

Investigation Into Contractors Craftsmen Training In The Nigerian Construction Industry

*Iro A. Ibrahim¹, Inuwa I. Ibrahim¹ and Dantong J.Sam²

¹Quantity Surveying Programme, Abubakar Tafawa Balewa University, Bauchi-Nigeria

²Department of Architecture, University of Jos, Nigeria

Abstract

Despite the strategic importance of the construction industry, projects fail in Nigeria due to poor contractors' performance. In strategic terms, the understanding of the customer's needs and values is crucial where organisations seek to differentiate themselves from their competitors. In accomplishing his roles the contractor coordinates and directs his craftsmen who contribute skillfully with their hands in the practical realization of a project. The study therefore aims at investigating the contractors' craftsmen training trends base on age groups and trades in the Nigerian construction industry. The study uses contextual and descriptive survey method, a total of 400 structured questionnaires were distributed randomly in four stratified sample locations in the north-central geopolitical zone of Nigeria to Contractors' craftsmen and attain a response rate of 55.25%. The chi-square statistics used at 5% level of significance to test the research proposition shows an agreement within the respondent. The data collected were analyzed and presented on a line graph and bar chart. Findings revealed that training of craftsmen in the Nigerian construction industry has never been adequate; moreover it is falling among the younger age-groups. The study recommends that: contractors should invest more on craftsmen training to attain high return on investment and; government, a major client to the industry should invest more on training; make policies that will address training needs and; enforce the use of trained craftsmen in the industry and, all should be geared towards attaining international best practices.

Key words: Construction industry, Contractors craftsmen, Training, contracting business, Training trends

1. Introduction

A nation's construction industry plays a critical role in the development of that nation through the provision of infrastructure and contribution to the country's gross domestic product (Dada, 2012). The industry in any country according to Smith and Jaggar (2007) is the sector of the economy that plans, designs, constructs, alters, refurbishes, maintains, repairs and eventually demolishes buildings of all kinds. According to Achuen, *et al* (2000) basic infrastructural facilities which are required for transportation, housing, communications, water and power supply, manufacturing and waste disposals are construction end products. The industry's ability in the provision of basic infrastructures has earned it a significant role in the socio economic development of developing economies (Hamilton, 2006). In Nigeria which is also a developing economy the government is the major client of the industry with a construction share of about 75%, consequently plays a significant role in controlling the construction market (Omole, 2000).

Construction is a big business (Bennett, 2003) and at the heart of every construction business is project execution (Roper and McLin, 2005); the quest for accomplishing the business involves many parties amongst which are (Usman *et al*, 2012; Gollenbeck, 2008): the owner or client; the designers or consultants and; the construction contractors. The contractor is undeniably one of the most important organisations in the construction project delivery system (Idoro and Akande-Subar, 2008). In

accomplishing his roles in project execution the contractor coordinate and direct his craftsmen (operatives) which according to Dantong (2007) constitute the contractors' main workforce. Craftsmen are identified as (ITF, 2005): Bricklayers (Masons); Steel fixers; Electricians; Carpenters; Painters; Plumbers; Artisans; etc. Construction craftsmen according to Dantong (2007) are operatives who contribute skillfully with their hands in the practical realization of a project in the construction industry. The level of building achievement and activity in any country is a measure of the country's success (Obiegbu, 2003): a high level of building activity indicates a healthy vigorous national economy; and highly developed building forms indicate a high level of civilized and cultural achievement in a country.

Despite the strategic importance of the construction industry (Jinadu, 2007), the sector in Nigeria still operates with some difficulties. Amongst others, projects failure due to poor contractors' performance which is characterized by: collapse of buildings; manpower deficiency and; conflicts (Usman *et al.*, 2012; Dimuna, 2010; Idoro and Akande-Subar, 2008; Jinadu, 2007). Wahab (2005) in Usman *et al.* (2012) identified qualitative and quantitative deficiencies in workmanship as some of the factors militating against the attainment of success in the Nigerian construction industry. Moreover, firms are concentrating on financial gains and forgetting the people that make the job and money (Omole, 2001). The problem of the industry according to Dantong (2007) is how to reconcile the need for a supply of manpower capable of high productivity in carrying out simplified sequential operations and retains a substantial number of craftsmen capable of highly skilled work.

