

Trains, Buses, and Basic Skills: Learning in—and from—a Union Education Program for Transit Workers

Paul J. Jurmo

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Abstract

This article begins with a brief history of two decades of U.S. workplace basic skills efforts that laid a foundation of goals, content, policies, and practices for subsequent worker education programs. It then draws on program records to present a case study of a work-related basic skills program in the New York City public transit workers' union in the early 2000s. It describes why and how the program was begun, learners served, jobs focused on, stakeholders involved, practices used, and shorter and longer term results. It concludes with reflections on how stakeholders can use worker education to serve workers, their families and communities, employers, and unions while supporting economic and societal renewal.

Keywords [basic skills](#), [test preparation](#), [worker](#), [union](#), [transit](#), [adult education](#)

A Case Study of a Major Education Initiative for Public Transit Workers in New York City

Origins

For two decades beginning in the mid-1980s, significant investment was made in the United States by federal and state agencies, employers, labor unions, and other stakeholders to develop models of basic education for incumbent workers. Organized labor—including the AFL-CIO at the national level and state- and local-level associations (e.g., the New York State AFL-CIO and Civil Service Employees Association, Consortium for Worker Education [CWE] in New York

City, and Massachusetts Worker Education Roundtable)—played major leadership roles in those efforts. Unions advocated for worker-centered models that not only strengthened worker productivity but assured worker employability, promotability, civil rights, job security, safety and health, and other indicators of quality of work life. Partnerships between governmental agencies, employers and unions (both individual companies and unions, and business and labor associations), and adult education providers planned programs, secured financial and in-kind supports, developed relevant instructional and assessment tools, implemented pilot projects, trained workforce educators, evaluated programs, and developed a body of knowledge about how to do this work ([Jurmo 2020b](#)).

Building on this experience, in the early 2000s Transport Workers Union (TWU) Local 100 and the New York City Metropolitan Transit Authority (MTA) established a US\$10 million Training and Upgrading Fund (TUF) to provide opportunities to train the 35,000 unionized workers who worked in the city's public bus and subway system. This initiative would be managed by TWU Local 100. In 2001, Local 100 reached out to the CWE, which had since the 1980s coordinated and supported the member education efforts of more than thirty unions based in the city, to plan for the initial round of education activities ([LaMar and Melikian 2004](#)). A small team of CWE staff worked with Local 100 representatives to conduct a study to determine the priority educational needs of workers at a time when the hundred-year-old subway system was being modernized with new technologies. This study adapted collaborative workplace education planning models developed a decade earlier for workplace education programs in the United States and CANADA ([Folinsbee and Jurmo 1994](#)). The researchers reviewed documents, interviewed TWU and MTA leaders, observed technologies at worksites and in transit training centers, conducted focus groups of workers representing diverse job categories, and talked with transportation experts at City University of New York (CUNY).

The resulting study ([Jurmo and LaMar 2001](#)) was issued shortly before the September 11, 2001 attacks upended the city's security and economy. It found that (1) new electronic technologies were impacting virtually all jobs; and the changes would transform current jobs, eliminate others, and create new ones; (2) such impacts required many workers to be trained in the installation, use, and maintenance of those technologies, to ensure that workers were able to perform

those jobs or move into new positions if their current jobs were eliminated or they wanted to move into a higher paying position; and (3) workers also wanted to be prepared to pass civil service exams required for promotion into better-paying jobs. The researchers were told that, for the current workforce to remain relevant, efficient, competitive, and employed, various kinds of training would be needed. In the process, efficiency of new procedures and technologies would be strengthened, creating a win-win for both workers and the MTA.

As a home base for this effort, TWU assembled a new “Training and Upgrading Fund” team in 2002–2003. Including two of the CWE staff who had conducted the original needs assessment, the team decided to begin with a civil service test-preparation program. This would help currently employed union members prepare for the competitive exams that all candidates for MTA jobs—union members or others not currently employed as transit workers—had to succeed in to be considered for openings.

