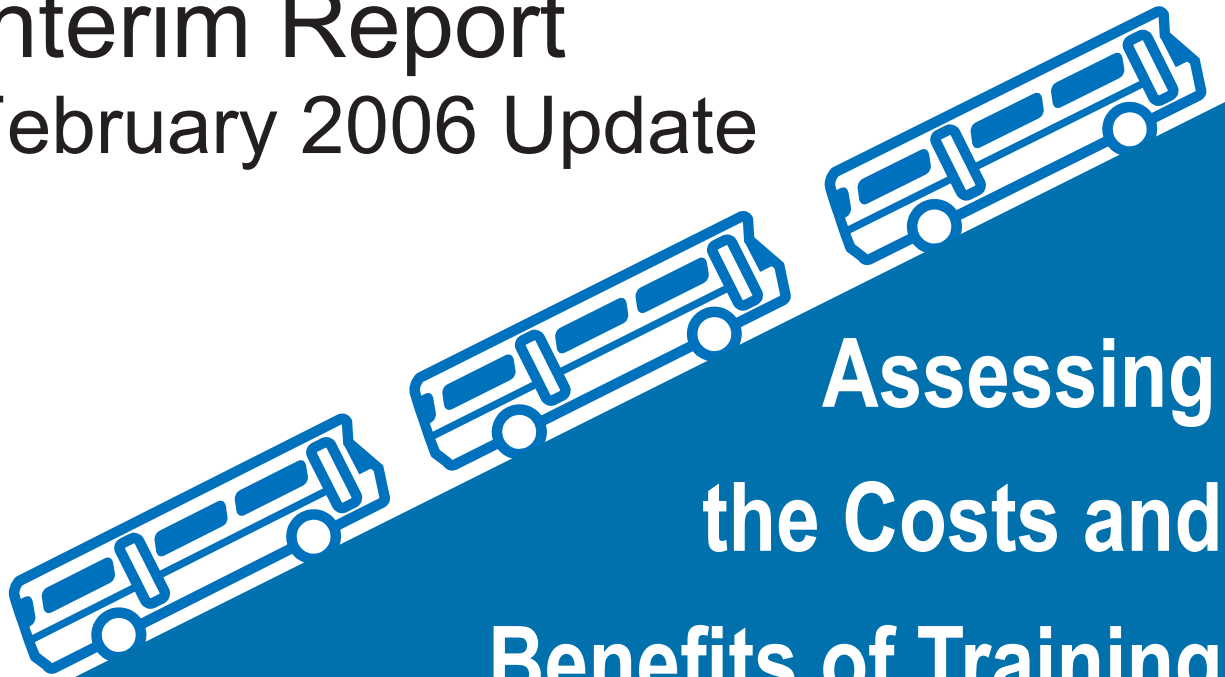


Measuring Up

Interim Report

February 2006 Update



**Assessing
the Costs and
Benefits of Training**

**in the Keystone Transit
Career Ladder
Partnership**



Preface

Measuring Up is the fruit of a long-term effort by the Community Transportation Center and its staff, particularly lead author Xinge Wang, the Center's Senior Research Associate, and her partner in this work, Jack Clark, Director of Workforce Development. The *Measuring Up* project goes beyond earlier research by showing that enhanced maintenance training through Pennsylvania's statewide Keystone Transit Career Ladder Partnership has (1) raised the knowledge and skill levels of transit maintenance employees, (2) led to improved effectiveness in diagnostics and repair and (3) yielded significantly reduced maintenance costs and improved vehicle reliability.

This *Interim Report* breaks new ground in comparing the value of savings in SEPTA's maintenance program with the costs of Pennsylvania's innovative Keystone Transit Career Ladder Partnership. This training program is uniquely based on an effective labor-management training partnership and a joint process driven by objective data identifying the training needs of transit systems and their workers and unions.

Research is continuing to isolate the contribution of the new training program from all the other factors that simultaneously impact transit maintenance and operations. The wide range of changing conditions surrounding any transit training program – changes in fleet composition and age, weather, management strategies, workplace practices, the labor-relations climate, and so forth – make this further analysis a challenge. But it is a challenge the Center is committed to pursuing.

