Bilingual Training Course for Redwood Residential Fence Company

Adriana Bernabe Martinez
California Polytechnic State University
San Luis Obispo, CA

The Hispanic population has been increasing in the US over the past twenty years, and made up 42.9% of the construction workforce in 2018 (Data USA, n.d.). Because of this population increase, it’s expected that 1 in 4 persons will be of Hispanic descent by the year 2050 (Canales, 2009). Due to this increase, many language barriers exist that can create serious issues in construction. Language barriers cause productivity to decrease and increase concerns for the workers’ safety. Although OSHA trainings are available in Spanish, the opportunity to take these courses vary from company to company and it is rare to see smaller companies, with a majority Hispanic workforce, utilizing these online courses. To solve this issue, this project teamed up with Redwood Residential Fence Company in Santa Rosa, California, to develop a bilingual training course for laborers and tailored the course with information related to their specialization. A 4-hour course was developed, consisting of four sections which teach basic construction vocabulary and phrases, and one section which goes in depth into OSHA safety trainings. The hope is that after taking this course, this information helps the workers in their daily lives and facilitates communication.

Key Words: Bilingual, Training, Construction, Safety, Communication

Introduction

Background / Problem

The construction industry is one of the United States’ largest industries, making up 7.03% (9.4 million) of the entire workforce and is also one of the most dangerous industries, making up 20.3% of all occupational deaths in 2002. (Brunette, 2005). According to associate professor Maria J. Brunette, from the College of Medicine at The Ohio State University, “among all the construction occupations, laborers experience the greatest number of fatalities” (Brunette, 2005). In her research, she found that Hispanic construction workers enter the construction trade by being employed first as laborers, followed by 14% working as carpenters and 13% as painters (Brunette, 2005). According to Data USA, Hispanics made up a total of 42.9% of the construction laborer workforce in the US in 2018 (Data USA, n.d.). Currently, Hispanics make up the majority of the construction workforce in California, New Mexico, and Texas; they are considered the largest minority in the US, and are projected to make up about 25% of the workforce by 2050 (Canales, 2009).

Given the high levels of Hispanics in the construction workforce, many problems tend to arise due to language communication barriers. According to Brunette’s research, “over the past 2 decades, the United States has experienced one of the largest waves of immigration in its history,” receiving approximately 900,000 immigrants each year (Brunette, 2005). Many of these communities tend to work for the construction industry, which explains the increasing level of Hispanic labor within
construction. Many of the immigrant laborers lack the basic vocabulary needed to communicate with different groups; “on average, Hispanic immigrants have lower levels of formal education than other groups; 56% have completed fewer than 12 years of schooling, and over half report speaking English not well or not at all” (Brunette, 2005). Due to this language barrier, many Hispanic workers experience more hazardous working conditions and “have injury and illness rates 2 to 3 times bigger than non Hispanic Whites” (Brunette, 2005).

The language barrier is not only a problem for the laborers, but also a problem for construction supervisors. According to a survey conducted for construction supervisors by Iowa State University, they reported that 82% of respondents said that “communication” and “language” barriers are the most common problems encountered in the jobsite (Canales, 2009). There have been previous propositions over the years on how to alleviate this issue on language barriers between management and the workforce, including bilingual instruction for the management side, but this is not enough to solve the issue because management often forgets this Spanish education. Canales reports that 60% of the supervisors had taken a Spanish course in high school or college, but their previous education was “not enough to communicate clearly with the Hispanic crew members and many indicated that they had forgotten the majority of the previously learned material” (Canales, 2009). Because most American supervisors are unable to communicate directly with their Hispanic workforce, many utilize a facilitator to help bridge this gap. The supervisors in Canales’ study note that one issue arises from relying on a facilitator for communication; when the facilitator does not show up to work, the productivity decreases and the concern for the workers’ safety increases because of the “improper transmission of tasks and safety instructions to Hispanic workers” (Canales, 2009).

Today OSHA trainings are a helpful tool which facilitate teaching safety procedures to the workforce in construction environments. It is often a requirement in several construction companies because it not only protects the labor force, but also protects the construction company from certain liabilities. Although we see OSHA as a common requirement for big general contracting companies, often times smaller construction companies do not require these trainings and several of the workforce is unknown to these teachings. In an interview conducted with two workers at Redwood Residential Fence Company in Santa Rosa, California, the workers state that they have both been carpenters for over 15 years and have worked in several laborer jobs over the course of their careers; yet they have never received any type of safety training ever in their lives, because in lower-level construction fields, like wood framing and fence building, the trade is more lenient. They say that they have had several run ins with OSHA inspectors who cite them for not wearing the proper PPE, for exposed wiring in their equipment, and have had several accidents in the field that could have been prevented if they had been exposed to safety training.

