

## **EMPOWERING ELECTRONIC ARTISANS: THE INFLUENCE OF APPRENTICESHIP TRAINING IN BAYELSA STATE**

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### **Abstract**

The study examines the influence of apprenticeship training programmes on the performance of electronic artisans in Bayelsa state. Two research questions guided the study and correspondingly, two hypotheses were formulated for the study. The study adopted descriptive research survey design. The population of the study comprises 6738 respondents. Purposive sampling technique was used to select communities while 309 respondents comprised of 84 master craftsmen and 225 artisans were proportionately sampled and used for the study. Data were collected through a self-structured questionnaire titled "Apprenticeship Training Programmes on the Performance of Electronic Artisans' Questionnaire". The instrument was designed on a modified 4-point rating scale of agreement. The instrument was validated by two experts in technical education. The reliability index of 0.89, 0.87, 0.82, 0.80 and 0.86 were established for different sections of the instrument using the Cronbach alpha method. Research questions were analyzed using mean and standard deviation statistics while the null hypotheses formulated were tested at 0.05 level of significance using z-test. The study found that indigenous apprenticeship programmes, formal, less formal, informal and advanced apprenticeship training programmes influence the performance of electronic artisans in Bayelsa State. Based on the findings of the study, it was recommended among others that instructors in various workshops should incorporate the indigenous apprenticeship methods of training artisans or apprentices in a particular trade and embark on various technical programmes such as the national open apprenticeship scheme as this will help to standardize apprenticeship training programmes in Bayelsa State.

**Keywords:** Apprenticeship, Training, Programmes, Performance, Electronic, Artisans

### **Introduction**

A large number of youths in Nigeria is visibly unemployed because they either possess inadequate saleable skills that could make them attractive to employers of labour or be self-employed. Skills development remains a key to poverty eradication, employment generation and rapid economic development globally, this fact has been made bear in some notable journals. In 2020, the unemployment rate in Nigeria hit a record of 33.3 percent which implies that 23.19 million Nigerians were unemployed (National Bureau of Statistics, 2021).

Nigeria has seen a rise in both inflation and unemployment, leading other countries of the world with a very high number of unemployed people globally. Consequently, over the past few decades, successive governments in

Nigeria have evolved policies and programmes aimed at developing entrepreneurship through the establishment of various apprenticeship and skill acquisition programmes aimed at the development of small and medium scale enterprises SMEs (Ayoade & Agwu 2015). The government in the year 2010 approved the inclusion of entrepreneurship studies into the academic curriculum of both secondary and tertiary educational institutions. Governments also increased the funding of technical institutions at all levels of education, this was targeted at achieving a higher level of entrepreneurial skills development among the people of country. In spite of all the efforts, poverty level in Nigeria has been accounted one of the highest in the world after India. Nigeria could leverage on the apprenticeship system as a way of acquiring and transferring saleable skills and knowledge for the younger generation (Aluu & Enudu, 2023). Apprenticeship as explained by Ezeji and Nkajimeje as cited in Olubisi (2018) “is an arrangement whereby an infant or an adult, male or female bonds himself or herself to serve and learn within a definite time from a master who undertakes to teach his trade or calling to someone who is regarded as an apprentice. Apprenticeship is a form of vocational training that has formal relationship between the stylist (trainer) and apprentice (trainee) through which the mutual obligations and duties of each are established by written or oral agreement. The term "apprenticeship" is associated with a contract for the services to be rendered. The service is a form of instruction on the part of the master and learning through working on the part of the learner or apprentice”.

