

Techniques Against Language Barriers: A Company Case Study

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The United States construction industry employed approximately 10.8 million people in 2020. Of these 10.8 million, an estimated 3.3 million, or 30%, were Hispanic workers. On construction job sites, workers are exposed to numerous safety risks, including falls, struck-by incidents, and electrocution. Unfortunately, some Hispanics or workers with limited English language skills encounter language barriers which cause additional safety concerns. Language barriers impact their communication and comprehension abilities and, consequently, their safety. For example, workers who do not speak English do not benefit from safety training conducted purely in English; they also cannot read operation manuals for machinery and equipment that are written only in English. Communicating with supervisors who don't speak Spanish about hazards on the job site also becomes difficult. As a result, Hispanics in construction suffer greater workplace injuries and deaths than other groups. This paper presents techniques currently being used by a construction company to reduce the negative safety impacts of language barriers. An interview was held with a company representative, discussing the main themes of this project: (1) language barrier issues encountered on job sites; (2) techniques implemented to combat language barriers; and (3) effectiveness of implemented techniques. Three techniques were presented, including (1) having translators in safety meetings; (2) conducting smaller meetings with groups in their native language; and (3) providing English language training. These techniques can be used as a guide for other companies to consider when developing inclusive safety plans.

Keywords: Language Barriers, Hispanics in Construction, Safety, Construction, Spanish

Introduction

The United States construction industry employed approximately 10.8 million people in 2020. Of these 10.8 million, an estimated 3.3 million, or 30%, were Hispanic (Gallagher, 2022). Hispanic workers are predominantly employed in the physical labor roles of construction, with 76% working jobs such as carpenters, electricians, plumbers, and laborers (Gallagher, 2022). All construction workers on job sites are exposed to several safety risks. Examples of these risks include falls, electrocution, caught-in/between incidents, and struck-by incidents (OSHA, 2006). Unfortunately, some Hispanics also experience a disadvantage that makes their workplace even more dangerous.

Language barriers experienced by workers speaking little or no English impact their communication and comprehension abilities, and therefore, their safety.

Evidence of Hispanic workers facing greater risks on construction job sites has been reported for many years. Menzel (2010) found that in construction occupations, “Hispanic workers [are] at a greater risk for death than other ethnicities/races, [and that] Hispanics accounted for over half of construction injuries involving days away from work in Nevada in 2006” (p. 179). Language barriers are a major contributor to this fact. For example, workers who do not speak English do not benefit from safety training conducted purely in English; they also cannot read operation manuals for machinery, equipment, and power tools that are written only in English. Communicating with supervisors who don’t speak Spanish about hazards on the job site also becomes very difficult. With the number of Hispanic workers employed in construction forecasted to keep growing, it is essential to ensure job sites are safe for everyone (Zhao, 2022). For job sites to be safe, language barriers need to be addressed.

The aim of this paper is to identify and present techniques one company has implemented to combat the detrimental effects of language barriers. These techniques can be used as a guide for other companies to consider when developing inclusive safety plans. Companies that take steps towards addressing language barriers make their job sites safer for everyone; additionally, workers feel safer on these sites.

Literature Review

Evidence of Hispanics Suffering Greater Injuries and Deaths in Construction

A big disparity has been identified within the construction industry: Hispanic workers suffer more workplace injuries and deaths than their white, non-Hispanic counterparts. Menzel and Gutierrez (2010) explain how, starting in 2003, Hispanic workers saw a high rate of job growth in the construction industry; however, along with this job growth came “an increased exposure to construction occupational hazards and disproportionate fatality rates” (p. 179). In 2006, the state of Nevada experienced an extreme case of this. Of the 3,370 construction injuries reported resulting in days away from work, 1,710 (or 51%) were suffered by Hispanic workers (Menzel & Gutierrez, 2010).

