



**FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA  
SCHOOL OF SCIENCE AND TECHNOLOGY EDUCATION**



# Conference *Proceedings*

## **THEME**

**21<sup>ST</sup> CENTURY GLOBAL CHANGES IN EDUCATION:  
IMPLICATIONS FOR  
SUSTAINABLE DEVELOPMENT**

**DATE: Tuesday, 4<sup>th</sup> - Friday, 7<sup>th</sup> October, 2016  
VENUE: CPES COMPLEX, BOSSO CAMPUS, MINNA**





## Strategies for Global Reforms in Automobile Technology Education for Sustainable Development

Idris, A. M.  
Mustapha, A.  
Beji, A. A.  
Gabriel, G. A.  
Jiya, S. J.  
Kolo, A. A.  
Audu, R.

Department of Industrial and Technology Education,  
School of Science and Technology Education,  
Federal University of Technology, Akoka, Niger State  
idris.mohammed@futa.edu.ng (07044550007)

### Abstract

*Nigeria as a country had advocated for the type of education that would enhance the needed self-reliance and sustainable development for the learners and the society. Automobile technology education programme would help in achieving the much desired self-reliance and sustainable development in Nigeria. This paper examined the conceptual issues of Automobile Technology Teacher Education such as: quality of candidates for automobile technology teachers training programme, training facilities, funding, and quality of lecturers and relevance of automobile technology teacher education curriculum to the needs of the society. The paper made case for strategies for global reforms that will reinvigorate automobile technology teacher education programme towards attaining self-reliance and sustainable development in Nigeria.*

**Keywords:** Strategies, global reforms, automobile technology education, curriculum, self-reliance, sustainable development.

### Introduction

Teacher education which concern is the production of teachers at all levels of education has been recognized as major concern for the nation. Teacher education will continue to be given a major emphasis in all our educational planning because no education can rise above the quality of its teachers (Federal Government of Nigeria (FGN), 2013). Automobile technology teacher education is not left out in the task of producing potential automobile technology teachers who would take up the challenges of nurturing the students. Automobile technology educators play prominent roles in preparing students to become responsible citizens, capable of making astute economic decisions that would benefit their personal and professional lives. Changes have been observed continuously in the educational system due to technological advancement globally and as such, automobile technology education programme has becomes increasingly important for preparing learners to imbibe the changes that have occur as a result of these development in technology.

The role of automobile technology education teachers as a handy tool in the realization of self-reliance and sustainable development in a country cannot be over-emphasized. Accordingly, Idris (2004) stressed that automobile technology teacher education curriculum should be developed in response to the national demand for education reform. Automobile technology teachers are therefore expected to demonstrate specific skills, apply knowledge and possess professional qualities which will enable them prepare students who can meet society's demands for high performance. The FGN, (2013) in accordance with the existing Automobile technology teacher education programme provides for career development in Automobile technology education at secondary school level to make it possible for recipients who cannot continue their education to the next level to find useful jobs. Automobile technology teacher education should exist with emphasis geared towards creating or offering employment opportunities covering a wide range of training requirements from certain semi-skilled and skilled jobs to managerial and executive positions (Umar, 2008).

### The Concept of Automobile Teacher Education Curriculum

Curriculum according to Ubulum (2000) is a set of intentions about opportunities for engagement of persons to be educated with other persons and things (all bearers of information, processes, techniques and values) in certain arrangements of times and space. Curriculum could also be referred to as the sum total of the educational experiences of the learners during their schooling period. The extent to which a curriculum assists automobile students and automobile teacher-trainees to competently enter and succeed in the world of work spells out success. In fact, every meaningful curriculum especially the automobile teacher education curriculum should not only be systematically developed, but should not be static or irrelevant. Else such curriculum would definitely have an adverse effect on whoever comes in contact with it. In terms of relevance, Mohammed (2008) stated that automobile teacher education curriculum planning and development like every other education programme planning and development, is a continuous process and should be in the following phases:

1. The selection of aims, goals and objectives;
2. The selection of learning experiences calculated to help in the attainment of these aims, goals and objectives;
3. The selection of content (subject-matter) through which certain types of experiences may be offered;
4. The organization and integration of learning experiences and content with respect to the teaching/learning process within the school and classroom; and
5. Evaluation of the effectiveness of all aspects of Phases - 2, 3 and 4 above in attaining the goals detailed in phase one. These phases are related, interdependent and combined to form a cyclical process.

