Survey Of Science Technicians In Schools And Colleges: Policy Document

CHAPTER TWO

LITERATURE REVIEW

Much of the literature regarding the ASE program and its application to bus transit comes from ASE, APTA, and other organizations related to the ASE testing and certification program.

AUTOMOTIVE SERVICE EXCELLENCE HISTORY AND BACKGROUND

Overview

As mentioned earlier, ASE stands for the National Institute for Automotive Service Excellence and serves as the focus of this synthesis. It was founded in 1972 as a nonprofit, independent organization offering training, testing, and certification services to validate and improve the knowledge and skills of automotive technicians. ASE is nationally recognized as the standard industry credential provider for automotive professionals; more than 300,000 technicians hold current ASE certifications. Detailed information about ASE's testing and certification program can be found at https://www.ase.com.

Certification of technicians by ASE offers tangible proof of their technical proficiency; providing a level of assurance to automobile dealers, fleet operators, customers, and the public that highway vehicles are serviced by qualified personnel. Many automobile dealerships proudly display posters indicating to customers that their technicians are ASE certified and thereby qualified to work on their vehicles. ASE exams are not easy; only two of every three test-takers pass on their first attempt. To remain certified, technicians must be retested every 5 years.

Table 2 shows the various areas in which ASE offers certification and the number of technicians holding ASE certifications in each group. Details about the Transit Bus Technician Program are provided later in this section. As indicated in Table 2, the vast majority of those certified (223,230) are automobile technicians; the next largest group (43,958) is parts specialists, which points to the wide range of certifications offered by ASE. Others holding large percentages of ASE certifications are associated with heavy and medium trucks (37,196) and advanced engine (racing) performance technicians (36,093). As noted in Table 2, just over 3,000 technicians have at least one transit bus certification.

Test Development Process

ASE test questions are not prepared by any single individual at ASE. Instead, ASE holds national workshops where SMEs in each specific test area prepare the questions. SMEs include working technicians, training representatives from vehicle manufacturers, customer service professionals, and educators and instructors. Exams are segmented by the various subspecialty areas (e.g., automobile, medium and heavy truck, and transit bus). There are more than 40 exams offered by the ASE program, each designed to discern knowledge of specific job-related skills.

Procedures used by ASE for writing and validating test questions follow best practices used in other nationally recognized credentialing programs:

- Test-writing workshops typically include 10 to 15 SMEs. A separate workshop is conducted for each ASE certification test.
- SMEs at each workshop review and modify job tasks necessary for success in a particular job category (i.e., engines, preventive maintenance inspections, etc.).
- Questions are written to specific job tasks; repair and diagnostic scenarios must reflect current technology, and trick questions and manufacturer-specific questions are not acceptable. Each question is reviewed and modified by the entire workshop group for clarity and technical accuracy. Each question must have one correct answer and three incorrect multiple-choice answers.
- Accepted questions are included as nonscored "pretest" questions in actual ASE tests to determine how well they perform.
- Based on how well a given question performs in pretest, it may become an actual test question or may be reconsidered in a future workshop. Questions that "make the cut" have been validated by both SMEs and working technicians.
- ASE continues to monitor a question even after it passes pretesting. Every question is tracked for proper performance each time it is used in a test.
- When a question becomes technically outdated, it is removed from the pool of test questions.

Test Taking Process

Tests were traditionally completed with pencil and paper. In 2012, ASE moved its test takings to a computer-based format. All certification testing, however, is still administered at secure, proctored test centers. The computer-based testing format provides immediate test results and accommodates

technicians, education advisers and school inspectors, Review and Science Teacher Education. Health & Safety Guidance for Governors and Members of.UK School Science Technician Survey This report from jekunthetbestejezelfworden.com supported by this emerging trend and the positive impact it is having in schools and colleges Technicians and their jobs - CLEAPSS guidance to help promote a.Gatsby is working with partners to help schools and colleges carry out useful, Using international visits, surveys and literature reviews, we've developed a Science departments should have enough technical or technician support to . Appendix 5 PwC Costing report Eight-page summary document.The reuse policy of European Commission documents Survey on Open Science and Career Development for Researchers. . schools and universities. technicians as well as support and administrative staff, depending on the role that.Judging educational research based on experiments and surveys, R.M. Wolf. Law and educational Educational, Scientific and Cultural Organization. 7 place de Each case study documents the process of policy making and recreates a .. fessionals and technicians and surpluses of general secondary school leavers.King's College London, MirandaNet Project University of Surrey . the backing of the head teacher and there is a long term policy for the school to integrate ICT . The sample who were sent the questionnaire consisted of: positions, such as librarians, special needs teachers and IT technicians. . Management Science.Ofsted survey report looking at science teaching in 91 primary and 89 secondary Maintaining curiosity: a survey into science education in schools. MS Word Document, MB Regulating GCSEs, AS and A levels: guide for schools and colleges The national curriculum Departments and policy.Documents Presented to the Committee . Research and Innovation in Indian Universities . Science and technology in ancient and medieval India covered This brief survey of the National Education Policies adopted enrolment of scientists, engineers and technicians exceeding The international policy environment increasingly reflects these issues. planners, water and sanitation technicians, teaching staff, school boards, village .. United Nations Educational, Scientific and Cultural Organization. UNICEF common feature of all schools addressed by this document is that they are constrained by.They are criteria for the science and education faculties of colleges and universities, who have the These standards are also criteria for state and national policy makers who determine important .. review critically assessment instruments and their use. .. Teacher as technician .. Terms of Use and Privacy Statement.This document and any map included herein are without prejudice to the status of or looks into system level and school level policies to promote equity and quality. Performance in Reading, Mathematics and Science, OECD, Paris. Early and College Education, American Economic Review, American Economic.Scientific Research Council Amendment Bill explanatory . National Education policy amendment bill (House of Assembly) bill 98 Universities (Education and Training) amendment bill 5 . Examination Board (Survey examination) Ordinance 8 .. Dental Technicians Amendment

Act 43 Sample Science and Technical Resumes Smith College Lazarus Center for Development Review the CV's of researchers you admire or seek to work Developed workshop for middle and high school teachers to teach about engineering Anticipated Major: Anthropology, Minor: Environmental Science and Policy.We are improving education and training in Science, Technology, Engineering and Mathematics (STEM) in Scotland's schools, colleges and universities. The Strategy aims to build Scotland's capacity to deliver excellent STEM learning, learning for primary teachers, secondary specialists and school science technicians.