

APPRENTICESHIP SYSTEMS AND HUMAN CAPITAL DEVELOPMENT IN JOS METROPOLIS, PLATEAU STATE

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ABSTRACT

This paper examined apprenticeship systems and human capital development in Jos metropolis. The specific objectives were to examine the methods of apprenticeship, the impact of apprenticeship on trainee skills, the effect of apprenticeship on trainee self-reliance. Using systems theory, the paper argued that although informal apprenticeship systems are facing daunting challenges, they have robustly contributed to human capital development in Jos Metropolis. The study utilized survey research design employing both primary and secondary sources of data. Purposive and simple random sampling was employed to obtain the sample. Three hundred and seventy-one (371) respondents were sampled using the Yamane (1967) sample size technique. Data collected was analyzed and presented using descriptive statistics; mean and percentages. Linear regression was adopted to test the hypotheses. The paper recommends that government should formalize, streamline and unify training curriculum making it compulsory for trainers to comply in delivering the content of training. The content of apprenticeship training should be formalized and structured in such a way to encompass conventional education system in order to develop the writing and social skills of trainees among others. Government should offer grants to graduate trainees in order to enable them set up their enterprise thereby improving their living standard and contributing to the country's GDP per capita.

Keywords: Apprenticeship system, apprenticeship training, economic status, human capital development

INTRODUCTION

In recent years, the significance of human capital development as a catalyst for economic growth and sustainable development has gained widespread recognition. As nations strive to enhance their competitiveness in the global arena, investments in education, skills development, and vocational training have become pivotal. In this context, apprenticeship policies have emerged as a promising avenue to foster human capital development (Wambui et al., 2020). The apprenticeship system is a prevalent form of informal vocational training in many developing countries, including Nigeria. This system allows aspiring individuals to learn practical skills and gain knowledge from mentors over a period of time (World Bank, 2022).

Anigbogu et al. (2019) posit that apprenticeship systems have a human development focus and are arranged in such a way that the apprentice lives and serves his master for a specified period of years, after which the master settles the apprentice by setting them up in business, that is, paying their rent for two or three years and also giving him a cash infusion so that he can venture into business on their own. This system of funding is called locally generated venture capital. Analysts have described the apprenticeship system that governs their human capital development as the largest business incubator platform in the world.

According to the World Bank (2022), apprenticeship system can be an effective way to develop human capital, as it provides participants with skills, knowledge, and experience needed to succeed in business. By offering a structured and comprehensive training programme, apprenticeship help individuals develop deep understanding of financial markets, trading strategies, risk management, and other critical areas.

Additionally, apprenticeship provide participants with valuable networking opportunities, as they have the chance to interact with industry professionals, including successful traders and investment managers. This help participants build relationships and develop a strong professional network, which is crucial to long-term success (Wambui et al., 2020). Overall, the apprenticeship is an effective way to develop human capital. By offering comprehensive training, mentorship, and networking opportunities, apprenticeship help individuals acquire the skills, knowledge, and experience needed to succeed in this competitive and challenging field (Wambui et al., 2020).

According to Okwuowulu (2022), apprenticeship programmes offer individuals the opportunity to learn practical skills and acquire industry-specific knowledge through hands-on training and mentorship. The policies implemented in Jos Metropolis aim to bridge the gap between formal education and practical work experience, providing aspiring workers with necessary skills and competencies required in the labour market. By offering apprenticeships across various sectors, such as automotive repair, construction, tailoring, hospitality, and information technology, the policy seeks to meet the diverse needs of the local economy.

Apprenticeship benefits individuals, and contribute to the overall human capital development of the state. By providing structured training and mentorship, these programmes enhance the employability of apprentices and empower them to become self-reliant. Moreover, apprenticeships foster entrepreneurship and encourage the establishment of small and medium-sized enterprises, thereby stimulating economic growth and job creation within the local community (Chineze, 2022).

Albeit serving as a unique path to skill development, the apprenticeship systems face wide range of challenges including poor completion rates, inconsistency in training offered, among others. These problem makes it difficult to attract young graduates and youths of school age into the system. Also, the attitude of the experienced ones that should take the apprentice, in most cases constitutes a hindrance to the practice of apprenticeship. This is because most of them they are not trained teachers. Consequently, lack of zeal toward apprenticeship has resulted to unemployment, shortage of efficient manpower, etc.; and had led to unemployment which is responsible of the manifestation of social vices like robbery, kidnapping, and unemployment etc. (Munkaila, 2016).

