



# Overview of Federal Motor Carrier Safety Administration Safety Training Research for New Entrant Motor Carriers

## BACKGROUND

In 2002, the Federal Motor Carrier Safety Administration (FMCSA) issued the New Entrant Program Interim Final Rule in response to the requirement in the Motor Carrier Safety Improvement Act of 1999. The requirement in the Act was based on research findings indicating that new entrant motor carrier operations are significantly less-safe than experienced motor carriers.

Research shows most new entrant motor carriers are generally very small; for example, a carrier with as few as four power units is a relatively large new entrant applicant. Generally, new very small carriers lack the resources to employ a safety professional or to develop a safety assurance program. It appears that many new entrant carriers do not understand either how to run a business or that adherence to Federal Motor Carrier Safety Regulations (FMCSRs) contributes to safer operations and maintenance procedures. Untrained, untested new entrant motor carriers continue to be statistically more likely to cause and/or be involved in crashes than larger, more experienced carriers.

Shortly after the New Entrant Interim Final Rule was issued in 2002, internal discussions began regarding elements to be included in the Final Rule. It was agreed there would be a higher threshold for passing the new entrant safety audit. New entrants that did not pass the safety audit would be required to prepare and submit a corrective action plan, which was proposed to be processed by FMCSA Division offices in each State. That new requirement, once implemented, would increase the workload of Division staff.

To address this projected increased workload, FMCSA began researching the effectiveness of early training and testing to instill the adoption of a safety culture (and an understanding of the FMCSRs) by new entrant

motor carriers. Between 2005 and 2012, FMCSA researched the application of two successive training and testing curricula with new entrant motor carriers in Montana and compared their safety performance results with a control group of new entrants in nearby States.

As part of the second generation research project, FMCSA examined and developed a recommendation for a third-generation blended training and testing curriculum that incorporates e-learning, peer interactions, mentoring, required proficiency testing, and examination of recordkeeping knowledge.

## 1. 2005–06 CURRICULUM RESEARCH DEMONSTRATION PROJECT

FMCSA's first-generation curriculum was applied to 221 new entrant motor carriers in Montana in 2005–06. It was a half-day of one-on-one training led by an experienced instructor. It recommended participants complete homework, which was to fill out the paperwork required for the new entrant safety audit and have it critiqued for completeness and accuracy. Approximately 50 percent of those who completed the training also completed the recommended homework and had it critiqued. These carriers are referred to as the "homework" carriers. Those who participated in the training, but did not complete the homework, are referred to as the "no-homework" carriers.

The homework new entrants' safety performance was statistically significantly better than both a control group of new entrants as well as all interstate carriers as a whole on all the safety performance statistics. The no-homework new entrants' safety performance was also better than the control group, but only statistically significantly on crashes. The report provides a theoretical discussion of the reasons for this split between homework and no-homework, and the

potential for successfully convincing new entrants to adopt a safety culture.

## **2. 2010–12 CURRICULUM RESEARCH DEMONSTRATION PROJECT**

FMCSA’s second-generation curriculum expanded the material that was covered in the 2005–06 curriculum and delivered the instruction in a classroom setting that incorporated small group discussions with the added requirement that trainees must be management (i.e., they could not be consultants or now-level employees). The group sessions provided a longer, more detailed presentation on the regulations, and trainees were required to sign an agreement to complete the homework and participate in the “mock audit” critique of the homework. This group session allowed for peer interactions that reinforced the value of sustained safe operations.

The second-generation curriculum also incorporated a one-on-one mentoring session with a business mentor. The business advice was to assist the carriers understand how to address the economic barriers to operating according to Federal safety standards and how that is beneficial to business survival in the motor carrier industry. Results show that the second-generation curriculum more successfully influenced a larger percentage of trained new entrant carriers to adopt a safety culture than the first-generation curriculum.

## **3. DEVELOPMENT OF THIRD-GENERATION CURRICULUM**

Based on theory for adopting a safety culture, extensive research on e-learning and other traditional learning methods, results from other blended training programs, and results from the first two generations of applied curricula, FMCSA developed a blended third-generation curriculum. It includes training and testing in safety and best business practices. The curriculum incorporates performance-based, technology-enhanced e-learning. It begins with an introductory session, allows for a challenge test for those who want to bypass the training, followed by e-learning for those needing it, followed by facilitated group discussions, concluding with a performance test and the equivalent of the off-site safety audit. This curriculum will be beta tested and refined in 2015.

## **Curriculum Development**

Available resources and reference materials were used to development the initial version of the third-generation curriculum. At the suggestion of FMCSA’s Field Associate Administrator, materials pertinent to addressing the economic barriers to safety compliance by new entrants may be given greater attention and prominence. The resulting blended curriculum thus covers a list of specific learning outcome requirements and metrics. The beta test will examine any needs for modifying the curriculum to better meet the needs and capabilities of the target trainees.

### **Goals of the Third-Generation Curriculum**

- Enhance new entrant training to more successfully foster establishment/adoption of a safety culture (thus reducing crashes and fatalities).
- Document how to identify and prepare a large pool of supervisors and facilitators for such training and testing. (The supervisors will help with the e-learning and the facilitators will help with the group discussions.)
- Reduce the cost of training and testing (without reducing their effectiveness).
- Provides a model curriculum that could be used to meet the needs of the requirement in the Moving Ahead for Progress in the 21st Century Act (MAP-21).

### **Standardized Curriculum Could Promote Understanding**

The third-generation curriculum and results of the beta test will be available to the Agency as it evaluates how it wants to meet the MAP-21 requirement for a mandatory proficiency test and whatever else is necessary to ensure the applicant understands the safety regulations [and likely has the ability to comply] before they are granted an interstate USDOT number.

For additional information on these projects, please contact David Goettee at [david.goettee@dot.gov](mailto:david.goettee@dot.gov). To read the complete report, please visit: <https://rosap.ntl.bts.gov/view/dot/208>