



Center for Transportation
Research and Education

IOWA STATE UNIVERSITY

Effective Training for American Supervisors with Hispanic Construction Workers

tech transfer summary

RESEARCH PROJECT TITLE

Developing an Effective Construction Training Program for American Supervisors with Hispanic Craft Workers

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The mission of the Center for Transportation Research and Education (CTRE) at Iowa State University is to develop and implement innovative methods, materials, and technologies for improving transportation efficiency, safety, and reliability while improving the learning environment of students, faculty, and staff in transportation-related fields.

Objectives

- Provide American supervisors in the construction industry a tool for more effectively and directly communicating with the growing Hispanic labor force.
- Assess the needs and interests of American supervisors, including the degree of Hispanic cultural awareness among supervisors.
- Give American supervisors the opportunity to be proactive and participate in the assimilation of the Hispanic and American cultures in the workplace.
- Produce valuable and practical training courses for supervisors that link the supervisors' needs and those of the construction industry to create a safer and more interactive workplace.

Problem Statement

Hispanics made up 21.4% of the construction industry workforce in 2004, according to the U.S. Census Bureau. Hispanic workers have the highest rate of fatal work injuries among racial/ethnic groups (4.5/100,000), and the construction sector has more fatal occupational injuries (1,126 in 2003) than any other labor sector. The growing number of foreign-born Hispanic laborers and the construction industry's high rate of work-related fatalities may be associated. The Mexican immigrant population entering the United States typically lacks the literacy skills necessary to communicate effectively in English or even in Spanish, which may contribute to the high fatality rate among Hispanics. On-site productivity is also limited by the communication gap between Hispanic workers and American supervisors. To face these new challenges effectively, workforce diversity awareness needs to increase among American supervisors.

Survey and Course Development

To understand the contractor's perspective on the Hispanic construction workforce's training requirements, American supervisors were interviewed, surveyed, and visited at the office and jobsite. The research team also investigated the diversity efforts of the Associated General Contractors of Iowa, as well as any current training material available for American supervisors. This assessment evaluated whether the contractors' requirements for their Hispanic workforce were being addressed and helped identify the most suitable course delivery models.

Based on the data, results, and recommendations obtained from the surveys, two training courses were developed. One course modified the English as a second language course developed in Phase I of the project ("Developing an Effective Training Program for Hispanic Supervisors and

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Research Description continued

Craft Workers”) into the Spanish as a Second Language (SSL) Survival Course. The other course developed, Concrete Paving Construction Basics (CPCB Course), offers specific technical training based on the needs discovered during the assessment.

Both courses are structured around (1) awareness, which briefly introduces industry risks, accident rates, demographic changes, and diversity issues; (2) skill building, which teaches new adjustments and behaviors; and (3) action planning, which develops problem solving and process improvement. The SSL Survival Course teaches Spanish to American supervisors in four segments: (1) meaning in Spanish, (2) meaning in English, (3) Spanish pronunciation, and (4) a picture of the word as a visual aid. The CPCB Course uses a method similar to that of the SSL Survival Course to fulfill the specific technical and contextual needs of American supervisors quickly; American supervisors may choose from any of 12 subtopics that fit their training needs. For example, see the figure. Each course was delivered to its target audience and improved based on evaluations.

Key Findings

- American supervisors feel that language barriers affect jobsite communication and productivity; most workplace challenges fall under “Communication” or “Language.”
- Training American supervisors in Spanish would be quicker, more cost-effective, and easier than training Hispanics in English, because supervisors are fewer in number and are better educated.
- The SSL Survival Course and the CPCB Course address current Hispanic workforce and American supervisor issues characteristic of construction companies in the United States.

Implementation Benefits

- A better awareness of the Iowa construction industry’s Hispanic workforce can lower fatality rates among Hispanics and improve safety and productivity.
- An adequate and continuous learning environment for both American supervisors and Hispanic workers can ensure common values and goals.
- The active involvement of American supervisors in the bicultural integration effort will help produce tangible results and bridge the communication gap.
- The SSL Survival Course and the CPCB Course help integrate Hispanic workers and American supervisors by improving the supervisors’ construction-related Spanish language skills.
- The SSL Survival Course offers practical Spanish language instruction for real work situations in which American supervisors must instruct their workers.
- The CPCB Course can meet the technical communication needs of American supervisors with Hispanic crewmembers, fit into American supervisors’ time constraints, and appeal to specific road construction projects.



Phrases from the “Placing Concrete” CPCB Course

Implementation Readiness

The courses are mostly suited for construction companies that employ a large percentage of Hispanic workers and work mostly in concrete pavement construction. American supervisors who oversee Hispanic crews should take at least four of the CPCB Courses that best fit their needs.

Contracting companies should be the driving force behind the implementation of these training programs, since upper-management involvement and support plays a big role in the success of the program. The courses must fit the contractors’ work schedules or seasons. Training programs in Iowa are best scheduled before the spring construction season.

It is recommended that the courses be delivered by individuals who possess Hispanic and American cultural experience in the construction industry and who are fluent in both Spanish and English. This will help students understand the differences between the two cultures and encourage interaction in the classroom through real experiences.