Measuring Up has gone further than many studies in identifying the impacts of training for two reasons: the perseverance of the Center's research team and the thoughtful assistance provided by Pennsylvania's transit systems and unions, particularly at SEPTA and the Transport Workers Union, Local 234. Most importantly, however, this research was able to find and measure significant results because of the extraordinary effectiveness of the Keystone Transit Career Ladder Partnership and the training it has developed.

This *Interim Report* builds on research conducted by the Center over the past four years. In 2003 *Pennsylvania Transit on the High Road* examined the history of Pennsylvania's innovative Keystone Transit Career Ladder Partnership and reported leadership impressions. In 2004 *Making a Difference* showed that workers receiving Keystone training and their supervisors perceived the program to be extremely valuable. *Measuring Up* seeks to explore quantitative changes in the key components of transit operations and their linkages to the new Keystone maintenance training. Its first volume was completed in January 2005.

The Center is continuing its research on labor-management training partnerships in the transit industry. Subsequent volumes will examine the effects of new training in smaller transit properties as well as in Pittsburgh's Port Authority Transit and ATU Local 85. The Center is also working to quantitatively parse the contribution of training relative to the many other factors at play at any time. This type of research will lead us closer to a report on training's return on investment in the future.

Finally, we want to acknowledge the Pennsylvania Department of Labor and Industry and the Federal Transit Administration. Their support made this study possible.



Brian Turner, Director

Executive Summary

This *Interim Report* is part of the ongoing research work by the Community Transportation Center (the Center) to examine whether effective transit maintenance training is a smart investment. It is focused on the Keystone Transit Career Ladder Partnership (Keystone), a labor-management initiative to address critical skills shortages in the Pennsylvania transit industry on a unique partnership-based, data-driven basis. Begun in December 2001, the Keystone Partnership has provided training to more than 2,000 transit workers in some 34 transit properties.

With this *Interim Report*, the Center attempts to quantitatively examine both the benefits and costs of Keystone training in bus maintenance. It is based on data collected from the Vehicle Maintenance Information System (VMIS) at Southeastern Pennsylvania Transit Authority (SEPTA) and the Keystone program expense reports.

As reported in January 2005 in the Center's *Measuring Up* report, bus maintenance training provided through Keystone resulted in savings on preventive maintenance and maintenance replacement labor and part costs. Analysis of the most recent VMIS data indicates consistent cost savings in many more areas of vehicle maintenance at SEPTA since the start of Keystone. In addition to preventive maintenance, significant manpower efficiency improvement has been achieved in repairs for service failure and operator reported failure, overhaul, running repairs, repairs of vandalized vehicles, etc. The combined cost savings accounted so far are estimated to be over \$26 million during Keystone's first four program years.

While the monetary costs remained relatively constant, the benefits continued to increase over time. In a few short years, the Keystone Transit Career Ladder Partnership at SEPTA has created measurable benefits that far outweigh the cost of the agency's investment. Even including the total cost of the increased investment in training systems (agency spending plus government grant funds) the value of the partial benefits that can be measured at this point outweighs the total investment substantially.

With only a fraction of measures included so far, the data indicates that Keystone's innovative partnership-based, data-driven training program is producing very positive benefits for SEPTA.

A full return on investment study is beyond the scope of this *Interim Report*. As is indicated by the conclusion, this type of study will require multi-variable analysis that attempts to identify the role of training, as distinct from other factors, in observed improvements. Additional measures on the benefit side will also need to be assessed to draw a complete picture of the rate of return.

Further research is underway to examine more complete data on the benefits side, including repeat and chronic mechanical failure, usage of parts, vehicle downtime, missed trips, spare bus ratio and vacancies in skilled positions. This research and the effort to identify the role of training specifically to observed improvements will form the basis of the Center's next report in this series.

