

Assessment of Traditional Human Resource Development Strategies of Construction Firms in North Western, Nigeria

Tukur Al-Mustapha¹, Aina Omotayo Olugbenga²

¹Building Technology Department, Waziri Uman Federal Polytechnic, Benin-Kebbi, Nigeria

²Department of Building, Obafemi Awolowo University, Ile-Ife, Nigeria

(Received Oct 2016, accepted Dec 2016)

Abstract Construction firms are fundamental economic sector which permeates most of the other sectors as it transforms various resources into constructed physical economic and social infrastructure necessary for socio-economic development. It embraces the process by which the physical infrastructure are planned, designed, procured, constructed or produced, altered, repaired, maintained, and demolished. In order to effectively carry out those responsibilities construction firms are expected to formulate and put in place HRD strategies that vigorously develop their human resource effectively. Therefore, the study assesses traditional Human Resource Development (HRD) strategies of construction firms in Northwestern, Nigeria. Simple random technique, structured questionnaire were used to collect data. A total of three hundred and ninety six (396) were distributed across selected construction firms, out of which, 238 questionnaires were filled and returned given 60.1% response. Data collected were analysed using appropriate descriptive and inferential statistical tools. The study revealed that, predominant HR in the sampled construction firms were concrete

technologist (71.85%), site managers (31.90%), architects (44.13%), and bricklayers (37.39%). However, professional staff (3.42%) with higher mean score among the HR categories was given more priority. Among the traditional HRD strategies practiced in the study area training programme (44%) and mandatory training of new employees (37%) were the major HRD strategies. However, production skill with a mean score of 2.59 was rated higher among the HRD practice area by construction firms.

Keywords: Construction firms, Human resource development strategies, North Western, Nigeria.

1. Introduction

Construction industry is critical to human existence because people depend on infrastructures which are necessities of life. The general public has great expectations from the construction industry because of the continuous demand for its service and products by both individuals and corporate entities, and its relationship with the economy worldwide. The industry accounts for a significant portion of world economic activities and it is the largest world industry next to government (Nakhon and Somjintan, 2012; Stacifawn,2007; Olubodun,1985). The activities of the industry are significant to the achievement of national and socioeconomic development goals. It provides infrastructure and contributes immensely to employment, gross fixed capital formation and gross domestic products (GDP) (Ibironke, 2003; Raza, 2008). Indeed, the industry is regarded as a barometer through which the good or ill-health of the nation's economy is measured and monitored (Agunbiade, Adeniyi, Olokesusi, Olufemi and Agboola, 1995).

Construction industry is a sector of the economy that brings together different factors of production using a technical process to produce construction products or services. The traditional procurement of construction process applies and sequential approach to project development, design and construction at different

stages in the construction process (Garza, 1994). This organizational and sequential process to project development characterized the industry as being complicated and challenging in nature (Storey, 1994; Vinit, Johan, Hakan and Pontus, 2010).

Organizations worldwide (private and public) are facing increasing challenges and they exist in complex nature; the construction industry is no exception (Aidah, 2013; Evans, Pucik and Barsoux, 2002; Ofori and Chan, 2000). The construction industry represents one of the most dynamic, risky, complex, and diverse industrial environments (Alvin, 2011). Being project-based in nature, the products are very vast and production responsibilities are divided among many participants such as Architects, Builders, Quantity Surveyors and Engineers. Each participant performs different functions belonging to different organizations with different objectives, policies and practices (Aina, Adesanya and Ojo, 2009; Pettus, 2003). Aina et al., (2009) added that participants are often freshly assembled for current project. It is volatile with peaks and falls in level of activities. The fluctuation in the market is reflected in considerable variation in number, size and types of projects undertaken by the industry over time (Turner and Keegan, 2001). This is responsible for significant variation in changing requirement of staff in terms of capability, knowledge, experience and skill profiles (Turner, 2002). In addition to these complex natures, the industry is still faced with challenges.

There are numerous challenges facing the construction industry today: economic swings, new markets emerging in the global economy, increasing competition, impact of technology, growing demand of complex infrastructure by clients, technological advancement and innovation in all forms of businesses, increasing demands from clients, customers and society (Abu Hassan, Arman, Mohamad and Nurkhuraishah, 2011; Chan, Suen and Chan, 2005; Egbu, Gaskell and Howes, 2001). Also, the solution to these kinds of problems requires specially trained personnel to be able to mitigate its various complicated dimensions. This is more pertinent because of the unstable nature of the

construction industry typified by casualization of workers, workers being employed at inception of projects, and laid off at its end and many labour-only subcontractor arrangements (Loosemore, Dainty and Lingard, 2003). This makes adequate attention on HRD issues in the construction industry imperative. Therefore, the industry requires the possession of a broad range of management talents, skills and capacity for a continuous approach to problem solving within competitive environment (Aniekwu and Ozochi, 2010). According to Oladeji (2002) a dynamic organization at the competitive edge is one that is imaginative and innovative in its HRD programme providing training and education that would make its human resource productive and innovative.