OSHA provides safety training in English and Spanish, which is helpful, but it all depends if the Hispanic workers are even able to receive this training from their companies. Although this is a great step towards keeping the Hispanic workforce safe, it does not solve the issue regarding the language barrier that exists. Besides a safety concern, the language barrier also plays a role in the career development of the construction workers. Many skilled Hispanic laborers have lost several job opportunities because they cannot communicate effectively in English. In the survey conducted by Canales’ team, construction laborers were asked if they would take a bilingual course in order to be promoted to a supervisor role, and 86% of them answered positively (Canales, 2009). This inclination is because, according to Canales’ research, “a construction craft worker who will become a supervisor is expected to be fluent in English, since this is one of the initial requirements for advancement opportunities within an American construction company.” (Canales, 2009).
Solution

To summarize the problem, there is a large Hispanic workforce who is exposed to safety risks and kept from advancing their careers due to language barriers that exist in the construction industry between the labor force and the construction supervisors. In order to mitigate this problem, this project’s aim was to create a bilingual safety training course targeted towards the labor force. Since the management side historically has had easier access to bilingual courses, this project was designed to help bridge the gap on the labor force side, to facilitate their work experience and attempt to create a safer work environment. Since there are countless construction trades that all have their own particular specializations, in order to make a useful course, this project teamed up with Redwood Residential Fence Company in Santa Rosa, California and tailored the course with information related to their specialization.

With the initial consultations with Redwood Residential, the idea was brought up to the owner, Ubi Ruiz. Mr. Ruiz said that a course like this would be ideal for his company because the majority of his workers consist of Hispanic workers who do not really speak English. One of his biggest problems is that it is hard for him to find both a qualified skilled carpenter who speaks English, its either one or the other. Because of this, his three men crews tend to consist of one bilingual foreman and two others. Sometimes his crews don’t have a bilingual person, so a common issue they run into on the field is a language barrier between the crew and the client; the crew must then call into the office to try to get a translator on the phone to help mitigate the issue at hand. Because of these issues, Mr. Ruiz was excited at the possibility of having a bilingual training course for his workers because he said it would be a great benefit for them.

Process

After agreeing with the owner on making a bilingual course for his company, research on how to conduct a course like this was needed. In the article, “Development of Educational and Training Materials on Safety and Health: Targeting Hispanic Workers in the Construction Industry”, Brunette describes the journey she went through to create the Spanish version of the 10-hour OSHA training for Hispanic workers in construction. In her findings, she interviewed several Hispanic construction workers and found what their best learning styles were in order to convey the information effectively to the Spanish speaking low education audience. The guidelines she made for creating the materials were to: “Use language that is familiar with workers; keep materials at limited literacy level; use plenty of clear and realistic illustrations, graphics, or photographs; use generic, “standard” Spanish, to provide equivalent Spanish versions of a given word or term, when appropriate; include basic education on OSHA laws and worker’s rights to safe and healthy conditions of workers in the training program,” (Brunette, 2005).

Another great source of information came from Professor Augusto R. Canales’ research project from Iowa State University, where he created a language course for management and for construction laborers. Canales’ course consisted of a presentation, and a booklet that the students would use to follow along. The teaching process for Canales’ class was very useful, because how the information was taught went in the following sequence: “(1) the word is shown and read to participants by the instructor in English and Spanish; (2) participants repeat the word several times; (3) participants write the pronunciation of the word (phonetic sound); and (4) comments are discussed.” (Canales, 2009). Both Canales and Brunette’s teaching methods were to be utilized for the process of this course creation.
After this literacy review, an interview was conducted with Jose Luis Bernabe, one of the workers from Redwood Residential. This interview was meant to get a more detailed description of the daily lives of workers in the company; what they encounter on a daily basis; the tools, equipment and materials they use; and other facets of their trade. Then with the information given, research was conducted into the 10-hour OSHA training provided by Cal Poly. The 10-hour OSHA training course consisted of various safety sections, but the following sections were used to create an adequate training plan to inform the students on information related to their line of work: “Intro to OSHA”, “Electrocution Hazards”, “PPE”, “Noise Protection”, “Excavation Safety”, “Stairways and Ladders”, “Hand and Power Tools,” (OSHA, & ClickSafety.com., n.d.).

