Transportation Education Development Pilot Program (TEDPP)
In 2008, the U.S. Department of Transportation awarded $979,829 to the University of Vermont’s Transportation Research Center (TRC) as part of a $1.01 million Transportation Education Development Pilot Program (TEDPP).
The TRC TEDPP grant supports four innovative pilot programs.
TRC TEDPP Project Overview

- Transportation Systems Institute (TSI)
- Transportation Systems Academy (TSA)
- Second Careers in Transportation (SCT)
- Community Colleges (CC)
Transportation Education Development Pilot Program (TEDPP)

• *Three* programs are aimed at attracting and retaining skilled workers. Non-traditional labor sectors (e.g. young adults, retirees, veterans or people with disabilities) are provided with transportation career awareness and skill building.

• *One* program has assessed the capacity of community colleges nationwide to participate in transportation workforce development.
Industry Facts

- 40% - 50% of the transportation workforce will retire within the next 10 years.
- Fewer people are going into key transportation fields.
Why the need for Transportation Workforce Development?

**Industry Facts**

- There is much competition from employers in other industries.
- We need a workforce that represents our nation’s diversity.
TEDPP Partners

- AARP Vermont
- Community High School of Vermont
- New Hampshire Local Technical Assistance Program at University of New Hampshire
- Maine Department of Transportation
- New Hampshire Department of Transportation
- Vermont Agency of Transportation
- Vermont Associates
- Vermont Department of Corrections
- Vermont Technical College Technology Education Division
Program #1
Transportation Systems Institute
The TRC partnered with Vermont Technical College Technology Extension Division (VTC TED) to successfully implement the first pilot group of the Transportation Systems Institute.
This program was created to address the needs of incumbent state transportation workers within Vermont, New Hampshire and Maine.
A *needs assessment* was conducted of VT, NH & ME Departments of Transportation which revealed a need for several trainings.
The first group of 15* transportation employees were selected from:

- Vermont
- New Hampshire
- Maine

* Five participants from each state.
Transportation Systems Institute (TSI)

TSI training modules were led by Vermont Technical College professionals and outside experts and included the following curriculum:

- Leadership Styles & Workplace Principles
- Systems & Organizational Change
- Coaching & Feedback
- Conflict Management
- Trends & Topics in Transportation
- Public & Government Relations
- Government Project Finance
- Adult Learners, Meetings, Mentoring & Train the Trainer
- Attitude, Motivation & Customer Services Skills
- Technical Project Management
- Having Difficult Conversations
- Ageism
- Managing & Optimizing Group Processing
- Critical Thinking
- You Can’t Do it Alone
Transportation Systems Institute (TSI)

TSI participants are experienced transportation professionals who:

• Facilitate retention of existing knowledge.
• Offer transferable skills to co-workers.
• Actively create programs & utilize newly learned tools.
Transportation Systems Institute (TSI)

Participants were asked to rate the TSI program:

![TSI Overall Participant Survey](chart.png)
Transportation Systems Institute (TSI)

Participants were asked two open-ended questions:

1. What did you find the most useful about the TSI?
2. What did you find most challenging about the TSI?
Transportation Systems Institute (TSI)

**Lessons Learned**

- Expand class time to allow participants to absorb the large amounts of information.
- Have regular communications between instructors and supervisors of participants.
- Incorporate “dinners” as part of the daily activities to include all participants.
Transportation Systems Institute (TSI)

Recommendations

- Create a program tool kit.
- Implement a “train the trainer” approach.
- Continue to secure dynamic instructors.
- Outline course expectations clearly.
- Encourage participants to have a high level of commitment.
Transportation Systems Institute (TSI)

Next Steps

Implement the TSI succession and mentoring plan through:

• Training TSI “graduates” to teach Transportation Systems Academy (TSA) curriculum in Vermont and New Hampshire.
Transportation Systems Institute (TSI)

