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Issues and Prospects in Continuing Education for Skills Development of Automobile Technicians in Nigeria

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Abstract

The automobile technicians are catalytic to the industrial revolution, employment generation, human capital development, and economic growth in the automotive industry in Nigeria. There is, however, a lack of competencies among them that has generated concerns in the community of practice. The study explored challenges of skills development among automobile technicians and examined the prospects of continuing education to enhance their skills development in the automotive industry. The study adopted a qualitative research method and reviewed journals, books, news reports, and official publications to discuss the key concepts of continuing education, skills development, and mainstreaming of automobile technicians in the informal sector to the national policy framework to transform the automotive industry for human capital development and economic growth in Nigeria. The absence of continuing education in the occupational practices of automobile technicians has created skills development crises in the automotive industry and is evidenced by a shortage of skilled labour, aging demographics, the prevalence of quackery, lack of requisite work knowledge, non-availability of sustainable continuing education programmes, lack of opportunities for continuing professional development, sectoral policy disconnect with human capital development practice in the industry, and funding. The implementation of continuing education programmes for the skills development of automobile technicians can create opportunities to enhance improved competencies, transform human capital development, and engender value creation and exceptional service delivery in the automotive industry through the transformative work environment and delivery of collaborative skills development programmes. The government

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should mainstream and implement grassroots policies for inclusive collaboratives to certify automobile technicians through continuing educational development programmes in the automotive industry.

Keywords: Automobile Technicians, Continuing Education, Lifelong Learning, Professional Development Programmes, Skills Development

INTRODUCTION

The patronage of automobile technicians is a common practice in Nigeria. The automobile technicians operate roadside workshops for vehicle maintenance in the automotive industry. The industry is pivotal to the industrial revolution, job creation, human capital development, and economic growth (Haruna, 2019; Ng & Yedan, 2023). The Nigeria Automobile Technicians Association (NATA) underscores its relevance and contribution to the Micro, Small, and Medium-sized Enterprises (MSMEs) development, which accounts for over 80% of new jobs and self-employment created over the last decade in the informal sector in Nigeria (National Bureau of Statistics, 2017; sunnewsonline, 2017; National Bureau of Statistics, 2023).

The National Automotive Design and Development Council was established in 2014 to use local human and material resources to create an enabling environment for the manufacture and maintenance of Nigerian-made vehicles of international standards at competitive prices. Presently, the automotive industry has been dominated by the informal sector where the prevalence of imported used vehicles, known as *tokunbo*, accounts for two-thirds of vehicles on Nigerian roads. The country has more *tokunbo* vehicles than Nigerian-made and brand-new cars. Annually, Nigeria imports over 200,000 vehicles and it is the third-highest importer of used vehicles in the world (Nanyang Technological University, 2022).

The International Trade Administration (2023) reported that 39% (4.6 million) and 45% (6.7 million) of the total of 11.8 million vehicles in Nigeria as of 2018 were privately owned and commercial vehicles, respectively. Owners of these private and commercial vehicles rely on automobile technicians in the informal sector to maintain their vehicles because formal vehicle repair workshops are either inadequate or non-existent in the country. Car owners, especially within the Nigerian middle class and working class, favour *tokunbo* vehicles due to prevailing socio-economic factors, convenience, and their status as symbols in society. They purposely use the services of automobile technicians for minor and major maintenance of their vehicles.

What happens from the experiences of these car owners, however, is that the automobile technicians fail to fix customers' vehicles to satisfaction. Rather than getting value for money, their vehicles repeatedly develop new sets of mechanical faults after visits to the roadside workshops, and Ayantoye (2022) attributed this to the lack of competencies of the automobile technicians to handle the new generation of vehicles on Nigerian roads. The situation is dire

for the national drive for industrialisation and the economy as this portends a grave risk to the goal of the National Automotive Design and Development Council, which projects that 30% of passenger cars driven in Nigeria will be electric-powered by 2025 (International Trade Administration, 2023). Kester, Omoregie, and Adeyeye (2006) surmised that continuing education for technicians and professionals in their occupational lines promotes the industrialisation and modernisation of the nation.

Invariably, the growing concerns in the community of practice that automobile technicians lack knowledge and skill for vehicle maintenance have escalated in recent times. Car owners and the government lose millions of Naira to the low level of technical expertise of the automobile technicians annually in terms of preventable damage to and loss of vehicular assets, loss of labour-hours spent by working-class car owners through avoidable repeat visits to the roadside workshops without satisfactory vehicle maintenance, and underdevelopment of human capital in the industry.

