How Deaf and Hearing Teams Work Together in the Business World

Abstract

In America deaf people are employed at a much lower rate than hearing people. This is a result of education differences, discrimination, and negative workforce experiences. When deaf people are included in the workplace, employees can improve their ability to work in biodiverse, culturally diverse, and linguistically diverse workplaces. The following research is an ethnography study and interviews of three different teams in the business world to better understand how Deaf and hearing people work together. These teams have a range of hearing statuses: (1) a team of all signing Deaf people, (2) a team with half signing Deaf people and half non-fluent hearing signers, (3) a team with only one signing Deaf member. The teams give insight into how the dynamics of the team change or stay the same based on the number of Deaf team members. The results indicate that teams with ASL as their default language have higher levels of Deaf Culture awareness, and a strong understanding of how to communicate with interpreters had smoother communication among the team members. This supports the fact that deaf people can work effectively in the business world and inclusive communication of deaf members is not exclusive of hearing members.

HOW DEAF AND HEARING TEAMS WORK TOGETHER IN THE BUSINESS WORLD

By

Nox Richmond

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WHARTON RESEARCH SCHOLARS

Faculty Advisors:

Dr. Anne Greenhalgh
Deputy Director of the Wharton Leadership Program, Management

Dr. Jami Fisher
American Sign Language Program Director, Linguistics

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INTRODUCTION

This paper analyzes how Deaf and hearing mixed teams can work together in the business world. In the United States the deaf population has experienced significantly lower rates of employment than their hearing counterparts throughout the history of the country. Researchers have studied the size of this difference, factors that contribute to the difference, and how deaf people navigate employment.[1] Some of these factors include: access to language as a child, education, mode(s) of communication (signed and/or spoken language), existence of additional disabilities, and the larger society's view towards deaf people.[2] Despite the extensive research on deaf employment, studies on teams in the workplace with a mix of signing culturally Deaf people and non-signing hearing people has yet to be studied.[3,4] This paper will fill that gap and focus on how these teams are working together in the business world.

Efforts toward increasing deaf employment as a whole is very important for more than just deaf people and their supporters. Mainstream society still has a very negative view towards deaf people and their capabilities. By employing more deaf people alongside hearing people, employees can improve their ability to work in biodiverse, culturally diverse, and linguistically diverse workplaces. Diversity in the workplace is important for performance, innovation, and creativity.[5] Specifically, this research on Deaf and hearing mixed teams will be important to DEI, hiring, and team managers, because they will be tasked with the decision of whether or not to hire a Deaf applicant and how to integrate them into the company. As the emphasis on DEI

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[1] Krupnick, Nancy, and George W. Krieger. "The deaf in the world of work." Journal of Employment Counseling 13, no. 4 (1976): 183
[2] Sommer Lindsay, Mette. "Deaf People's Coping Strategies in an Everyday Employment Context." Deaf Studies Digital Journal 5 (2020)
[3] In this paper lower case "d" deaf will represent those with severe hearing loss
[4] In this paper capital "D" Deaf will represent those with severe hearing loss that also identify with Deaf Culture. For the purposes of this paper, this would include using American Sign Language fluently and as a primary mode of communication.
[5] Lambert, J. (2016). Cultural diversity as a mechanism for innovation: Workplace diversity and the absorptive capacity framework.

increases in the post-covid era, it is important that deaf people are not left out of this inclusivity.[6]

To create a more inclusive environment, workplaces need to correct their old frame of deafness focused on a "lack of hearing" to the new frame of deafness focused on assets, not deficits. Not only are deaf people qualified for employment, but in some cases they bring advantages to the table that hearing people do not. Without giving deaf people an equal chance at employment and/or providing full access to their working environment, companies are missing out on a way to positively diversify their workplace.

The following research is an ethnography study and interviews of three different teams in the business world to better understand how Deaf and hearing people work together. These teams have a range of hearing statuses: (1) a team of all signing Deaf people, (2) a team with half signing Deaf people and half non-fluent hearing signers, (3) a team with only one signing Deaf member. These three types of teams were chosen for a few reasons. First, the teams mimic what it would be like for a Deaf employee to go on the journey from being the only Deaf team member, to being one of a few Deaf team members, to being on an all Deaf team. These cohorts replicate what the workforce could look like as it becomes more inclusive for Deaf people. Second, the teams give insight into how the dynamics of the team change or stay the same based on the number of Deaf team members. These dynamics can highlight some of the best (and not so helpful) ways to create an inclusive working environment for Deaf employees.

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LITERATURE REVIEW

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Introduction

The exploration of Deaf employment around the world is a growing field of study. With sign languages finally starting to be recognized by governments and institutions as full languages

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[6] Christ, G. (2022, December 8). Dei progress stalled in 2022. HR Dive. Retrieved April 24, 2023, from https://www.hrdive.com/news/dei-progress-stalled-in-2022/638313/#:~:text=After%20two%20years%20of%20gains %2C%20diversity%2C%20equity%20and%20inclusion%20programs,2019%20to%2043%25%20in%202021.

with their own grammatical structure, the door has been opened for more people to learn these languages and study the cultures around them. Similarly to many other minority groups, deaf people globally experience discrimination, specifically referred to as Audism, that impacts not only their daily lives but also their opportunities for employment. This literature review examines the research from the mid-late 1900s to now pertaining to the broad topic of deaf employment. Researchers in the field agree that there are significant differences in employment and underemployment rates between deaf and hearing people.[7] It is important to note that the field recognizes that the unemployment rate between deaf and hearing people is not significantly different. How is this possible? Deaf people who receive disability checks from the government or have given up on finding work are not included in the unemployment rate. By focusing on the experiences of deaf workers from their educational achievements, to entering the workforce, to (possibly) starting their own business, this literature review will provide an overview explanation of factors that contribute to the low deaf employment rate, and identify gaps for future research.

High-Level View of Deaf Employment

First, it is important to note just how many people are deaf or hard of hearing. In 1973, there were an estimated 450,000 deaf people in the United States.[8] By 1991, it was found that 9.6 million people of working age (16-64 years old) were hard of hearing and 2.2 million people became deaf in that same age range in just the United States.[9] Globally, hearing loss is ranked 4th on the leading causes of disability.[10] This literature review will focus on deaf employment in

[7] Garberoglio, Carrie Lou, Jeffrey Levi Palmer, Stephanie W. Cawthon, and Adam Sales. Deaf people and employment in the United States: 2019. 2019.

