RESEARCH
PROJECT CAPSULE [13-2SA]
October 2012
TECHNOLOGY TRANSFER PROGRAM

Developing a Highway Safety Fundamentals Course

JUST THE FACTS:

Start Date:
July 1, 2012

Duration:
18 months

End Date:
December 31, 2013

Funding:
State: TT-Reg & RITA

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Sponsored jointly by the Louisiana Department of Transportation and Development and Louisiana State University

POINTS OF INTEREST:

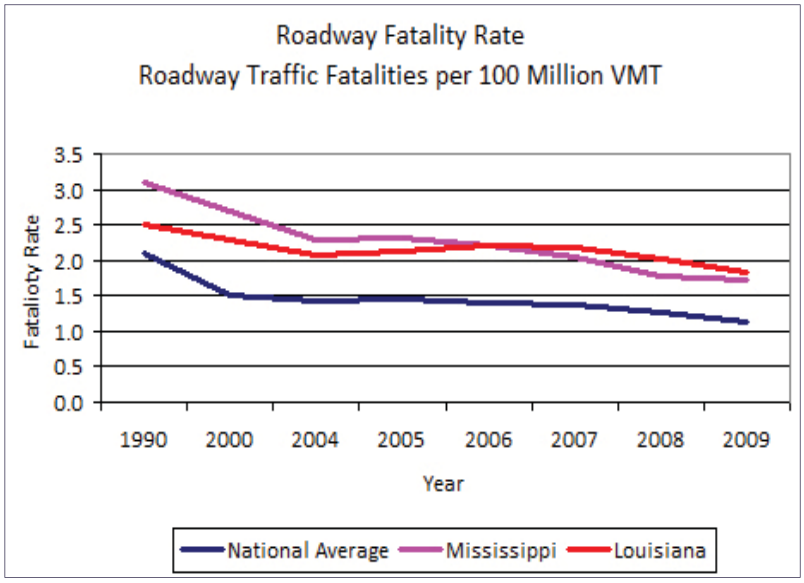
Problem Addressed / Objective of Research / Methodology Used Implementation Potential

This project is associated with the Louisiana Transportation Research Center (LTRC) partnership with the National Center for Intermodal Transportation for Economic Competiveness (NCITEC). The NCITEC is a University Transportation Center housed at Mississippi State University funded by the Research and Innovative Technology Administration (RITA) of the U.S. Department of Transportation (DOT).

PROBLEM

Although the need for road safety education was first recognized in the 1960s, recently it has become an increasingly urgent issue. To fulfill the hefty goal set up by the AASHTO Highway Safety Strategy (cutting traffic fatalities in half by 2020) and by the state (Destination Zero Death by Louisiana Strategy Highway Safety Plan), it is critical to have a workforce that fully understands the fundamentals of highway safety. At the present time, the most experienced highway safety engineers acquire their expertise through on-the-job training. The retirement of those experienced professionals in the next decade will result in a gap in the roadway safety workforce development. Ensuring that newly entering engineering students are equipped with a sufficient background in highway safety is critical to sustaining the progress of reducing the number of crashes in recent years. Therefore, one way to ensure such an adequate workforce is to develop a college level course to educate students, which has not been done in the past.

Although the NCHRP Project 17-40, "Model Curriculum for Highway Safety Core Competencies," has produced training materials on highway safety, it targets a broad audience of all levels of government, as well as representatives of the private sector and non-profits. The course titled "Road Safety 101" clearly shows that it is not intended for a systematic safety education in the field of engineering.



Preparing engineering students for future work in highway safety is particularly important in this region because of our poor performance in highway safety. The traffic fatality rate (fatalities

per 100 million vehicle-miles-traveled) in Louisiana and Mississippi has persistently been higher than the normal average. Traffic crashes bring a hugely negative impact not only on public health but also on sustainable economic development due to the lost productivities, lost wages and salaries, medical and long-term care cost, property damage, and travel delay. It is estimated that crashes annually cost about $820.00 for every licensed driver in Louisiana. The need to improve highway safety is significant in this region.

OBJECTIVE

The objective of this project is to develop a much needed roadway safety curriculum for undergraduate and graduate students for the NCITEC consortium universities.

METHODOLOGY

Task 1: Overview

The objective of this task is to collect, review, and compile all information relevant to highway safety education and trainings both in educational institutions and in the workplace.

Task 2: Developing the course curriculum

In this task, a curriculum framework will be developed outlining all major topics needing to be covered in highway safety. The learning objectives for each major topic will also be developed and listed.

Task 3: Developing content list for each topic

With an outline defined, this task continues to develop subtopics for each main topic developed in the course curriculum. These subtopics can serve as an integrated part of the topic, as well as an independent element with its own objectives and logical flow.

Task 4: Interim report

This report will present the results of the first three tasks. A course syllabus will be developed and presented in this report. The syllabus includes not only topics and subtopics but also class assignments and teaching techniques.

Task 5: Developing a detailed teaching materials for "Highway Safety Fundamentals"

A detailed teaching package will be developed in this task that will contain the lecture plans, objectives, and assessment methods for Highway Safety Fundamentals.

Task 6: Final report

The final report will be a comprehensive document covering all elements of the project.

IMPLEMENTATION POTENTIAL

The developed course materials can be used for college education in the classroom setting or for workforce training in the workshop setting. By increasing the workforce short- and long-term competitiveness in highway safety in this region will help the sustainable regional economic development.