HRD is part of management practices which is defined as the process of increasing the knowledge, skills and competencies of all the people in a working environment (Sriyan, 1997). In addition, Adams (1997) took a broader view of HRD as improving competence, culture and commitment which include opportunities for employees' training, re-training, career development and mentoring. The purpose of HRD is to enhance learning and high performance in work-related systems, to ensure the effective and efficient use of resources (Yuan and John, 2008), and improve organization performance (Kasimu, Rosilan and Fadhlin, 2013). According to Mathis and Jackson (2000) human resources development is progressively considered as a survival tool in a dynamic, competitive and continuously changing environment (Kasimuet al., 2013; Laundon and Laundon, 2003). Also, Malone (2004) revealed that HRD has now turned into an important factor and continues to be broadly practiced by many organizations as one of the most promising approaches for organizational success within the information age.

The foregoing issues indicate the fact that HRD is a tool for to the achievement of construction firms' core objectives. It is therefore necessary for the construction industry to continuously update HR Hence, this study assessed the extent to which HRD strategies are practiced by construction firms in North Western Nigeria.

2. Background

In recent times the incident of organizational development and improved performance has become paramount in many organizations (Ayoola, 2014; Griffis, Hogan, & Li, 1995). The workforce is the most valuable asset for an efficient outcome of any organization and this is especially true in the case of labour-intensive industries (Malkani & Kambekar, 2013) like construction industry. Unlike many organizations whose performances are enhanced by new emerging technologies, construction industry is still a labour-intensive and low-tech industry, as a result human resource is the most important and very often the most expensive resources deployed within construction industry (Loosemore et al., 2003). Drucker (1993) submitted that the fundamental economic resource is no more capital, natural assets, nor work, but human resources. Human resource are an important factor in the development of the construction (Mohamed, Andrew, Dainty, & Stephen, 2011).

The concept of HR refers to the managerial, scientific, engineering, technical, craft and other skills which are employed in creating, designing and developing organizations and managing and operating production and services of enterprises (Oladeji, 2002). Human Resource (HR) is also defined as the knowledge, skill, experiences, energies and attitude employed by organizations which are potentially useful for the production of goods and services. HR is recognized not just in terms of hour work but also skill, knowledge, attitude, experience and similar attributes that affect particular human capabilities to do productive work and would be most suitable for the realization of their purposes, aspirations or objectives (Stephen, 2011). Corporate organizations appreciation of HR lays not so much in the human beings but in them having the requisite skill, training, education, experience and attitudes that would be most suitable for their purposes, aspirations or objective (Stephen, 2011).

The construction industry presents a challenge to each member of the construction team. All members of the team bear heavy responsibilities and it is

the duty of the various organizations to assist their individual members to discharge their respective responsibilities in an effective manner. This informed the need for this study. In Nigeria, the members of the construction team are categorized into four groups: Professional and management/administrative staff, Technical staff, Tradesmen and Auxiliary (Akin, 2003).

Professional HR in the construction industry include: architects; builders, engineers, (for example structural, geotechnical, building services, mechanical and electrical), estate surveyors and value's, quantity surveyors, land surveyors and town Planners. The professionals in the industry are expected to have been scientifically, technologically and management oriented(Katz, Aldrich, Welbourneand William, 2000). They are responsible for applying the basic principles of management to oversee the execution of projects they are properly trained on the use management. Generally, professionals are university graduates or similarly qualified. They carry out most of the planning, design, production, management and general stability and service ability of structures. The managerial personnel, on the other hand, are responsible for applying the basic principles of management to oversee the execution of projects for the construction companies (Katz, Kochan and Keefe, 1987). They are, therefore, expected to be properly trained on the use of management techniques to effectively and efficiently manage resources to deliver optimum performance. They often go by the job titles; programmes manager, constructor, construction manager, project engineer, project manager, construction supervisor, or similar designations(World Bank, 2006).

Technical personnel are usually analytical and problem solving in nature. They should be able to estimate the type and quantity of material required to complete a job and how long a job will taken to be completed. Technical staffs include line managers and site supervisor/resident builder. These categories of staff often have advanced technical certificate, national diploma or higher national diploma certificate from polytechnics. Also, technical personnel comprise foremen of different trade sections, specialist and general foremen,

structural, electrical laboratory technicians, construction engineers and plant and equipment superintendents. The skills requirements for technical personnel are usually analytical and problem solving in nature (Smith, 2002). According to Yakubu (2005) a construction foreman, for instance, should have the ability to identify and estimate the correct type and quantity of materials required to complete a job and accurately estimate how long a job will take to complete and at what cost. After acquiring the skills and knowledge, and with enough experience, they advance to supervisors or senior foremen. They may also become project managers or construction superintendents (World Bank, 1989).

Artisans and craftsmen are construction operatives who contribute skillfully with their hands in the practical realization of a project. Artisans and craftsmen are equally as important as professionals, in the construction industry. In spite of advancement in technology, plant and equipment and in particular robotics, the construction industry is one of the few that still relies heavily on individual skill of tradesmen. There is and always will be the need for tradesmen such as carpenters/joiners, block layers/bricklayers, still fixer, plumbers, electricians, floor and wall tillers.