[8] Krupnick, Nancy, and George W. Krieger. "The deaf in the world of work." Journal of Employment Counseling 13, no. 4 (1976): 183

[9] Geyer, Paul D., and John G. Schroedel. "Early career job satisfaction for full-time workers who are deaf or hard of hearing." The Journal of Rehabilitation 64, no. 1 (1998): 33

[10] Shan, A., J. S. Ting, C. Price, A. M. Goman, A. Willink, N. S. Reed, and C. L. Nieman. "Hearing loss and employment: a systematic review of the association between hearing loss and employment among adults." The Journal of Laryngology & Otology 134, no. 5 (2020): 387

the United States, but it is important to understand that other countries tend to have less protection of deaf rights, since they are often without laws as protective as the Americans with Disabilities Act (ADA).[11]

Over time in the United States, the difference between deaf and hearing employment rates has maintained nearly the same. In 2014, 48% of the deaf population was employed, compared to 72% of the hearing population.[12] In 2019, these numbers increase to 53.3% and 75.8% respectively.[13] Despite this drastic difference in employment rates, the unemployment rate of deaf and hearing people is nearly the same at 3.8% and 3.4% respectively in 2019.[14] Low employment rates are not the only issue deaf people face when job searching. Researchers agree that underemployment of the deaf population is another big issue that stems from discrimination against people with disabilities in the United States.[15] When compared with their hearing counterparts and job descriptions, deaf employees often have achieved a higher degree of education than what is necessary to do their job.[16] This really emphasizes just how much more effort and time is spent by deaf people convincing employers that they are just as effective workers.[17]

[11] Xu, Sheila Zhi. "The emergence of a deaf economy." Undergrad Thesis., Massachusetts Institute of Technology, 2014.

[12] Dammeyer, Jesper, Kathryn Crowe, Marc Marschark, and Mark Rosica. "Work and employment characteristics of deaf and hard-of-hearing adults." The Journal of Deaf Studies and Deaf Education 24, no. 4 (2019): 387

[13] Garberoglio, Carrie Lou, Jeffrey Levi Palmer, Stephanie W. Cawthon, and Adam Sales. Deaf people and employment in the United States: 2019. 2019.

[14] Garberoglio, Palmer, Cawthon, Sales, Deaf people and employment in the United States: 2019.

[15] Sommer Lindsay, Mette. "Deaf People's Coping Strategies in an Everyday Employment Context." Deaf Studies Digital Journal 5 (2020)

[16] Lam, Jackie. "A Win-Win for the Deaf Community: Deaf-Owned Businesses Create Opportunities, Change Perceptions." The Hearing Journal 71, no. 10 (2018): 24

[17] Krupnick, Krieger, "The deaf in the world of work.", 183

Researchers have greatly explored the factors that collectively contribute to the discrepancy between the deaf and hearing employment rates.[18,19,20,21,22,23] These factors can all fit under Sommer's 4 Levels of Audist Structures: (1) Linguistic Disadvantages (2) Identity Disadvantages (3) Upbringings and Knowledge (4) Society's Views of Disabled People.[24]

Starting with Linguistic Disadvantages, hearing people often place the full burden of communication on the deaf person.[25] Meaning, hearing people tend to wait for the deaf person to figure out how to communicate with them without taking any steps to try to communicate with the deaf person. Many times this can look like a hearing person refusing to communicate with a deaf person because of their deafness, or a deaf person using written communication while the hearing person continues to use spoken language. This paired with minimal content provided in ASL or with closed captions, results in communication barriers being the most common difficulty faced by deaf people in the workforce.[26,27] Without full access to information, conversations, and instructions, then it is very difficult to do work that meets the bar on quality.

In Identity Disadvantages, researchers found that race, gender, and additional disabilities impact deaf people in addition to the audism they face. For example, only 34.6% of deafblind people are employed and 19.9% of deaf people with an independent living disability are employed.[28] The intersectionality of many deaf people's identities leads to them facing

[18] Sommer, Coping Strategies
[19] Lam,Win-Win for the Deaf Community, 26
[20] Dammeyer, Jesper, Crowe, Marschark, Rosica, Work and employment characteristics, 393
[21] Garberoglio, Palmer, Cawthon, Sales, Deaf people and employment in the United States: 2019.
[22] Krupnick, Krieger, "The deaf in the world of work.", 184
[23] Fisher, Sandra L., and Catherine E. Connelly. "Building the "Business Case" for Hiring People with Disabilities: A Financial Cost-Benefit Analysis Methodology and Example." Canadian Journal of Disability Studies 9, no. 4 (2020): 84
[24] Sommer Lindsay, Mette. "Deaf People's Coping Strategies in an Everyday Employment Context." Deaf Studies Digital Journal 5 (2020)
[25] Sommer, Coping Strategies
[26] Lam,Win-Win for the Deaf Community, 26
[27] Dammeyer, Jesper, Crowe, Marschark, Rosica, Work and employment characteristics, 393
[28] Garberoglio, Palmer, Cawthon, Sales, Deaf people and employment in the United States: 2019.

discrimination in a multitude of ways, which could result in isolation. In the workplace when the most confident person tends to receive the most power, deaf people are once again put at a disadvantage.

Moving on to Upbringings and Knowledge, culturally Deaf people and/or those who attended a Deaf School tend to have different social norms than hearing people do. For example, Deaf people tend to use waving, touch, or the flickering of lights to get someone's attention. But in the mainstream hearing world, people tend to say or yell someone's name. In the workplace, the flickering of lights is not typically the norm to get someone's attention so it could easily be misunderstood without background information. Without full access to the communication going on in the hearing world, it is more difficult for deaf people to pick up the social habits and customs in the workplace.[29] On top of this, not all deaf upbringings are the same. There are a multitude of different experiences that can include a mix and match of hearing or Deaf families, mainstream or Deaf schools, oralism or signing experience, born hearing or born deaf, and much more. All of these different experiences have their own positives and negatives for setting someone up to enter the workforce.[30] For example, if a deaf student attended a Deaf school instead of a mainstream school, they might have less experience working with hearing people making it harder to assimilate to a hearing workplace. But, in the same way that most hearing students are instructed in their first language, full access is guaranteed when deaf students are also instructed in their first (or accessible) language, such as ASL. In this sense, although deaf people entering hearing dominated work spaces may have some difficulty assimilating due to

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[29] Krupnick, Krieger, "The deaf in the world of work.", 184
[30] Krupnick, Krieger, "The deaf in the world of work.", 184

being in mostly deaf contexts, they still will remain highly effective employees as a result of their fully accessible education.[31]

Lastly, and arguably the most impactful, Society's Views of Disabled People puts up some of the hardest walls for deaf people to break down. Not only do many hearing people not think that deaf people are as capable as them, but they also do not know how to work with a deaf person. Employers tend to avoid hiring deaf people because they fall victim to the mindset that meeting their proper accommodation needs is too expensive and time consuming.[32] This is such a widespread view that Fisher and Connelle's research stems around the cost-benefit analysis of hiring deaf employees. In their study, they found that deaf employees who are qualified and receive full accommodations actually provide a net cost savings for their employers.[33] A major benefit that they found is that deaf employees tend to have lower turnover that eventually covers the cost of their accommodations. The stability of deaf workers is also backed by Krupnick's study that found that 43% of the surveyed population stayed with their job for 11 to 26 years.[34] Even after these misconceptions are corrected, and a deaf person is hired, they still face the fact that the majority of hearing people do not know how to work and communicate with them. This is evident from the fact that minor changes such as light-activated warning devices, basic ASL and fingerspelling training, and adjustments away from phone calls can really make a big difference in accessibility, yet deaf employees with Cochlear Implants tend to have higher employment rates.[35]

