Experiential Learning for Diesel Mechanics

In addition to academic and technical preparedness, on-the-job training and other work-based learning experiences are critical components of worker readiness programs. These national programs provide co-curricular value to student career preparedness:

National Automotive Technicians Education Foundation (NATEF)

The NATEF is a national automotive training program accreditation body. Programs that receive accreditation are considered to be the elite auto mechanic education programs in the United States. The status of an auto mechanic education program is measured against whether it is capable of qualifying students for ASE certification upon completion of the curriculum. The NATEF website offers a searchable portal for students to find accredited programs in their area. NATEF also offers career tips and other resources, including links to scholarship opportunities for both tuition and tools.

Association of Diesel Specialists (ADS)

ADS's mission is to provide education and networking opportunities to members of the diesel community. While ADS does not offer student memberships, organization memberships are free for training programs offering diesel courses, allowing students to access its resources. Students can also visit the ADS website to view a virtual tradeshow or find information about training opportunities and the annual ADS International Convention.

Association of Equipment Management Professionals (AEMP)

The AEMP Education Foundation seeks to build awareness of career opportunities and provide scholarships to high school graduates that wish to gain the skills to become a heavy equipment diesel technician. Each year AEMP offers thousands of dollars in scholarships to students attending qualified schools offering a two-year diesel technician program. AEMP also recognizes annually a Technician of the Year, to showcase career pathways and highlight outstanding role models in the field.

US Department of Labor Apprenticeship (USDOL)

The USDOL offers resources related to apprenticeships in high-demand occupations in many fields, including transportation. Diesel Mechanics is one such field. In addition, the USDOL site provides information about National Apprenticeship Week, which is hosted in November each year. The site offers a listing of all National Apprenticeship Week events across the country so that students can get involved or learn more about apprenticeship through a local event.

Innovative Learning Strategies for Diesel Mechanics

To establish curricular lessons and activities that incorporate the latest strategies for increasing student learning effectiveness and retention, a review of practices deployed by workforce and CTE practitioners reveals several approaches that would benefit students within a diesel mechanics program of study. These learning strategies include:

Competency-Based Curriculum

Curriculum that meets academic and quality standards that is designed and organized by competencies required for jobs and cross-walked with industry skill standards and certifications, where applicable. Job profiling and the use of "SMEs" should be considered to meet the competency needs of business.

Modularized Curriculum

Structure and sequence curriculum in modules tied to jobs with multiple entry/exit points, with multiple levels of industry recognized credentials built into the sequenced pathway.

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

Instruction that helps students who benefit from hands-on learning foster team-building skills while solving real-life problems.

Experiential Learning

Incorporate opportunities for "learning-by-doing", including internships, apprenticeships, co-op work experience, and simulations developed by local employers.

Context-Based Learning

By interpreting new information in the context or place of where and when it occurs and relating it to what we already know, we come to understand its relevance and meaning. To design effective strategies for learning requires an understanding of how context shapes learning.

Individual Learning

Learners are different and innovative learning environments reflect the various experiences and prior knowledge that each student brings to class. It's important that practices and processes help teachers engage each student where they are.

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