In the past, many of the tradesmen were generally trained through trade centers, vocational training institution and technical colleges. Some even took craft examinations at the end of the apprenticeship period, such as City and Guild Institute of Great Britain, London, and Trade test (Grade I. II. III.) Certificate of Federal Ministry of Labour and Productivity. Auxiliary staffs include administrators, accountants, store keepers, security men, clerks and drivers.

Human resource development can be defined as a set of systematic or planned activities designed by an organization to provide its members with the opportunities to learn necessary skills with a view to meeting current and future job demands. HRD seeks to develop people's knowledge, expertise, productivity and satisfaction, whether for personal or group/team gain or for the benefit of an organization (Mclean and Mclean, 2001). HRD activities should

begin when an employee joins an organization and should continue throughout their career, regardless of whether that employee is an executive or a worker on the assembly line (Dubem, et al.,2012).

Swanson (2007)has defined HRD as a process for developing and unleashing human expertise through training, development and organization development for the purpose of improving performance.

HRD as discussed can be a stand-alone function, or it can be one of the primary functions within the Management department. An ASTD sponsored study (Mclagan, 1989) identified the HRD role and competencies needed for an effective HRD function. This ASTD study documented a shift from the more traditional training and development topics to a function that include career development and organization development issue as well. Training and Development (T&D) focus on changing or improving the knowledge, skill and attitudes of individuals. Training typically involves providing employees the knowledge and skill needed to do a particular task or job, though attitude changes (Swanson 2007).

Education is the key to creating, adapting and spreading knowledge. It increases people's capability to learn and to interpret information. But higher education increases the technical training needed to build a labour force that can keep up with a constant stream of technological advances, which compress production cycles and speed the depreciation of human capital, such as the construction industry (Aidah, 2013). Education produces people, who can monitor technological trends, assess their relevance to an organization's prospects and help formulate an appropriate organizational strategy. It improves the construction organizational performance in terms of project delivery, reduce construction rework, and improve problems solving solutions and decision making. Laundon and Laundon (2003)stated that education is progressively considered as a survival tool in a dynamic and competitive environment. Education is primarily for the benefit of the recipient and gives a range of broad knowledge and skills which will be of use in life and work generally.

Fagbola (2012) and Mahapatro (2010) defined training as “an organized activity for increasing the knowledge and skills of the people for a definite purpose. It involves systematic procedures for transferring technical know-how to the employees so as to increase their knowledge and skills for doing specific job with proficiency (Mahapatro, 2010). In other words, the trainees acquire technical knowledge, skills and problem-solving ability by undergoing the training programme.

Abiodun (1999) submitted that “training is a systematic development of the knowledge, skills and attitudes required by employees to perform adequately on a given task or job, it can take place in a number of ways-on the job or off the job; in the organization or outside organization (Mullins, 1999). Training is to improve knowledge and skills and to change attitude. The study further argues that training is capable of producing the following benefits; increase the confidence, motivation and commitment of staff; provides recognition, enhanced responsibility and possibility of increased pay promotion; gives feeling of personal satisfaction and achievement and broaden opportunity for career progression; and helps to improve the availability and quality of staff.

In order to effectively implement training and development programmes, several methodologies have been put forward in previous studies. Among the other training methods is On the Job Training’s: This relates to formal training on-the job. A worker becomes experienced on the job over time due to modification of job behavior at the point of the trainings or acquisition of skills. Atiomo (2000) identified on-the-job Training as the training in the normal work situation, in the attitude/knowledge/skill behaviour pattern appropriate to a task or job. In other words, the trainee learns as he does his job and with time, perfects completely. On-the-job training is the most effective method of training /staff development in the construction firms. This is largely expected as most duties in the construction industry are mostly carried out on-the-site giving opportunities to large groups of employees to be trained while on the job. It is given preference because of the following (ITF, 2005): The training takes place

in the environment in which the trainee will work at the end of his training; the trainee works with equipment and materials which he will use at the completion of training; and the job procedures are the same as obtained after training. Atiomo (2000) identifies On-the-Job training as the training in the normal work situation, in the attitude/knowledge/skill behavior pattern appropriate to a task or job. In other words, the trainee learns as he does his job and with time becomes perfect completely. On-the-job training is about getting the job done. On-the-job training is dynamic, situated and practice-oriented (Tabassi and Bakar, 2009).

Off-the-job training, on the other hand, is the training in the knowledge behavior pattern required for a task, job or occupation away from the normal work situation and day-to-day pressures (Smith, 2002). Tabassi and Barker (2009) made a comparison between on-the-job and off-the-job training. According to the authors, in terms of emphasis, off-the-job training is about learning basic facts and skills while on-the-job is about getting the job done. The ultimate goal of off the- job is “knowledge” while that of on-the-job is developing “best practices”. The knowledge obtained from off-the-job training is static, decontextualized and general while the knowledge obtained from on-the-job training is dynamic, situated and practice-oriented. In terms of topics/problems, off-the-job training is given by curriculum while on-the-job training arises from and embedded on in work situation for on-the-job trainings. The scope of learning for off-the-job training is primarily individual while that for on-the-job training ranges from individual to group and organization (Tabassi and Barker, 2009).

