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# ESTABLISHING GUIDELINES FOR QUALITY TRAINING

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**Elements of Effective Training Programs**

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**This draft is intended for review and discussion by  
Transportation Learning Center staff and industry  
partners.**

## Background

Over the last four years, the process of developing and implementing effective training standards for technicians has been facilitated through the Transportation Learning Center involving joint labor-management transit industry panels. To further advance development of a national system of transit training, a comprehensive approach to ensuring quality training is a necessary precondition for:

- Creating a *national system of transit industry training and apprenticeship* programs
- Transitioning toward a system that can provide *college credits* for transit technical skills training tied to industry training standards

A system of training elements can provide a framework of guidelines for the implementation of quality transit training programs. The following describes a system of training elements based on several national models for training program review and accreditation.<sup>1</sup> In the future, the use of training program guidelines may lead to an established process for industry training program accreditation for college credit and apprenticeship, as well as an established precondition for possible future testing and certification. One example of this accreditation process would involve the Joint Rail Car Training Standards Committee or a related group serving as an official review board for training program approval to certify transit agencies which meet the specific quality requirements.

## Elements of an Effective Training Program

Quality training is the result of the interconnection of several elements, all of which must be continually reviewed, maintained and updated, to provide an effective learning environment. An effective training program can be subdivided into eight key elements:

- Organization<sup>2</sup>
- Learner
- Instructor
- Delivery Method
- Environment
- Curriculum
- Program Evaluation
- Learner Assessment

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<sup>1</sup> Guidelines used as reference include: American Council on Education (ACE), Southern California, Regional Transit Training Consortium (SCR TTC), American Society for Training and Development (ASTD), International Distance Education Certification Center (IDECC), Occupational Safety and Health Administration (OSHA), and other sources).

<sup>2</sup> For purposes of this paper, organization refers to transit agency department(s) responsible for the training of rail vehicle technicians.

Each key element of a training program has several components and processes which affect the ability of the student to learn and demonstrate the necessary skills, knowledge and abilities required for the job. It is in the industry's interest – for both workers and employers – to develop a comprehensive training program review process to assess if each of these items are present and functioning in an effective manner.

Elements of Training	Components and Processes
<b>Organization</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Industry Standards</li> <li><input type="checkbox"/> Goals</li> <li><input type="checkbox"/> Objectives provided in measurable terms</li> <li><input type="checkbox"/> Job Tasks</li> </ul>
<b>Learner</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Industry Standards</li> <li><input type="checkbox"/> Goals</li> <li><input type="checkbox"/> Objectives provided in measurable terms</li> <li><input type="checkbox"/> Job Tasks</li> </ul>
<b>Instructor</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Process for instructor selection, performance review and development               <ul style="list-style-type: none"> <li><input type="checkbox"/> Demonstrated competence in subject matter through qualifications and experience</li> <li><input type="checkbox"/> Clearly communicates program goals and objectives</li> <li><input type="checkbox"/> Demonstrated knowledge and skill in instructional methods and learning processes.</li> <li><input type="checkbox"/> Instructors are regularly evaluated and provided feedback on their performance</li> </ul> </li> </ul>
<b>Delivery Method</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Instructors and program administrators are available to provide reasonable support to learners in addition to the course delivery.</li> <li><input type="checkbox"/> Classroom/Hands-on/Lab               <ul style="list-style-type: none"> <li><input type="checkbox"/> Recommended class size (classroom/online)</li> <li><input type="checkbox"/> Recommended class size (hands-on/lab)</li> <li><input type="checkbox"/> Student to Instructor Ratio (classroom/online)</li> <li><input type="checkbox"/> Student to Instructor Ratio (hands-on/lab)</li> <li><input type="checkbox"/> Courses using computer-based technology are taught by instructors who are familiar with distance learning and computer assisted instruction</li> <li><input type="checkbox"/> Courses are free from technical malfunctions</li> <li><input type="checkbox"/> Courses meet standards for instructional and technical support availability.</li> </ul> </li> <li><input type="checkbox"/> On-the-Job               <ul style="list-style-type: none"> <li><input type="checkbox"/> Supervisors support learning process</li> <li><input type="checkbox"/> Qualified mentors available to assist learners in demonstrating knowledge, skills and abilities in work activities</li> <li><input type="checkbox"/> Student to Mentor/Journeyperson Ratio</li> <li><input type="checkbox"/> Job aids to assist learners in performing key tasks</li> </ul> </li> </ul>