In recent time, apprenticeship has been modernized, compare to the old time, when people are taught by watching, observing and imitating whatever the master is doing. Apprenticeship during the era of old was based on the principle of “doing as I do” or “say as I say”. In the modern time, apprenticeship has taken a different shape such that people are made to write something down as they watch the master perform the task, and at the end of the training programme a certificate is issued to the trainee or artisan or apprentice. Apprenticeship is being defined by Gessier (2019) as a practice or a trade of craft that is under a legal agreement that define the relationship between the master, apprentice, the duration and the condition of their services. This implies that it is a training given in developing a profession under a tutelage of a professional. It is a way of acquiring new skills and getting hand on industrial experience before getting an educational degree or an entry level job. Okadi, Onah, Ekenta and Ezhim (2020), mentioned that apprenticeship training is a type of vocational training in which an individual attach him/herself to a master or skilled technician to acquire a skill. A well-trained apprentice is expected to perform very in the chosen area of apprenticeship. This could be achieved if the artisan is well trained and terms handling of tools and others. Hence, the training acquired could me measure in terms of job performance during the period of apprenticeship and after completion.

Job performance relate to how individual artisan perform in their job operations. Job performance to be the sum total of a worker’s (artisan) execution of assigned tasks. Grouping assigning, analyzing, and evaluating a worker’s job performance generally involve human resource expertise. Managerial personnel may also be involved in these areas of responsibility, because of their knowledge of overall production and workflow (Fletcher, 2023). Job

performance evaluates if a person performs a job well. Job performance is studied in school as part of industrial and organizational psychology, it also forms part of human resources management. Performance is a very important factor for assessing an organization's outcome and success. In his description Campbel (2020), described job performance as an individual level variable, or something a single person does while Sam (2013), aver that "job performance is the effectiveness of job-related behaviour as measured quantity of quality of output, or against multiple criterion dimension". Job performance range from poor to excellent in trainee on performance level.

Parents and guardians are enthusiastic about their children and wards' prospects of securing or creating employment opportunities after completing training courses such as indigenous apprenticeship programs. Indigenous apprenticeship training involves the acquisition and enhancement of marketable skills, including electronic skills that are relevant to the dynamic and business-oriented society (Obadara & Abatan, 2014). The prevailing issue in Nigeria today primarily revolves around the insufficient production of artisans capable of meeting the demands of the rapidly evolving job market. Indigenous apprenticeship training programs should aim to equip trainees with the necessary skills and attitudes required for employment (Agbola & Oloaoye cited in Nwokedi, Amaewhule & Nwafor, 2018). Traditional indigenous apprenticeship is widely acknowledged as an effective method of training young individuals in various skills and vocations, such as electronics, to cultivate electronic artisans.

The primary aim of formal apprenticeship training for electronic artisans is to enhance the participants' appeal to potential employers, facilitate the establishment of their own businesses, or secure employment opportunities. These structured training programs are designed to bolster the human capital of electronic artisans in Bayelsa State (Ayinde, 2018). It is anticipated that formal apprenticeship training will yield two main outcomes: either an increase in demand for participants' labor from employers, or participants acquiring the skills necessary to start their own ventures, leading to higher wage rates and enhanced employment prospects.

An alternative perspective, such as Thurow's (1980) job competition model, posits that participation in formal apprenticeship training programs serves as a signal to employers regarding an individual's motivation or aptitude for training (Ayinde, 2018). Formal apprenticeship training entails a documented agreement outlining the terms and responsibilities of teaching and learning for both parties involved.

### **Statement of the Problem**

The field of electronics has in recent times witnessed rapid advancements, necessitating a skilled workforce capable of adapting to evolving technologies. Bayelsa State, one of the states in the Niger Delta, Nigeria, has a growing demand for proficient electronic artisans to contribute to the development of various sectors such as telecommunications, manufacturing, and energy. However, the efficacy of apprenticeship training programme in equipping electronic artisans with the necessary skills and knowledge remains a critical concern. Traditionally in Bayelsa, people learned skills through apprenticeship with a master, similar to their old educational system. This system trained many of today's workforce, but focused mainly on practical skills with less emphasis on theoretical knowledge.