This study therefore seeks to examine the effect of apprentice system with focus on various trades and their impact on human capital development in Jos metropolis. The main objective of the study is to examine of the effectiveness of trader's apprenticeship system on human capital development in Jos Metropolis. Other specific objectives include:

- 1) To assess the effectiveness of methods of apprenticeship training in Jos Metropolis;
- 2) To assess the content of apprenticeship training in Jos Metropolis; and
- 3) To examine the impact of apprenticeship training on the economic status of trainees in Jos Metropolis.

The study was guided by the following Null hypothesis

Ho₁: The methods of apprenticeship training are not effective to trainees in Jos metropolis.

Ho₂: The content of apprenticeship training is not effective to trainees in Jos metropolis.

Ho₃: Apprenticeship training does not enhance the economic status of trainees in Jos metropolis.

LITERATURE REVIEW

Concept of Apprenticeship

Basically, apprenticeship involves a contractual relationship between a master craftsman and a trainee. The trainee is trained for the prescribed work process through practical experience under the supervision of the

master craftsman through formal instructions (Adeyeye, 2009). It is a process in which an aspiring trader works under the guidance and supervision of an experienced trader to learn skills, knowledge, and strategies necessary to become a successful trader. Apprenticeship is the main avenue for skill and manpower development in the informal sector. It provides refuge for the unemployed in most African countries, as they receive on-the-job training.

Apprenticeship is a concept that revolves around a structured program designed to provide aspiring traders with the necessary knowledge, skills, and practical experience to become successful. It combines hands-on training, mentorship, and real-world trading opportunities. Apprenticeship typically operates within a trading firm, where experienced traders take on apprentices and guide them through the intricacies of trading. The goal is to equip the apprentice with the tools and understanding they need to make informed trading decisions (International Labour Organization [ILO], 2022).

The apprentice works closely with the mentor, observing and participating in trading activities, analyzing market trends and making trading decisions. The duration of the apprenticeship vary depending on the level of knowledge and skills the apprentice already possesses. Some apprenticeships may last for several years, while others may be completed in a shorter period. World Bank (2021) provides that the goal of apprenticeship is to provide aspiring traders with a practical education that prepares them for a successful career in trading.

By working with an experienced trader, the apprentice gain valuable insights into markets, learn from real-world experiences, and develop a solid foundation of trading skills. Overall, apprenticeship is an effective way for aspiring traders to learn the ropes of trading and develop the necessary skills to succeed in business (Vareto, 2020).

Human Capital Development

Human capital development refers to the process of enhancing and optimising the knowledge, skills, abilities, and other attributes of individuals that can contribute to their personal and professional growth and ultimately to the growth and success of organisations and society as a whole. World Bank (2022) provides that human capital development is a wide range of activities, including education and training programmes, mentorship and coaching, career development opportunities, leadership development, and talent management. The goal is to help individuals acquire and develop the skills and knowledge needed to perform their jobs effectively and advance their careers.

Apprenticeship and Human Capital Development

Apprenticeship as a form of vocational education and is closely linked to human capital development, and is instrumental to economic growth and development. Previous studies show that apprenticeship relates to different facets of human capital development and improves economic status to individuals. Adeyeye et al. (2015) examined the contribution of apprenticeship to skill development in the printing industry in Nigeria and reports that apprenticeship has significant positive impact on skill development in the informal sector, in particular in the printing industry.

Similarly, Egbosionu (2021) examined effect of apprentices' commitment on productivity of SMEs in Abuja, Nigeria. The study found that apprentice commitment had a positive effect on productivity of SMEs. Also, Chineze (2022) examined effect of apprenticeship on unemployment reduction in Onitsha. The study found that apprentice has a significant effect on unemployment reduction at Onitsha. Adekola in (2013), examined traditional apprenticeship in Africa and its relevance to contemporary work practices and human capital development in modern Nigerian communities. The study concluded that using traditional apprenticeship to productively engage idle and unemployed youths would not only create employment and enhance technological advancement, but would also positively impact security in the country. In addition,

Michael (2017) examined effect of apprenticeship on human capital development in Kaduna Metropolis and revealed that the effect of the scheme on the majority of participants was positive.

Theoretical framework: System Theory

The System theory was propounded by David Easton in 1965. The theory holds that the elements of a system are interrelated and that the system can respond to forces in its environment. Inputs in form of demands and supports are sent into political system from the environment. Once an input enters the system, it undergoes transformation or refinement which translates to output. The output is fed back into the environment and the feedback mechanism ensures that the system endures. The relationship between the systems in this study are Trainees (input), conversion process, outputs, environments and feed.

The trainees serve as the components of the social environment which form the inputs into the system. The trainees who in this case are unemployed graduates serve as demand while budgetary allocations serve as support which enables the scheme to be effective. Finance which is also a crucial raw material is also injected into the system which serves as a lubricant for effective functioning of the system.