Sambo, Idris, and Shamang (2012) argued that the level of competencies of automobile technicians in Nigeria is low, and this correlates to their level of education and limited exposure to continuing professional training on the job. Similarly, the gap between training and professional competence among automobile technicians underscores the relationship between continuing training programmes and skills development in the industry (Birniwa & Idris, 2023). Continuing education seeks to upgrade the knowledge and skills or rectify identified deficiencies of specific vocational occupations (Adelaiye, 2019; Omole, 2005). Lifelong learning and continuing technical vocational education influence skills and professional development in the automotive industry, and Poschauko, Kreuzer, Hirz, and Pacher (2023) demonstrated that the latter becomes an essential component of society as the Global South, particularly developing countries like Nigeria, moves towards the Fourth Industrial Revolution (4IR) because of the critical role of skills and professional development in the sector as a whole.

Consequently, this study explored the challenges of skills development among automobile technicians and examined the prospects of continuing education to enhance their skills development in the automotive industry. The study used the documentary approach in qualitative research method and obtained secondary data from the review of journals, books, news reports, and official publications to discuss the key concepts of continuing education, skills development, and mainstreaming of automobile technicians in the informal sector to the national policy framework to transform the automotive industry for human capital development and economic growth in Nigeria.

CONCEPTUAL FRAMEWORK

Continuing Education

Continuing Education is utilitarian terminology in higher education that scholars and institutions use interchangeably with adult education or as a complementary interdisciplinary field of specialisation in adult and continuing education. The National Policy on Education identifies

Continuing Education as a key component of adult and non-formal education in Nigeria (National Commission for Mass Literacy, Adult and Non-Formal Education [NMEC], 2008). Continuing Education is a vehicle of social change for adult education in society (Akinpelu, 1988; Osuji, 2001; Tahir, 2000). It is a non-formal education described as an alternative knowledge acquisition and skills development with immediate net value output in the workplace for adult learners (Akinpelu, 1986; Akinpelu, 2002; Bankole, 2009; Egenti & Omoruyi, 2011; Egunyomi, 2009).

Continuing Education presents learning as a lifelong process and programme that increases learners' competence and enhances on-the-job skills development (Egunyomi, 2015; Somieari-Pepple, 2023). Okebiorun and Alao (2011) and Egunyomi (2009) situate Continuing Education as a multidisciplinary field of adult education programme that is conceived as a broad range of practices in lifelong education, community, civil and political education, social education, vocational, technical and workers education, remedial education, and liberal education. A common feature of Continuing Education as a programme is that it satisfies the remedial, vocational, developmental, professional, competence, and innovation needs of adult learners in the workplace (Aitokhuehi, 2018; Hussain, Alhassan, & Kamba, 2013). The Continuing Education programmes are delivered using various methods, including evening classes, extramural or extension classes, and professional association meetings, through both face-to-face and virtual vocational learning via radio, television, and social media channels (Osuji, 2004).

Egunyomi (2009) believes that Continuing Education is oriented toward national development, where adult Nigerians are trained for employment and entrepreneurship in society. Osuji (2005) agreed that Continuing Education is contiguous to industrial development, organisational productivity, and worker efficiency. The philosophy of Continuing Education is embedded in the provision of education after basic education in the National Policy on Education based on the goals of education in Nigeria and the imperative of lifelong learning (NERDC, 2013; Somieari-Pepple, 2023). Egunyomi (2009) argued that the National Policy on Education provided for the training of adults for employment but was not succinct in producing trained adults as employers of labour through continuing education programmes. Hussain, et al (2013) are also concerned about the opaqueness of the clarity of objectives in continuing education, particularly the technical education and the overlapping roles of institutions and agencies of adult education in the implementation of Continuing Education in Nigeria.

Ezeyi, Ene, and Nwosu (2021) and Epelle and Omoruyi (2004) surmised that there is a disconnect between educational policy plans and implementation. The Industrial Training Fund was conceived as a vocationally-oriented continuing education programme aimed at bridging skill enhancement and workforce development gaps for employees in industrial and commercial sectors following the 1970 Nigerian Civil War. However, its implementation was flawed (Osuji, 2005). The National Open University of Nigeria was established to promote lifelong learning through open and distance education but focuses more on the provision of higher education

than Technical and Vocational Education (TVE). Technical and Vocational Education and Training (TVET) is not responsive to the continuing education needs of industrial and commercial establishments to stimulate widespread acceptability among workers (Akpan, 2023; Okoye & Arimonu, 2016). The role and impact of professional associations and trade unions are doubtful in the execution of Continuing Education programmes for their members (Osuji, 2004).

Skills Development

Skills development essentially refers to two key concepts: 'skills' and 'development,' and their interrelationship within the socio-economic context of society. According to Romiszowski (2009), skill is the capacity of an individual to perform a given activity with a given degree of effectiveness, efficiency, speed, or other measure of quantity or quality. The African Development Report (2011) defined skills as the subset of human capital specific to a particular task, job, or enterprise and are obtained through specialised education or training in vocational occupations. On its part, development is the process of enhancing the quality of human engagement, experience, and growth for sustainable socio-economic and political advancement that promotes human dignity, innovation, and justice through investment in education and skills training (Sakalasooriya, 2020). Notwithstanding the classic and neoclassical perspectives on development, the focus of productive and economic growth in any nation centres on human capital development as the driver of innovation and transformation in the global economy today (Abanikannda & Omobuwa, 2021).