Similarly, Sears et al. (2012) found that “a number of studies based on hospital discharge data or trauma registry reports have found higher rates of work-related injuries among [Hispanics] in several states...as well as for the United States as a whole” (p. 1239); for example, in Washington state between 1998 and 2008, Hispanics were “2.6 times more likely than [non-Hispanic] workers to have a work-related traumatic injury” (Sears et al., 2012, p. 1239).

Unfortunately, this injury and death disparity trend continued to persist between 2011 and 2020. While the fatal injury rate for white, non-Hispanic workers decreased from 2019 to 2020, it increased for Hispanic workers “from 4.2 fatal work injuries per 100,000 full-time workers in 2019 to 4.5 in 2020” (U.S. Bureau of Labor Statistics, 2022). Furthermore, for construction and extraction roles (made up of carpenters, laborers, plumbers, etc.), while the overall population saw an 8.4% decrease in workplace deaths, Hispanics had a 1.6% increase (U.S. Bureau of Labor Statistics, 2022), as shown in Figure 1.

Hispanic and Latino worker deaths as a percent of total workplace deaths, 2011–20

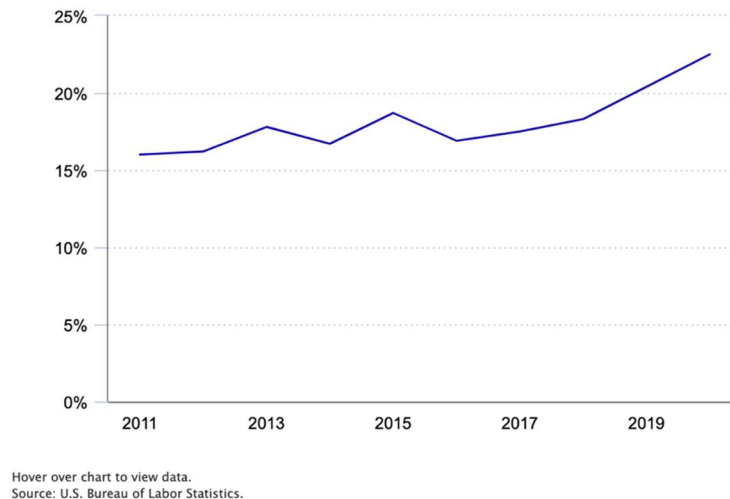


Figure 1 – Trend in Hispanic Workplace Deaths (U.S. Bureau of Labor Statistics, 2022)

Language Barriers Identified as Cause

Language barriers have been identified as a major contributor to the higher rates of injuries and deaths experienced by Hispanics. With the explosive construction growth of 2003, many immigrants began filling open job positions. Brunette (2004) explains that many of these Hispanic immigrants “lacked trade related and, more significantly, language skills (approximately one third of all Hispanic construction workers speak only Spanish)” (p. 244).

Having a large portion of the work population lack English-speaking skills presented communication and safety issues on job sites. Menzel and Gutierrez (2010) conducted a study on a group of thirty Hispanic workers from Nevada trade unions. Their goal was to better understand what workers believed to be the biggest safety risks present on job sites. When participants were asked if they believed Hispanics were at a greater risk for workplace injury than other groups, participants frequently answered: “yes;” when asked for reasons why Hispanics were at greater injury risk, common answers were “lack of experience, lack of training, and English skills” (Menzel and Gutierrez, 2010, p. 182). Focusing on language and communication skills, Menzel and Gutierrez (2010) discovered that “participants perceived that low English skills were an injury risk factor because they were unable to understand safety training” (p. 183). Workers understood that not being able to read safety manuals and signage placed them at greater risk of injury on job sites. Furthermore, even though some safety material was translated to Spanish, many translations were poor and direct word-for-word translations were difficult to understand.