Conversion process involves managers responsible for running the apprenticeship. The decisions they make either make or mar the entire system. The various skill acquisition schemes serve as the conversion process. The outputs of the system constitute “empowered” trainees who have acquired skills and with the necessary assistance create employment thereby becoming economically empowered. The Inputs and Conversion process determine the quality of the beneficiaries.

The environment includes the social, socio-economic, and political dynamics of the society. Examples of which are, the higher institutions of learning since they produce the inputs, business environment such as economic stability, political, cultural and socio-cultural environment affect both the inputs and outputs. These to a large extent could determine the effectiveness of the output; while feedback serves as a mechanism for knowing how the “outputs” are faring. That is, the trainees getting informed of the effectiveness of scheme, the performance of beneficiaries, level of employment created through its skills acquisition schemes and also areas of the scheme that needs to be improved. The feedback mechanism creates an avenue to keep track of its activities. According to Easton (1953) an obstruction or slack in one of the systems will impinge the attainment of outputs. Thus, sub-systems must operate smoothly for the system to maintain a steady and effective state.

METHODOLOGY

This study employed cross sectional survey design. It combines both qualitative and quantitative methods of data collection. The primary source of data comprised the questionnaire and interview: Secondary and time series data were collected from publications. Purposive and simple random sampling was employed to obtain a sample from the population. The population of the study was ten thousand four hundred and seventeen (10,417) obtained from selected traders in Jos metropolis, comprising consumer goods merchants, auto mechanic, textiles merchants, building materials merchants, welders, pharmaceutical products dealers, Painting/Decorating, Computers & Telephones, Carpentry/Joinery and Electricians. Three Hundred and seventy (371) respondents were sampled using the Yamane (1967) formula sample size determination technique. Quantitative data obtained was analyzed using the statistical package for social scientists (SPSS) software version 2.5 to generate descriptive and inferential Statistics. The hypotheses were tested using linear regression. The model is specified as:

$$Y = \beta_0 + \beta X_1 + \mu$$

Where:

Y = economic development (Dependent Variable)

X = Smuggling of goods (Explanatory/Independent Variable)

β_0 = Constant term (Intercept)

β = Coefficient of tax leakage

μ = Error term (Stochastic Term)

Decision Rule Accept the alternative hypothesis, if the P-value of the test is less than 0.05. Otherwise reject.

RESULTS AND DISCUSSION

Table 1: Respondents' views on the methods of apprenticeship training in Jos

Statements	SA	A	N	SD	D
On-the-job-training	150 42.9%	200 57.1%			
Simulations	250 71.3%	100 28.7%			
Oral Instruction	200 57.1%	150 42.9%			
Demonstration	180 51.5%	170 48.5%			
Imitation	200 57.1%	150 4.9%			
Observation	100 28.7%	250 71.3%			

Source: Field survey, 2023

Table 1 shows that respondents overwhelmingly agreed that different methods of training were applied in apprenticeship training in Jos metropolis. These include on-the-job- training, oral instructions, demonstration, imitation, observation. Others include demonstration, simulations among others.

Table 2: Respondents' views on the content of apprenticeship training in Jos Metropolis.

Statements	SA	A	N	D	SD
Training provided me with creative skills	190 54.3%	150 42.9%	10 2.8%		
Training provided me with communication skills	220 62.8%	130 37.2%			
Training provided me with problem solving skills	200 57.1%	130 37.2%	10 2.8%		
Training provided me with inter personal skills	100 28.7%	250 71.3%			
Training provided me with writing skills			102 2.8%	240 68.5%	100 28.7%
Training provide me with critical thinking skills	216 61.7%	134 38.3%			
Training provided me with operational and technical skills	134 38.3%	216 61.7%			
Training provided me with team work	250 71.3%	100 28.7%			
Training provided me with social skills	50 14.2%	50 14.2%		100 28.7%	150 49.2%
Training provided me with marketing skills	180 51.4%	120 34.2%	10 2.8%	20 5.7%	30 8.5%

Source: Field survey, 2023

Table 2 shows that respondents alluded that the content of apprentice training received was broad and all encompassing. Respondents strongly agreed that training comprised communication, problem solving, inter personal, marketing skills and critical thinking skills. However, some respondents disagreed that training conveyed writing and social skills.

Table 3: Respondents' views on impact of apprenticeship on trainees in Jos

Statements	SA	A	N	D	SD
Gainfully employed after training	150 42.9%	100 28.7%	-	70 20%	30 8.4%
Not gainfully employed after training	50 14.2%	50 14.2%	-	150 42.9%	100 28.7%
Self-employed and employer of labour	150 42.9%	50 14.2%	20 5.7%	70 20%	60 17.2%
Engaged in related field of training	230 65.8%	70 20%	10 2.8%	20 5.7%	20 5.7%
Not engaged in related field of training	50 14.2%	50 14.2%	-	200 57.4%	50 14.2%

Source: Field survey, 2023

Table 3 shows that 42.9% and 28.8.7% of respondents strongly agreed and agreed that they were gainfully employed after apprenticeship. 42.9% and 28.7% disagreed and strongly disagreed that they were not gainfully employed. 65.8% strongly agreed that they were practicing the trade learnt while 57.4% submitted that were not engage in related field of training.