**Deliverables**

After all relative information was compiled the course was made. This project consisted of the Training Guide, the Booklet, and the laminated Pocket Reference Guide. This deliverable was a total of 57 pages, printed and delivered to the owner. The training guide was 40 pages, the booklet was 15 pages, and the pocket reference guide was 2 pages. The entire deliverable can be found in the attached Appendix.

The course outline / syllabus is shown on figure 1 and is a great summary of what is within the manual, and how the instructor is meant to convey the course.

**Course Outline:**

- This course is to be given in one 4 hour session by a bilingual instructor.
- It shall consist of a visual presentation slide show to accompany the booklet handout guide.
- The Booklet will consist of several images along with their English term (in Blue) and their Spanish term (in Red).
- There will also be a Phonics pronunciation for the english term.
- There will also be a laminated pocket reference guide that workers can take with them and reference for future use.

**The course will consist of Four Sections:**

1. **Simple direct language phrases to facilitate basic communication & Survival phrases;**
2. **Basic OSHA standards to follow;**
3. **Construction related vocabulary;**
4. **Names of Tools, Equipment and Material**

- **Booklet instruction:**
  - After the instructor introduces the respective section, the teaching style will follow as proposed:
    1. The word is shown on the slideshow and read to participants by the instructor in English and Spanish;
    2. Participants repeat the word several times;
    3. Participants write the pronunciation of the word (phonetic sound);
    4. Comments are discussed.

- Follow-up
  - During weekly toolbox talks, there will be constant implementation of bilingual instruction and review of the course teachings.
  - This follow-up will be useful because the repetition of such instruction will aid laborers to cement the knowledge they learned for future reference.

Figure 1: Course Outline
Training Guide

The Training Guide is the heart of the project, because the other 2 deliverables are subsequent summaries of each other. The course binder contains an introduction and purpose, the course outline, the training guide, the booklet, and the pocket reference guide. The Training Guide is broken down into the four main sections of the course: (1) Simple direct language phrases to facilitate basic communication & Survival phrases; (2) Basic OSHA standards to follow; (3) Construction related vocabulary; and (4) Names of Tools, Equipment and Material.

This course is designed as a 4-hour seminar which would ideally take place on a Saturday. It requires a bilingual instructor, ideally with a construction background to effectively communicate the material. In order to create an adequate program, the material within the deliverable was reviewed by both the owner and one of the workers to ensure that the language was comprehensible and understandable for the Spanish dialect spoken in that company.

Since the course is designed for a primarily Spanish speaking audience, the entire training guide is written in both English and Spanish. To facilitate cognitive recognition, the English sections were written in blue, while the Spanish version was written in red. Each section contains an introduction that the instructor reads to the class, and then proceeds to introduce the material to the students, as presented in Carnales’ research; this is best summarized in Figure 1 above. Each section is very similar, including an introduction to the importance of the section followed by a list of words or phrases that the class will review. The only distinct section is the OSHA safety section which is more like a long presentation of significant OSHA safety practices and regulations the workers should follow in their line of work.

Booklet

As previously mentioned, the Booklet is a handout that outlines the specific vocabulary and phrases that the workers are meant to learn. Everything within the booklet is presented on a future slideshow of the Training guide material. As seen in figure 2, each section contains the vocabulary words, with the English and Spanish translation, along with an image and a space below to write the phonetic pronunciation of the word. When the instructor presents the vocabulary on the screen, it contains the image, the translations, and a phonetic pronunciation that the workers may use to write down. If they do not like how the premade phonetic word is presented, they can make their own phonetic pronunciation if they feel it sounds better another way.
4. Names of Tools, Equipment and Material

4. Nombres de Herramientas, Maquinaria y Materiales

<table>
<thead>
<tr>
<th>Tools / Herramientas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image / Imagen</td>
</tr>
</tbody>
</table>
| ![Image](image1.png) | English: Bar  
Español: Barra  
Pronunciación Fonética: |
| ![Image](image2.png) | English: Brush  
Español: Cepillo / Escoba  
Pronunciación Fonética: |
| ![Image](image3.png) | English: Chalk line  
Español: Línea de tiza  
Pronunciación Fonética: |
| ![Image](image4.png) | English: Chainsaw  
Español: Motosierra  
Pronunciación Fonética: |
| ![Image](image5.png) | English: Circular Saw  
Español: Sierra Circular  
Pronunciación Fonética: |