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[31] Sommer Lindsay, Mette. "Deaf People's Coping Strategies in an Everyday Employment Context." Deaf Studies Digital Journal 5 (2020)

[32] Krupnick, Krieger, "The deaf in the world of work.", 185

[33] Fisher, Sandra L., and Catherine E. Connelly. "Building the "Business Case" for Hiring People with Disabilities: A Financial Cost-Benefit Analysis Methodology and Example." Canadian Journal of Disability Studies 9, no. 4 (2020): 84

[34] Krupnick, Krieger, "The deaf in the world of work.", 187

[35] Dammeyer, Jesper, Crowe, Marschark, Rosica, Work and employment characteristics, 387

Education's Connection to Employment

Consistently over the years, researchers have found that education not only increases the employment rate, but it also decreases the gap between the deaf and hearing employment rates. Walter specifically looked at the trend of labor force participation 1 year and 10 years after high school graduation and found that the number nearly doubled, jumping from 46.07% to 88.57% in 1987.[36] In 2010, Walter and Dirmyer found that 15.1% of deaf high school graduates were unemployed and 11.7% of their hearing counterparts were unemployed.[37] In the same year, the unemployment rates for those with a bachelor's degree were 8.1% and 5.7% respectively.[38] This trend continues in 2019 where the difference in the employment rates between deaf and hearing people were 26.3% for those with less than a HS diploma, but only 17.7% for those with a JD/PHD/MD.[39] Educational attainment is a huge factor in increasing employment rates and beginning to close the gap between the deaf and hearing employment rates. Diving deeper into education, researchers have found that deaf students who are sign language users tend to complete more levels of education compared to those who do not.[40] Since those with higher education attainment have increased employment rates, it is inferred that deaf people who are sign language users would have higher levels of employment. This is not seen in actuality as deaf employees who have Cochlear Implants have a higher rate of employment.[41]

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[36] Walter, Gerard G. "Outcomes for Graduates of Secondary Education Programs for Deaf Students: Early Findings of a Cooperative National Longitudinal Study." (1987).

[37] Walter, Gerard G., and Richard Dirmyer. "The effect of education on the occupational status of deaf and hard of hearing 26-to-64-year-olds." American annals of the deaf 158, no. 1 (2013): 46

[38] Walter, Dirmyer, The effect of education on the occupational status of deaf, 46

[39] Garberoglio, Palmer, Cawthon, Sales, Deaf people and employment in the United States: 2019.

[40] Dammeyer, Jesper, Crowe, Marschark, Rosica, Work and employment characteristics, 389

[41] Dammeyer, Jesper, Crowe, Marschark, Rosica, Work and employment characteristics, 387

Workforce Experiences

Employment rates alone are not the full picture of the experience of deaf people in the workforce. Getting into the workplace is very difficult, but once in it, there is more discrimination to be faced. The onset of Globalization in the 1970s really changed what the job opportunities in America looked like, especially for deaf employees.[42] Deaf and hard of hearing employees tend to have more blue collar jobs and manufacturing jobs.[43,44] Even in 2019, manufacturing is still the field that hires the most deaf people at 15.7%.[45] But Globalization led to a major decline in manufacturing jobs in the United States and a huge increase in the service industry.[46] This meant that lots of jobs that were typically employing deaf workers in the United States now were outsourcing this work overseas. The service industry greatly underemploys deaf workers in manager roles with nearly ⅔ of the deaf employees having no management responsibilities.[47] Researchers agree that this tends to stem from society's negative view of deaf people, leading to deaf people being left out of access to meetings[48], increasing social isolation[49], lacking a support system in the workplace to help them overcome these barriers[50], and decreased upward mobility.[51] On the positive side, research shows that median earnings of deaf and hearing employees have evened out over time. In 1987, hearing employees made nearly double what

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[42] Walter, Gerard G. "Outcomes for Graduates of Secondary Education Programs for Deaf Students: Early Findings of a Cooperative National Longitudinal Study." (1987).

[43] Dammeyer, Jesper, Crowe, Marschark, Rosica, Work and employment characteristics, 387

[44] Krupnick, Krieger, "The deaf in the world of work.", 183

[45] Garberoglio, Palmer, Cawthon, Sales, Deaf people and employment in the United States: 2019.

[46] Walter, Dirmyer, The effect of education on the occupational status of deaf, 42

[47] Dammeyer, Jesper, Crowe, Marschark, Rosica, Work and employment characteristics, 393

[48] Xu, Sheila Zhi. "The emergence of a deaf economy." PhD diss., Massachusetts Institute of Technology, 2014.

[49] Shan, Price, Goman, Willink, Reed, Nieman, Hearing loss and employment, 387

[50] Dammeyer, Jesper, Crowe, Marschark, Rosica, Work and employment characteristics, 388

[51] Walter, Gerard G. "Outcomes for Graduates of Secondary Education Programs for Deaf Students: Early Findings of a Cooperative National Longitudinal Study." (1987).

their deaf counterparts did[52], but in 2019 the median income evened out to about $50,000 a year for both populations.[53]

Deaf-Owned Businesses

Since 11.6% of deaf people are self-employed, compared to only 9.8% of hearing people, it is important not to leave deaf-owned businesses out of the discussion of deaf employment.[54] Unlike most hearing people who start businesses out of a passion for entrepreneurship, deaf people tend to start their own businesses in response to their negative experience in the general workforce.[55] As it has been discussed, many deaf people have a more difficult time finding jobs, being included in mainstream workplaces, and being supported in their work.[56] In response to this, many deaf business owners started their business, creating a more inclusive workplace made by deaf people for deaf people.[57] Researchers have found that this decision has paid off for many of the deaf owners. From 2007 to 2017, the number of deaf owned businesses grew from 600 to 1,000.[58] Additionally, more jobs specifically for deaf people have been created since many of these companies have an all deaf or signing staff. Deaf owned and run businesses have created a more desirable working place for deaf employees than in the mainstream workforce.[59] These businesses also capitalize on the uniqueness of deafness in their advertising, attracting deaf and hearing customers from around the country and world.[60] Deaf businesses help to correct society's misconceptions about deaf people, which will likely lead to more hearing people being willing to hire deaf workers.[61]

[52] Dammeyer, Jesper, Crowe, Marschark, Rosica, Work and employment characteristics, 387
[53] Garberoglio, Palmer, Cawthon, Sales, Deaf people and employment in the United States: 2019.
[54] Garberoglio, Palmer, Cawthon, Sales, Deaf people and employment in the United States: 2019.
[55] Lam,Win-Win for the Deaf Community, 24
[56] Sommer, Mette, Deaf People's Coping Strategies
[57] Xu, Sheila Zhi. "The emergence of a deaf economy." PhD diss., Massachusetts Institute of Technology, 2014.
[58] Lam,Win-Win for the Deaf Community, 26
[59] Krupnick, Krieger, "The deaf in the world of work.", 183
[60] Xu, Sheila Zhi. "The emergence of a deaf economy." PhD diss., Massachusetts Institute of Technology, 2014.
[61] Lam,Win-Win for the Deaf Community, 27

Literature Review Closing

The purpose of this section is to examine the scholarly literature pertaining to deaf employment. A major factor in employment is education, which increasingly tightens the gap between deaf and hearing employment rates. Once a deaf person has completed their education and tries to enter the workforce, they are met with many barriers to entry stemming from society's negative perception of disabled people in the United States. This leaves deaf people with only a small corner of the workforce centered on manufacturing and deaf owned-businesses. For those in the mainstream workforce, they tend to have negative experiences unless they receive adequate accommodations. In that case, they become some of the company's most loyal employees. Employees who do have negative experiences tend to leave the workforce or find themselves in a deaf owned business, where they have full access to communication and support.