Induction/Orientation: is carried out for new employees on the job to make them familiar with the total corporate requirements like norms, ethics, values, rules and regulations. Another training method practice in the construction industry is apprenticeship a method of training where an unskilled person understudies a skilled person. Apprenticeship programmes are more comprehensive trainings that combine on-the-job training with related

classroom instruction and are available for electricians, iron workers, carpenters and other artisans.

Demonstration as a training method in the construction industry involve, teaching by example whereby the skilled worker performs the job and the unskilled worker closely observes so as to understand the job process. A conference is a training method that involves presentations by more than one person to a wide audience. It is more cost effective as a group of employees are trained on particular topics all at the same time in large audiences. This method, however, is disadvantageous because it is not easy to ensure that all individual trainees understand the topic at hand as a whole.

Coaching and Mentoring: This involves having more experienced employees (McCourt and Derek, 2003; Torrington, Hall and Taylor, 2005). It is argued that mentoring offers a wide range of advantages for development of the responsibility and relationship building (Torrington and Tan, 1998). The practice is often applied to newly recruited graduates in the organization by being attached to a mentor who might be their immediate manager or another senior manager. This however, does not imply that older employees are excluded.

Vestibule is also another training method. This is done through industrial attachment for the purpose of skills and technology transfer. The effect is the acquisition of practical and specialized skills. Formal training method, this method involves practical and theoretical teaching process which could be done within or outside an organization. When training is carried out inside an organization, it is called an in-house training, while off-house training is carried out in professionalized training area outside organization such as universities, polytechnics and professional institutes;

Other training method include vocational training schools and vestibule schools which provide practical on –the – job knowledge and skills in diverse areas of human endeavour and is more formal than apprenticeship programme. Industrial training's a form of training that provides an on–the–job situation for

trainees and is usually part of the curriculum for higher educational programmes in universities, polytechnics and lasts between 3 and 4 months. It is coordinated in Nigeria by the Industrial Training Fund (ITF). Conferences and Workshops are for professional peers and superiors to rub minds, interact and share ideas on developments within a profession or industry higher qualification programmes include diploma, graduate and postgraduate programmes offered in institutions of higher learning and companies and organizations alike use it as a platform to sponsor their staff to acquire knowledge at the higher level to equip them with requisite skill to face more daunting tasks in the organizations.

3. Research Methodology

The primary data for this study were collected through field work, involving the administration of a structured questionnaire to elicit information on available and categories of HR in the construction firms in Northwestern Nigeria, traditional human resources development strategies adopted by the firms. Using Purposive sampling technique, the study selected three states namely: Sokoto, Kebbi and Zamfara state from North Western Nigeria. The target population for the study consisted of all registered construction firms in the selected states. The number of registered construction firms was obtained from the State Tender Board in each state. Twenty percent (20%) of the construction firms with offices in the three states were selected using random sampling, yielding 66 firms. In each firm, 6 staff member were selected making a total of 396 respondents; hence, a total of 396 questionnaires were administered out of which 238 were retrieved. The primary data for the study was collected through the administration of structured questionnaires. Factors were rated by respondent using a five point-likert scale as follows: “very significant”, “significant”, “moderately significant”, “fairly significant”, and ‘Not significant, with weight values 5, 4, 3, 2, and 1 respectively, data collected were analysed using appropriate descriptive and inferential statistical tools.

4. Results and Discussion

This section identified and categorized human resources in the construction firms in Northwestern Nigeria. The identified human resource in the construction firms in the study area are presented in Table 1. Identified human resources in the sampled firms were classified into four categories, namely: administration/management staff, professional staff, technicians, and tradesmen and artisans. Among the administration/ management staff level, six (6) staff were identified. These were general managers, site managers, store officers, finance managers, procurement managers and security officers. However, the results indicated that 21.4% of respondents have general managers; 31.9% have site managers; 14.7% have store officers; 10.5% have finance managers, 14.3% have procurement managers; while only 7.2% of the firms have security officers. The result indicated that a higher percentage of sampled construction firms in the study area prioritize site managers in their human resource while security officers are given least consideration.

The professional staffs identified with the sampled construction firms include Structural Engineers (26.47%), Builders (18.06%), Architects (44.13%), Services Engineers (4.62%) and Quantity Surveyors (6.72%). The result indicated that the construction firms attached much importance to Architects and Structural engineers in their human resource strategies. The identified technical staffs in the sampled firms were services technologists and concrete technologists. The results showed that majority (71.85%) of the firms have Concrete technologists staff while 28.15% of the firms have Building services technologists. Tradesmen and artisans were also identified in the study area. Carpenters (21.44%), steel fixers (4.62%), bricklayers (37.39%), painters (28.57%) and tillers (7.98%) were identified in the firms. The findings however, indicated that there are more bricklayers and painters respectively in the sampled construction firms in the study area among Tradesmen and artisans. The categorization of human resources in the construction firms as indicated in