Therefore, skills development can be considered as the productive human capabilities obtained through levels of learning and training that take place in lifelong education, whether formal, non-formal, informal, or on-the-job training (Adelaiye, 2019; Swedish International Development Cooperation Agency, 2018). The skills required for human productivity span from fundamental to technical and life skills. Fundamental skills are basic and foundation skills acquired through the elementary formal schooling system, such as reading, writing, comprehension, and basic mathematics. Skills such as active learning, active listening, and ICT literacy are also fundamental skills. Technical skills are general and vocational skills, such as management techniques and business skills, or specialised skills. The former can be advanced literacy, accounting techniques, financial reasoning, marketing, and basic quantitative skills while the latter are trade-specific competencies or knowledge relating to particular production processes or occupational trades. Technical skills are acquired through formal school systems or non-formal learning processes. Life skills are transferrable people or interpersonal skills for personal and work effectiveness, popularly described as soft skills, and these are problem-solving, decision-making, teamwork, leadership, time management, conflict management, emotional intelligence, creativity, adaptability, and the ability to communicate effectively and work well with others.

Skills can be developed through formal and informal education. Skills are formally developed through a country's educational system at vocational, technical, or higher education levels. On the other hand, skills are also developed informally through apprenticeship training systems whether traditional artisanship or on-the-job training programmes using the lifelong learning methodologies. The African Development Report (2011) stated that a shortage of skills places a country at a considerable competitive disadvantage. Skills are a vital component of both everyday life and national development (Gibson & Chesterman, 2022). In the development of skills as a concept to emphasise its relevance to continuing professional development, Rigby and Sanchis (2006) proposed a market-driven approach to understanding skills development. They argued that the social construct of the concept of skills is based on the perceived value and power dynamics within the employer-employee relationship. It means that skills development requires political commitment to industrialisation involving multi-level stakeholders to grow the competencies of technicians and professionals across occupational disciplines and cross-sectoral industrial collaboration to induce economic transformation in the country (United Nations, 2011).

Automobile Technicians

The automobile technicians are artisans without formal education or technicians with average formal education. The automobile technicians are mechanics, panel beaters, welders, iron benders, painters (auto-sprayers), auto-electricians, blacksmiths (turners), battery chargers, auto-body builders, and vulcanisers. They are members of the Nigeria Automobile Technicians Association (NATA), which serves as the national professional body of the micro, small, and medium-scale auto-repairers in the informal economy. The Nigeria Automobile Technicians Association was registered as the Nigeria Motor Mechanic Association in 1962, with a history that dates back to 1919. In 1986, the association became the Nigeria Motor Mechanics and Technicians Association when the Federal Government of Nigeria excluded all trade unions of self-employed workers from the unified trade union.

The Nigeria Motor Mechanics and Technicians Association re-registered as the Nigeria Automobile Technicians Association with the Corporate Affairs Commission in 2000 and has maintained the NATA nomenclature. There are over 2 million automobile technicians, representing 75% of the total number of automobile technicians in Nigeria (Birniwa and Idris, 2023). According to NATA, there are over 100,000 female automobile technicians in Nigeria plying their trades in Abuja, Anambra, Edo, Lagos, Oyo, and Rivers. Members of NATA operate in the informal sector and this suits their structure because they are distributed in the grassroots local units where the local branches meet weekly to deliberate on the affairs of their members.

Nigeria Automobile Technicians Association recognises the importance of continuing education, and this represents 62.5% of the objectives of the association. The education and training components of their broad-based objectives include (i) the education of members on

the impact of national policies and the operating environment of their trade, (ii) the promotion of government policies on automobile technological development, education, health, economy, and political matters, (iii) the mobilisation of members for enhanced participation in national development, (iv) organisation of training programmes through workshops, seminars, and symposium on political, economic, health, and any other societal matters including the trades of members for professionalism, and (v) improvement and regulation of training and practices of members.

The NATA Constitution [second edition] was adopted in September 1997 at the second National Quadrennial Delegates Conference of the association held in Minna, Nigeria. Article 17 of the NATA Constitution [second edition] is on education, which enjoins members to invest in their education through continuing education. The association seeks to use educational classes, symposiums, leaflets, and other educational activities to improve the standard of education of its members, their quality of trade, eradicate illiteracy, enhance mutual understanding and cooperation, promote industrial democracy among members, and encourage positive industrial relations with the government and society among members. The association aims to run educational programmes that address the industrial, cultural, socio-economic, and political needs of its members.

ISSUES OF CONTINUING EDUCATION FOR SKILLS DEVELOPMENT OF AUTOMOBILE TECHNICIANS

The lack of continuing education in the occupational practices of automobile technicians has led to a skills development crisis in the automotive industry, as evidenced by several challenges. These include a shortage of skilled labour, an ageing workforce, the prevalence of quackery, insufficient work knowledge, the absence of sustainable continuing education programmes, limited opportunities for continuing professional development, a disconnect between sectoral policies and human capital development practices, and inadequate funding.