Researchers have covered lots of ground on the broad topic of deaf employment, but there are still lots of important areas for future research. Three that really stand out are: inclusive hiring practices for hearing companies when hiring deaf people, how deaf and hearing teams can work together successfully, and lastly studies on how the Signing Starbucks impacts deaf opportunities in the service industry. These are all areas of study that focus on the overlap of deaf and hearing worlds. The following research builds on this foundation by focusing on how deaf and hearing teams work together successfully in the business world. Given that most job opportunities are in the hearing world, research on how teams of mixed hearing statuses can communicate together successfully can be a proactive step in minimizing negative workplace experiences for deaf employees.

METHODS

In-order to properly assess how teams with signing Deaf people and non-signing hearing people can be successful in workplace settings, I combined an ethnographic study and interviews on three teams of different hearing statuses. In this study, "success" is defined as equal access to communication for all parties involved, and "team" is defined as a group of people working together to accomplish a goal. Equal access to communication is the bar for success because it allows for a more cohesive working environment. Ethnography studies require observing my participants more than once and keeping detailed observations, allowing me to pick up on communication tactics that might happen unconsciously for the group. By observing, the team can operate in their own workplace and as close to how they do on a normal day as possible. Xu (2014) used this type of research to assess the emerging deaf economy. This allowed her to understand the interactions of the deaf subjects in their natural environment and in an accessible way.[62] Since both the researcher and the subjects were deaf and used different sign languages, an ethnography study allowed for part of the research to take place without any language barriers. This is important for my study because ASL is my second language, so the context of the interactions amongst the team supported my understanding when later asking questions. Interviews paired well with the ethnography study because I was able to dive deeper into the communication practices I noticed and how the different team members felt about them. "Practices" or "communication practices" will refer to communication behaviors that are considered normal for the team to take part in. These can be decided on or unspoken behaviors. I modeled these interviews off of a case study performed on a virtual team's communication practices. This study also looked specifically at communication practices in an area where there

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[62] Xu, Sheila Zhi. "The emergence of a deaf economy." Undergrad Thesis., Massachusetts Institute of Technology, 2014.

are natural barriers to communication, similar to how there are barriers between ASL and English communication. Additionally their final product was a set of "best practices" that supported these teams in their success and ideas for improvement.[63]

I performed the ethnography study and interviews on three different teams with a range of signing deaf employees. The three teams are:

1. All Deaf signers - Mainstream Coffee Shop Employees

2. Half Deaf signers, half hearing signers - Internal Advancement Office at a Deaf School

3. One Deaf signer on an all non-signing hearing team - MBA Students

These specific teams have been chosen because of their make-up of signing deaf and hearing people, all are in a business setting, and ease of visiting the workplace. With this mix of teams, I am able to compare how the best practices differ or remain the same depending on the amount of signing deaf employees. This comparison allows for a more diverse perspective on how deaf and hearing teams work together in different business settings, which may call for more or less communication than others. Business settings that are not specifically manufacturing or blue collar hire the least amount of deaf people.[64,65] My study specifically avoids manufacturing and blue collar industries to explore areas where hiring managers are more unsure of how deaf employees would fit into their hearing dominant company successfully.[66] For that reason, I have selected teams from the service, marketing, and finance industries.

In the ethnography study, I specifically focused on how the people on the team communicate. The following are my baseline observations:

[63] Suchan, Jim, and Greg Hayzak. "The communication characteristics of virtual teams: A case study." IEEE transactions on Professional Communication 44, no. 3 (2001): 174-186.
[64] Dammeyer, Jesper, Crowe, Marschark, Rosica, Work and employment characteristics, 387
[65] Krupnick, Krieger, "The deaf in the world of work.", 183
[66] Dammeyer, Jesper, Crowe, Marschark, Rosica, Work and employment characteristics, 387

1. Describe the team's communication strategies in face-to-face communication and which situations they are used in.

2. Describe the forms of communication that the team uses in non-face-to-face situations and which situations they are used in..

3. Describe the group dynamics and/or how language use affects the team's communication.

In the interviews, I focused on how these norms came about and how people feel that they have helped or hurt the team's communication. The interviews were conducted in whichever language the interviewee feet most comfortable (ASL, spoken English, or written English). These are the baseline questions I asked:

1. Describe your team's communication. Are there any standards for communication? If so, how did they come about?

2. Do you feel that you have full communication access with your team? If so, what supports this? If not, what detracts from your access?

3. Do you prefer face-to-face communication or non-face-to-face communication more with people of the opposite hearing status? Why?

4. Are there any communication practices that your team uses that you would like to add? Or a setting in which you feel communication practices should be discussed/decided on?

RESULTS

Compare & Contrast Between Groups

The three teams range in interpreter use and use of many Deaf Culture customs. The MBA Students require that two interpreters are with the Deaf member at nearly all times for full access to language to be achieved. But there is a drastic change when moving to the Deaf School Employees: interpreters are only used for team meetings and not used for around the office

communication. This is possible for the Deaf School Employees and not the MBA Students because all of the hearing team members are actively learning ASL. As for Deaf Culture customs, the team of Coffee Shop Employees uses Deaf Culture customs the most when communicating with each other and in advanced ways. For example, it would take a non-Deaf signer years to possibly achieve the ability to use peripheral vision, sense of touch, and one handed signing to do work and sign simultaneously. The Deaf School Employees use some similar Deaf Culture customs such as circling when communicating, lights for alerts, and one person signing/talking at a time.

Face-to-Face Communication			
Team	MBA Students (One Deaf Team Member)	Deaf School Employees (Half Hearing, Half Deaf)	Coffee Shop Employees (All Deaf)
Interpreters	Two interpreters for the team meeting that happens one time every two weeks Two interpreters at a time assigned to the Deaf student throughout the school day	One Interpreter for the team meeting that happens 1x a week No interpreter used for around the office communication	No interpreters used - 100% of the communication is in ASL
Norms for Group Communication	N/A	Circle tables used for meetings so all members can see each other clearly Light up doorbells on the offices of the Deaf employees to get their attention One person talking or signing at a time	Line of sight kept clear in most situations Use of circling when multiple signers in one conversation Tap on the shoulder or waving to get each other's attention

| | | | Use of peripheral vision, sense of touch, and one handed signing to do work while signing simultaneously |
| | | | One person signing at a time per conversation |

The biggest difference among the teams in non-face-to-face communication is that the Deaf School Employees and the Coffee Shop Employees teams do not use non-face-to-face communication that often. Specifically in the Deaf School Employees and the Coffee Shop Employees teams, it is customary to chat with the person face-to-face rather than send an email or VP them.

