total
		How to work with an interpreter	Necessary resources you should use, such as captioning, good lighting, etc.	Deaf cultural information	Resources for more information on working with an interpreter, e.g. the Registry of Interpreters for the Deaf (RID)	Other	
From where did you receive this information?	The school	1	2	0	2	4	9
	The interpreter	0	0	0	0	0	0
	The Deaf student	0	0	0	0	0	0
	The Deaf student's parents	0	1	0	0	1	2
	Other	0	0	0	0	0	0
	Total	1	3	0	2	5	11

Figure 4. Types of information participants received compared with where they received it.

Although Figure 4 shows that 100% of respondents reported to have had a successful interaction, 67% of people also reported that they feel the interaction would have gone *more* successfully if they had been given more information (about how to work with an interpreter) before their initial interaction. While 78% percent of respondents reported to have received information prior to working with an interpreter, only 1% received information about *how* to work with an interpreter. This means that vital information about how to function as part of a teacher-interpreter team is not introduced prior to the interaction. This is potentially problematic for a variety of reasons. In K-12 settings, for both interpreters and teachers alike, roles and responsibilities are multi-faceted. As such, they might find themselves playing a role outside of their prescribed job description. In these situations, it is imperative for teachers and interpreters to have a mutual understanding of their individual roles in the decision making process. However, without information about how to work collectively, a successful interaction is unlikely. It appears that the most successful interactions take place when the teacher and interpreter are in understanding of each other's roles; knowing how the interpreter functions as a member of the team, including information about what an interpreter does and does not do, allows teachers and interpreters to not merely coexist, but to work together as unit.

An interpreter facilitates communication to make the classroom accessible for *everyone*. A common misconception is that the interpreter is present only for the needs of a Deaf person. However, interpreters work to ensure all parties – both Deaf and non-Deaf – are understood. Having this knowledge will allow teachers to understand that communication works both ways. Without a basic understanding of how the interpreting process works and what role the interpreter plays in the classroom, it is arguably difficult for teachers to work with interpreters

efficiently. A functional understanding of ASL and how it differs from English could allow teachers to structure class in a way that is accessible to all students. This includes logistical components such as how the room is set up as well as social and academic components. The more information teachers have about working with an interpreter, the better equipped they will be in developing strategies in managing a class with different needs.

Of the respondents who reported to have gotten information prior to the interaction, 87% received the information from their school while the other 13% received the information from the Deaf student's parents. However, there were varied responses from those that received information from the school. Although there is existing research that delineates what information teachers need in order to work effectively with an interpreter (Stinson & Liu, 1999; Siple, 1993), there are no standards that are utilized to disseminate this information. Additionally, it raises the question of where the schools are getting the information, and what considerations are taken in ensuring that teachers are prepared. Setting a standard for teacher preparation may be the starting place for future successes during interpretation in schools.

Generally, there are open channels of communication that allow faculty members to share ideas and experiences collectively. This is necessary to ensure that students and faculty members are aligned in their goals and have a clear sense of place. Similarly, there must be a way for teachers and interpreters to build this same level of understanding. Without it, expectations go unfulfilled and the distance between the perception of the interpreter and the true role of an interpreter grows further apart. These skewed perceptions are perpetuated by existing stigmas but also the lack of knowledge and communication between parties. Currently the responsibility of educating teachers falls on the interpreter. The need for interpreters to educate faculty members

results in a shifted focus away from the needs of the student. Furthermore, it provides the teacher with information on an as-needed-basis rather than a comprehensive understanding of how to work effectively in an interpreted interaction. Without the proper preparatory material, teachers are unaware of how to meet the needs of their students, and interpreters are left to bridge gaps environmentally, culturally and linguistically. A lack of knowledge regarding the interpreter's role results in unrealistic expectations and a distorted perception of the interpreter's responsibilities. Wolbers's (2012) study found that interpreters were expected to take on a wide range of responsibilities outside of the conventional role; including Deaf awareness advocates and teachers aids. Performing these roles concurrently not only negatively impacts communication as a whole but also poses some challenges ethically, when role delineation is unclear.

### **Limitations**

There were a variety of limitations within this current research. If improved upon, or eliminated, future research may be more successful than this pilot study. First and foremost, very few responses were received. This extremely low response rate made it difficult to identify conclusions that could be generalized. Though the data that were collected were very telling, there are too few responses for the results to be considered robust enough to fully respond to the questions posed. The initial pool that received surveys and recruitment letters had the potential of eliciting thousands of responses. One implication of having so few responses was that some of the survey questions carried little meaning as a result. For example, the demographics questions, which addressed location and grade level teaching of faculty members, supplied virtually no information that aided in this study. Thus conclusions related to demographics cannot be drawn

from the current data set.