Next Steps

• Continued follow up and conversations with TSI graduates through use of technology learned at the Institute and through regularly scheduled conference calls.
Transportation Systems Institute (TSI)

Next Steps

• TSI graduates will actively participate in the process of choosing new participants for the 2nd pilot group of the TSI.
Transportation Systems Institute (TSI)

Next Steps

• TSI graduates will actively mentor the next round of Institute participants.
Program #2
Transportation Systems Academy
The Transportation Systems Academy (TSA) was created to generate a unique workforce pipeline into the transportation sector.
Transportation Systems Academy (TSA)

The TSA meets multiple objectives:

- Career awareness;
- Skill building and;
- Provides a trained workforce for the transportation industry.
Transportation Systems Academy (TSA)

The TRC is partnered with the VT Agency of Transportation, Community High School of Vermont, Technology Transfer Center at the University of New Hampshire (NH LTAP) and the White Mountains Community College to work with non-traditional labor pools of individuals to provide career awareness and skills in transportation.
Participants learn valuable transportation job skills.

Successfully completing these 11 career-oriented courses will prepare students for jobs in the private and public sectors of the transportation industry.
The TSA successfully completed the first pilot in Vermont, with plans to conduct a second pilot in New Hampshire.
Transportation Systems Academy (TSA)

First Pilot Group

- Community High School-Vermont students were the first group to successfully complete the first pilot of the TSA.
Transportation Systems Academy (TSA)

TSA Curriculum

- Municipal/Transportation 101
- Construction Math
- Citizenship and Community Participation
- Winter Roads
- OSHA (Certification)
- Basics of a Good Road
- First Aid/CPR (Certification)
- Work Zone/Flagging (Certification)
- Project Planning & Selling
- Supporting & Creating Respectful Work Environments
- CDL Basics*

* New course to be offered in the 2nd pilot in partnership with the White Mountains Community College.
Transportation Systems Academy (TSA)

All TSA Graduates will receive:

• Steel-toed boots, an internship and/or job placement to enable them to start a career
Transportation Systems Academy (TSA)

Program Evaluation

What was your overall impression of the TSA courses?

- Municipalities/Transportation 101 N=17
- Construction Math N=8
- Citizenship & Community Participation N=16
- Winter Roads N=18
- OSHA-10 N=16
- Basics of a Good Road N=16
- First Aid/CPR N=15
- Work Zone/Flagging N=13
- Project Planning & Selling N=11

Please rate the instructors delivery and presentation of the subject matter.

- Municipalities/Transportation 101 N=17
- Construction Math N=8
- Citizenship & Community Participation N=16
- Winter Roads N=18
- OSHA-10 N=16
- Basics of a Good Road N=16
- First Aid/CPR N=15
- Work Zone/Flagging N=13
- Project Planning & Selling N=11
Transportation Systems Academy (TSA)

As of May 2010, **seventeen** individuals successfully graduated from the TSA. Of the **seventeen graduates**:

- **Seven** have found gainful employment of which two are employed in the transportation industry and;
- **Three** are seeking or have completed 40-hour internships with AOT-VT with possible employment opportunities.
- **Seven** are still finishing up educational courses or other requirements.
Transportation Systems Academy (TSA)

• Support from Teachers and High/Tech School Guidance Counselors and;

• Vermont Association of Business, Industry and Rehabilitation (VABIR) Employment Specialists* in Vermont.