The aforementioned problems call for an investigation on the trend of training of contractors' craftsmen in order to justify the need for performance improvement within the contractors' organisation. There are different types/methods of training used in the construction industry (see, Usman *et al.* 2012). The study therefore aims at investigating the contractors' craftsmen training trends base on age groups and trades in the Nigerian construction industry.

2. The Need For Training Contractors Craftsmen In Nigeria

In strategic terms (Holder and Coffey, 1997), the understanding of the customer's needs and values is crucial where organisations seek to

differentiate themselves from their competitors. According to Aina and Wahab (2011) any client would want to construct a facility of the highest quality at a minimum cost and time and these are used as a basis for assessing contractors' performance. Nassar (2009) also affirms that contractors' performance can be defined by the level (time and cost) and quality of projects delivered to clients.

Nonetheless, in recent times, the quality of work done by contractors have become a major concern to stakeholders in the Nigerian construction industry because of the following reasons: Firstly, the incidences of collapsed structures have been at alarming rate prompting caution on contractors to be engaged. Secondly, the performance of many existing structures particularly new ones is below standard (Guardian, 2007a&b cited in Idoro and Akande-Subar, 2008). Although, several parties should be blamed for the problem however, the major blame should be borne by contractors because they are directly responsible for the production of the structures (Idoro and Akande-Subar, 2008). These call for performance improvements through training as acknowledged by Onukwube (2012) that training is used as a means of performance improvement intervention universally in organisations. For this reason there is need to train contractors craftsmen in order to improve on their performance in projects delivery in the Nigerian construction industry.

Training is a planned learning experience designed to bring about permanent change in an individual's knowledge, attitudes or skills (Noel, 2009 cited in Onukwube, 2012). Nmadu (1998) defines training as an organizational effort to change the behavior or attitudes of employees so that they can perform to acceptable standards on the job. Training (Nmadu, 1998), seeks to meet the demands on growth and chance. Training is giving teaching and practice to a person or persons in order to bring him or her to a desired standard of behavior, efficiency or physical condition (Obiegbu, 2003). He added that training is submitting a person to discipline and instruction, to educate, to bring up, rear in habits of good behavior and conduct". In the words of Taylor (1961) cited in Usman, *et al.*, (2012) training seeks to achieve improved human productivity by increasing the ability level of the work force.

The nature of the human resource problem and its pervasive effects indicate the need for extraordinary action to upgrade managerial and technical skills, broaden their range and increase their totality. Education and training are, consequently,

needed at all levels and across a wider spectrum of technical discipline. Indeed, what is required more than ever before is a highly trained cadre of people who are alive to the needs and realities of their own societies, sensitive to cultural values of intrinsic worth, conscious of the social nature of design and imbued with philosophy, which leads to the efficient use of indigenous materials and techniques (Bokinni, 2005 cited Usman, *et al.*, 2012).

3. THE EFFECTS OF TRAINING ON CONTRACTING BUSINESS

Contractor runs a business enterprise that is established to provide a product or service in the hope of earning a profit and such enterprise may be sole proprietorship, a partnership or a corporation (for detail see: Harris and McCaffer, 2005; Hillebrandt, 1991). In modern day society construction participants, are faced with challenges which amongst others include (Davis *et al.* 2007): higher clients' requirements through increasing complexity of modern construction projects; impact of computerization and; competition within the industry. Moreover, the quest for efficiency and drive for competitiveness are cardinal goals of globalised economy. Disciplines and Professions that are able to deliver these goals are certainly the toast of the society and will enjoy full endorsement and patronage (Oyediran, 2006).