Table 4: Regression analysis on the methods of apprenticeship training

Model	Standardized Coefficients		t	R	R ²	Adj. R ²	P-value
	Beta						
1 (Constant)			17.631	.13 ^a	.018	.018	.041
Apprenticeship	.133		1.0613				

a. Dependent Variable: Methodss.

b. Predictors: (Constant), Apprenticeship Training

Source: Fieldwork, 2023

The result of regression analysis presented in Table 4 disclosed the beta value (beta = .133 with the R-square of .018 which indicated that the apprenticeship training has 18% influence on effectiveness. The p-value obtained was found to be less than the level of significance (.041<0.05). The *p-value of 0.041* obtained suggested that the independent variable (apprenticeship training) has significance influence on effectiveness on apprenticeship training in Jos metropolis. The hypothesis was therefore rejected.

Table 5: Regression analysis on the content of apprenticeship training

Model	Standardized Coefficients		t	R	R ²	Adj. R ²	P-value
	Beta						
1 (Constant)			11.663	.114 ^a	.029	.026	.008
Apprenticeship	.171		0.775				

a. Dependent Variable: Trainee skills

b. Predictors: (Constant), Apprenticeship training

Source: Fieldwork, 2023

The regression analysis presented in Table 5 disclosed the beta value (beta = .171 with the R-square of .029 which indicated that the influence of independent variable on the dependent variable was 26%. This is also

applicable with the p-value of .008 obtained which was found to be less than 0.05 level of significance. The p-value obtained suggested that the content of apprenticeship training was effective. The hypothesis was therefore not retained.

Table 6: Regression Analysis on the impact of training on trainees in Jos metropolis

Model	Standardized Coefficients		t	R	R ²	Adj. R ²	P-value
	Beta						
1 (Constant)			19.571	.174 ^a	.037	.022	.007
Apprenticeship	.184		3.005				

a. Dependent Variable: Economic Status

b. Predictors: (Constant), Apprenticeship training

Source: Fieldwork, 2023

The regression analysis presented in Table 6 disclosed a beta value (beta = .184) with the R-square of .037 which indicates that the influence of independent variable on the dependent variable was 22%. This is also applicable with the p-value of .007 obtained which was found to be less than 0.05 level of significance. The p-value obtained suggested that apprenticeship training significantly enhance economic status of trainees in Jos metropolis. The hypothesis was therefore not retained.

DISCUSSION OF FINDINGS

The data analyses show that methods of apprenticeship training in Jos metropolis were effective. The result of regression analysis shows that a beta value of .133 with an R-square of .018, which indicate that methods of apprenticeship training have 18% influence on effectiveness. The p-value obtained is less than the level of significance (.041<0.05). This suggest that methods of apprenticeship training has significant influence on trainees in Jos metropolis. These findings are consistent with the works of Adeyeye et al. (2015) and Chineze (2022).

The analyses also show that the content of apprenticeship training is effective. The regression analysis shows a beta value.171 with an R-square of .029. This indicates that the influence of independent variable on the dependent variable was 26%. This is also applicable with the p-value of .008 obtained which is less than 0.05 level of significance. Thus imply that the content of apprenticeship training was effective. The hypothesis was therefore not retained. These findings is corroborated by the works of Michael (2017) and Adekola (2013).

The analyses further revealed a beta value of .184 and an R-square of .037; indicating that the influence of independent variable on the dependent variable was 22%. This is also applicable with the p-value of .007 obtained which was found to be less than 0.05 level of significance. The p-value obtained suggested that apprenticeship training significantly enhances the economic status of trainees in Jos metropolis.

CONCLUSION AND RECOMMENDATIONS

Based on the findings of this study, we conclude that apprenticeship positively influences human capital development; and to further improve apprenticeship training in Jos metropolis, the study makes the following recommendations:

- 1) Government should formalize, streamline and unify the methods of apprenticeship training thereby making it compulsory for trainers to comply in delivering the content of training.
- 2) The content of apprenticeship training should be formalized and structured in such a way to encompass conventional education system in order to develop the writing and social skills of trainees among others.

- 3) Government should create an apprenticeship fund to support apprentices in order to enable them set up their enterprise thereby improving their living standard and contributing to the country's GDP per capita.

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