### Automobile Teacher Education

The education of automobile teachers in Nigeria has been expanding and growing in recent years. This is as a result of increase in the demand for automobile teachers because of increase in students' enrolment in automobile education programme and quest for acquisition of employable. In Nigeria's Third National Development Plan (1975 to 1980), the Federal Government maintained that the quality of teaching staff in all fields is probably the most important determinant of educational standards at all levels. Furthermore, the Federal Government of Nigeria (2013) stated that teachers' education will continue to be given a major emphasis in all our educational planning because no educational system can rise above the quality of its teachers. Therefore, for automobile education teacher quality to rise above the automobile education system, a strong global reform in automobile teacher education curriculum is required. Such reforms would enhance automobile teacher education the chance of being a component of any educational system charged with the education and training of teachers to acquire the competencies and skills of teaching for the attainment of self-reliance of the individual learner and the nation at large.

Automobile education is an aspect of educational programme offered at the higher institution of learning which prepares students for careers in automobile enterprises. Folorunsho (2001) sees automobile teacher education as the pedagogical and automobile competencies necessary for teaching automobile attitudes, concepts, skills and knowledge. It could be seen as an aspect of educational training process which automobile teacher-trainees receive with the primary motive of enabling them to acquire adequate attitudes, concepts, knowledge, understanding and skills in automobile activities, for personal or vocational usage, and/or for careers as administrators, managers and teachers wherever they may find themselves.

### Strategies or Global Reforms in Automobile Teacher Education

Adequate strategies and means need to be devised if Nigerian automobile teacher education should be compared to the type obtained globally. The following need to be considered necessary for reforming automobile teacher education programme in Nigeria:

1. Quality of candidates for automobile education programme: According to Federal Government of Nigeria, (2013), the Nigerian certificate of education (NCE) remains the minimum qualification for entry into teaching profession in the Nigeria educational system. Imogie (1999) considered such entry requirement in teaching to be too low to be regarded as a profession. Such poor entrants to the teacher education programme in our schools today constitute the problems of recruitment of competent and professionally trained automobile teachers into Nigerian school system (Mahe, 2010). The poor quality of teachers can be ascribed to the low entry behavior of pre-service teachers.



**Training Facilities for automobile teacher education programme:** The importance of training facilities to the overall success of any educational enterprise has never been in doubt. It is on this basis that Umar (2008) emphasized on the need for the provision of adequate training facilities. Umar (2002) maintained that training equipment and facilities needed for effective instruction of automobile education should be a replica of what is obtained and used in automobile workshop. The need for the availability of functional training facilities and equipment, such as modern workshop machines facilities, computer diagnosing, scanners and tools cannot be overemphasized. There is no doubt that wherever effective training equipment and facilities are utilized, they generate greater students' interest in the learning system and also enhance retention of learned ideas.

**Funding of tertiary institution in Nigeria** is nothing to write home about and this invariably is affecting the procurement of required training equipment and facilities for automobile education teachers. Ma'aji (2010) observed that poor funding cause acute shortage of tools, machines/facilities and sizeable workshops for automobile teacher education programme to become effective as is found in most developed nations. There should be adequate and appropriate funding both by the government and stakeholders. This would enhance the purchase and provision of training equipment and facilities and adequate manpower development in automobile teacher education.

### Quality Automobile Teachers

The importance of quality automobile education teachers in reforming automobile teacher education cannot be overstressed. The Colleges of Education (Technical) established to train teachers outside the Universities and other Colleges of Education could not cope with the number of teachers required for the programme. Accordingly, teachers are poorly trained as many could not teach the subjects they were trained in. The ability of the teachers to perform depends on the type of training available to them, the quality of facilities, materials and the environment under which they operate (Ehiamefor, 2003). It has been observed that some skills are likely to become obsolete as a result of lack of updating knowledge by automobile teachers. There is therefore, the need for a workable staff development policy that would influence the retraining of automobile teachers whose skills will turn out to be unmarketable. Such staff development will center on the area of new technology application. Automobile teachers need to engage themselves through a number of processes such as internet browsing, attendance to seminars, conferences, reading relevant books and journals and playing active roles in relevant professional associations.