Non-Face-to-Face Communication			
Team	MBA Students (One Deaf Team Member)	Deaf School Employees (Half Hearing, Half Deaf)	Coffee Shop Employees (All Deaf)
Modes of Communication	WhatsApp Zoom Chat Email Google Drive for collaborative work	Email Video Phone (VP) Online booking system for interpreters	Video Phone (VP) Facetime
Amount of Non-Face-to-Face Communication Used	Only face-to-face communication every two weeks at the team meeting	Not a lot of non-face-to-face communication; mostly walk over to the person's office and chat with them directly	Not a lot of non-face-to-face communication

The difference in the default language for each team, leads to changes in the team's dynamics. The MBA Students is the only team that has English as the default language of communication. In this group there is also a lack of other members learning ASL. This group relies heavily on the interpreters for full access to language. The Deaf School Employees use ASL as their default language of communication, leading to a shift in where the burden of communication falls in the group in comparison to the MBA students. The Deaf School Employees' hearing members are all actively learning ASL and working together with the Deaf members of the team to communicate and understand more about Deaf Culture. Among the Coffee Shop Employees, the default language of communication is ASL and there is yet another shift in how communication takes place when it comes to working with customers of different hearing statuses. As customer's signing skills increase, the communication that takes place between them and the workers becomes more friendly.

Group Dynamics / Language's Effect on Team's Communication			
Team	MBA Students (One Deaf Team Member)	Deaf School Employees (Half Hearing, Half Deaf)	Coffee Shop Employees (All Deaf)
Default Language	English	ASL	ASL
Cultural Awareness	Low Deaf Culture awareness - all hearing members new to communicating and working with a Deaf person and interpreters	Medium to High Deaf Culture awareness - hearing members didn't come in with a background in ASL and Deaf Culture but actively are learning; Deaf members who identify with Deaf Culture	High Deaf Culture awareness - all Deaf members who identify with Deaf Culture

ASL Language Users	Only one person outside of the Deaf student is learning basic ASL	Hearing members actively learning ASL	All team members fluent in ASL
Level of Understanding	Poor understanding of how to use interpreters: - Some looking at the signer rather than the interpreter - Talking over the interpreters (aka talking over the Deaf member) - Simultaneous communication from interpreters, WhatsApp chat, and Zoom chat that make it difficult for the Deaf member to see all forms of communication simultaneously	Good understanding of how to use interpreters: - Look at signer rather than interpreter - One person talking/signing at a time (use hand raising to signal when they want to chime in) - Pausing when the Deaf member's eye's aren't on the interpreter - Pausing for team members to read the board before speaking - Leaving the seat across from the interpreter open for the Deaf members	Difference in communicating with customers of different hearing statuses: - Hearing customers: only communication needed to take order via writing and gesturing - Hearing signing customers: small talk and order taken in ASL - Deaf customers: storytelling and communicating while making orders
Other	N/A	Took a few minutes of the team meeting to go completely voices off to practice their ASL skills together Team leader (hearing) opens team meeting by signing before passing off communication to the interpreter	N/A

Takeaways from One-on-One Interviews:

Across the interviews there were a few trends that stood out. First, the vast majority of participants prefer face-to-face communication with those of the opposite hearing status. This is quite interesting since many non-face-to-face ways of communication (such as text messaging) happen in the common language of English. This often makes communication more efficient, but the desire for personal connection outweighs the directness of non-face-to-face communication methods. Second, the Coffee Shop Employees had the most sure and enthusiastic confirmation of having full access to language in their team. For example, one member of the Coffee Shop Employees responded immediately with "YES YES YES" and a big smile, but in the team of MBA Students, each teammate took nearly a minute to assess if they have full access to language in their team. The excitement from the Coffee Shop Employees speaks to how often this is not the case for many Deaf people across the globe. Third, the importance of interpreters was emphasized, but it often came up that the team's understanding of how to use interpreters properly and respectfully can have a big impact on the accessibility for the Deaf participants. For example, members of the MBA Students expressed that their communication can "cause a bit of confusion because so much is happening at once" and "can be easily missed if someone does not explicitly point it out". Whereas the Deaf School Employees' members describe their team's communication as "knowledgeable about the communication practices that are best for access" and "patient and welcoming". When the team has a good understanding of how to work with an interpreter, the Deaf members had a smoother and clearer experience in the meeting compared to those in the team that did not have previous experience in this scenario.

One-on-One Interviews - Team Overview			
Team	MBA Students (One Deaf Team Member)	Deaf School Employees (Half Hearing, Half Deaf)	Coffee Shop Employees (All Deaf)
Access to Language	All team members felt that they had full access to language	All team members felt that they had full access to language	All team members felt that they had full access to language
Descriptors of Communication	"Still in progress", "bumpy"	"Individualized", visual, patient	Visual, efficient
Face-to-Face Communication Preference	One team member preferred non-face-to-face communication; the rest preferred face-to-face communication	All team members preferred face-to-face communication	All team members preferred face-to-face communication
Trend/Advice/ Reflection	This team reflected heavily on how communication practices could be more explicit in the group going forward	This team emphasized communication strategies that support a positive view on Deaf employees	This team highlighted the importance of diverse experiences for both Deaf and hearing people

CONCLUSION

Meaning for Deaf & Hearing Teams in the Business World

My literature review of Deaf employment revealed a few facts that I would like to emphasize before interpreting the results of this study:

- The service industry greatly underemploys deaf workers

- The manufacturing industry hires the greatest number of deaf people

- Society's views of Disabled people are some of the biggest barriers to workplace inclusion

With these in mind, I feel that the two biggest takeaways from this study is that:

1) **Deaf people CAN work effectively and seamlessly in the business world**

All three of the teams that participated in this study fall under the business world umbrella and are outside of the manufacturing sector. Despite these teams ranging from having one Deaf member to all Deaf members, they all provided full access to language to everyone of the employees on the team. Once full access to language is achieved, the playing field is evened for all members of the team and normal business team functions can take place. Clear and productive communication can really make or break any team in the business world. The teams in this study have found ways to achieve full access to communication despite different hearing status and languages of communication. If these teams can do it, so can others.

2) **Communication that is inclusive of Deaf members is not exclusive of hearing members**

Priority number one of teams of mixed hearing statuses should be to provide full access to communication for all members of the team. What is most interesting about the communication strategies implemented by these groups to achieve full access to communication for the Deaf members of the team is that these communication strategies in no way took away access to language for the hearing members of the team. Yet, without these strategies only the hearing members of the team would have full access to communication. Though communication with Deaf members present may look different than with an all hearing team, it does not mean that access to communication is lost for any of the hearing team members. So to provide the most access to language for everyone involved, communication should be inclusive of Deaf members of the team.

Advice for Adding a Deaf Employee to a Hearing Team

Educate members of the team on how to use an interpreter, different ways to communicate with a Deaf person, and Deaf Culture. Author of sources and guest speakers on the topic should be Deaf to provide the best and most accurate information.

