The objective of this report is to initiate the development of an introductory Spanish topics course within the construction management curriculum at Cal Poly. With each construction management student at Cal Poly that graduates, the industry is gifted another future industry expert. However, in order to be truly successful in construction, one must be excellent at communicating with, and coordinating team’s activities. There is no question that workers in the construction industry are subject to life threatening hazards on a regular basis. In order to mitigate the potential harm of these hazards, all steps must be taken in managing these risks. Faults in communication between coworkers not only can lead to inefficiencies, but workers can also end up injured. With a large number of laborers in America being of Latin descent, the Spanish-English-language-barrier is something of high importance, and should not go unrecognized.

Upon completing the Spanish in Construction topics course, students will have the skills necessary to communicate with Spanish speaking workers in order to help diminish these safety hazards.

**Keywords**: Bilingual, Spanish, Teaching, Safety, Learning

**Introduction:**

Unlike many other industries where the workforce is not subject to daily hazards, construction work can produce a number of harmful and potentially life threatening hazards on employees whenever they step on a job site. To mitigate the risk of these hazards, organizations like OSHA, the Occupational Safety and Health Administration, set the safety standards to be followed on job sites. Although safety standards can be imposed on a job site, they will be proven ineffective if not everyone is aware of, and understands, them. The construction industry requires employees from various backgrounds to work with one another, and communicate seamlessly in order to complete the task at hand. With communication being the building blocks for success, having employees speak the same language, or having the ability to translate for one another, is a characteristic that should be found on each construction job site.

It is no myth that the Spanish language is used as a means of communication in California. From a census taken in 2013, it was found that 36.4% of Californias labor force was Hispanic and spoke Spanish as their primary language (Bureau of Labor Statistics). With nearly 40% of the workforce on a construction job site having the potential to speak Spanish as the
primary language, it is evident that those directing the labor force should have some educational background in regards to speaking Spanish.

According to census data, the Limited English Proficient population within the United States is constantly growing—with 60 million U.S. residents speaking a language other than English at home, and with 25 million being unable to speak and understand English well (Language Access Plan). With Spanish also being one of the most common non-English languages spoken in the United States, all should have a basic understanding of how to speak Spanish.

Sight Translation

Sight translation is the most important skill to be gained from taking this course. As defined by the National Council on Interpreting in Health Care, sight translation is the “oral rendition of text written in one language into another language” (Nat’l Council). A student’s ability to sight translate construction related information from English into Spanish is the end goal of the course. Sight translating is also a highly valued trait in construction, which in turn will cause students to see the value in learning how to speak Spanish. An example of sight translation in regards to construction would be the translation of a scope of work from English into Spanish.

Classroom Types

There are two types of classroom settings where students learn an unfamiliar language: foreign language classrooms, and second language classrooms. A foreign language classroom is made up of a body of students that are culturally homogeneous, and who are seeking to learn a second language. A second language classroom is made up of students, from different backgrounds and cultures, who are trying to learn a new language that is the dominant one (R. Michael Paige). For learning Spanish at Cal Poly, a foreign language classroom is assumed, as English is the primary language at the University, and students are seeking to acquire the skill of being able to speak a second language. Similarly, a foreign language classroom will be assumed for this proposed course.

Methodology:

Survey

There are two factors that can prohibit this Spanish course from being added to the Cal Poly Construction Management curriculum: student interest; and whether or not the course is of value to the construction industry. In order to ensure interest in the course, Austin Changras and I conducted two separate surveys to gauge the importance of this course to both current Cal Poly students, as well as industry professionals. Results from both surveys showed a high interest in the course, and also that speaking Spanish effectively is a valued skill within the construction industry.

From the student survey, we received responses from a total of 8 freshman, 5 sophomores, 12 juniors, and 10 seniors. From their responses, we learned that only 48% of
students were somewhat familiar with speaking Spanish, and that 71% of students would enroll in the course if given the opportunity to do so (Changras et al.).

From the industry professional survey, we received responses from 14 Project Managers, 5 Superintendents, 5 Project engineers, 4 Presidents / CEO’s, 5 Vice Presidents, and the rest of the responses came from people with other positions. From their responses, we were able to note that a majority of workers, 60% to be exact, were only somewhat familiar with Spanish, and that there are indeed language barriers faced in the working world (Changras et al.).

**Interview**

Through an interview with Dr. Marijuan, an Assistant Professor of Spanish and Applied Linguistics, I learned the method that Cal Poly uses to teach students an unfamiliar language. Dr. Marijuan expressed greatly that it is vital that students engage with one another in the classroom through conversation, as well as outside of the classroom either through online discussion, or group work. If students were to study the Spanish language solely through a variety of grammar and vocabulary lessons that were all done individually, the course would be of little value. Resulting from my interview with Dr. Marijuan, is the proposed method for teaching this coursework— a method that is already employed here at Cal Poly through the various foreign language courses that are offered. I speak on the teaching methods and proposed course structure later.