Understanding these apprenticeship methods is important because many people choose them over formal education. In Bayelsa, most apprentices have limited formal education and may not be familiar with different training methods. Additionally, traditional apprenticeship often lacks modern teaching methods and technology. The Bayelsa government has tried to improve artisans' theoretical knowledge through programme, as they might struggle with new technologies. This study aims to investigate how apprenticeship programme affects the performance of electronics artisans in Bayelsa

### **Purpose of the Study**

The purpose of the study was to examine the influence of apprenticeship training programmes on the performance of electronic artisans in Bayelsa State. Specifically, the study sought to;

1. ascertain the methods of indigenous apprenticeship training programmes for enhancing the performance of electronic artisans in Bayelsa State.
2. determine the influence of formal apprenticeship training programmes on the performance of electronic artisans in Bayelsa State.

### **Research Questions**

The following questions were raised and answered in the study.

1. What is the influence of indigenous apprenticeship training programmes on the performance of electronic artisans in Bayelsa State?
2. What is the influence of formal apprenticeship training programmes on the performance of electronic artisans in Bayelsa State?

### **Hypotheses**

The following null hypotheses were formulated and were tested at 0.05 level of significance.

1. There is no significant difference in the mean responses of master craftsmen and artisans on the influence of indigenous apprenticeship training programmes on the performance of electronic artisans in Bayelsa State.
2. There is no significant difference in the mean responses of master craftsmen and artisans on the influence of formal apprenticeship training programmes on the performance of electronic artisans in Bayelsa State.

### **Methodology**

The research employed a descriptive survey design. The current study aligns with this approach as it involves collecting data from a substantial sample of master craftsmen and artisans to investigate the impact of apprenticeship training programs on the performance of electronic artisans in Bayelsa State. The area of the study was Bayelsa State. The study targeted all electronic artisans and master craftsmen within Bayelsa State, which, at the time of the study, amounted to 6,738 individuals, comprising 1,845 master craftsmen and 4,893 artisans spread across 1,796 workshops (Source: Ministry of Commerce and Industry, 2023). For the study's sample, 658 respondents were selected, including 186 master craftsmen and 472 artisans, through multistage sampling techniques. The data collection instrument was a self-constructed questionnaire titled "Apprenticeship Training Programmes on the Performance of Electronic Artisans Questionnaire. The instrument underwent face and content validation by the researcher's supervisor and two experts in Technical Education and

Measurement/Evaluation with the reliability coefficients obtained ranged from 0.80 to 0.89 for different sections of the instrument. Data collection was conducted directly by the researcher and two appointed research assistants, with collected questionnaires retrieved promptly to ensure accuracy. Research questions were analyzed using mean and standard deviation statistics, while null hypotheses were tested at a significance level of 0.05 using the z-test.

### Results Research Question 1

What is the influence of indigenous apprenticeship training programmes on the performance of electronic artisans in Bayelsa State?

**Table 1: Mean Responses on Influence of Indigenous Apprenticeship Training Programmes on the Performance of Electronic Artisans in Bayelsa State**