<b>Environment</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Classroom equipment and supplies (PowerPoint, projector, whiteboard, graphical displays, etc.)</li> <li><input type="checkbox"/> Visual displays and hands-on equipment and supplies (interactive training modules such as brake boards, cutaways, site visits, etc.)</li> <li><input type="checkbox"/> Appropriate level of internet access (classroom/distance learning/job aids)</li> <li><input type="checkbox"/> On-the-job support- mentoring, supervision</li> </ul>
<b>Curriculum</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Course description and syllabus</li> <li><input type="checkbox"/> Course duration (does the course provide enough time for the students to be able to perform each of the learning objectives identified by the standard for each course module)</li> <li><input type="checkbox"/> Instructional strategies appropriate for course content, learning objectives, and delivery method <ul style="list-style-type: none"> <li><input type="checkbox"/> Interactivity should be sufficiently implemented by learning strategies</li> <li><input type="checkbox"/> Should go beyond standard classroom lecture and include strategies for cooperative/group learning exercises, case studies, and assessments.</li> </ul> </li> <li><input type="checkbox"/> Courseware and training materials <ul style="list-style-type: none"> <li><input type="checkbox"/> Should include instructor and participant materials, such as lesson plans, manuals, course handouts, PowerPoint or online presentation, videos, etc.</li> <li><input type="checkbox"/> Reflect current knowledge and practice</li> <li><input type="checkbox"/> Contain no significant errors in spelling or grammar.</li> </ul> </li> <li><input type="checkbox"/> Process for content review, identifying problems with training design or materials, and updates/revisions to course materials</li> </ul>
<b>Program Evaluation</b>	<p>Training programs should use two or more of these elements to routinely evaluate training programs and instructor performance.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Level 1: Learner reaction to training</li> <li><input type="checkbox"/> Level 2: Learning Achieved (see assessment)</li> <li><input type="checkbox"/> Level 3: Changes in learner behavior (workplace actions post training)</li> <li><input type="checkbox"/> Level 4: Results (improvement in organization performance)</li> <li><input type="checkbox"/> Level 5: Return on Investment (cost savings from training)</li> </ul>
<b>Learner Assessment</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Assessment exercises are provided throughout the course to prepare students for testing</li> <li><input type="checkbox"/> Appropriate feedback is provided after each assessment exercise</li> <li><input type="checkbox"/> Final assessments are developed to meet industry standards, <ul style="list-style-type: none"> <li><input type="checkbox"/> Can include performance demonstrations (real or simulated conditions), written or oral examinations, written reports and/or completion of a project.</li> </ul> </li> </ul>

## Next Steps

The labor and management representatives of the Joint Rail Car Training Standards Committee are the transit industry's best resource to identify the key elements and processes required for effective technical skills training for transit rail car technicians. A proposed objective for the March 18-19 Transit Joint Rail Car Training Standards Committee meeting is to develop a consensus on these items and a schedule of next steps to implement the elements of quality training. Proposed next steps would include, but are not limited to, the following tasks:

1. Identify minimum apprenticeship hours (both OJT and classroom) for the Rail Car Training Standard curriculum, beginning with the 100-200 level modules.
2. Develop comprehensive mentoring and OJT training checklists for apprentices and new hires.
3. Expand a process of courseware sharing to promote a standardized curriculum while reducing agency training expenses.
4. Create an online forum for transit agency technical instructors to share information and best practices.

These next steps will help ensure the quality of technical training for local transit agencies across the industry.

The logo consists of five stylized, overlapping curved shapes in shades of blue and red, resembling a stylized 'T' or a series of connected arcs.

## **TRANSPORTATION LEARNING CENTER**

The Transportation Learning Center builds constructive labor-management partnerships to strengthen transit's workforce. The Center is the only nonprofit organization that receives support from the Department of Labor, the Federal Transit Administration and the Transit Cooperative Research Program.

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