As it got underway, this new initiative had the following advantages to build on:

- Real Opportunities for Family-Sustaining Jobs—Local 100 members had an “inside track” on learning about and qualifying for good jobs with a major employer with whom they already had proven track records. The city was intent on modernizing the hundred-year-old subway system with new technologies, to serve the large numbers of city residents who used the system daily. Union members knew that these unionized jobs provided family-sustaining wages and benefits. This is in contrast to other workforce education programs that operate in environments in which the availability of good jobs is less clear.
- A Sense of Urgency/Timeliness—The TUF team had both the advantage and challenge of trying to respond to the schedule of civil service exams that union members wanted to prepare for. Program staff did not have the luxury of taking their time to prepare. The team had to be assembled and get to work quickly to prepare for not just one exam but for a series of exams to be held in the first year of TUF’s operation. The timing and content of those exams was at the discretion of the MTA, forcing the TUF team to be nimble and well-organized.

- Availability of Experienced, Creative Adult Educators—TUF was fortunate to have access to adult educators and other resource persons in the city who were willing and able to respond to TUF’s call for help to plan and implement relevant education activities quickly.

Components

Working with the above “external” (contextual) assets, the TUF team used the following “internal” practices adapted from research and experience in the worker education field:

- Significant and Timely Financial and In-Kind Resources—TUF could tap into a US\$10 million budget provided under the union contract. These funds allowed TUF to get established quickly, hire staff and consultants, and purchase computers and other needed equipment to get started. The union also was able to set aside space in its headquarters for a TUF office and arrange for classrooms in partner facilities (e.g., CUNY campuses).
- Leadership, Collaboration, and Commitment—TUF benefited greatly from visionary, strong leadership within the union and from others involved (e.g., the adult educators it hired as coordinators, curriculum developers, and instructors; transit industry subject matter experts at CUNY). They were willing to collaborate to try something new and commit significant resources for at least three years (long enough to produce something tangible). Those doing the work were particularly motivated by the trusting, sustained support they received from the union leaders who created the program.

Planning

The TUF team used innovative strategies to collect needed information and make decisions. They focused on the needs and strengths of both the employer and union and of the workers who would participate. Strategies included the following:

- Use of an organizational needs assessment to understand the “big picture” of the transit system; skills, knowledge, and credentials needed by workers; and existing training resources;

- Adaptation of literacy task analysis techniques to understand particular skill requirements of civil service exams and college-level electronics courses that the education program would prepare workers for;
- Researching existing test-prep and electronics training curricula;
- Use of customized pre-course assessments to gauge individuals' abilities vis-à-vis course requirements; and
- Ongoing monitoring of program activities (e.g., through observations of classes, interviews with students, feedback from instructors) to guide decisions about how to strengthen current and future programs.

Preparation of Curricula and Assessments

Curriculum developers first reviewed the limited (though helpful) professional literature on the topic of technical exam preparation ([Bureau of Vocational, Technical, and Adult Education 1992](#); [Collins 1999](#); [Foster, Paulk, and Riederer Dastoor 1999](#); [Mercer County Community College 1992](#)) and curricula from other test-preparation programs (e.g., for utility workers and for the General Aptitude Test Battery) to identify potential test-preparation strategies to adapt for this program. Developers then clarified which exams to focus on first, based on the MTA's announcements of the exams to be held in the coming months. Using a modified "literacy task analysis," they quickly went to work to identify the literacy skills (e.g., finding information in a text), test-taking skills (e.g., coming to the test prepared, using time wisely, making educated guesses on multiple-choice questions), and background knowledge (about relevant terminology related to the job) that upcoming exams (i.e., for train operator and conductor) would require.

In keeping with civil service policies, the MTA did not make sample copies of past exams available to anyone, including the TUF team. As an alternative to seeing actual exams, the curriculum planners reviewed commercially available test-preparation books that test-takers often purchased to prepare for such exams. These books presented test questions that resembled those on the exams themselves. TUF planners also interviewed TWU members who had previously taken similar exams, to learn what they remembered about their content and format.

The education team identified several phenomena:

- The civil service exams fell into three types, each with different content and format:
 - “Reading comprehension exams” presenting sample passages from an employee manual which test-takers read to answer related multiple-choice questions;
 - “Technical knowledge exams” with multiple-choice questions requiring test-takers to draw on their existing knowledge to answer; and
 - “Practical (hands-on) exams” requiring test-takers to demonstrate how they would, for example, repair a machine that test-givers have rigged to malfunction.
- Test-taking skills are vital for success on the exams, including:
 - Time management (to correctly answer as many questions as possible within the time given);
 - Educated guessing (using a process of elimination to narrow down answers to two feasible ones and then make an educated guess); and
 - Coming prepared (on time, rested, equipped with pencils and water, focused, confident, and ready to succeed).
- Exams are stressful (e.g., can last three hours, with eighty questions);
- TWU has many very knowledgeable members who knew the jobs covered in the exams, the general content and format of previous exams, and how to prepare for and succeed on them. These resource persons could advise curriculum planners and serve as co-facilitators or guest presenters in test-preparation classes.