| S/N | Item Statement                                                                                               | Master Craftsmen |                 |     | Artisans    |                 |                                 |
|-----|--------------------------------------------------------------------------------------------------------------|------------------|-----------------|-----|-------------|-----------------|---------------------------------|
|     |                                                                                                              | $\bar{X}_1$      | SD <sub>1</sub> | RMK | $\bar{X}_2$ | SD <sub>2</sub> | RMK                             |
| 1   | Provision of occupational skills and                                                                         | 3.61             | 0.64            | SA  | 3.79        | 0.61            | A                               |
| 2   | Fostering the necessary work attitude among electronic artisan and develop them as competent skilled workers | 2.89             | 0.71            | A   | 3.13        | 1.03            | A and proper discipline         |
| 3   | Instilling in the electronic artisan a sense of pride in their trades                                        | 3.76             | 1.03            | SA  | 3.11        | 0.66            | A                               |
| 4   | Providing a base and skill up-grading minors (14 years) and employed indigenous electronic artisan           | 3.01             | 0.69            | A   | 3.71        | 0.84            | SA training for both            |
| 5   | Decolonizing educational access and success for indigenous electronic artisan                                | 3.70             | 0.57            | SA  | 3.69        | 0.61            | SA                              |
| 6   | Enhancing access to critical skills for                                                                      | 3.08             | 0.56            | A   | 3.70        | 1.11            | SA economic development.        |
| 7   | Increasing equity ownership                                                                                  | 3.60             | 0.80            | SA  | 3.01        | 0.69            | A                               |
| 8   | Supporting electronic artisan occupation                                                                     | 3.49             | 0.64            | A   | 3.70        | 0.57            | SA and skill development        |
| 9   | Strengthening financial and electronic                                                                       | 2.94             | 1.11            | A   | 3.57        | 0.66            | SA business management capacity |
| 10  | Removing barriers to employment for indigenous youth and adults                                              | 3.51             | 0.74            | SA  | 3.05        | 0.74            | A                               |
| 11  | Fostering economic self-sufficiency and socio-economic equality                                              | 3.21             | 0.66            | A   | 3.14        | 0.60            | A                               |
| 12  | Increasing access to post-secondary education, including training in electronic trade                        | 3.06             | 0.58            | A   | 3.75        | 0.77            | A                               |
| 13  | Providing education access to rural and remote area                                                          | 3.71             | 0.71            | SA  | 3.94        | 1.01            | SA                              |

14 Allowing individuals to learn in their community with important support and resources for success  
2.98 1.01 A 3.50 0.59 SA

15 Allowing for free entry and exit of electronic artisan at will  
3.66 0.84 SA 2.67 0.84 A  
**Average Mean/SD 3.35 0.75 A 3.43 0.79 A**

**Source:** *Researcher's Field Result; 2024*

### Research Question 2

What is the influence of formal apprenticeship training programmes on the performance of electronic artisans in Bayelsa State?

**Table 2: Mean Responses on Formal Apprenticeship Training Programmes on the Performance of Electronic Artisans in Bayelsa State**

| S/N | Item Statement                                                                                                                                                     | Master Craftsmen |                 |     | Artisans    |                 |     |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------|-----|-------------|-----------------|-----|
|     |                                                                                                                                                                    | $\bar{X}_1$      | SD <sub>1</sub> | RMK | $\bar{X}_2$ | SD <sub>2</sub> | RMK |
| 16  | Most of the learners becomes the normal artisan upon completion of training                                                                                        | 3.61             | 0.64            | SA  | 3.79        | 1.11            | A   |
| 17  | Enhancing combination of vocational education with work-based learning for an intermediate occupational skill                                                      | 2.89             | 0.71            | A   | 3.13        | 1.03            | A   |
| 18  | Leading to the development of the bulk electronic artisan                                                                                                          | 3.76             | 1.03            | SA  | 3.11        | 0.66            | A   |
| 19  | Benefiting companies, employees and                                                                                                                                | 3.01             | 0.69            | A   | 3.71        | 0.84            | SA  |
| 20  | Promoting growth and ease the transition from full-time education to work                                                                                          | 3.70             | 0.57            | SA  | 3.69        | 0.61            | SA  |
| 21  | Improves the limited skills and knowledge of shop-floor electronic artisan and supervisors making more productive and versatile in their assigned electronic jobs. | 3.08             | 0.56            | A   | 3.70        | 1.11            | SA  |
| 22  | Exposing and preparing artisans to work them the needed experience in handling electronic equipment and machinery                                                  | 3.60             | 0.80            | SA  | 3.01        | 0.69            | A   |
| 23  | Helping to bridge the gap between theory learnt in school and practice as they exist in the electronic industries                                                  | 3.49             | 0.64            | A   | 3.70        | 0.57            | SA  |