Check the team's privileges. Specifically, learn and reflect on the team's hearing privilege. One should not feel bad about being able to hear, but it is important to appreciate how hearing has affected their life in a multitude of ways. This exercise can lead to an open discussion about how different life experiences have affected different team members, resulting in a better understanding of the team and individual experiences.

Arrange the workspace to be Deaf friendly. The office building might not have been designed with a visual language in mind, but some minor changes can go a long way. Think about how line of sight can be easily achieved in meeting spaces, the lighting can be optimized so signing is clear, and how emergency alert systems should be just as accessible visibly as they are auditorily.

Listen to the Deaf team member. Let the Deaf person lead the way on how they prefer to communicate, what methods are best to get their attention, and what changes need to be made to provide the best access for them.

Meet halfway when communicating with Deaf people. It is not the Deaf person's job to figure out how to communicate with hearing people on the team, but rather both parties' job to figure out how to communicate with each other.

Caption all videos and music so that they are equally accessible to all members of the team. Be sure to check the captions and make sure that they are accurate before sharing.

Show effort to include the new Deaf member of the team by learning some basic ASL (finger spelling, greetings, ect.), invite them to office social events, and make time to meet them like one would with any new employee of a team.

Limits and Future Research

There are a few limitations to this research study. With only three teams in the study, totaling about 24 people, the sample size of this study is quite small. Additionally, only nine people from these groups were able to be interviewed due to time constraints by both the participants and interviewer. These teams were also centralized in the Philadelphia and Washington DC area, consisting of only the service and internal advancement industries. With Washington DC being home to the leading deaf university, this metro area is likely already the most aware and amenable towards deaf people in the United States. Ideally, more teams across a wider range of the United States and industries could have been included in this research study.

Throughout this research process, a few areas of future research topics have stood out to me. One potential study could be centered around the comfortability level that a hearing company has in hiring a Deaf employee. Specifically, do hearing companies feel equipped to hire a Deaf employee and communicate through an ASL interpreter or other means of communication? Another potential study could focus on Deaf employees' experiences in job searching. What type of companies are they looking at? Are they mostly hearing or Deaf companies? What industries are they looking to get into? How comfortable do Deaf employees feel joining a hearing dominant company? A third study could research upward mobility trends in businesses for Deaf employees. Are Deaf employees promoted at the same rate hearing employees are? Why or why not? How can these rates be evened out?

As a business student myself, I feel that business schools have the power to influence their students in a magnitude of ways, specifically their values. Business schools have started to expand their DEI class offerings and teachings, but these tend to stop at addressing inclusiveness for different races and genders in the workplace. Business schools also place a large priority on their student's ability to communicate effectively, but do not dive deep into how to communicate with people of different communication styles or abilities. Having classes that address diversity more fully and teaches students how to communicate with people who have different modes of communication is important to prepare students for a more inclusive workforce. If business schools encouraged students to learn ASL and/or about Deaf Culture (and people with Disabilities in general), then students could enter the business world with a higher level of cultural competence for working with Deaf people. This is quite important as the teams in this research study with a higher level of Deaf Culture awareness had more seamless communication amongst the team members.

APPENDIX

MBA Student Observations:

In both observation days, I observed the team's board meeting. This was a hybrid meeting where half the team was on zoom and half was in-person. There were multiple forms of communication going simultaneously: face-to-face conversation, WhatsApp group chat, and Zoom Chat, all of which received messages throughout both meetings.

Specifically, on the first day, the team experienced a delay in the start of the meeting because the zoom link was not working for the interpreters. In waiting for the interpreters, the meeting was just silent with a few messages in the Zoom Chat. There seemed to be a bit of confusion from the hearing members why the meeting had not started yet and if the interpreters were coming or not. Because the trouble shooting of the Zoom link was not working, the interpreters ended up coming in-person. Luckily, they were in the same building and were able to come quite quickly after the decision was made. The meeting was finally able to start 20 minutes into the hour-long meeting.

On the second day of observation, the interpreters came in-person, immediately bypassing the technology issues from the week before. In this meeting, there were a few times where a student would talk over the interpreter and the signer. The interpreter advocated for the Deaf student by talking louder so the Deaf person's opinions were still heard. Eventually the other student got the message that the interpreter was not going to stop voicing for the Deaf student because they were trying to interrupt. The student then caught on that they needed to wait their turn to speak.

MBA Student 1 (Deaf) Interview Notes:

This student described their team's communication set up as consisting of two group chats, email, and the use of interpreters. They feel that they have full access to communication in this team with this set up. In 1:1 situations that are in a quiet setting, they can communicate reasonably well by just using their cochlear implant. In the group settings, they have two interpreters with them. These are from an overall interpreting team for this student. The Lead Interpreter for this team sets up the scheduling of the interpreters, advocates for the student by educating the professors on accessible class practices, and takes the communication access burden off the student. Two interpreters are assigned to this student throughout the day rather than for specific events, because people frequently cancel and move events making it hard to request interpreters the standard two weeks in advance.

Face-to-Face communication is preferred by this student because it is much easier to see the interpreters and their facial expressions. Additionally, when they are relying on their CI, it is much harder to lipread on video call platforms since the sound and mouth movements are not perfectly synced. On top of that, the sound feels much more artificial making it harder to understand.

Looking forward, this student wishes that people had more prior knowledge about communicating with a Deaf person so the burden of education does not fully fall on the student. They gave the example of how many people would not understand that in a loud environment their CI cannot be relied on, but rather they would need to text or pass a paper back and forth to communicate. They added that many people do not know to follow the Deaf person's lead on communication strategies in different situations as well. It was also noted that when communication is happening on Zoom, in the Zoom Chat, and in group chats simultaneously, it

is really helpful to have someone bring attention to what is being said in the chat. Without someone voicing what the comment says or that there has been a message in the chat, it is easily missed by the Deaf participant since their eyes are focused on the interpreters for access.

MBA Student 2 (Hearing) Interview Notes:

This student describes the group communicating through WhatsApp, in-person/Zoom board meetings, some use of email, and the consistent use of Google Docs to collaborate on work. They explained that WhatsApp was chosen out of popularity amongst the MBA students rather than for its accessibility. Despite saying that the group tried to talk about communication standards in the beginning of its creation, this student describes the communication as being a bit bumpy. Specifically, they point out the issue with the Zoom link access for the interpreters in the first day that I observed. When specifically reflecting on how they communicate with their Deaf team member, they stress the importance of a consistent meeting time so that way the interpreters are guaranteed to be there. But, they point out that when it comes to meetings they have to have with people outside the group, they do not tend to think about timing with the interpreters when planning. This can lead to the Deaf member not being able to attend meetings with external parties.

With an active group chat, detailed meeting notes, and a very organized Google Drive system, this student reports having full access to communication despite being unable to make the board meetings. Most of their communication with the Deaf student has been through WhatsApp, but they still prefer face-to-face communication when it comes to communicating with those of the opposite hearing status. In-person they feel that the communication is clearer and that more emotions are involved.