Menzel and Shrestha (2012) revealed that, during an eighteen-month period, nine construction workers suffered fatal injuries while working on the Las Vegas Strip. Menzel and Shrestha (2012) further reported that Hispanic workers in Las Vegas “identified lack of or inadequate safety training conducted in Spanish as a contributing factor to accident risk” (p. 730). The Occupational Health and Safety Administration (OSHA) further supported this finding with their analysis of a specific event where one Hispanic worker suffered a fatal 70-foot fall down an elevator shaft: “OSHA’s accident

investigation cited lack of safety training as one of the two causes” (Menzel and Shrestha, 2012, p. 730). Following the streak of fatal injuries on the Las Vegas Strip came a fall-prevention training program delivered by the University of Nevada, Las Vegas. Training was conducted in both Spanish and English, through five-hour long classes. A total of 773 workers attended the training, 180 (23%) of which attended the Spanish classes (Menzel and Shrestha, 2012). In post-training interviews conducted eight weeks after the training, over 70% of Hispanics reported “they had used their knowledge to avoid a fall on the job, [while] only 45% of those attending the English language training reported the same” (Menzel and Shrestha, 2012, p. 733); furthermore, “a majority (87%) of [Hispanic] trainees interviewed reported making at least one change in safety behavior after training” (Menzel and Shrestha, 2012, p. 733). These findings provide insight into how effective Spanish training can be for workers.

Unfortunately, insufficient training has been provided to Hispanic workers to help address their language and communication barriers. In a study conducted by O’Connor et al. (2005) on fifty young, foreign-born Hispanic workers in North Carolina, participants were split into two groups: one for those with no/very little English skills and another for those with at least a basic command of the English language. A major finding from the study was that “the group with little or no English ability was less likely to receive any safety training (58% vs 84%) and less likely to receive more than an hour of training (34% vs 66%) than the group with basic or better English ability” (O’Connor et al., 2005, p. 274). When participants with low English skills were asked how they learned about job safety, they indicated a strong dependency on co-workers for knowledge. One participant stated the following: “there is a book [operation manual] that goes with the machine [tractor/ bobcat], but it is in English... I learned how to do my job from a [coworker], using hand signals and pointing” (O’Connor et al., 2005, p. 275). Another stated that “no Hispanic worker ever receives training about these types of things... I only learned from my cousin... there was no kind of formal training” (O’Connor et al., 2005, p. 275). The study also revealed information on how communication took place on the job sites of the fifty participants: 16% reported having sufficient English skills to “get by,” 22% had co-workers explain things to them, 18% had an interpreter on their job site, and 20% said they understood very little of what was said and relied more on hand signs and gestures (O’Connor et al., 2005). These findings are a reason for concern because construction occupations are too dangerous to rely on hand signs alone for communication. The study concluded with a comparison between the amount of training reported by the fifty-person Hispanic group and a larger, primarily non-Hispanic group also located in North Carolina. While only 17% of the larger, primarily non-Hispanic group reported receiving no training or less than one hour of training, 48% of the fifty-person Hispanic group reported the same (O’Connor et al., 2005).

Methodology

The objective of this paper was to perform a case study on a company taking significant steps against safety incidents caused by language barriers on their job sites. Their techniques could then be presented for other companies to learn from. To carry out the case study, the first step was to identify a small group of companies that were taking steps against language barriers. Three companies were identified through short, in-person, semi-formal interviews with company representatives. Company 1’s representative was a site superintendent, Company 2’s was a safety officer, and Company 3’s was a general foreman. Data was collected for each company, illustrated in Table 1, to help make the selection for the case study.