Measuring Up Interim Report – February 2006 Update

Assessing the Costs and Benefits of Training in the Keystone Transit Career Ladder Partnership

I. Introduction

Is good transit maintenance training a smart investment? If transit systems spend scarce resources on highly effective maintenance training, does it cost them money overall? Or, conversely, could transit systems actually save money in other areas (or even “make money”) by increasing their spending on high quality maintenance training?

These questions provide the background to ongoing research work by the Community Transportation Center. It is focused on the Keystone Transit Career Ladder Partnership, a labor-management initiative to address critical skills shortages in the Pennsylvania transit industry on a partnership-based, data-driven basis. The Keystone Transit Partnership was begun in December 2001 and has since provided training to more than 2,000 Pennsylvania transit workers in some 34 transit properties.¹ (See Figure 1 for a summary of number of workers trained in three areas of the state from Dec. 2001 to June 2005, and Figure 2 on the following page for Keystone bus promotions and wage gains in Philadelphia).

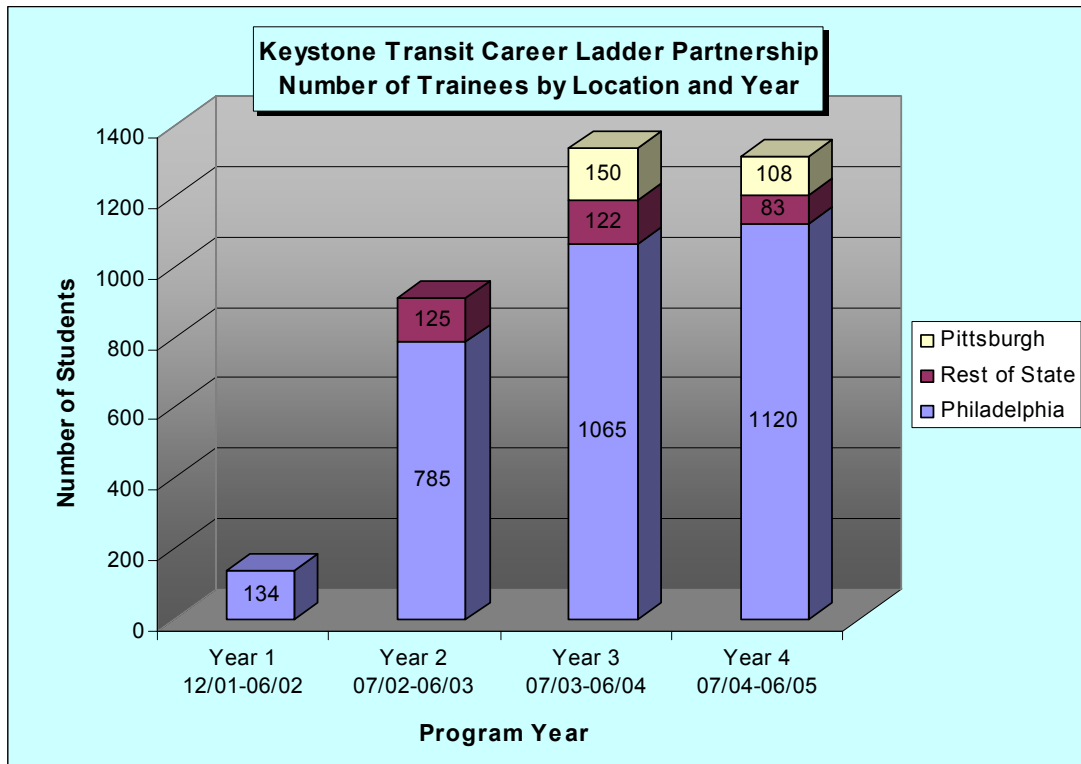


Figure 1. Number of Trainees by Location and Phase

¹ The Partnership is funded by the Pennsylvania Department of Labor and Industry and supported by the Pennsylvania AFL-CIO. Its principal members are SEPTA (Southeastern Pennsylvania Transit Authority), the Amalgamated Transit Union (ATU), the Transport Workers Union (TWU), Port Authority of Allegheny County, and smaller transit properties organized in the Pennsylvania Public Transportation Association (PPTA).