

## **Comparative Studies on the Needs and Development of Autotronic Maintenance Training Modules for the Training of Automobile Independent Workshop Service Technicians in North - Western Region, Nigeria**

**Authors :** Muhammad Shuaibu Birniwa

**Abstract :** Automobile Independent Workshop Service Technicians (popularly called roadside mechanics) are technical personals that repairs most of the automobile vehicles in Nigeria. Majority of these mechanics acquired their skills through apprenticeship training. Modern vehicle imported into the country posed greater challenges to the present automobile technicians particularly in the area of carrying out maintenance repairs of these latest automobile vehicles (autotronics vehicle) due to their inability to possessed autotronic skills competency. To source for solution to the above mentioned problems, therefore a research is carried out in North - Western region of Nigeria to produce a suitable maintenance training modules that can be used to train the technicians for them to upgrade/acquire the needed competencies for successful maintenance repair of the autotronic vehicles that were running everyday on the nation's roads. A cluster sampling technique is used to obtain a sample from the population. The population of the study is all autotronic inclined lecturers, instructors and independent workshop service technicians that are within North - Western region of Nigeria. There are seven states (Jigawa, Kaduna, Kano, Katsina, Kebbi, Sokoto and Zamfara) in the study area, these serves as clusters in the population. Five (5) states were randomly selected to serve as the sample size. The five states are Jigawa, Kano, Katsina, Kebbi and Zamfara, the entire population of the five states which serves as clusters is (183), lecturers (44), instructors (49) and autotronic independent workshop service technicians (90), all of them were used in the study because of their manageable size. 183 copies of autotronic maintenance training module questionnaires (AMTMQ) with 174 and 149 question items respectively were administered and collected by the researcher with the help of an assistants, they are administered to 44 Polytechnic lecturers in the department of mechanical engineering, 49 instructors in skills acquisition centres/polytechnics and 90 master craftsmen of an independent workshops that are autotronic inclined. Data collected for answering research questions 1, 3, 4 and 5 were analysed using SPSS software version 22, Grand Mean and standard deviation were used to answer the research questions. Analysis of Variance (ANOVA) was used to test null hypotheses one (1) to three (3) and t-test statistical tool is used to analyzed hypotheses four (4) and five (5) all at 0.05 level of significance. The research conducted revealed that; all the objectives, contents/tasks, facilities, delivery systems and evaluation techniques contained in the questionnaire were required for the development of the autotronic maintenance training modules for independent workshop service technicians in the north - western zone of Nigeria. The skills upgrade training conducted by federal government in collaboration with SURE-P, NAC and SMEDEN was not successful because the educational status of the target population was not considered in drafting the needed training modules. The mode of training used does not also take cognizance of the theoretical aspect of the trainees, especially basic science which rendered the programme ineffective and insufficient for the tasks on ground.

**Keywords :** autotronics, roadside, mechanics, technicians, independent

**Conference Title :** ICTVE 2023 : International Conference on Technical Vocational Education

**Conference Location :** Tokyo, Japan

**Conference Dates :** November 13-14, 2023