- **Shortage of Skilled Labour**: There are inherent problems facing the automotive industry, particularly relating to human capital development. There is either a shortage of skilled technicians unable to keep up with the rapid technological changes in the industry, or unskilled labour lacking the necessary competence and skills to provide interventions or routine services for available brands of imported used vehicles with basic technology. As there are fewer trained and versatile automobile technicians in the industry, the curriculum at the informal and formal levels of education is not attractive to elicit interest among young adults in society.
- **Aging Demographics**: The demographic of automobile technicians indicates that the workforce is aging, with outdated skill sets that are insufficient to meet the needs of customers who rely on their services. These aging automobile technicians do trial and error in diagnosis, which is speculative and cannot thrive with modern automobile

technology in newer cars coming into the country (Alabi, 2017). This misdiagnosis costs the customers loss of assets, money, and time. Customers have been disadvantaged because of the incompetence of aging automobile technicians in the industry. The aging automobile technicians attempt to service vehicles they do not have the core competencies to handle, delegate the repairs of customers' cars to apprentices who are less experienced on the job or fail to conduct quality assurance of fixed vehicles before delivery to owners (Akinselure, 2023).

- **Prevalence of Quackery**: The NATA Constitution stipulates a commitment to the educational investment of its membership. There are also reports that their members are equipped with acquired technological advancement training in partnership with some lubricant stations such as Mobil, Oando, and Ammasco (Igbokwe, 2018). A punctilious review of these activities at the various roadside workshops of the automobile technicians and feedback from selected associations' reports at different state levels do not correlate with the perceived quality of service delivery in the community of practice. NATA partners with organisations such as Mobil Nigeria Plc and has trained over 100,000 members, representing 5% of the total automobile technicians in Nigeria. However, the experiences of car owners have shown that automobile technicians in the informal sector cost them more money, and waste their time, and sometimes assets (vehicles) because of incompetence and dubious practices. Ayantoye (2022) opined that the prevalence of quackery, lack of skills, and lack of continuing education are factors militating against quality service delivery to customers among automobile technicians in the informal sector.
- **Lack of Requisite Work Knowledge**. Omole (2005) stated that forms of continuing education available to automobile technicians are workshops, exhibitions, seminars, symposiums, and on-the-job training. These involve knowledge of the functionality of modern cars, standard operating procedures for vehicle maintenance, work habits, occupational health, safety, and environment (OSHE) education, customer service, quality assurance, book-keeping and accounting, financial literacy, work habits, work ethics, and etiquette. They can also involve starting up and managing small informal businesses. Other areas of continuing education are business development, financial management, and technical knowledge. In the community of practice, however, most automobile technicians suffer injuries and are exposed to varying degrees of occupational hazards at work because of lack of knowledge (Johnson & Bassey, 2016; Oche, Okafoagu, Oladigbolu, Ismail, Ango, Hashimu, & Ijapa, 2020).
- **Non-Availability of Sustainable Continuing Education Programmes**. The automobile technicians possess outdated knowledge and skills from their entry-level informal training, and this is inadequate to fix modern vehicles, particularly the electric cars in the country today (Akinselure, 2023). The automobile technicians operate,

sometimes under unhygienic conditions under trees, in uncompleted or unoccupied buildings, and on the roadside; hence their popular nomenclature as roadside mechanics in the community of practice and sometimes in literature (Igbokwe, 2019). The non-availability of sustainable continuing education has not only affected their knowledge, skills, and abilities but also contributed to their unorthodox method of operations as roadside mechanics without efforts to rebrand or upgrade their skill sets or environment.

- **Lack of Opportunities for Continuing Professional Development**. Over the last decade, the Nigerian Automotive Industry Development Plan (NAIDP) 2014-2024 has not significantly transformed Nigeria into the hub of Africa's automotive industry, and the lack of critical human capital development and strategic direction for local production remain a challenge (Adejumo, 2015; SUSA Africa, 2020). The inconsistency in the government's fiscal and importation policies, along with investments in the local automotive industry, has affected human capital development within the sector (Ologunagbe, 2023). There is a paucity of skilled workforce in the industry (National Automotive Design and Development Council, 2023). The automobile technicians who provide services to vehicles do not have the requisite skills to bridge the skill and knowledge gap in the industry. They lack opportunities for technical training, skill development, and exchange programmes to expose them to international standards in vehicle production and maintenance. Automobile technicians often use trial-and-error or rule-of-the-thumb methods of troubleshooting to detect mechanical faults because they lack the requisite technical training to use modern equipment and technology for diagnosis and repairs of vehicles (Umukoro & Asor, 2023).
- **Sectoral Policy Disconnect with Human Capital Development Practice in the Industry**. The Nigerian Automotive Industry Development Plan was revised in 2023. The revised Plan acknowledged that NAIDP 2014 could not deliver on its objective of skills development, which was one of its pivotal pillars aimed to facilitate quick knowledge transfer to locals and improve productivity. The revised NAIDP Plan was envisioned to address the challenges that militated against the effective delivery of the five pillars, which were industrial infrastructure, skills development, standards, investment promotion, and vehicle purchase scheme and market development in the NAIDP 2014, according to the Minister of Federal Ministry of Industry, Trade and Investment (National Automotive Design and Development Council, 2023). Despite the shortcomings of the NAIDP 2014, the corrective measures of NAIDP 2023 focused primarily on the formal sector. There are no direct policy provisions or programmes for the inclusive skills development of automobile technicians to highlight their importance in the value chain for human capital development within the industry. The NAIDP 2014 collaborated with the National Board for Technical Education (NBTE) and the National Universities Commission (NUC) to bridge the knowledge and skills development gaps. The statistics from NAIDP 2023 showed that over

