

Project Title: Mission Intermodal Excellence

Principal Investigators:

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TRB keywords: Intermodal transportation, supply chain management, transportation, educational project

Funds Requested: \$69,645

Project Summary:

The main objective of this project is to continue educating K-12 students about intermodal transportation. In 2012, NCITEC funded our K-12 project which aimed to develop tools, such as, lesson plans and hands-on activities that would introduce K-12 students to intermodal transportation. We will be delivering our first summer training program for K-12 teachers during June and August, 2013. Outcomes of this summer program are lesson plans which will be developed by the PIs and the teachers. In Fall 2013, the lesson plans and hands-on activities developed will be used in the classroom. We are now requesting funds in order to continue offering the summer internship program for teachers during Summer 2014, and also continue with classroom activities and competition during Fall 2014.

The goal of the summer training program is to introduce K-12 teachers to the benefits and challenges of using intermodal transportation. This summer program consists of two phases. Phase 1 will take place in June, and phase 2 in August. During phase 1, the teachers will be introduced to intermodal transportation. The program for this phase includes a number of presentations from experts in different areas of transportation, such as, airline, barge, intermodal and rail transportation. Our speakers come from different engineering departments of MSU, Sociology Department of MSU, FedEx, CN Railway, and Tenn Tombigbee Waterway Development Council. We also plan to take field trips to the port of Columbus, GTR airport, and Amtrak Hub in Meridian. During this phase, the MSU team will be providing teachers with ideas about incorporating intermodal transportation concepts in their curricula. The team will be presenting a number of hands-on activities which can be used in the classroom. Each teacher will have about 1 month to reflect on the material presented during phase 1 of the summer training and develop one sample lesson plan. During phase 2 the teachers will be presenting their intermodal-related lesson plans. The teachers and the MSU team will be discussing improvements of the lesson plans, improvements of the hands-on activities, and implementation of these activities in the classroom during Fall semester.

The goal of the activities planned for Fall semester is to deliver the lesson plans and hands-on activities. The material will be delivered by the PIs in cooperation with the trained teachers. Finally, during Fall semester we plan to organize a competition with the students who have participated in this program. Our team is preparing two sets of curricula materials. One set is designed for students of grades K-5. The other is designed for students of grades 6-12. The competitions for the two groups of students will take place on the same day. However, the structure of the competition will be different for these groups. The purpose of addressing these two groups of students separately is to develop lectures and class examples that reflect their level of knowledge and understanding of math and science within the construct of differentiated learning.