Table 1

Data collected for each of the three companies

	Company 1	Company 2	Company 3
Representative	Site Superintendent	Safety Officer	General Foreman
Type of Company	General Contractor, Self-perform rough framing	General Contractor, Self-perform various work	Structural Concrete Contractor, Self-perform concrete
Number of employees supervised by representative	45	60	25
Percentage of workers speaking little or no English supervised by representative	35%	38%	40%

Company representatives were asked if they had any experience with the topic of language barriers in construction. Company 1 and Company 2 representatives (Representative 1 and 2, respectively) were familiar with the topic and expressed having felt concerned on their job sites before due to language barriers. Representative 1 reported issues with communication due to language barriers and Representative 2 had experienced communication and safety concerns due to language barriers. Representative 3 reported having not experienced issues with language barriers before but was familiar with the topic. Representatives were then asked if their companies implemented any techniques to help address issues caused by language barriers. Representatives 1 and 2 both reported having used company techniques against language barriers. Representative 3, although reported not having experienced difficulties because of language barriers, knew of company techniques used to address communication issues.

From the data collected during the short, semi-formal interviews, Company 2 was selected for the case study. Company 2 was selected because of the representative's position as safety officer and experience in safety, aligning more closely with the case study topic, the large number of non-English speaking workers, and the various techniques implemented against language barriers. A one-hour interview was conducted with Representative 2 on their experience with language barriers on company job sites, safety and communication concerns caused by language barriers, techniques used against language barriers, and success of these techniques. The interview was then analyzed, and the findings reported in this paper.

Company Case Study

The company selected to perform the case study on is a large-scale general contractor with over 130 years in business in the United States. They operate in several states, with a major presence in California, Texas, and Washington. They have a diverse portfolio of projects in sectors such as affordable housing, aviation, healthcare, and higher education. With self-perform teams in concrete,

demolition, and more, the company understands the importance of safety on job sites for everyone. For this case study, the focus was on the company's Northern California projects. Many of the self-perform teams, as well as the subcontractors managed by the company, employed Hispanic workers, providing a great sample for this case study.

Results

For the one-hour interview, the company representative was asked a series of questions, following three main themes: (1) language barrier issues encountered on the job sites; (2) techniques implemented to combat language barriers; and (3) effectiveness of implemented communication techniques. Each of these is discussed in more detail in the sections that follow. The company representative has worked in the construction industry for seven years and has been the company's safety officer for three years. To protect the identity of the company representative, the company representative will use the pseudonym of Diaz.

Language Barrier Issues Encountered on Job Sites

To better understand some of the problems encountered as a result of language barriers, the company representative was first asked what language-barrier-related issues they had experienced as a safety officer on their company job sites. The most prevalent issue was having safety meetings, training, and materials that were ineffective for employees with low English skills. When written safety rules and materials were distributed purely in English, workers with low English skills would seem confused after glancing over the material. When meetings were held only in English, workers would quickly become disengaged; after the meetings, they would seem unsure or confused. These workers were not benefiting from safety training and materials as they did not understand them. Diaz experienced many occasions where a safety topic would be covered in an English meeting, such as always staying six feet away from open ledges, and workers would violate the safety topic discussed shortly after the meeting. When asked if they were not present during the safety meeting, workers responded they were present, but could not understand anything being said.

A second issue commonly experienced by Diaz was related to communication. Site management such as superintendents and foremen who only spoke English had a very difficult time communicating with workers with low-English skills. Communication would be done through hand signals or a bilingual third party; however, both alternatives presented issues. Hand signals were only effective with very simple messages, and a third party was not always around to translate messages. Poor communication can lead to accidents on job sites; for example, if workers knew of a potential hazard on the job site, they might keep this knowledge to themselves because they would struggle to communicate it to management.

Techniques Implemented to Combat Language Barriers

Diaz was then asked what techniques were being used by the company on their job sites to reduce the harmful effects of language barriers. The first technique was that of always having a translator during meetings. Whenever safety meetings or trainings take place, Diaz ensures there is a translator present for each language spoken by workers with low English skills. Since Diaz speaks Spanish, they translate for Hispanics who do not speak English. However, there are workers who speak languages other than Spanish, requiring additional translators. The translator does not have to be someone in management, like a superintendent or foreman; it can be a fellow worker who speaks English. Beyond

just having a translator, Diaz pays attention to body language and facial expressions of workers to ensure they are understanding the topics covered. If the workers still seem confused or disengaged, Diaz slows down the meeting to ensure everyone is understanding.