400,000 graduates were produced yearly by the Technical and Vocational Education and Training (TVET) institutions, but the National Automotive Design and Development Council (2023) concluded that over 70% of these graduates were unemployable because they lacked technical skills for the modern automotive industry. In this circumstance, automobile technicians are substitutes for millions of imported used vehicles that require maintenance to remain on the roads over the last decade in the country. There were no records from the revised Nigerian Automotive Industry Development Plan 2023 that the informal sector, where the automobile technicians practise their trade was catered to in the industry.

- **Funding:** Abutu, Idris, Abdulkadir, Audu, and Mohammed (2017) stated that the skills upgrade of automobile technicians was constrained by budgetary limitations. The association also suffers from the capacity to implement its annual training plans because of low contributions received from members. The NATA across the geopolitical zones of the country in Lagos, Ekiti, and Sokoto States has had to depend on partnerships with the organised private sector and government for the funding to organise training for their members because of the financial constraints, lack of forecasting, and implementation of the training objectives of the association.

PROSPECTS OF CONTINUING EDUCATION FOR SKILLS DEVELOPMENT OF AUTOMOBILE TECHNICIANS

The automotive industry is a crucial sector of the Nigerian economy that can drive its developmental agenda. Although the government seeks to transform the industry and decrease dependence on imported used vehicles, car owners still prefer imported vehicles. As vehicle ownership continues to rise significantly in developing countries worldwide, Ukonze, Nwachukwu, Mba, Okeke, and Jiburum (2020) noted that vehicle ownership in Nigeria, which was 35.3 million in 2018 according to the National Bureau of Statistics (2018), is projected to grow to 48.7 million by 2030 and 76.1 million by 2050. Consequently, the demand for vehicles is expected to keep increasing. The role of the informal sector and the importance of automobile technicians in maintaining vehicles cannot, therefore, be overstated.

The infusion of standardised continuing education programmes for the skills development of automobile technicians in NATA can create opportunities to enhance competencies among these automobile technicians, improve human capital development, and engender value creation and exceptional service delivery in the automotive industry through the transformative work environment and delivery of collaborative skills development programmes.

There is a direct linkage between the challenges of skills development facing automobile technicians and the lack of provision of continuing education for them in the automotive industry. Automobile technicians require continuing education to keep them abreast of changing technology in the automotive industry. It is first of all the responsibility of the individual technicians

to invest in their self-development through continuing education collaboratives with their association that has training and education of members as a priority objective. The NATA Sokoto State has been promised a new mechanic village of international standard for their operations and should produce skills acquisition programmes to attract youth into the trade and improve the competencies of members.

Furthermore, there is a correlation between a good working environment and productivity that is induced by continuing education (Sambo, Idris, and Shamang, 2012). Johnson and Bassey (2016) established a relationship between continuing education and the occupational health, safety, and environment (OHSE) of automobile technicians. The authors emphasised that enhancing the educational attainment of these technicians through adult literacy programmes would contribute to their overall well-being as professionals. This is evident in the interactions of NATA in Ekiti (ekitistate.gov.ng, 2012), Lagos (Igbokwe, 2018), Imo, Kaduna (Alabi, 2017), Katsina, Oyo (Akinselure, 2023), and Sokoto (datelineng, 2021), to mention but a few that have demanded mechanic villages where their members can build modern workshops to service modern cars rather than the prevalent practice of automobile technicians.

The NATA Delta State protested that the government should provide them with a mechanic village to mitigate the hazards of working on the roadside in Asaba (Igbekoyi, 2020). There is a connection between the environment and the training centre for modern car repairs, as well as the capacity building of automobile mechanics. There should be a tripartite agreement among NATA, government, and financial institutions to create financial packages and micro credits for automobile technicians who are self-employed and in MSMEs to access loans to start up mobile corner shops for quick fixes in line with the appropriate agencies of government such as the ministry of environment and town planning to delineate arrears where automobile technicians can locate their workshops. This will remove the mentality that they are roadside. This has been done in the food and confectionery industry for quick-service restaurants and can be done for the automotive industry to enhance quick service for minor repairs and maintenance of vehicles.