|                        |                                                                                                                               |             |             |          |             |             |                                                 |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------|-------------|----------|-------------|-------------|-------------------------------------------------|
| 24                     | Preparing the electronic artisans to work methods that safe guides the work area and other workers in the electronic industry | 2.94        | 1.11        | A        | 3.57        | 0.66        | SA                                              |
| 25                     | Providing electronic artisans to familiarize with tools and equipment which give them employable opportunities.               | 3.51        | 0.74        | SA       | 3.05        | 0.74        | A                                               |
| 26                     | Fostering economic self-sufficiency and socio-economic equality                                                               | 3.83        | 0.60        | SA       | 3.94        | 0.94        | SA                                              |
| 27                     | Increasing access to informal education                                                                                       | 3.18        | 0.72        | A        | 3.80        | 1.12        | SA and practical training in electronic trade.  |
| 28                     | Providing artisans with the necessary                                                                                         | 3.01        | 0.82        | A        | 3.67        | 0.70        | SA learning approaches in specific task.        |
| 29                     | Influencing effective means of training skilled and semi-skilled craftsmen in the industries                                  | 3.57        | 0.80        | SA       | 3.12        | 0.66        | A                                               |
| 30                     | Exposing and preparing electronic                                                                                             | 3.13        | 0.60        | A        | 3.67        | 0.84        | SA artisan of higher tasks for work situations. |
| 31                     | Enhancing economic viability of trained                                                                                       | 2.94        | 0.87        | A        | 3.55        | 0.83        | SA artisans.                                    |
| 32                     | Transition from abstract to real practical                                                                                    | 3.05        | 1.01        | A        | 2.94        | 1.02        | A situation in the electronic industry.         |
| 33                     | Enhancing the human capital of the                                                                                            | 2.71        | 0.58        | A        | 3.17        | 0.74        | A participant in electronic artisan programme.  |
| <b>Average Mean/SD</b> |                                                                                                                               | <b>3.28</b> | <b>0.75</b> | <b>A</b> | <b>3.46</b> | <b>0.83</b> | <b>A</b>                                        |

Source: *Researcher's Field Result, 2024.*

### Statistical Test of Hypotheses

The following null hypotheses were formulated and were tested at 0.05 level of significant. **Hypotheses 1**  
There is no significant difference in the means responses of master craftsmen and artisans on the methods of indigenous apprenticeship training programmes on the performance of electronic artisans in Bayelsa State.

**Table 4.6: z-Test Analysis on Methods of Indigenous Apprenticeship Training Programmes on the Performance of Electronic Artisans in Bayelsa State**

| S/N              | $\bar{X}$ | SD    | N    | df       | $\alpha$ | zcal | zcrit | Remark |
|------------------|-----------|-------|------|----------|----------|------|-------|--------|
| Master Craftsmen | 3.35      | 0.75  | 84   |          |          |      |       |        |
| 307              | 0.05      | -0.82 | 1.96 | Accepted | Artisans | 3.43 | 0.79  | 225    |

Source: *Researcher's Field Result; 2024*

## Hypotheses 2

There is no significant difference in the means responses of master craftsmen and artisans on the influence of formal apprenticeship training programmes on the performance of electronic artisans in Bayelsa State.

**Table 4.7: z-Test Analysis on Influence of Formal Apprenticeship Training Programmes on the Performance of Electronic Artisans in Bayelsa State**

| S/N              | $\bar{X}$ | SD   | N   | df  | $\alpha$ | zcal  | zcrit | Remark   |
|------------------|-----------|------|-----|-----|----------|-------|-------|----------|
| Master Craftsmen | 3.28      | 0.75 | 84  | 307 | 0.05     | -1.88 | 1.96  | Accepted |
| Artisans         | 3.46      | 0.83 | 225 |     |          |       |       |          |

**Source:** *Researcher's Field Result; 2024*

## Summary of Findings

The study yielded the following discoveries:

1. Indigenous apprenticeship training programs significantly impact the performance of electronic artisans in Bayelsa State by furnishing them with occupational skills and technical knowledge. Moreover, the study revealed no noteworthy disparity in mean responses between master craftsmen and artisans regarding the influence of indigenous apprenticeship training programs on the performance of electronic artisans in Bayelsa State.
2. Formal apprenticeship training programs play a crucial role in influencing the performance of electronic artisans in Bayelsa State, as they offer exposure and preparation in work methodologies, thus equipping artisans with essential experience in handling electronic equipment and machinery. Additionally, the study observed no significant difference in mean responses between master craftsmen and artisans concerning the impact of formal apprenticeship training programs on the performance of electronic artisans in Bayelsa State.