**Results:**

**Course Teaching Method:**

As affirmed by Dr. Silvia, the proposed course will follow the TBLT, or *Task Based Language Teaching*, method. TBLT is the most effective way for students to both understand and retain a new language. By having students engage in tasks, whether it be conversation, or individual assignments, it is ensured that students will retain a greater amount of information upon completing the course. To further certify the effectiveness of the TBLT teaching method, introductory Spanish courses at Cal Poly follow this same exact structure (Marijuan, S).

With the assumption that the majority of students who enroll in this class will have little background knowledge of the Spanish language, it must be guaranteed that the course will not move at a pace that is too fast for the students. Resulting from this assumption, came the design for the introductory and second weeks of the course. The 1st week will cover the basics of Spanish speaking— without having a basic understanding of how to speak Spanish, the TBLT method will be useless, as students will not be able to effectively learn Spanish through the course’s activities. The introductory week will follow a textbook that is completely unrelated to construction, but that will facilitate an understanding of conversational Spanish. The textbook of choice is *The Basic Spanish Series: Basic Spanish, 2nd Edition*, by Ana C. Jarvis. The weeks following the introductory period will be broken down by industry sectors: Residential, Commercial, and Heavy Civil.
**Typical Class Breakdown:**

The lessons for each sector will include the *most important* vocabulary from each of the preexisting respective labs at Cal Poly. In order for students to have enough of an understanding of speaking Spanish on a construction site, the vocabulary learned throughout the course will consist of common terms, phrases, and equipment that are found in construction. Students will learn common phrases that incorporate these common terms, and then converse with one another — practicing the novel material. Furthermore, because the purpose of this class is to enhance the safety of future job sites where Cal Poly graduates work, and not to simply give them a competitive advantage when applying for jobs, the OSHA regulations for each industry will also be an additional focus for the entire duration of the class.

A typical week in this course consists of two, two hour periods, and involves students going over the vocabulary for the given construction industry sector that is being covered that week, and then using the vocabulary through conversation. Students will spend the first half of each class learning the new vocabulary, and then will use this vocabulary in face-to-face conversation.

**Assessing Students:**

**Conversations:**

Because learning a new language requires students to actually use the language in real life scenarios, a student’s attendance and participation in the course will have a more substantial weight on their final grade compared to what is typically found in other courses. After working through an introductory Spanish textbook, teaching present tense commands, and studying the grammar for the particular lesson, students will engage in conversations with one another.

**Quizzes:**

Weekly quizzes will assess student’s understanding of the vocabulary of that week. Quizzes can be administered online, and can require students to read phrases and “fill in” missing words, and translate the name of a piece of equipment from English into Spanish. Whatever coursework that is being covered for a specific point, will dictate if and how students should be assessed.

**Midterm and Final Exams:**

Like the weekly quizzes, midterm and final exams will include photos of construction sites and equipment which students will name, common phrases throughout the course that will have missing words that students must “fill in”, etc. There will be a total of two exams administered throughout the duration of the course: One midterm exam at the end of week 4 covering the basics of Spanish, and the information regarding the residential sector. As well as a final exam that will be taken during week 10 (dead week), that will cover the
basics of Spanish, as well as the information regarding the commercial and heavy civil sectors of construction.

Cumulative Paper:

Students will be required to write a paper that describes an observation made on a job site where bilingualism could have benefitted certain instances. By physically going onto a job site, students will get to use their new knowledge from the course, and the course will follow the Task Based Language Teaching method that structures other language courses at Cal Poly.

The paper will also give students the ability to add content to the course. For example, if a student finds a language barrier found on a job site that had not been covered throughout the course’s teachings, then the example could be added into the course. The initial creation of this course would most likely leave out many examples / instances where language barriers are encountered in construction. By giving students the power to add new knowledge, there would be a larger impact on the dilemma of language barriers on job sites, and thus making construction a more safe occupation.

Presentation:

Students will prepare a tool box talk in Spanish as a way to assess their understanding of the Spanish language. Tool box talks are 10-15 minute presentations regarding the safety measures necessary for any activity found on a construction site, and are required by CalOSHA to be performed weekly (Occupational Safety and Health). Students will pick from any of the topics covered throughout the course, and create and present their tool box talk to the rest of the class during the final week of the quarter. By doing so, the course will continue to follow the TBLT methods, and ensure that students have adequately practiced and studied the Spanish language.

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