There are federal and state universities that have adult education programmes for technicians to upgrade their skills. NATA sought to enrol its members in adult education programmes to help those who are illiterate acquire formal education and enhance their skills (Alabi, 2017). There should be increased sensitisation and awareness programmes to increase the enrolment of members of NATA. The University of Ibadan has a short course for automobile technicians. There is an agreement signed between NATA and the National Open University of Nigeria to educate their members (Alabi, 2017). There should be a flexible training programme built into their weekly meeting sessions, as members who are not encouraged to enrol because they must earn their daily bread and cannot afford to leave their workplace to go to school will learn basic skills to upgrade their practices.

CONCLUSION

There is a need for continuing education to address education, human resources development, and industrial relations gaps in the automotive industry. There should be a collaboration among higher education, sectoral associations, and impact investors to undertake long-term studies to assess the social and economic returns on programme investments in the industry. Conclusively, the study suggests as follows:

- **Mainstreaming and implementation of grassroots policies**: The National Automotive Design and Development Council should implement inclusive policies and programmes that integrate the informal sector into its agenda. Its policy planning, industrial infrastructure, funding, and licensing should bring on board the automobile technicians and not only practitioners in the formal sectors. It should collaborate with professional associations like NATA, educational institutions like NOUN, and other federal or state universities to develop a curriculum for the certification of automobile technicians in the informal sector and collaborate with the Bank of Industry or related prosocial micro-credit institutions to make loans available for NATA members to create entrepreneurial businesses where their new competencies can benefit society.
- **Collaborative learning ecosystem**. There should be collaboration between NATA, the National Board for Technical Education (NBTE), the National Directorate of Employment (NDE), the Standard Organisation of Nigeria (SON), Nigerian Society of Engineers (NSE), the National Automotive Design and Development Council (NADDC), the National Commission for Mass Literacy, Adult and Non-Formal Education (NMEC), the organised private sector, and the relevant agencies of government to monitor skills development and certification of automobile technicians. This certification should be based on annual renewal, and licenses should be graded to let customers know the type of skills that the technicians they are approaching possess.
- **Facilities**. There is a need for the state governments to fast-track the establishment of modern mechanic villages across the 774 local government areas (LGAs) in Nigeria. The initiative will promote the image of NATA members, improve their environment, and ensure that customers who patronise the services of automobile technicians get value for money.

CONFLICTS OF INTEREST

According to the authors, there are not any to disclose.

References

Abanikannda, A., & Omobuwa, A. (2021). Nigeria's development process, methodology, and milestones planned for Vision 20:2020 – 13 years after. *Research Journal of Health Sciences, 9*(2), 169–175.

Abutu, F., Idris, A. M., Abdulkadir, M., Audu, R., & Mohammed, M. A. (2017). The automotive industry in Nigeria: Trends, challenges, and prospects in the 21st century. *Benue State University Journal of Education, 17*(2), 251–257.

Adejumo, K. (2015). The Nigeria automotive industry – Policy, history, and development. Retrieved from https://www.thenigerianvoice.com/news/180765/the-nigeria-automotive-industrypolicy-history-and-developm.html

Adelaiye, M. B. O. (2019). Internship, Employability and Organisational Commitment in the Hospitality Industry in Bauchi Metropolis, Bauchi State, Nigeria. *Agidigbo: ABUAD Journal of the Humanities, 7*(1), 35-46. https://doi.org/10.53982/agidigbo.2019.0701.04-j.

African Development Report. (2011). Human capital and skills development. Retrieved from https://www.afdb.org/.

Aitokhuehi, O. (2018). Facilitating in continuing education centres as a management function. *Journal of Educational Thought, 7*(1), 55–67.

Akinpelu, J. A. (1986). Nature, aims and scope of continuing and vocational education. *First National Seminar on Continuing and Vocational Education*. University of Ibadan.

Akinpelu, J. A. (1988). Towards a re-definition of the concept of continuing education. *Unpublished mimeograph*. University of Ibadan, Nigeria.

Akinpelu, J. A. (2002). *Philosophy of adult education*. Ibadan: Stirling-Horden Publishers.

Akpan, D. (2023). Nigeria's technical, vocational education, and training programmes: Insights and analysis. *Technical report for Masters of Art in Educational Innovation, Technology and Entrepreneurship*. The University of North Carolina at Chapel Hill.

Akinselure, W. (2023). NATA worries over outdated car mechanics, auto technicians. Retrieved from https://tribuneonlineng.com/nata-worries-over-outdated-car-mechanics-auto-technicians/.

Alabi, A. (2017). Kaduna technicians to engage 1,000 Almajiris. Retrieved from https://guardian.ng/appointments/kaduna-technicians-to-engage-1000-almajiris/.