Another technique used by Diaz is having separate meetings for workers with low English skills. Rather than having one large meeting for all workers, a smaller meeting is held where translation is needed. The smaller meeting carries a slower pace that allows topics to be communicated more effectively. Additionally, in a smaller group setting, workers can feel more comfortable asking questions. Overall, the separate groups allow for more effective learning.

A third and final technique discussed with Diaz was that of offering English classes to workers. This is not a technique currently employed at their company, but Diaz had studied its implementation at other companies. Teaching workers English helps eliminate many of the communication and safety issues caused by language barriers. However, it is a big investment to make, both for employers and for workers. This technique is more advantageous to implement with younger workers who are predicted to have a long career with the company and who can advance to management positions. They stated that although this could be an effective measure, their company would likely only be willing to offer English classes for their self-perform teams.

Effectiveness of Techniques

Diaz has felt that techniques one and two, implemented at their job sites, have made a difference in reducing the negative safety impacts caused by language barriers. However, all three techniques discussed have their downsides that are important to keep in mind. Technique one of having a translator for all meetings can become ineffective if the translator is not doing an adequate job. A translator, which can sometimes be a fellow worker, rushing through the message and not taking care that workers are understanding can cause ineffective communication. To prevent this from happening, Diaz emphasized the importance of reading the body language and facial expressions of the workers. From these non-verbal cues, one can see if the workers are absorbing the information or not. When the translator is doing a poor job, Diaz asks them to slow down and explains the importance of everyone understanding the information.

Technique two of holding a smaller, separate meeting requires more personnel and/or time to conduct multiple meetings. This, however, can be a small additional burden for a very effective way to communicate safety topics.

The third technique of having workers learn English requires a big investment, both from the employer and employee, that not everyone is willing to make. Since it is a big investment, companies might not be willing to make it for employees that will soon retire, and with construction's aging workforce, that eliminates a large portion of workers.

Overall, techniques one and two serve as great ways to address both communication and safety concerns caused by language barriers. Workers often feel they don't receive enough and adequate training (Menzel & Shrestha, 2012), and both techniques can help change that. When Diaz asked workers what they thought of having translators for meetings and smaller, separate group meetings, workers often responded positively. They felt both techniques helped them absorb the information more effectively.

Conclusion

The purpose of this paper was to present techniques that a construction company is successfully implementing to minimize the harmful consequences of language barriers. Companies can use the findings from this report as a resource on their own job sites. Working with Diaz, it became clear that workers truly benefit from the steps their companies take to ensure a safe workplace for everyone, including (1) having translators in safety meetings; (2) conducting smaller meetings with groups in their native language; and (3) providing English language training. Although for this study it was difficult to obtain number-driven data and statistics, the qualitative research collected pointed towards positive results. With that being said, there are ways to improve this project and opportunities for future research.

There were several limitations to this project. First, the case study only included the perspective of the safety officer and their perceptions of the effectiveness of the utilized communication methods. Additional research should be performed to interview workers who work for companies that implement these safety communication techniques to understand the effectiveness of the techniques and worker perceptions. Speaking with workers directly can provide primary insight into some of the lesser-known struggles caused by language barriers. Additionally, workers can provide better feedback on the techniques being implemented by their company. Preparing a small list of interview questions for workers would serve as a great investment of time.

This study was a case study of one company and ways they approached communication barriers specifically in regards to non-English speaking workers. Future research could be conducted on additional companies to determine other methods for implementing safety communication since other companies could be implementing different techniques than the ones mentioned in this paper. Future researchers could begin to compile a list of techniques companies are using, including the ones presented here. The end product could be a detailed list of techniques that companies could reference, learn from, and implement on their job sites.

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