Figure 2: Booklet - "Names of Tools, Equipment and Materials" Section

Pocket Reference Guide

Finally, the Pocket Reference Guide is probably one of the most valuable outcomes of this deliverable. This guide is a laminated brochure which summarizes every single vocabulary word and phrase that the class learned during the session. As seen in Figure 3, the brochure is separated into the 4 main sections of the course, and has both the English and Spanish words written in the color scheme previously mentioned (blue and red), as well as the related image from before. This brochure is a more condensed version of the Booklet, so the workers should have an easy time locating the information. This item is valuable because since it is laminated, it can be folded and taken with them wherever they go, without having to worry about damaging it too much. They can pull out the brochure at work and get some repetition on the material, or even use it to communicate with the client out in the field and point to what they are talking about. The brochure is set up in a trifold design and is front to back.
Figure 3: Pocket Reference Guide

Survival Vocabulary / Vocabulario para Sobre vivir
1. Help
2. Send me
3. Send for
4. Here!
5. Cool!
6. Watch your step
7. Mist and Planned Reality

OSHA Vocabulary / Vocabulario de OSHA
1. Goggles
2. Gloves
3. Boots
4. Hard Hat
5. Ear Plugs
6. Ladder

Construction Vocabulary / Vocabulario de Construcción
1. Build
2. Dig
3. Bulldozer
4. Excavator
5. Forklift
6. Truck
7. Tractor

Tools / Herramientas
1. Bar
2. Box
3. Chisel
4. Screwdriver
5. Saw
6. Drill
7. Hammer
8. Handsaw
9. Jack Hammer

Equipment / Maquinaria
1. Air compressor
2. Air hose
3. Auger
4. Generator
5. Leaf blower
6. Wheelbarrow

Talking to Clients / Hablando con Clientes
1. Hi I’m NAME from Redwood Residential, and I will be working on your fence today.
2. Can you tell me where the fence will be?
3. My office told me that your job consists of: _______. Is this correct?
4. Do you want to keep any of the old fence material or do you want us to take it away?
5. Hello Sir/ Ma’am, we have completed the job, do you want to inspect it?
6. Do you need us to fix anything?

Material / Material
1. Cement
2. Dirt
3. Gravel
4. Sand
5. Soil
6. Water
7. Pressure Treated Wood Posts
8. Redwood
9. Cedar Wood
10. Lattice
11. Hard Wire
12. Horse Wire
13. Deer Wire
Conclusion

To summarize, the goal of this project was to create a bilingual safety training course as a means to bridge the gap in the language barriers that currently exist in the construction industry, which can create a potentially harmful environment. Over the years, the numbers of Hispanic workers have increasingly grown in construction and it is anticipated that by the year 2050, Hispanics will make up 25% of the US workforce (Canales, 2009). Due to this increase, many language barriers exist and are one of the biggest issues in construction. Language barriers cause productivity to decrease and the concern for the workers’ safety to increase. Although there currently are OSHA trainings available in Spanish, the opportunity to take these courses vary from company to company and are a rare phenomenon to see in smaller construction companies, where the majority of the workforce consists of a Hispanic population. For this reason, this course was specifically tailored for the workers at Redwood Residential Fence Company in Santa Rosa, California, because they resonate with a lot of these issues.

This 4-hour course consists of four sections which teach basic vocabulary and phrases that the workers are exposed to, and one section which goes in depth into OSHA safety trainings. The hope is that after taking this course, this information helps the workers in their daily lives and facilitates their communication with others, as well as to keep them safe from any safety concerns due to the OSHA information presented to them. After this course is implemented into Redwood Residential, the goal is that it is followed up by being implemented in the company’s toolbox talks. This follow-up will be useful because the repetition of such instruction will aid laborers to cement the knowledge they learned for future reference.
References


Redwood Residential Fence Co. Interview with Jose Luis Bernabe [Telephone interview]. (2021, January 25).

Redwood Residential Fence Co. Interview with Jose Bernardo Bernabe [Telephone interview]. (2020, May 6).

Redwood Residential Fence Co. Interview with Owner Ubi Ruiz [In Person interview]. (2020, July 3).