The first few exams were of the “reading comprehension” variety. The team began creating test-preparation courses geared to learners from diverse professional and educational backgrounds (including recent highly educated arrivals from Russia who had worked on the Russian space program as well as less-well-educated and/or limited-English-proficient individuals from the United States and other countries). The research-informed lesson plans presented contextualized, participatory, team-oriented activities that helped learners to

- build on their prior occupational and test-taking knowledge;
- understand what the tests required;

- actively engage in intensive, reflective practice (in class and via homework assignments) using simulated (“authentic”) test questions resembling those likely to be found on the tests; and
- provide peer support to each other, both to help learners master course content and go into the tests logistically and emotionally ready.

All of the resulting courses were, to varying degrees, “workplace basic skills” courses in that they focused on specific types of reading and problem solving required to succeed on occupational exams. The “reading comprehension” exams (the largest number of the exams we developed courses for) were relatively more focused on reading-related skills (e.g., interpreting test questions, scanning, and deciphering information in various text formats such as narrative instructions, charts, lists, timetables) than the “technical” and “practical” exams. Because the initial courses were all “test-prep” in nature, curriculum developers were able to create an initial successful course model—as well as successful procedures for orienting and assessing learners and publicizing courses—and then adapt those initial models as templates for subsequent classes.

Staff Development

Team members then turned to the task of staff development (i.e., recruiting, preparing, supporting, and supervising instructors). How many instructors would be needed to teach the various courses? What expertise would they need to bring to this work? And how might these instructors be recruited? The team described the emerging curriculum in the job description prepared for potential instructors. TUF then used existing citywide adult education networks (e.g., CWE, the New York City Literacy Assistance Center) to disseminate notices to adult education instructors citywide, informing them of this new test-preparation program, explaining that TUF was looking for teachers with prior related experience (i.e., using participatory education methods to help adults develop technical reading and test-taking skills and empower themselves as learners and union members), and inviting them to apply.

Because a large percentage of TWU members were people of color, TUF prioritized recruiting instructors from minority racial groups. This was not always easy due to the limited pool of minority adult educators (a longtime problem in the

field nationally) and the fact that instructors would be needed on fairly short notice and at irregular intervals to work part-time at odd hours geared to union member availability. The response from local adult educators was positive. A good number of qualified instructors signed up, including a modest number of individuals of color. They met (individually or in a large group, depending on their availability) with TUF staff in a small number of teacher meetings prior to the start of the classes, to review the TUF mission, learner population, course goals, instructional approach and content, and administrative issues (e.g., record keeping, locations, schedules). As classes got underway, instructors would (as their schedules permitted, given that this was a part-time job for all of them and most had other jobs they had to work around) meet periodically to report on how they were doing, share strategies, and establish peer-mentoring relationships.

TUF staff monitored instructors and classes through site visits to the classrooms in sites around the city. Venues included Local 100 headquarters, CUNY campuses, and other places convenient to union members who lived and worked (on multiple shifts) in many locations around the sprawling city. Most classes were at night or on Saturdays, so this meant that all involved—students, instructors, and TUF staff—had to be willing and able to participate at odd hours and sometimes in remote locations and on cold winter nights.

TUF also recruited more-experienced union members to serve as subject matter experts who were paired with basic skills instructors in “co-teaching” arrangements. (Such co-teaching is commonly now held up as an innovative “best practice” by advocates and funders of current “Integrated Education and Training” programs.)

Learner Recruitment and Registration

The TUF team did its best to time the three-week, twelve- to fifteen-hour (an average of three to four hours per session) classes to end shortly before the corresponding exam dates. This was done to maximize the classes’ impact, allowing participants to take the exam fresh with the skills, knowledge, and positive attitudes developed in the classes. The TWU communication system was used to get the word out about the classes’ availability via union meetings, the union’s website and newsletter, flyers, and informal networking. Interested union

members attended orientation sessions at TWU facilities, where TUF staff and TWU leaders explained the classes and encouraged members to participate and spread the word. Attendees took a brief placement exam that mimicked the test the classes would prepare them for. This had the dual purpose of giving TUF staff an approximation of the skill levels attendees would bring with them and familiarizing potential participants with course content.