* This service is specifically to help those who are disabled or need extra support.
Lessons Learned

• Incorporate more real life experiences and hands-on learning.
• Add a CDL and harassment course.
• Create a smaller classroom setting.
• Conduct mini training for instructors around specific transportation work.
• Secure more support in the classroom.
• Create a “meet and greet” portion of the course to meet with internship hosts and potential employers.
• Present clearer expectations of students, instructors and employers.
• Schedule courses closer together.
• Clearly define post-graduation/release internship processes, roles & responsibilities.
• Incorporate *Bridges out of Poverty & Habits of Mind* training for all instructors.
Transportation Systems Academy (TSA)

**Lessons Learned**

- Add more intense *Habits of Mind* scenarios, roll-playing and life skills training.
- Build in more intense pre-employment skills training through tailoring role-playing exercises to match employer expectations and skills.
- Form a TSA Advisory Board.
- Continue to form closer and additional partnerships with AGC, ACEC, Truck & Bus Association, etc.
- Form a closer connection with community colleges as the program grows.
- Align all curriculums with the educational framework of standards and competencies.
- All other TSA programming will look different than the CHS VT programming.
- Train students on specific skills needed to be hired by a transportation employer.
Transportation Systems Academy (TSA)

**Recommendations**

- Create a program tool kit that will guide the replication process.
- Communicate regularly with partners and instructors.
- Connect with strong social/human services infrastructure within the community to support graduates.
- Integrate accountability systems to support commitment levels and follow up with graduates.
Transportation Systems Academy (TSA)

Next Steps

1. Develop partnership with a New Hampshire technical high school and focus on Juniors and Seniors.
Next Steps

2. Create and revise existing technical high school program curriculum to accommodate national standards to equal 500 hours.
Next Steps

3. Continue to work with the Community High School of Vermont to run a 2nd program.
4. Develop partnerships with White Mountain Community College and a New Hampshire technical High school to focus on Seniors as a 2nd year TDL program.
Transportation Systems Academy (TSA)

Next Steps

5. Continue building partnerships throughout VT and NH.
Next Steps

6. Incorporate and train TSI graduates as instructors.
Next Steps

7. Consider offering small stipends to students for completed internship.
Transportation Systems Academy (TSA)

Next Steps

8. Continue connecting with and establishing key mentors and supports for TSA graduates for CHS VT.
Next Steps

9. Incorporate *Lessons Learned* and *Recommendations* into the program.
Program #3
Second Careers in Transportation
Second Careers in Transportation (SCT)

The TRC is partnered with AARP-VT and Vermont Associates for Training & Development to focus on attracting retirees and the growing ‘over 50’ population to focus on bringing their skills from other industries to the 21st century challenges in transportation.
Second Careers in Transportation (SCT)

The SCT program will:

1. Assess the workforce needs of the transportation industry in VT, NH and ME and;
2. Provide older individuals with transportation career awareness as well as the opportunity to meet transportation employers interested in their skills.
Second Careers in Transportation (SCT)

The TRC and the Center for Rural Studies (CRS) at UVM are developing needs assessments for both the public and private sectors of the transportation industry.
Second Careers in Transportation (SCT)

Many skills used in other industries may be transferable to transportation jobs; including, but not limited to:

• Financial
• Environmental;
• Citizen Management;
• Marketing and;
• Administrative positions.
Three main goals of the SCT Program include:
Second Careers in Transportation (SCT)

1. Gauging the level of awareness of the transportation industry by this target audience;
2. Attracting older workers to consider professional positions within the transportation industry;
Second Careers in Transportation (SCT)

3. Providing the link between older workers and transportation job opportunities, primarily those who have recently retired from other industries and possess skills that are needed in transportation.
Second Careers in Transportation (SCT)

Next Steps

• Collect needs assessment data & compile results.
• Create a web-based transportation career awareness module that would be available through the mature worker resources center and include both a WorkKeys National Career Readiness Certificate and assessment.
• Create a stipend component that could be made available to mature workers to “try out employment” for 4 weeks through Voc Rehab.
Next Steps

• Set a meeting with VT AOT District Transportation Administrators (DTA’s) and Executive Staff to describe the potential partnership with Mature Workers and the TEDPP SCT program.
• The UVM TRC and Vermont Associates will set a meeting to further develop the partnership.
• Continue connecting with and establishing key partnerships to help build the pilot program.
Program #4
Community Colleges
The fourth and final program has been completed.