Table 2, showed that professional staff members (33%) in the sampled firms were in higher category followed by tradesmen and artisans (28%), relative to administrative/management staff (26%) and technical staff (13%) respectively. The results highlighted the importance attached to professional staff in the study area. This is more pertinent with construction firms because of their technical function. The skills requirements for technical personnel are usually analytical and problem solving in nature (Learning and Skills Council, 2003). According to Yakubu (2005), technical staff, for instance, should have the ability to identify and estimate the correct type and quantity of materials required to complete a job and accurately estimate how long a job will take to complete and at what cost (Dubem, Stephen, Oluwaseyi and Onuwa, 2012)

These results indicated that sampled construction firms employed HR of different specialization in their organization. The results also implied that Architect with 105(44.13%) were ranked highest among the professional staff level. They were dominant because, it must be remembered that on many occasions the client will have little or no knowledge as to what he wants, or even if he has ideas they may be quite inadequate to meet his needs. Architects have the first opportunity to formulate the client’s requirements into an understandable form before other professionals were involved (Butler, 1977).

Table 1. Human Resource in the Sampled Construction Firms

Human resource	Frequency	Percentage (%)
Management/Administrative staff		
General managers	51	21.4
Site managers	76	31.9
Store officers	38	14.7
FinanceManagers	25	10.5

Procurement managers	34	14.3
Security officers	17	7.2
Total	238	100
Professional staff		
Structural engineers	63	26.47
Builders	43	18.06
Architects	105	44.13
Services engineers	11	4.62
Quantity surveyors	16	6.72
Total	238	100
Technical staff		
Services technologists	67	28.15
Concrete technologist	171	71.85
Total	238	100
Tradesmen and Artisans		
Carpenters	51	21.44
Steel fixers	11	4.62
Brick/block layers	89	37.39
Painters	68	28.57
Tiling and Terrazzo floor fixers	19	7.98
Total	238	100

Table 2. Categorization of Human Resources in the Sampled Construction Firms

Categorization of human resources	Percentage (%)	Mean Score	Rank
Professionalstaff	33	3.42	1
Tradesmen and Artisans staff	28	2.89	2
Management/ administrative staff	26	2.71	3
Technicalstaff	13	1.45	4
Total	100	10.47	10

The traditional HRD strategies adopted by construction firms in the study area are presented in Table 3. The result identified training programme (44%) as the most frequently used HRD strategies of construction firms in the study area; this was followed by development programme (31%) and education system (25%). It appeared that training programme (44%) was ranked high among the HRD programme. This is more pertinent with construction firms because training programme concerned with improving current job performance and imparting specific skill among operative such as tradesmen and artisans (Fagbola, 2012; Mahapatro, 2010).

Table 3. Identified HRD Strategies Adopted by Construction Firms

HRD Programme	Percentage (%)
Training	44
Development	31
Education	25
HRD Policies	

Mandatory training of employees upon joining the firms	37
Employee request	26
No specific policy	18
Supervisors recommendation	10
Performance appraisal	9

Odusamiet al., (2007) and Chan (2005) observed that training has become the only source of sustainable long term competitive advantage in the construction industry. Similarly, in an effort to justify the importance of labour training to the construction industry, Obiegbu (2003) outlines the following as its major objectives: enabling that employees acquire sufficient, relevant academic, technical knowledge and skills for dealing with problems of the Construction Industry; acquiring practical field, providing the technical ability to visualize and solve practical construction problems; Providing managerial knowledge to make sound decisions and implement them on a prudent and economic basis; enhancing the safety of workmen used on machines. These objectives have further reinforced the belief that a construction workforce well trained will impact significantly on project delivery. Tabassiet al., (2011) argue that training plays a critical role in increasing workers' adaptability and flexibility which employers have found to be increasing important. Thus, it is imperative to admit that every necessary step should be adopted to meet the basic objectives of training and development in the construction firms.

The result on HRD policies shows how respondents were selected/ sent for training and development in their respective construction firms include mandatory training of employees upon joining the firms (37%) and (26%) of employees were selected based on request. It appeared that a large number of these respondents (37%) were selected to participate and, thus, received mandatory training upon joining the firms. This study is consistent with Coles

(1986) which indicated that other companies may prefer to recruit personnel that are already trained and professionally qualified as a policy to reduce cost of staff development. Training policy of an organization is a laid down statement setting out what the organization is prepared to do in terms of developing its employees (Odusamiet al., 2007). This policy document may contain such clauses relating to providing opportunities for selected employees to participation in training activities such as attending conferences, workshops, and seminars to prepare them for new roles.

Further examination on HRD strategies revealed different methods of training, educational and developmental systems adopted by the sampled construction firms (Table 4.5). Using mean score to rank the variables and ANOVA F to test the significance of each variable with respect HRD strategies adopted.