Throughout the interview, this student stressed the importance of having a conversation on the communication norms for the group in the future. Specifically focused on the inclusivity of the Deaf and low vision students. Additionally, they point out that this group should model what accessible communication looks like to others because it includes so many people with Disabilities. When events and external communication are had, this student feels that if they model what accessible communication looks like, then others will follow in their footsteps.

MBA Student 3 (Hearing) Interview Notes:

This student describes the team's communication as still in progress. They are still figuring out the standards of the group, technical issues (refers back to the Zoom mishap on the first observation day), and just figuring out what the team should be pursuing next. The student reports that the many channels of communication (Zoom, WhatsApp, and email) cause a bit of confusion because so much is happening at once. They want to push for one channel to be decided on in the future. Despite the overlapping channels, they feel that they have full access to language in the group.

When it comes to communicating with the Deaf member of the team, this student prefers non-face-to-face communication. The student points out that with their limited ability to understand ASL, non-face-to-face communication is faster since they don't have to rely on someone else to tell them what the Deaf person is saying.

Going forward, this student wants the team to find more ways for more of the members to be comfortable engaging. They describe the team as having uneven levels of engagement and they really want to even that out.

Deaf School Employees Observations:

Both days of observation consisted of the weekly team meeting and witnessing around the office communications outside of official meetings. For the whole team meeting, an interpreter is used, but for around the office communication no interpreter is used. This continuously supports and encourages the hearing members of the team learning of ASL and all members to meet each other in the middle when it comes to communicating, despite their different hearing statuses. When it comes to non-face-to-face communication, the team uses email with each other and an online website to book interpreters for meetings. This team does not use a lot of non-face-to-face communication, but rather they walk over to each other's offices and communicate with each other directly in ASL or English depending on the hearing statuses involved. Booking interpreters is an important part of their non-face-to-face communication that takes a lot of ahead planning. The meeting information needs to be entered into the system 48-72 hours in advance of the meeting but if it is desperate, sometimes a few hours headsup is enough. This adds another layer of thought when meetings are scheduled because they need to figure out who will be at the meeting, people's comfortability with ASL, and double check that all meetings where interpreters are needed are submitted into the system and confirmed.

The use of ASL as the primary language of the group heavily affects the team's communication and group dynamics. The leader of the team is hearing and new to ASL. Despite this, they begin each team meeting signing to the best of their ability and then pass communication off to the interpreter after the introduction. This signals to the team that they are constantly working on increasing their ASL skills and value the seamlessness of communication that knowing ASL gives the team. This team has a very high level of awareness of Deaf Culture and respectful communication practices when it comes to using an interpreter. For starters, the

meeting takes place at a circular table so everyone can see each other. The seats across from the interpreters are reserved for the Deaf members of the team so they can see the interpreter very easily. The hearing members of the team make sure to always look at the signer instead of the interpreter to show respect to the Deaf members of the team. To make sure that the Deaf members of the team receive communication in as close to real time as possible, the team uses hand raising to signal that they want to speak next, only one person talks/signs at a time, and if the Deaf members of the team are not looking at the interpreter at the moment then they will pause for a second and wait for the Deaf members to look back at the interpreter. On the second day of observation at the meeting, the team had about 5 minutes of voices off communication fully in ASL (initiated by one of the Deaf members of the team) so everyone could practice their ASL. One of the Deaf members of the team signed for a little bit and then asked the hearing people to one at a time sign back what they understood. Everyone completely understood and was able to sign back. The team took a second to celebrate that they are getting closer to being able to have their meetings fully in ASL.

Deaf School Employee 1 (Hearing) Interview Notes:

This employee describes the team's communication as "individualized based on the one-on-one interaction and very personalized based on employee comfort". They use ASL with Deaf members of the team, but use spoken English with the other hearing members. They use interpreters when appropriate or required (specifically team meetings). If a one-on-one conversation is taking place, they feel fine communicating without an interpreter. When it comes to external meetings interpreters are used for both communication and to increase visibility of how to include a signing Deaf person in a meeting with hearing people. They explain that many

companies do not normally work with Deaf people and the interpreters are extra important for them to see to "signify" what access can look like.

Though it took a lot of time to cultivate, this employee feels that they have full access to language in the team because they have a working proficiency in ASL. When they had joined the team, they used interpreters, but now they feel comfortable communicating in ASL. If they are meeting with a Deaf person that they have not met before, they do use interpreters because it takes a little while for them to get used to different signing styles and accents. Additionally, they prefer face-to-face communication with Deaf people because facial expressions are a very central part of ASL and they are easy to miss on a screen.

This team member would like to see basic information about interpreter etiquette communicated to people outside of the organization before meetings. For example, when vendors visit, they often do not know to look at the signer instead of the interpreter. They also add that written communication can be different sometimes because of the differences in grammar structures of the two languages. For example, instead of saying "I go to the store" in ASL it is signed STORE ME GO. When communicating via email with people outside the organization, they feel that people should be given a heads up that the grammar is different to help avoid breakdowns in communication. Because English proficiency is often associated with intelligence in the hearing world, this sharing of the different grammatical structures would signal that there is no difference in intelligence with who they are communicating with but rather a language difference.

Deaf School Employee 2 (Deaf) Interview Notes:

This employee describes the team's communication as visual, because Deaf people depend more on visual language whereas hearing people depend on sound. They explain that

there is a delay in communication for the Deaf members of the team due to the "waiting gap for the interpreter". This requires hearing people to be patient, and they feel that the hearing members of the team are very understanding and patient. In other teams, they have experienced people feeling intimidated looking at the Deaf person rather than the interpreter, but this team does a good job of looking at the signer. This team also has created a welcoming environment, where they feel comfortable speaking up despite being Deaf.

Given the amount of trust with the team, the use of interpreters, and the hearing members actively learning ASL, this employee feels that they have full access to language in this team. They explain that the communication on the team is very open and trusting of each other. This team member prefers face-to-face communication because they can see the signer clearer and feel more connected to the conversation. Video conversations bring challenges of a smaller video and less of a human connection between the parties.

They feel that it is important to emphasize that Deaf people need visual and sign support. During the team meetings, the agenda is posted on a big screen and they find this really helpful for themselves and the interpreter. Just as important though is giving time for the Deaf members to read the agenda before discussing. A lot of time in hearing environments, teams do not wait for the Deaf members to read the screen and that puts them a lot further behind in receiving communication from the interpreter. This team member wraps up by expressing that the accessibility within the team is great and fair because people are knowledgeable about the communication practices that are best for access.

Deaf School Employee 3 (Deaf) Interview Notes:

This employee describes the team's communication methods in terms of email, team meeting, direct communication face-to-face, and sometimes through video phone. They

emphasize the importance of having an interpreter for team meetings in order to achieve full access to communication. Though this team member feels that they have full access to language, they emphasize that there is a cultural gap in some cases. One example of this that they gave is "Deaf Lens". This is a literary term that is often used to describe videos or movies made by Deaf people with a Deaf audience in mind in terms of the video and editing techniques. Different from mainstream videos, these videos with a Deaf Lens tend to have captions that are easy to read while still seeing the expressions of the speaker and are shot as one continuous video.