In addition to the effects and limitations of a low response rate, the data may have been affected by poorly worded, or ambiguous questions. Due to the nature of the survey and the participants, those who responded were not likely to be familiar with certain terminology known to someone within the ASL interpreting realm. For example, one question asked whether the participant felt the interaction was successful or unsuccessful. Within the interpreting world, it is understood that a successful interpretation means one in which all participants had equal and clear access to the dialogue taking place. Without prior knowledge of interpreting, including the significance of back channeling, cues that let the interpreter know when a message is being understood, it might be impossible for the participant to answer this question knowledgeably. This question was intended to be extremely telling of whether participants were truly receiving the information they needed, but the answers we received (100% “yes”), cannot be truly accurate without the participants knowing what a successful interaction actually means. This severely limited the data in more ways than one. Not only was the question poorly worded and lacking clarity, but it also limited the participants to choosing either successful or unsuccessful. The survey forced participants to choose one or the other instead of the reasons *why* interactions were unsuccessful. It is unlikely that a participant might choose the unsuccessful option if they are under the impression that everything is running smoothly. The question needed serious expansion.

Finally, the questions limited the participants’ choices. Although there were several questions, which included an “other” option in which to write in an answer, participants might not know exactly what went wrong, and therefore wouldn’t know what to comment. With that in

mind, the survey should have included far more options than were included. That way there would be a greater chance of participants identifying what did not go successfully during the interaction.

Overall, there were a variety of limitations that became evident during the study and data collection. As a result, this becomes a pilot study for future research. In addition, few generalizable conclusions can be drawn due to the small number of participants. This pilot study does provide an opening for more in-depth research in the future.

### **Future Research**

Given the limitations of this study, there is future research that needs to be done in order to fully comprehend what preparatory material currently exists, what needs to be implemented in order to add to or change current materials, and what possible avenues there are to ensure that the identified material is accessible to all faculty members working with interpreters in a given school.

In addition to the questions regarding received preparatory material, a couple of our survey questions asked faculty members to assess the degree of success experienced during their interpreted interaction. As mentioned in the previous section, the ambiguity of the question resulted in us considering whether or not the participants could accurately conclude that the interaction was successful. In order to obtain a clearer picture of whether or not these interactions were truly a success, it is important that we include the perspectives of all participants involved. Future research in this area could survey teachers, interpreters, and Deaf students in college to determine if there is a discrepancy in how each party feels the interaction went. It would also be helpful to know what information Deaf students and interpreters think would be most beneficial

in ensuring accessibility for all involved. Specific information about areas that were reported as being unsuccessful could be used to further examine where communication is breaking down and how school can better prepare their faculty to ensure successful interactions.

Furthermore, when participants were asked to assess their level of comfort when working with an ASL interpreter, most participants answered either that they felt “comfortable” or “very comfortable.” With the comfort and ease of the interaction in mind, it was critical to note whether there was a correlation between this comfort and the amount of preparatory materials received. Additional correlation analysis on these two variables could be conducted to see if the receipt of preparatory material results in increased levels of comfort between all participants involved.

With Deaf and Hard of Hearing services generally falling under the umbrella of Special Education, research on Special Education Programs within schools would help to assess how knowledgeable Special Education Directors/Coordinators are about the students they serve, what types of resources they have available, and if, in their opinion, it is their responsibility to make sure teachers are prepared to integrate the Deaf student into their classroom. If they are responsible for providing the Deaf student with the necessary resources, among other questions one would want to know is what that process looks like, what information they are providing to teachers, and how they address any questions and concerns regarding teacher/interpreter dynamics. Do they defer to the interpreter? Is there someone who is knowledgeable and available to provide support? Is there a follow up to ensure that things are going well? The answers to these questions and determining the department responsible for coordinating interpreting services

will be beneficial in establishing the best approach for distribution and implementation in the future.

Following the distribution of the survey, many e-mail responses were received from school districts stating that they either did not have any Deaf students who attended their school district or had Deaf students that did not utilize interpreting services. It would be interesting to research this further and identify any commonalities, if any, of school districts who responded to not utilizing interpreting services. Further, it would be telling to analyze any information the Department of Education holds on the subject, such as statistics regarding the enrollment of Deaf students and those that receive an interpreted education. This research could also examine the type of resources these Deaf students *are* receiving, and how it affects their education overall.

Further studies could administer and analyze different types of resources provided to school faculty. These might include pamphlets, web pages, or videos with comprehensive information regarding working in an interpreted interaction. These studies would help identify which materials are most appropriate and most effective for faculty to utilize. For the purpose of narrowing down the target audience and identifying the best point of access, these resources would be sent to and distributed by the Special Education department in each district. This designation of responsibility comes from a practicality standpoint and establishes a standard not only for the preparatory materials but also for the entities held accountable for distributing them. With this in mind, it is possible for faculty and staff in Massachusetts' schools to have knowledge and awareness of both ASL and working with an interpreter. If standardized, there would be a positive impact on the academic success of Deaf and hard of hearing students who utilize interpreted services overall.

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