In a construction firm as in any other firm according to Olateju (1992) cited in Fagbenle *et al.*, (2011), the primary responsibility of management is to ensure that all resources namely, manpower, machinery, materials and money are employed optimally to produce maximum profit for the investors in the enterprise. One of the most efficient and effective methods of managing an enterprise resources is through productivity improvement, for this reason productivity improvement has become a central challenge for managers in all types and sizes of organisations (Abiola, 2004). Productivity is any output – input ratio. Inputs include all resources consumed to produce those outputs. Labor is one of the input resources consumed but so too are capital, material and energy (Abiola, 2004). Productivity is reaching the highest level of performance with the least of expenditure of resources. Productivity (Usman, *et al.* 2012), ultimately, is the ability to produce in the desire to produce. Training offers the craftsmen this ability and it ensures that they perform their work effectively and efficiently; these qualities are certainly a recipe for workers productivity which eventually translates to higher returns to a business

enterprise. Therefore construction craftsmen when employed must be trained to the industries standards while those already employed must be constantly trained and retrained in order to improve on their productivity.

4. METHODOLOGY

The study uses contextual and descriptive survey method. Existing literatures were reviewed in obtaining data on the subject and oral interviews were conducted on members of the sample group (contractors' craftsmen). A total of 400 structured questionnaires were administered to Contractors' craftsmen: Bricklayers, steel fixers, carpenters and, electricians. The questionnaires were distributed randomly in four stratified sample locations in the north-central geopolitical zone of Nigeria (Kaduna, Nasarawa, Niger, Plateau and Abuja-the capital city of Nigeria). The response rate was 55.25% (table 1). These indicate an unbiased and higher value of survey as stipulated by Iro (2006). The data collected were analyzed to determine the trend of trained and untrained craftsmen base on trades and age group and the results were presented on a line (graph) and bar chart. The chi-square statistics used at 5% level of significance to test the research proposition shows an agreement within the respondent.

5. DATA PRESENTATION AND ANALYSIS

Table 1: Distribution of Questionnaires and Reponses

S/N	States	No. Distributed	No Responses	% of Responses
1	Abuja (FCT)	100	60	60
2	Kaduna	80	30	37.50
3	Niger	50	15	30
4	Nasarawa	70	40	57.14
5	Plateau	100	76	76
TOTAL		400	221	55.25

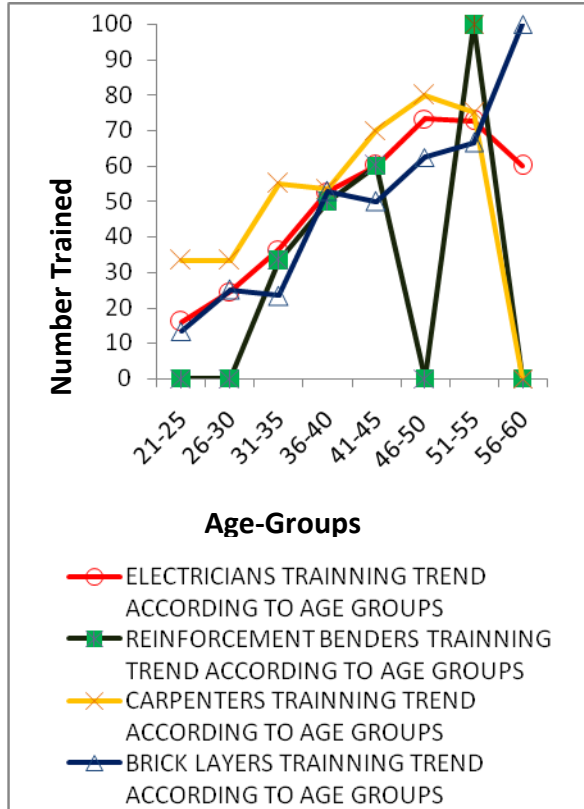


Figure 1: Craftsmen Training Trends Base on Age groups (Field survey, 2011)