Despite benefits to both face-to-face and non-face-to-face communication, this team member generally prefers face-to-face communication. They feel that it helps with keeping everyone on the same page. When it comes to non-face-to-face communication, they find that this is often useful to keep things moving on the work front. The efficiency of non-face-to-face communication and the closeness of face-to-face communication results in the communication type depending heavily on the situation.

Reflecting on their experience with communication in the team, this team member emphasizes that at the end of the day they all work for the school and not for their own personal benefit. They clarify this to mean that when it comes down to communication it is important to use whatever method is needed to get the information across, rather than the communication method that they prefer the most. They mention how important it is to meet people at their skill level when it comes to ASL. Some people won't ever be fluent, but that does not mean they cannot communicate at the level needed to get the job done.

Coffee Shop Employee Observations:

In the two days of observation, I saw the team work in a less busy environment and in a rush hour environment. The first day, the team of employees was about 4 people and the second

day, there were about 6 employees. During both days, the team communicated 100% of the time in ASL and did not use any interpreters for communicating with hearing customers.

Throughout the days, I noticed 4 different communication situations that the employees were involved in: employee with employee, Deaf employee with hearing customer, Deaf employee with signing hearing customer, and Deaf employee with signing Deaf customer. First with employee only communication, their working space was set up so that line of sight would not be obstructed by any of the materials used to prepare orders. This allowed them to keep line of sight with most of the employees at all times. To get each other's attention, they either waved to the person or tapped on the person's shoulder to let them know that they wanted to communicate. When signing together, they often signed 1 handed and used their sense of touch to do work with their hands while listening with their eyes to the other's that were signing. Additionally, they did not always need to be perfectly facing each other, but rather they utilized their peripheral vision to read the signs of those next to them while they were working. When multiple employees were signing together, they often formed a bit of a semi-circle so that they could all see each other and only one person signed at a time.

Second, when employees communicated with hearing customers, interpreters were not used. They have tablets out for customers to write down their order. When they need to ask questions about the order they often use gestures that both Deaf and hearing people would understand. For example, a follow up question that was often asked was if the drink was supposed to be hot or cold. Instead of using the ASL sign for hot, the employee would fan themselves and stick their tongue out and then for cold, they would cross their arms in front of their body and shiver. The hearing customer then understood the question and they would repeat the gesture to signal if they wanted their drink hot or cold. When the order is made and ready,

the customer's name is marked as ready on a big TV screen by the pick up area. If the store is really busy and lots of employees happen to have their backs to the register, there is a mirror on the opposite wall of the register so that the employees can see that someone is waiting to order. Oftentimes, hearing customers walked in not knowing that all the employees are Deaf and would try to speak their order. The employees would then point to their ear and then gesture towards the tablets and gesture like they were writing. This was often enough for the customer to understand that the employee was Deaf and that they needed to write down their order. There was one instance where one of the customers refused to write down what they were asking for, even after the employee wrote down that they could not hear them. The employee was able to lip read that the person wanted sugar and pointed to the different options of sugar until the customer nodded yes. In this interaction, the hearing person forced the responsibility of communication on to the Deaf employee. There was one instance where an interpreter was used for the employee and hearing customer to communicate, and that was when a customer called to ask a question. The calls to the store go to a Video Relay Service that connects the caller to an interpreter who video calls the store. To alert the employees that the phone is ringing, there is a bright flashing light that goes off for the rings. This is set up right behind the cash register so that employees can still see people ordering as well. During the call that I observed, there was also someone ordering at the same time and the employee used their peripheral vision to put the order into the system while watching the interpreter sign on the video phone. When another employee noticed that their coworker was balancing two conversations at once, they stepped in and took the orders of the people in person. After the conversation on the video phone, the two coworkers signed about how the interpreter on the video phone was so hard to understand that

they had to ask for another interpreter. They then debriefed about how they got through the conversation with an unclear interpreter.

Third, there were a few conversations between the employees and signing hearing customers. These conversations were quite warmer than those with non-signing people. With people who didn't know ASL, the conversations ended with the information they needed to make the order, but with people who signed there was small talk throughout the conversation and both parties looked happy to chat.

Fourth, the interactions between the employees and the signing Deaf customers were the most like the interactions between the employees. These conversations were fully in ASL and they tended to continue having full conversations while the order was being made. They were able to do this because the counters between the employees and the customers are low enough so that both party's signs can be seen clearly. These conversations were often not about the order itself but sharing stories about each other's lives. It was clear that many of the Deaf customers were known by the employees.

Coffee Shop Employee 1 (Deaf) Interview Notes:

This employee describes their team's communication practices by looking at it from the lens of a new person joining the team. When someone new joins, they have a little bit of a learning curve to understand the different shorthands that the team uses to communicate quicker. For example, some fingerspelled drink names are shortened to 2 letters. Additionally, lots of the employees are from different parts of the United States and have different signing accents. So in the same way that the new employee has to figure out the shorthand, the current employees have to figure out the accent of the new team member. The example the employee gave here was the 3 different signs for "strawberry" that are used amongst the team. Also, when the shop gets very

busy, they tend to be passing by each other quite often in the workspace. To stay efficient, they each focus on their task unless they are tapped by another worker and then they will turn their attention to them to see the signs.

When asked if this employee has full access to language amongst their team, they responded with an enthusiastic yes. Given that they all use ASL fluently, there is no delay or breakdown of communication within the team. That being said, when communicating with hearing people, this employee prefers a mix of face-to-face and non-face-to-face methods of communication. They tend to try to work through some communication in sign language with hearing people, but they tend to have to use the tablet to communicate fully together. Then they can ask follow up questions through gestures once they have the same foundation of the conversation topic.

Lastly, this employee shared that it is extremely important to ask Deaf people what is the best way to get their attention. Preferences differ among Deaf people and the level of comfortability they have in the environment.

Coffee Shop Employee 2 (Deaf) Interview Notes:

Outside of using ASL in person, this employee describes their communication taking place on FaceTime or video phones to communicate when they are not at work. They feel that they have full access to communication with their team, but caveat that this definitely does not apply to the customers since most of them are non-signing hearing people. This employee explains that when going up the hierarchy of the organization, the hiring of Deaf employees stops at the manager position of the store. After that, all communication goes back to prioritizing hearing communication and hearing people rather than Deaf people and ASL.

This employee prefers face-to-face communication with everyone because they describe themself as a very big people person. They shared that it is important to know that a lot of hearing people do not understand how to work or communicate with Deaf people so they brush them off and leave.

Coffee Shop Employee 3 (Deaf) Interview Notes:

This employee describes the team's communication as taking place completely in ASL and because of this, they feel that they have full access to language. Having full access to language makes this employee feel very included and welcome. They enjoy using ASL the whole time and not needing to speak.

When it comes to communicating with hearing people, they prefer face-to-face communication because they feel that it is important to explore different communities and cultures fully. They highlight that working with Deaf people gives people more diverse experiences.

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