The result (Table 4) shows that several training methods were adopted by sampled firms as part of their HRD strategies, namely: induction/orientation (mean score=2.18), apprenticeship (mean score=2.02), coaching and mentoring (mean score=2.24), presentation (mean score=2.20), on-site training (mean score=2.58) and off-site training methods (mean score=1.78). However, only three of these methods were found significant. These are on-the-site significant at ($F=6.259$, $P<0.05$), followed by coaching and mentoring, significant at ($F=5.890$, $P<0.05$) and induction/orientation, significant at ($F=3.598$, $P<0.05$). Those training methods were found to be the most significant training strategies adopted by sampled construction firms. It appeared that among the training methods, on-the-site training method (2.58 mean rating) was ranked highest and most significant at ($F=6.259$, $P<0.05$). This is largely expected as most duties in the construction industry were carried out on-the-site, giving opportunities to large groups of employees to be trained while on the job. It is given preference because training takes place in the environment in which the trainee will work at the end of his training (ITF, 2005). Also trainee work with equipment and materials which they will use at the completion of training and the job procedures are the same as obtained after training. On-the-job training is about

getting the job done and it is dynamic, situated and practice-oriented (Tabassi and Bakar, 2009).

Table 4. HRD strategies adopted by construction firms

HRD Strategies	Mean Score	Ranks	ANOVA F
Training methods			
On-the-site	2.58	1	6.259**
Coaching/mentoring	2.24	2	5.890**
Induction/Orientation	2.18	3	3.598**
Presentation	2.20	4	3.309**
Apprenticeship	2.02	5	3.132**
Demonstration	2.00	6	1.485
Off-the-site	1.76	7	2.260
Conference	1.91	8	1.990
Vestibule	1.06	9	1.014
Educational system			
Informal education	1.50	1	2.781**
Formal education	1.15	2	2.061
Development methods			
Promotion	1.42	1	4.157**
Under-study	1.33	2	2.863**
Job-rotation and transfer	1.08	3	2.188

Self-development	1.23	4	2.145
------------------	------	---	-------

******, significant at 5% level

There were two components of education system (Table 4) adopted by sampled construction firms. These are informal and formal education systems. The mean rating of informal education system (mean score=2.781) was higher and significant at ($F=2.781$, $P<0.05$) than formal system (mean score 2.061). This indicates that HRD strategies adopted by sampled firms in relation to education were mainly informal (mean score 2.781), ranked highest and significant at ($F=2.781$). Development as HRD strategies (Table 4) adopted by sampled construction firms included, promotion (mean score=1.42), under-study (mean score=1.33), job rotation and transfer (mean score=1.23) and self-development (mean score=1.08). However, promotions with higher (mean score 1.42) were found to be the most significant component ($F=4.157$, $P<0.05$) followed by under-study (mean score 1.3) and significant ($F=2.863$).

The findings on HRD programme and methods adopted indicated that the HRD strategies practiced in the study area had little attention on education system. This is more pertinent because of the unstable nature of the construction industry typified by casualization of workers, workers being employed at inception of projects, and laid off at its end and many labour-only subcontractor arrangements (Loosemore, Dainty and Lingard, 2003). Aina et al., (2009) added that participants are often freshly assembled for current project. This could have number of implication to performance of construction firms. However, Jayawardane and Gunawardena (1998) argued that absence of education among construction firms in developing countries results in poor quality work, high wastage and long term productivity decline in the industry. Similarly, Balogun (2005) identified that poor education programme in most of construction firms in Nigeria has implications of poor performance which is characterized by poor workmanship, rework, low productivity, late completion

of work, cost overruns, high accident rate, poor work practice and conflicts between staffs. Also Wahab (2005) identified qualitative and quantitative deficiencies in workmanship as some of the factors militating against the attainment of success in the Nigerian construction industry.

The extent to which employees in the sampled construction firms have been developed in the areas of HRD practices are presented in (Table 5).The result showed that most of the employees were highly developed in the area of technical knowledge (means=4.20), production skills (means=4.05) and legal/regulatory policy (means=4.01). The extent of development in communication skills is above average (means=3.51) while development in the area of computer/IT was below average (means ranked=3.44). It appeared that, technical knowledge (means ranked=4.20) and Production skills (means ranked=4.05) respectively were highly ranked by the respondents, while Computer/IT was least ranked with (mean ranked=3.44).

Table 5. HRD Practice Areas and Employees Development

HRD practice areas	%					Mean Score	Rank
	Very high	High	Average	Low	Very low		
Technical knowledge	51.3	23.1	15.4	7.7	2.6	4.20	1
Production skills	47.1	23.5	19.6	7.8	2.0	4.05	2
Legal/regulatory policy	38.3	38.3	13.3	6.7	3.3	4.01	3
Management of People	34.7	44.9	8.2	10.2	2.0	4.00	4

Health and Safety	29.8	42.6	21.3	4.3	2.1	3.94	5
Customer care and marketing	38.5	23.1	21.2	11.5	5.8	3.77	6
Leadership	28.3	24.5	35.8	9.4	1.9	3.68	7
Business and Finance	27.7	36.2	12.8	19.1	4.3	3.64	8
Communication skills	23.1	25.6	30.8	10.3	10.3	3.51	9
Computer/IT	22.0	32.0	20.0	20.0	6.0	3.44	10

5. Conclusion

The study focused on traditional HRD strategies of construction firms in Northwestern, Nigeria with a view to assess the HRD programmes and policy practice by construction firms in the study area. Based on the findings from this study, the following conclusions were drawn. The study concluded that the construction firms in the study area have low human resource capacity in the areas of builders and quantity surveyors. The study also concluded that the traditional HRD strategies adopted by the firms did not include the educational system of training. Hence, the HRD strategies favour on-the-site training methods and promotion development method.