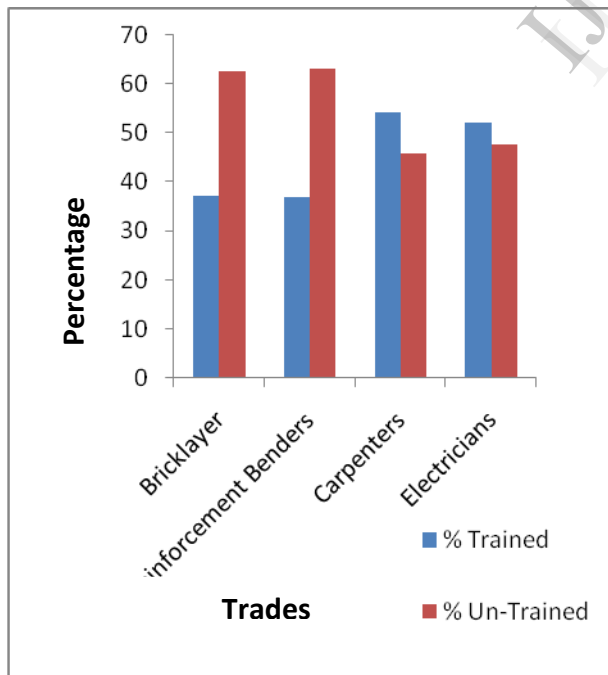


Figure 2: Percentage Trained and Un-Trained Contractors Craftsmen (Field survey, 2011)

Figure 1 shows the training trend of contractors' craftsmen between the ages of 21 and 60. Looking at the training trends of reinforcement benders it shows a zero rate (0%) of training at age groups of 21-25, 26-30, 46-50 and 56-60. The age groups range of 31-35, 36-40, 41-50, and 51-55 shows evidence of training with rates of 35%, 54%, 60%, and 100% respectively. The highest number of benders that received training is between the ages of 51 and 55 followed by the age group of 41-45. The trend shows a gradual decline in training among the younger age groups till it is zero for the groups within the ages 21-30. For the electricians, there are evidences of training in all but one age group (56-60). Looking at its training trends for the age groups, it shows rates of 34% at 21-25 to 26-30 while the rest have 57%, 70%, 80% and 75% respectively. The trend shows training to be highest within the age range of 46-55 and decline among the younger age groups till it is just 20% in the range 21-25 years, although, the decline is still not so severe (30-35%).

For the carpenters' trade, it is worth noting that the pattern is not different from those of the trades above, with the highest training level obtained within the ages of 41-55 and lowest within the ages of 21-30. The bricklayers, although the most trained, with 100% of the sample in the age group 56-60 trained, the trend fell continuously over the age groups till it is less than 20% within the age group 21-25.

Training level varies within the trades by age-groups. Within the age of 21-26, the carpenters were the most trained followed by electricians, then bricklayers and bar benders received no training at all. The age-group 26-30 is topped by carpenters, followed by bricklayers, then electricians; with the bar bender receiving no training at all. From 31-35, carpenters had largest number of trained craftsmen, followed by electricians, then bar benders and least in the bricklayers trade. In the group 36-40, training level is still highest with the carpenters' trade, followed by bricklayers, then electricians and least with bar benders. In the group 41-45, training level is highest with the carpenters' trade, followed by electricians and bar benders and bricklayers the least. The group 46-50, witnessed high level of training for carpenters, electricians and bricklayers, but zero level for bar benders. The group 51-55 is the best trained age-group, with bricklayers; the least having about 67% of the respondents trained. For the group 56-60, training is only observed among Electricians and bricklayers.

Figure 2 shows generally the level of trained and untrained craftsmen base on trades. The figure

depicts the level of training to be fair among the electricians and carpenters, with the number of the trained craftsmen almost equaling the un-trained. With the bricklaying and bar bending trades, despite the high number of trained craftsmen; the percentage of un-trained is by far greater than the trained.

6. CONCLUDING REMARK

From the preceding analyses it is evident that training of craftsmen in the Nigerian construction industry has never been adequate among the craftsmen, moreover it is falling among the younger age-groups. This can hinder output and affect the quality of workmanship produced by the contractors which might be very detrimental to the contractors' business return on investment. In addition, it will result to poor delivery of construction products (buildings) produced in the Nigerian construction industry. It is therefore recommended that contractors should invest more on the training of its craftsmen in order to attain high return on investment and the government which is a major client to the Nigeria construction industry should: invest more on training; make policies that will address training needs and; above all enforce the use of trained craftsmen in the industry. All these should be geared towards attaining international best practices.

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