- The Community Colleges Program assessed what community colleges are currently doing and could do in the future to prepare the next generation of transportation workers.
The TRC worked with the American Association of Community Colleges (AACC) to provide for greater community college engagement in transportation workforce development efforts.
Information was generated about what community colleges could do to prepare the next generation of transportation workers.
Community Colleges (CC)

Key Findings

The Community Colleges report identified key findings which included:
The current and potential role of community colleges in providing transportation workforce development;
Community Colleges (CC)

**Key Findings**

- Possible transportation careers that are currently or would have the potential to be served by community college courses or programs and;
Community Colleges (CC)

Key Findings

• The potential curriculum that community colleges presently have in place or could be administered that would help prepare students for careers in transportation.
Through this work with American Association of Community Colleges (AACC), we were able to generate some “Best Practices”.
• To establish a formalized advisory board with representation from both private and public transportation sector partners;
Community Colleges (CC)

Best Practices

• Enhance the transportation aspect of existing complementary degree and certification programs by broadening the content to include relevant transportation concepts and skills;
Community Colleges (CC)

Best Practices

• Cultivate student interest in transportation through K-12 outreach;
Community Colleges (CC)

Best Practices

• Investigate existing state and federal programs as potential sources of funding, expertise, and assistance for establishing or enhancing transportation curriculum;
Community Colleges (CC)

**Best Practices**

- Engage private and public sector organizations for real-world internships and mentoring and;
Community Colleges (CC)

Best Practices

• Tap into private and public sector demand for customization, non-credit training that can become the foundation for building a broader transportation program.
Community Colleges (CC)

Recommendations

Based on the Best Practices gleaned from the Community Colleges, *seven* recommendations were concluded:
Recommendations

1. Lead private, public and academic sector transportation stakeholders in establishing and promoting a common language for transportation workforce development, including refined job definitions and classifications.
Community Colleges (CC)

**Recommendations**

2. Partner with private and public state and local, and academic sector organizations to identify Transportation-related workforce needs anticipated to emerge over the next 5-10 years.
Recommendations

3. Evaluate the role and partnership potential of other federal agencies; including the Departments of Labor, Energy and Education and the Environmental Protection Agency in transportation workforce development and formally engage with them as needed.
4. Conduct formalized research to assess the near-term demand for transportation sector workers to support specific transportation modes and then compare the results against an inventory of existing specialized training facilities and programs to determine our nation's readiness to support training efforts.
Community Colleges (CC)

**Recommendations**

5. Sponsor the development of transportation-related examples and case studies that may be utilized in General Studies courses.
Community Colleges (CC)

Recommendations

6. Set aside a pool of funding that may be accessed by community colleges seeking to further develop their transportation-related curriculum. Work with the Departments of Education and Labor to leverage interest and resources for community college curriculum development and student support.
7. Provide a pathway, including necessary resources for students, from high school to community college graduation including support for those students who wish to pursue a college/university to pursue transportation degrees.
Next Steps

1. Develop high school level career interest in the transportation industry that is sufficient to encourage them to pursue transportation studies. Focus will be primarily on Juniors and Seniors;
Community Colleges (CC)

Next Steps

2. Supply financial support to community college students to enroll in transportation-related curriculum;
Community Colleges (CC)

Next Steps

3. Develop internship/cooperative education programs provided by public and private sector transportation employers that will be rewarding for students and beneficial for employers;
4. Enhance processes and financial support for community college students to move more easily to four year schools.
Transportation Education Development Pilot Project

Conclusion

The Transportation Research Center at UVM and its partners in the Transportation Education Development Pilot Project are working together to improve on and expand each of the four programs. Eventually, the programs will be released for use nationwide. By doing so, we will provide the trainings and support needed to help us plan for and overcome the critical shortage of transportation workers facing the United States 21st Century.
Transportation Education Development Pilot Project

**Conclusion**

Innovative Training Programs

+ Skilled Workers

= *Better Transportation Systems*