Ayantoye, D. (2022). How roadside mechanics hide under repairs to fleece vehicle owners. Retrieved from https://punchng.com/how-roadside-mechanics-hide-under-repairs-to-fleece-vehicle-owners/

Bankole, A. A. (2009). Management effectiveness of continuing education centres in Ogun State, Nigeria. *Ph.D. Thesis*. University of Lagos.

Birniwa, M. S., & Idris, U. A. (2023). Assessment of competencies and training needs of automobile mechanics in Jigawa State. *HAFED POLY Journal of Science, Management, and Technology, 5*(1), 1–15.

dateline.ng. (2021). Tambuwal applauds automobile technicians for providing jobs. Retrieved from https://dateline.ng/tambuwal-applauds-automobile-technicians-for-providing-jobs/.

Epelle, A., & Omoruyi, O. (2004). The national policy on education. In Igbinovia, P. E., Okonofua, B. A., & Osunde, O. (Eds.), *Law and social policy legislation and administration in Nigeria* (pp. 196–211). Lagos: Ababa Press Limited.

Egenti, M. N., & Omoruyi, P. F. E. O. (2011). Challenges of women participation in continuing higher education programmes: Implications for adult women counselling and education. *Edo Journal of Counselling, 4*(1&2), 130–143.

Egunyomi, D. A. (2009). Continuing education and the millennium development goals in Nigeria. *Pakistan Journal of Social Sciences, 6*(6), 339–342.

Egunyomi, D. A. (2015). *Balancing life equation with continuing education: An inaugural lecture.* Ibadan: Ibadan University Press.

ekitistate.gov.ng. (2012). EKSG to establish a central mechanic village. Retrieved from https://www.ekitistate.gov.ng/archives/19569

Ezeyi, V. N., Ene, N. N. S., & Nwosu, R. Y. (2021). National policy on education in Nigeria. In *Historiological dimensions of the Nigeria education* (pp. 91–150). Equity Ventures in conjunction with Mega Atlas Projects Limited. Retrieved from http://eprints.gouni.edu.ng/id/eprint/3519

Gibson, M., & Chesterman, M. (2022). Collaborative skills development: Theory and practice. *Children and Youth Services Review, 142*. https://doi.org/10.1016/j.childyouth.2022.106632

Haruna, M. S. (2019). Automotive industry as a catalyst to socio-economic development. *9th National Engineering and Annual General Meeting of Automotive and Locomotive Engineering Institute.* Automotive and Locomotive Engineering Institute, Abuja. https://doi.org/10.13140/RG.2.2.26531.78888

Hussain, M. S., Alhassan, A. U., & Kamba, I. N. (2013). Continuing education in Nigeria: Meaning, objectives, forms, and prospects. *European Scientific Journal, 9*(10), 168–175.

Igbekoyi, F. (2020). NATA protests sack of 2,000 members from workshops in Asaba. Retrieved from https://independent.ng/nata-protests-sack-of-over-2000-members-from-workshops-in-asaba/

Igokwe, E. (2018). Automobile technicians demand mechanic village from incoming governor. Retrieved from https://echonews.ng/automobile-technicians-demand-mechanic-village-from-incoming-governor/

International Trade Administration. (2023). Nigeria – Country commercial guide: Automotive sector. Retrieved from https://www.trade.gov/country-commercial-guides/nigeria-automotive-sector

Johnson, O. E., & Bassey, E. A. (2016). Work habits and health problems of automobile technicians at Mechanic Village, Uyo, Nigeria. *Global Advanced Research Journal of Medicine and Medical Sciences, 5*(5), 136–142.

Kester, K., Omoregie, E., & Adeyeye, J. (2006). Rethinking workers' education in Africa. *Adult Education in Nigeria, 12,* 241–248.

Mordor Intelligence. (2024). Nigeria used car market size and share analysis – Growth trends and forecasts (2024–2029). Retrieved from https://www.mordorintelligence.com/industry-reports/nigeria-used-car-market

Nanyang Technological University. (2022). A new car assembly plant begins operation in Nigeria. Retrieved from https://www.ntu.edu.sg/cas/news-events/news/details/a-new-car-assembly-plant-begins-operation-in-nigeria

National Automotive Design and Development Council. (2023). Nigerian automotive industry development plan. Retrieved from https://naddc.gov.ng/wp-content/uploads/2023/06/Nigerian-Automotive-Industry-Development-Plan-2023.pdf

National Bureau of Statistics. (2017). Labour force statistics Vol. 2: Employment by sector report (Q3 2017). Retrieved from https://nigerianstat.gov.ng/elibrary/read/711

National Bureau of Statistics. (2018). *Annual abstract of statistics 1970–2017.*

National Bureau of Statistics. (2023). Nigeria labour force survey Q4 2022 and Q1 2023. Retrieved from https://nigerianstat.gov.ng/elibrary/read/1241365

National Commission for Mass Literacy, Adult and Non-Formal Education. (2008). The development and state-of-the-art of adult learning and education (ALE): National report of Nigeria. Retrieved from https://uil.unesco.org/fileadmin/multimedia/uil/confintea/pdf/National_Reports/Africa/Africa/Nigeria.pdf

NERDC. (2013). *National policy on education* (6th ed.). Yaba, Lagos: NERDC Press.