6. Recommendations

Based on the findings of the study and conclusions drawn, the following recommendations were made: It is recommended that professional and government bodies should embark on enlightenment campaigns to educate

contractors and members of the public on the roles of builders in the area of production management (programme of work, quality control, health and safety plans construction methodology and resource management) and roles of quantity surveyors in the area of effective cost control (preparation of estimate, bill of quantities, legal policies and other contract logistics). This can be achieved by organizing public lectures, workshops and seminars or through the media and invitations to other professional programmes. Government should pay more attention to employees' qualities before awarding contracts by assessing an organization's profile.

It is recommended that construction firms should invest in human resource development by providing adequate formal education for every employee irrespective of his/her cadre in the firm. This can be successfully achieved by enforcing enabling legislations that will make it mandatory for construction firms to educate their staff. Professional bodies in conjunction with the stakeholders should review the policies of the construction firms through annual accreditation and renewal of license.

References

Abiodun, E. J. A. (1999). Human Resources Management, an overview. Concept Publication. 110-121.

Abu Hassan, A., Arman, A. R., Mohamad, N. Y., & Nurkhuraishah, A. k. (2011). Factors determining growth of companies: A study on construction companies in Malaysia. *African journal of business management*, 5(22), 8753-8762. doi: <http://www.academicjournals.org/AJBM> DIO:10.5897/AJBM10.1142

Adamolekun, L. (1983). *public Administration: Nigeria and Comparative perspective*, London. Longmans.

Adams, O. A. (1997). contractor development in nigeria: perceptions of contractor and professionals construction management and economic, 15(1), 95-108.

Agunbiade, B., Adeniyi, K., Olokesusi, F., Olufemi, S., & Agboola, T. (1995). Final report on the impact of liberation policies in the Building construction industry in Nigeria NISER publication, Ibadan, Nigeria.

Aidah, N. (2013). effects of training on employee performance Evidence from Uganda. (M. Sc.), VAASAN AMMATIKORKEAKOULU UNIVERSITY OF APPLIED SCIENCE.

Aina, Adesanya, & Ojo. (2009). Delay problems in construction projects in Nigeria: a theoretical focus on causes and avoidance strategies. *Journal of environmental design and management*, 11(2), 40-46.

Akin, A. (2003). performance evaluation of the building construction personnel. Paper presented at the Annual conference and general meeting of the NIOB at the women's development centre, Abuja.

Alvin, V. (2011). Factors in human resource management the influence construction company's performance in Indoneia.

Aniekwu, N., & Ozochi, A. (2010). Restructuring education and human - resource development in the Nigerian construction industry. *journal of science and technology education research*, 1(5), 92-98. doi: <http://www.academicjournals.org/JSTER>

Atiomo, A. (2000). *Human Resource Management*.

Ayoola, M. O. (2014). Capacity building and job performance of employees in university of technology in southwestern Nigeria. (M. Phil), Obafemi Awolowo University, Ile- Ife, Osun state, Nigeria.

Chan, Suen, & Chan. (2005). An integrated project extranet design prototype: e-AEC for architects, engineers and contractors in hong kong mainland china construction research, 6(2), 253-271.

Drucker, P. F. (1993). *The post capitalist society*, Butterworth- heinemann London, Egbu, C O, 2005. *Knowledge management as a driver for innovation, knowled management in construction*. Oxford, U K Blackwell publishing.

Dunn, J. D., & Stephens, E. C. (1972). *management of personnel*: New York: McGraw Hill. 121.

Edwin, B., & flippo. (1998). *Principles of personnel management*, McGraw- Hill, Tokyo, . 209.

Egbu, C., Gaskell, C., & Howes, J. (2001). The role of organizational culture and motivation in the effective utilisation of information technology for team working in construction. Paper presented at the proceedings of the 17th Annual conference of the Association of researchers in construction management (ARCOM): 91-100; 5-7 september,, at university of Salford, UK.

Evans, P., Pucik, V., & Barsoux, J. L. (2002). *the global challenge: Frame work for international Human resource management*. Boston: Mcgraw- Hill.

Fagbola, T. O. (2012). *Manpower development and efficiency of employees in the food and beverage indutry in south western nigeria*. (M. Phil), Obafemi Awolowo University Ile- Ife Osun State nigeria.

Gann, D. M., & Salter, A. (1998). Learning and innovation management in project-based, service- enhanced firms, . *international journal of of innovation management*., 2(4), 431-454.

Griffis, F. H., Hogan, D. B., & Li, W. (1995). An Analysis of the impact of using three dimensional computer models in the management of construction. construction industry institute (cii) Austin. Tx, Usa, Research report, 106-111.