In the few cases in which applicants scored very low on the sample test, TUF staff counseled them privately that the course might be too difficult for them. It turned out that many of those low-scoring members self-selected not to enroll in the test-preparation classes. TUF staff referred those low scorers to other literacy or English for Speakers of Other Languages classes available in their communities and via TUF.

Scheduling and Other Administrative Supports

As stated earlier, TUF made special efforts to provide instruction at times and places accessible to learners, including those working evenings and nights in a transit system that ran twenty-four hours per day. TUF contracted with CUNY campuses and other locations around the city to provide classroom spaces. These were accessible, comfortable, safe (with security guards), professional-quality classrooms in “college-type” or union facilities. These professional settings—coupled with the above-described carefully chosen and prepared instructors and customized curriculum—reinforced the notion that TUF took the classes seriously and treated the participants respectfully. In addition to ensuring that facilities and schedules maximized learner participation, TUF provided other important administrative supports, including financial management (e.g., paying the consultants doing curriculum design and instructional tasks fair wages in a timely way), printing, and office and meeting space. Although less visible, these supports were vital to efficiency and staff morale.

Monitoring and Evaluation

TUF staff monitored the program through careful selection and preparation of instructors; class observations; review of class records, the pre-assessments done in the orientation sessions, and mid-course feedback from participants; and consideration of questions raised in the orientation sessions and of feedback from

instructors in teacher meetings and one-to-one discussions. The TUF team also had frequent discussions to decide how to keep the program running smoothly and to plan for the next round of activities. This ongoing dialogue, teamwork, and focus on continuous improvement were key to ensuring program quality and team cohesion. TWU officials also checked in with the TUF team to ensure that higher level decision makers were informed and felt confident in the TUF team, which included people (instructors, curriculum developers, and coordinators) whom TWU leaders had not previously known.

Results

While some of the above program components might seem natural and mundane, the way they were assembled quickly into an integrated system of supports required significant leadership, management, and collaboration skills, and a commitment to providing a high-quality, innovative service to union members within tight time frames. This approach produced the following largely positive results for the initial round of eight civil service test-preparation classes in 2003–2005.

Short-term results

- *Test scores of participants:* Because the MTA did not share the results of the civil service tests with anyone other than the test-takers, the TUF team could not know with any certitude how many of the course participants actually took the exams and their performance on them. However, anecdotal evidence suggested that most course participants did take the exams, did well on them, and felt that the courses had been helpful.
- *Feedback from learners:* In mid-course and end-of-course written evaluations, informal conversations, and discussions during class visits and in post-course focus groups, course participants generally gave positive ratings to the courses (content, instructional activities, tone), facilities, and—especially—their instructors.
- *Feedback from instructors:* Instructors generally rated the course materials, activities, and facilities positively. Many said they enjoyed working with the course participants. A few instructors said that a small number of participants did not focus adequately (with poor attendance or lack of preparation or class

participation) or that a few participants did not treat them with sufficient respect.

- *Feedback from union officials:* Union officials were generally positive about the classes, their results, and the work of the TUF team. They actively supported continuing the courses and also adding new types of courses.
- *Participant interest in enrolling in other classes:* Participants generally indicated interest in enrolling in other TUF classes if they were relevant to their needs and scheduled at convenient times and locations.

Long-term results

By the end of the first two years of these activities, TUF staff identified the following “macro-level” benefits for Local 100 members and the union local as a whole, for the MTA, and for our educational partners (e.g., CUNY and the adult education field within and outside New York City).

- Clarified needs, interests, and strengths of TWU members vis-à-vis education and training;
- Raised visibility of and interest in TUF among union leaders and members;
- Laid the groundwork for the education program, producing terminology, goals, standards, staff, partnerships, and procedures for additional test-preparation courses and new technical math and English courses that began in 2004 (to enable TWU members to take electronics courses at CUNY in preparation for sought-after electronics-repair positions);
- Led to establishing more-permanent offices for TUF; and
- Led to continued—though modified—TWU-MTA investment in and implementation of educational activities for the subsequent sixteen years.