Ng, B., & Yedan, A. (2023). Human capital as a critical capability and asset for supply chains in Africa: An econometric analysis of the automotive sector. Retrieved from https://unctad.org/system/files/non-official-document/edar2023_BP6_en.pdf

Oche, M. O., Okafoagu, C. N., Oladigbolu, R. A., Ismail, R., Ango, T. J., Hashimu, A. B., & Ijapa, A. (2020). Determinants of occupational health hazards among automobile technicians in Sokoto Metropolis, Nigeria. *Annals of African Medicine, 19*(2), 80–88. https://doi.org/10.4103/aam.aam_50_18

Ologunagbe, O. (2023). What to know about GAC Lagos car assembly line. Retrieved from https://businessday.ng/news/article/what-to-know-about-gac-lagos-car-assembly-line/

Okebiorun, J., & Alao, O. (2011). Financing continuing education in the 21st century: Options and challenges. *Journal of Educational Research and Development, 6*(2), 148–154.

Okoye, R., & Arimonu, M. O. (2016). Technical and vocational education in Nigeria: Issues, challenges, and a way forward. *Journal of Education and Practice, 7*(3), 113–118.

Omole, M. A. L. (2005). *Industrial education and human resources development.* Ibadan: Alafas Nigeria Company.

Osuji, S. N. (2001). Principles and practice of continuing education in Nigeria. In Okedara, J. T., & Anyanwu, C. N. (Eds.), *Philosophical foundations of adult and non-formal education* (pp. 157–173). Ibadan: Ibadan University Press.

Osuji, S. N. (2004). New perspectives in adult education in Nigeria in the 21st century. Retrieved from https://files.eric.ed.gov/fulltext/ED491791.pdf

Osuji, S. N. (2005). The right to learn: The continuing education opportunities for workers in industries in Nigeria. *Journal of Social Sciences, 11*(2), 157–163. https://doi.org/10.1080/09718923.2005.11892508

Poschauko, V. C., Kreuzer, E., Hirz, M., & Pacher, C. (2023). Engineering education goes lifelong learning: Modularised technical vocational education and training programme for the automotive sector. *Procedia Computer Science, 232*(4), 1799–1808. https://doi.org/10.1016/J.PROSC.2024.02.002

Rigby, M., & Sanchis, E. (2006). The concept of skill and its social construction. *European Journal of Vocational Training, 37,* 22–33.

Romiszowski, A. (2009). Fostering skill development outcomes. In Reigeluth, C. M. (Ed.), *Instructional design theories and models* (pp. 199–224). New York: Routledge.

Sakalasooriya, N. (2020). *The concept of development: Definitions, theories, and contemporary perspectives.* Sri Lanka: University of Kelaniya.

Sambo, M., Idris, S., & Shamang, A. (2012). Determinants of occupational health hazards among automobile technicians in Zaria, North Western Nigeria. *Borno Medical Journal, 9*(1), 5–9.

Somieari-Pepple, E. S. (2023). Impact of adult and non-formal education in Nigeria: The way forward for educational leaders. *International Journal of Scientific Research in Education, 16*(3), 302–319.

sunnewsonline.com. (2017). NATA holds training in Lagos, hails Mobil for empowering members. Retrieved from https://sunnewsonline.com/nata-holds-training-in-lagos-hails-mobil-for-empowering-members/

SUSU Africa. (2020). Nigeria is the next West Africa auto hub. Retrieved from https://susafrica.com/2020/02/14/nigeria-is-the-next-west-africa-auto-hub/

Swedish International Development Cooperation Agency. (2018). Skills development: Information brief. Retrieved from https://cdn.sida.se/publications/files/sida62134en-skills-development.pdf

Tahir, G. (2000). Continuing education policy provisions and options in Nigeria. In Indabawa, S. A. et al. (Eds.), *The state of adult education in Africa.* Bonn, Germany: John Meinert Publishing.

Ukonze, F. I., Nwachukwu, M. U., Mba, H. C., Okeke, D. C., & Jiburum, U. (2020). Determinants of vehicle ownership in Nigeria. *SAGE Open, 10*(3), 1–13. https://doi.org/10.1177/2158244020922970

Umukoro, S., & Asor, M. (2023). Customers' service perceptions in the automotive repairs industry in Nigeria. *Journal of Research in Business and Management, 11*(4), 130–141.

United Nations. (2011). *Economic development in Africa report: Fostering industrial development in Africa in the new global environment.* Retrieved from https://unctad.org/system/files/official-document/aldcafrica2011_en.pdf.