## Discussion of Findings

The results depicted in Table 1 of this investigation demonstrate that indigenous apprenticeship training programs exert a significant influence on the performance of electronic artisans in Bayelsa State. The study unveiled that indigenous apprenticeship enhances artisan performance by imparting occupational skills and technical knowledge, thereby facilitating equitable access to education and economic self-sufficiency for indigenous individuals. Additionally, it serves as a means for skill upgrading among both adolescent minors and employed

indigenous adults, instilling a sense of pride in the electronic trade and reducing barriers to employment for indigenous youth and adults. This finding resonates with Coleman's assertions, as cited in McMahon (2014), which underscore the role of indigenous apprenticeship training programs in equipping trainees with occupational skills, fostering the development of proper work attitudes and discipline among trainees, and nurturing their competency as skilled workers. Furthermore, the study aligns with the observations of Obadara and Abatan (2014), who emphasized the importance of indigenous apprenticeship in equipping individuals with marketable skills like electronics, crucial for meeting the demands of an evolving business-oriented society. Similarly, the study is consistent with the insights of Agbola and Oloaoye, cited in Nwokedi, Amaewhule, and Nwafor (2018), which recognize indigenous apprenticeship as a potent mechanism for training youth in various skills and vocations, contributing to talent development, human capital enhancement, and employability, thereby realizing individuals' aspirations.

The findings presented in Table 2 of this inquiry unveil that formal apprenticeship training programs significantly influence the performance of electronic artisans in Bayelsa State. The study indicates that formal apprenticeship programs bolster artisan performance by facilitating growth and easing the transition from full-time education to the workforce, enhancing the skills and knowledge of shop-floor electronic artisans and supervisors, thereby rendering them more productive and adaptable in their electronic roles. Moreover, these programs aid in bridging the gap between theoretical knowledge acquired in school and practical application within electronic industries, facilitating the transition from abstract concepts to real-world scenarios. This finding corroborates with Ayinde's (2018) perspective, emphasizing the role of formal apprenticeship training programs in enhancing the human capital of electronic artisans. Additionally, it concurs with Ayinde (2018)'s assertion that formal apprenticeship programs are expected to yield two main outcomes: increased demand for participants' labor from employers or participants acquiring the requisite skills to establish their own businesses, thereby boosting their employability and wage rates. Furthermore, the finding aligns with Thurow's viewpoints, as cited in Ayinde (2018), emphasizing how formal apprenticeship programs contribute to the development of a skilled workforce, benefitting companies, employees, and the broader economy, while also facilitating the transition from education to employment for young individuals.

### **Conclusion**

Following the findings of the study, it was concluded that in Bayelsa State, apprenticeship training programmes influence the performance of electronic artisans. This is drawn from the finding which revealed that apprenticeship such as indigenous apprenticeship, formal apprenticeship, less informal apprenticeship, informal apprenticeship and advance apprenticeship influence the training of artisans of electronic in Bayelsa State.

### Recommendations

The follow recommendations were made based on the findings of the study:

1. Indigenous apprenticeship methods of training artisan or apprentice in a particular trade should be incorporated by instructors in various workshops, the National Open Apprenticeship Scheme (NOAS) etc., this will help to standardize apprenticeship training programmes in Bayelsa State.
2. Since graduates of apprenticeship training complement the workforce needed in the private sector, they should be exposed to modern training methods.
3. More apprenticeship centres should be built by governments to enhance the performance artisans in various trades.

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