Experiential & Innovative Learning: Bike Share

Innovative Strategies for Integrating Bike Share Competencies into Varied Programs of Study

A career pathway in bike share systems involves attaining competencies within various traditional transportation programs of study. In addition to acquiring technical preparedness in bike mechanics, safety, maintenance and warehouse operations, students and incumbent workers on a bike share career pathway will pursue experiential learning, on-the-job training and other work-based or real-world learning experiences focused on community engagement around transportation and shared mobility. Examples of effective integration models are listed that provide curricular and co-curricular value to career preparedness:

Co-Curricular

University Research Partnerships

Research partnerships between university faculty and community and regional entities are proven resources in planning, program development, and transportation workforce development when they: 1) are implemented over the long-term; and 2) actively involve faculty and both undergraduate and graduate multi-disciplinary students in the implementation of multi-modal and/or sustainable transportation research and project development. The Initiative for Bicycle and Pedestrian Innovation (IBPI) is an excellent example of such a program at Portland State University, offering courses and community continuing education, applied research, and degree concentrations.

Campus Living/Learning

Many US campuses (182 across 45 states as of 2017) are engaged in creating bike-friendly environments (See League of Amercian Bicyclists' recognition program), and many time offer students their first real interaction with bikeshare (and other types of shared mobility) experience. Students often have an opportunity to play significant roles in planning, design and operation of systems.

Work-Based Learning

In sustainable transportation and planning programs, many institutions either require or strongly encourage work-based learning experiences for their students through internships and co-ops. Industry and education institutions can work together to ensure that students have access to and develop skills that are important components of these sustainable transportation fields. From CTE and apprenticeship programs for bicycle mechanics, to internships at most bike share companies.

Curricular

Engaged Scholarship

Most universities provide mechanisms to incorporate community projects into student coursework, either through senior design, capstone, or service learning courses. Engagement of transportation organizations with universities to provide community outreach, shared mobility and sustainable transportation course-based projects can serve as a powerful student exposure and recruitment tool to bike share career pathways.

Transportation-Focused Course-Based Learning

Integration of transportation topics and experiential learning into the classroom can be accomplished in various ways, including incorporation of transportation-focused case studies and fieldwork into required coursework; and implementation of assignments that demonstrate understanding of sustainable transportation principles and processes.

Competency-Based Curriculum

A curriculum that meets academic and quality standards, designed and organized by competencies required for jobs and cross-walked with industry skill standards and certifications, can be designed for sustainable transportation. The existence of some industry-driven professional certifications can be used to facilitate this process. Programs of this kind may award credit for prior learning, allowing incumbent workers to achieve credentials by demonstrating knowledge and skills developed on-the-job.

Asynchronous Learning

Provide education and training for students and incumbent workers at times and locations convenient to students and employers, rather than instructors or institutions. This may include evenings or weekends, blended or "hybrid" delivery models, and delivery at off-campus locations.

Problem-Based Learning

Problem-based learning provides students with opportunities to solve real life problems, often in environments that replicate the workplace (e.g. design within constraints, working on multidisciplinary teams, etc.). Industry engagement with educators to provide real world problem examples and guidance on project constraints enhances student experience.

Work-Based and Experiential Learning

Incorporate opportunities for "learning-by-doing", including internships, co-op work experience, fieldwork, and team class projects that are assignments from local employers.

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