

Can Travel Training Services Save Public Transportation Agencies Money?

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Travel training services can offer public transportation agencies an alternative to providing increasingly costly paratransit service to customers with disabilities. Research to understand the outcomes and financial implications of travel training services, however, has been scant. To address this issue, a cost-benefit model was tested to measure the value that travel training services can provide to transportation agencies.

Problem

Paratransit is a transportation service that is provided in response to the particular needs of individual travelers, not according to a fixed schedule or route. Public transportation agencies offer paratransit service to customers with disabilities, in compliance with the requirements of the Americans with Disabilities Act (ADA). The service may use a

minibus or taxi, for example, that is dispatched at the request of a customer.

ADA paratransit costs are growing rapidly and represent a financial challenge for many public transportation agencies—ADA paratransit trips are more costly than fixed-route trips. Travel training for ADA paratransit customers is a means of reducing transportation agency costs by equipping and encouraging these customers to travel on the fixed-route system.

Application

Travel training services started in the 1970s and have been delivered and funded by public transportation agencies, school districts, and human services organizations. No wide-scale studies have been conducted to understand the benefits that customers or transit agencies receive from the services. The New



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The Washington Metropolitan Area Transportation Authority in Washington, D.C., provides travel training for people with disabilities—here, reviewing fares, maps, and accessibility onsite at a Metrorail station.

Freedom Program, initiated under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, encouraged start-ups of travel training programs, presenting opportunities for rigorous research.

The research project described here applied the Easter Seals Project ACTION definition of travel training services, which comprise one or more of three distinct activities:

1. Instruction about how to travel from a specific origin to a specific destination—this involves designing a highly individualized path of travel and delivering route instructions on the street and on transit vehicles.
2. A general overview and orientation to a public transportation system—this covers such tasks as reading a schedule, identifying a stop location, purchasing the fare, and using the transit vehicle's features.
3. Instruction on how to use personal mobility devices on public transportation—this includes safely boarding, riding, and alighting vehicles.

The research started with the hypothesis that ADA paratransit customers who learn how to ride fixed-route vehicles for some or all of their trips will save public transportation agencies money. A cost-benefit model was developed to test the hypothesis.

Solution

Two studies were conducted. The purpose of the first was to define a general cost-benefit model to assist key stakeholders in their decisions about beginning, sustaining, and expanding travel training services. The second study tested the model.

In the first study, researchers convened an expert panel to identify the costs and monetary benefits of providing travel training services (1). The costs and monetary benefits became components of the cost-benefit model. The expert panel comprised four groups: administrators from public transportation agencies or their subcontractors, travel trainers, recipients of travel training services, and other transportation professionals familiar with travel training services.

The panel participated in two teleconferences, each lasting one hour. The panel's work resulted in templates for calculating benefit-cost ratios from the perspectives of the customer, the public transportation agency or subcontractor, and the community. The panel reviewed the drafts, and the final set of templates and formulas incorporated their comments. From these findings, the researchers devel-

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Travel training familiarizes people with disabilities with transit use, assisting in the transition from paratransit services.

oped algorithms for calculating the benefit-cost ratio from the stakeholders' perspectives.

The second study involved partnering with an experienced organization to provide contractual travel training services to three public transportation agencies in two Western states. The organization's experience in collecting, analyzing, and reporting data about travel training services ensured an appropriate environment for the study.

The components of the cost-benefit model for public transportation agencies included the following:

- ◆ Cost of vehicles and equipment to provide travel training services (represented in the calculation as the variable *a*)—for example, the personal or agency vehicle used by the travel trainer, the mileage, and the parking fees incurred during the travel training;
- ◆ Cost of the travel training personnel (variable *b*)—for example, the salaries and benefits of the travel trainers, the administrative personnel, continuing education, drug testing, and background checks;

TABLE 1 Benefit–Cost Calculations for Three Transportation Agencies

Agency	Annual Benefit (\$)	Annual Cost (\$)	Benefit–Cost Ratio	Net Benefit (\$)
1	389,561	187,739	2.07	201,822
2	1,101,817	760,517	1.45	341,300
3	589,000	148,082	3.98	440,918

- ◆ Cost of supplies, equipment, and occupancy (variable *c*), such as office supplies, printing, information technology, and occupancy;

- ◆ Increased taxes paid by customers (variable *y*)—the portion of taxes paid by customers that is allocated to public transportation; for example, tax revenue will increase if travel training increases job opportunities or causes training recipients to spend a greater share of their income at local businesses; and

- ◆ Cost avoidance (variable *z*)—the cost of the paratransit trips not provided minus the cost of the fixed-route trips taken instead.

The benefit and cost calculations were as follows:

$$\text{Benefits} = y + z$$

$$\text{Costs} = a + b + c$$

$$\text{Benefit/cost ratio} = (y + z) / (a + b + c)$$

$$\text{Net benefit} = (y + z) - (a + b + c)$$

The calculations for the three transportation agencies are shown in the table above. The data indicate that for every \$1.00 used to purchase travel training services from the agency, Agency 1 saved or diverted \$2.07; Agency 2 saved or diverted \$1.45; and Agency 3 saved or received \$3.98. The savings in large part result from the travel trainers' abilities to teach customers how to use fixed-route transit

successfully—instead of relying on paratransit—for some or all of their trips.

Each of the agencies realized positive benefit–cost ratios. Reasons for the differences in the ratios included economies of scale, distances traveled, and the costs of the fixed-route and paratransit services.

Advantages

Applying the cost–benefit model clarified the value of travel training services paid for by public transportation agencies. The model also provided information to a variety of stakeholders interested in the following:

- ◆ Measuring improvements in community livability for people with disabilities who are able to use a less restrictive mode of transportation;

- ◆ Assisting public transportation agencies in making decisions about funding a travel training program and to what extent;

- ◆ Saving the financial resources of public transportation agencies; and

- ◆ Contributing to the sustainability of local transportation systems.

In short, travel training services can save public transportation agencies money.

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Reference

1. Wolf-Branigin, K., and M. Wolf-Branigin. A Travel Training Cost–Benefit Model for People with Disabilities, Public Transportation Agencies, and Communities. In *International Conference on Mobility and Transport for Elderly and Disabled Persons Conference Proceedings*, 2010.

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Suggestions for “Research Pays Off” topics are welcome. Contact G. P. Jayaprakash, Transportation Research Board, Keck 488, 500 Fifth Street, NW, Washington, DC 20001 (202-334-2952; gjayaprakash@nas.edu).

Transit agencies and other stakeholders can use a cost–benefit model to measure the improvements in community livability for people with disabilities who have participated in a travel training program.



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