Worker Education Policy and Practice: What Stakeholders Can Do

Outlined above are key factors that supported the success of the basic-skills-related education programs at TWU Local 100. TUF used innovative, creative adaptations of lessons learned in the earlier workplace basic skills efforts described at the beginning of this article. Such components might be adapted by current and future workforce education efforts to help both unionized and nonunionized workers to strengthen the economic security and general well-being

of themselves and their families and communities as well as build an economy that is more equitable, efficient, healthy, and environmentally sustainable.

At this writing, a new federal administration is contemplating how to create a workforce and economic development system that helps the nation respond to an extraordinary set of challenges. While these problems have been exacerbated by COVID-19, most of them began long before the pandemic: massive unemployment; major declines in several industries (e.g., retail, hospitality); increased demand for qualified workers in other sectors (e.g., health care, environmental sustainability, infrastructure construction); threats to workers' health; inadequate distance learning and teleworking opportunities for many workers; decline in unionized jobs; inadequate child care, elder care, and health insurance supports for many workers; increased debt and decreased savings for many workers; and the need to ensure equitable employment opportunities for historically underemployed populations.

Experience and research have shown that well-designed and well-supported adult basic education can help mitigate and solve the above kinds of problems. While there has been an increased awareness of and support for career and college pathway programs, apprenticeships, and distance learning for incumbent workers as effective workforce development strategies, planners of workforce development services often fail to use or support adult basic education effectively ([Jurmo 2020c](#)). In addition to learning from more recent workforce education initiatives, planners should also learn from work done in previous decades—including in union-based education programs like TUF ([Jurmo 2020a](#)).

We propose that public policy makers and other stakeholders (e.g., labor unions, employers, public health providers, social service agencies, and advocates for social justice, among others):

1. Establish an Adult Basic Skills Education Task Force composed of informed representatives of key stakeholder groups—including federal agencies that deal with education, labor, commerce, immigration, civil rights, public health, environmental sustainability, corrections, as well as the other stakeholders cited below—to guide decisions on the actions described below.

2. Deepen and broaden stakeholders' understanding about (1) the adult learner populations, industries, and other stakeholders that can benefit from well-planned and well-supported work-related adult basic education; and (2) how—when integrated with other services—adult education can strengthen workforce and economic development while also responding to public health, environmental, social justice, and other needs ([Jurmo 2020a](#)).
3. Support short- and long-term actions to strengthen and expand work-related adult basic skills development supports in the United States.
 - a. Provide Increased, Targeted Funding to Proven Existing Adult Basic Skills Services. Funding can help programs increase the numbers of learners served and improve the range and quality of services through professional development, use of effective practices, and other self-identified program improvement actions.
 - b. Develop New Adult Basic Skills Services Targeted to the Learning Needs of Underserved Populations, Industries, and Communities. New efforts might be structured as demonstration projects that meet several goals: building the capacities of participating agencies; serving particular learner populations, industries, and communities; increasing the involvement of a wider range of stakeholders (e.g., employers, labor unions, public health providers, criminal justice reform organizations, family service providers, immigrant and refugee agencies, social justice advocates, environmental sustainability organizations, and higher education) in workforce education; and creating models and tools that can be adapted more widely in the field.
 - c. Re-build the Research, Dissemination, and Professional Development Infrastructure of the Adult Basic Education Field. Virtually all of the former infrastructure—based in federal agencies, universities, demonstration projects, state- and community-level adult literacy resource centers, and other institutions—has either disappeared or narrowed its focus to a small number of topics.

Labor educators have historically provided strong, innovative leadership in the field of worker education. Now is a time when that kind of leadership is particularly needed—for the good of our workforce and our nation.

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Author’s Note

Paul J. Jurmo develops basic skills development systems designed to help diverse learner groups to successfully participate in work, family, and civic roles. Please visit www.pauljurmo.info for more information.

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Author Biography

Paul J. Jurmo has developed work-related basic skills programs in the U.S. and other countries since the early 1980s, when he advised a farmer co-operative program in The Gambia. He's served as a researcher, evaluator, curriculum developer, teacher trainer, administrator, and advocate for worker basic skills programs, including union-based programs in New York City.

Visit www.pauljurmo.info for more information.