Ibironke, T. O. (2003). construction finance technical books (first edition TIMLAB ed.).

Kasimu, M. A., Rosilan, A., & Fadhlin, A. (2013). The significance of knowledge management in civil Engineering construction firms in Nigeria. Journal of Applied Sciences Research, 9(6), 3484-3491.

Laundon, K. C., & Laundon, P. L. (2003). Essentials of management information systems, managing the digital firms, (fifth ed.). New jersey: prentice-hall, Englewood cliffs.

Loosemore, D., Dainty, A., & Lingard, H. (2003). Human resource management in construction projects: Strategic and operational approaches.

Mahapatro, B. M. (2010). Human resource management, New Age publisher, New Delhi.

Malkani, Z. A. K., & Kambekar, A. R. (2013). Management of human Resource in construction industry. international journal of Engineering research and technology, 6(3), 353-362. doi: <http://www.irphouse.com>

Malone, T. W. (2004). The future of work. boston Harvard business school press.

Mathis, S. R., & Jackson, J. H. (2000). Human Resource Management. South Western College publishers.

McCourt, W., & Derek, E. (2003). *global human resource management: managing people in developing transitional countries*. Cheltenham. UK: Edward Elgar.

Mclagan, P. A. (1989). Models for HRD practice. . *Training and Development journal*, 4(9), 49-59.

Mclean, G. N., & Mclean, L. (2001). If we can't define HRD in one country, how can we define it international contex? *Human resources Development International*, 4(3), 313-326.

Mohamed, S. A.-w., Andrew, R. J., Dainty, A., & Stephen, G. I. (2011). A review of the relationship between skills and productivity in construction.

Nakhon, K., & Somjintan, K. (2012). current practices of human resource management (HRM) in Thai construction industry: A Risk and opportunity perspective. *society of interdisciplinary business research*, 1(1). doi: www.sibresearch.org

Obiegbu, M. (2003). Education and training of Builders Towards proactive Roles in the 21st century Building Industry in Nigeria. seminar for lecturers of Building programme in Tertiary Institutions. Nigerian Institute of Building (NIOB), 13th December.

Ofori, G., & Chan, S. (2000). Growth paths of construction Enterprises in Singapore,. *Eng. Construct. Architect. manage.*, 7(3):307-321, 1980-1998.

Ogunlana, S., Thapa, S., & Dey, P. K. (2002). Assessing engineering training needs, methods and effectiveness In: SO Ogunlana(Eds): *Training for construction Industry Development...* Rotterdamm:CIB Publication, 94-102.

Oladeji, S. O. (2002). Approaches to Human Resources Development. Paper presented at the training programme on management of human resources, , Ibadan, Nigeria.

Olubodun, O. (1985). "low productivity of the Nigeria construction workers". Unpublished seminar paper, Building Department, OAU Ile-Ife. 1-21.

Pettus. (2003). Growth from chaos:Developing your firm' resources to achieve profitability without cost cutting.

Pettus, M. L. (2003). Growth from Chaos: Developing Your Firm' Resources to Achieve profitability without cost cutting.

Raza, A. K. (2008). Role of construction sector in economic growth:Empirical Evidence from Pakistan economy. Paper presented at the First international conference on construction in developing countries "Advancing and intergrating construction education, research & practice" August 4-5 2008,.

Smith, P. J. (2002). Modern learning methods rhetoric and reality - further to sadler-smith et al .. person rev. 31(1), 103-113.

Sriyan, d. s. (1997). priority for employers. Paper presented at the International Labour Office workshop on Employees' Organization, Asia-pacific.

Stacifawn, B. (2007). Recruitment and selection in construction. (master of science), University of florider.

Stephen, g. (2011). human resource development.

Storey, D. J. (1994). understanding the small business sector. London:Routledge.

Tabassi, A. A., & Barker, A. A. H. (2009). Training, Motivation and Performance: The Case Of human resource Management in Construction

Projects in Mashhad, Iran. . international journal of project management, 27, 471-480.

Tabassi, A. A., Ramli, M., & Bakar, A. H. A. (2011). Training, Motivation and Teamwork improvement: The case of construction firms. . African journal of business management, 5(14), 5627-5636.

Torrington, D., Hall, L., & Taylor, S. (2005). human resources development (6th Ed. ed.). London: prentice Hall.

Torrington, D., & Tan, C. H. (1998). Human resource management for Southeast Asia and Hong Kong prentice hall.

Turner. (2002). Strategic Human Resource Forecasting. London: CIPD: .

Turner, & Keegan, A. (2001). Mechanisms of Governance in project- based Organizations: The Role of the broker and Steward. European Management Journal, 19(3), 254-267.

Vinit, P., Johan, J., Hakan, Y., & Pontus, B. (2010). Barriers to information and communication technology adoption in small firms. Paper presented at the swedish entrepreneurship forum, pontus Braunerhjelm.

Yuan, C., & John, K. (2008). The mechnisms of information communication on construction sites newcastle university. Forum Ejournal.