### Curriculum

The need for the curriculum of business teacher education to be relevant to the needs of the student teachers cannot be overemphasized. Business teacher education curriculum should be viewed from the point of occupational and pedagogical competence, relevance to the needs of the students, society and employers, comprehension in scope, depth in knowledge and competence in skills. As new ideas accumulate in business and industry and as Nigeria will have to fully embrace advanced ICT, the curriculum of teachers who will impart these new areas of knowledge will have to be enriched.

### Conclusion

The global reforms in automobile education call for serious attention in reshaping automobile teacher education curriculum in Nigeria. This necessitates the plan and organization of automobile teacher education in such a way that will help the teachers to acquire the needed occupational and pedagogical competence. The training of Nigerian teachers should top the list of priorities of government because the service of automobile teachers for national development cannot be overemphasized.

### Recommendations

The following recommendations were made:

1. As business environments are becoming more complex and computerized, government policy on computer education should provide for the training of automobile educators who will be well placed in training individuals for new jobs that are occasioned by automated equipment and devices;

2. Adequate funding of automobile teacher education should be a priority of governments and stakeholders.
3. Appropriate legislation for the implementation of the National policy on teacher education is a necessity in Nigeria;
4. For an effective enrichment of automobile teacher education curriculum, there is the need to develop a curriculum which will be relevant to the current and anticipated needs, problems and aspirations of the learners. It is a well known fact that learning that is divorced from the major waves of changes in the learner's environment could be incapable of solving current and even future problems of the learner and society at large;
5. Our present society requires an educational system that would enable learners become self-reliant, as such automobile teacher education curriculum should be enriched by adopting a responsive curriculum that would enable its products respond to social goals, economic realities and future life challenges. This should be done by selecting contents that are consistent with emergent and anticipated needs, like issues on ICT, conflict resolution and economic survival and entrepreneurship education.

#### References

- Ehiemetalor, E. T. (2003). Education resource management: Failure of the past; Inaugural lecture series No. 69. University of Benin, Benin City
- Federal Government of Nigeria (FGN), (2013). *National policy on education*. Lagos: (6<sup>th</sup> Edition). Lagos: Nigerian educational research and development council (NERDC) press.
- Folorunsho, O. A. (2001). Restructuring the curriculum of technical college for sustainable poverty alleviation. In Oladimeji, T. A. G.; Ibeneme, O. T.; Adesope, O.; Ogunyemi, M. A. and Tukura, H. (eds.). *Technology education and poverty alleviation in Nigeria*. Proceedings of 14<sup>th</sup> annual NATT conference. Umunze, Anambra State
- Idris, A. M. (2011). The Level of Availability of Recommended Tools and Equipment for Teaching Motor Vehicle Mechanic Works for Sustainable Industrial Development in Nigeria. *Proceedings of the 24<sup>th</sup> Annual National Conference of the Nigerian Association of Teachers of Technology*.
- Imogie, A. I. (1999). Do you know who is teaching your child? Inaugural lecture series No. 53. University of Benin, Benin City
- Ma'aji, A. S., Ohize, E. J., Saba, T. M., & Tsado, J. (2010) Assessment of the implementation of students' industrial training practices in engineering and technology education programmes in the universities in northern Nigeria. *Journal of Educational Research and development ABU Zaria* 5(3) 194-200
- Mahe, A. M. (2010). Assessment of the implementation of technical education programmes of the polytechnics in Kano and Jigawa States, Nigeria. *Unpublished M.Tech project*. Department of industrial and technology education, Federal University of Technology, Minna
- Mohammed, P. I. (2008). Development of motor mechanics vehicle mechanics practical skills evaluation instrument for technical colleges in Niger State, Nigeria. *Unpublished M.Tech project*. Department of industrial and technology education, Federal University of Technology, Minna
- Ubulum WJ (2000): Business Education Curriculum for JSS: A guide for practicing teachers. Port Harcourt: Celwil Nigeria Limited
- Umar, I. Y. (2008). Management of technical colleges workshops for improved practical skills acquisition in north central States of Nigeria. *Unpublished M.Tech project*. Department of industrial and technology education, Federal University of Technology, Minna