

# The Impact Of Human Factors On Construction Productivity In Nigeria

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*Abstract: This study appraised the impact of human factors on construction productivity. The paper considered factors such as age, skill, organic ability, motivation, training, innate ability, adaptation, acclimatization, learning, job satisfaction. The study concluded that the ability of an employee to cope with new challenges or changes affects productivity. This is directly related to his/her physical and mental abilities. In most cases, it is related, too, to the employee's level of acclimatization, adaptation and learning in the workplace. Although the literature strongly suggests a direct relationship between job training and job performance as well as job training and employee attitudes, there is little empirical support for this suggestion. Clearly, there is a need to provide such empirical support. It is therefore recommended that a proper or effective selection of workers be carried out considering all the necessary human factors to enhance productivity.*

**Keywords: impact, human factor, construction, productivity, skills, employees**

## I. INTRODUCTION

The expression "human factor" refers to more than just the direct impact employees have on your business. It refers to the strategic approach your company takes with employees. Human factors in safety are concerned with all those factors that influence people and their behaviour in safety-critical situations. In aviation these are, for example, environmental factors in the cockpit, organisational factors such as shift work, human characteristics such as ability and motivation of staff. Careful consideration of human factors is necessary to improve health and safety at work by optimising the interaction of humans with their technical and social (team, supervisor) work environment. This provides considerable benefits for business by increasing efficiency and by preventing incidents/accidents. One reason for this is that human factors are difficult to measure and therefore also difficult to manage. Studies in other domains, such as workplace health promotion, indicate that BSC-based tools are

useful for human factor management. Their mission is to develop a set of indicators that are sensitive to organisational performance and help identify driving forces as well as bottlenecks (Rowden & Shamsuddin, 2000).

The human factor in business can also be defined as the collective impact employees have on near-term and long-term success of a business. Companies must recognize the human factor in responding to public pressure to build sustainable organizations. While much emphasis is placed on customer care and environmental responsibilities, employees are an equally important company stakeholder, especially for small organizations. Some large retail chains emphasize cost controls and efficiency in compensation and retention policies. However, the marketplace increasingly wants companies to have fair working conditions and labor standards. Companies that take a long-term strategic approach with employees pay at or above-average wages, fair benefits and create a non-discriminatory environment where employees are core assets (Rowden & Shamsuddin, 2000).

## II. CONCEPT OF PRODUCTIVITY

Productivity is simply the amount of output derived from per unit of input. It is a way to compare the cost of something to its benefit. Productivity refers to an amount of physical output to its related labour input.

Organization productivity usually relates to efficiency and effectiveness. Efficiency and effectiveness are two words associated with organizational productivity. Efficiency is the degree to which a system or component of a system perform its designated functions with minimum consumption of resources. Efficiency is doing things right. It is generally measured by a ratio of outputs produced to resources used. While, effectiveness is the degree to which a goal is achieved and suggests a quality of output measurement against a defined standard. It means doing the right thing (Rowden & Shamsuddin, 2000).

Productivity in a manufacturing industry usually relates to “how many valuable resources are used relative to what are produced (efficiency) and the ability of the manufacturing process to produce the desired result (effectiveness). In order to achieve maximum productivity, organizations must possess qualified personnel, who are committed and dedicated to service delivery. The road map to qualified personnel in any organization is determined by effectiveness of the selection process. Ineffective selection process predisposes organizations to the following consequences (Rowden & Shamsuddin, 2000):

- ✓ Inability to cope with new challenges or changes.
- ✓ Non-competitiveness.
- ✓ High rate of employee turnover as a result of incessant layoff of workers.
- ✓ Lack of service excellence.
- ✓ Poor quality production.
- ✓ Waste of organization's resources such as money, time and other valuable resources.
- ✓ Poor productivity such as low return on investment, unsatisfied customers.
- ✓ Under performance of employees.
- ✓ Business failure.

### A. EFFECT OF MONETARY INCENTIVES ON PRODUCTIVITY

Money can never be overlooked as a motivator. Money is often more than monetary value. Status or power goes with money. Money can be given in the form of wages, piecework rate, incentive pay, bonus, stock options, company paid insurance and in some other forms. Economists and most managers have tended to place money high on scale of motivators. Behavioral scientists tend to place it low. But neither view is right.

As regards money as a motivator some points to be mentioned are (Rowden & Shamsuddin, 2000):

- ✓ Money is likely to be more important to people who are beginning their career and raising a family than people who have arrived (means late in their career and family obligations are taken care of).

- ✓ Money payments are used to attract employees to work in an organization and they may not motivate people further.
- ✓ Money as a motivator becomes a dull instrument if all managers at a certain level are paid similar compensation.
- ✓ If salaries and bonuses reflect the individual performance it is likely to be more potent as a motivator.
- ✓ Money can acts as a motivator, when the payment promised is large relative to a person's income.

### B. EFFECT OF EMPLOYEE'S INNATE ABILITY ON PRODUCTIVITY

The ability of an employee to cope with new challenges or changes affects productivity. This is directly related to his/her physical and mental abilities. In most cases, it is related, too, to the employee's level of acclimatization, adaptation and learning in the workplace (Rowden & Shamsuddin, 2000).

### C. EFFECT OF EMPLOYEE'S AGE ON PRODUCTIVITY

An aging workforce also influences economic metrics such as productivity and GDP. According to the National Bureau of Economic Research's Bulletin on Aging and Health, “a 10 percent increase in the share of the population that is age 60 and above decreases growth in GDP per capita by 5.5 percent.” The share of employees aged 30-49 years is significantly positively correlated with productivity. A one percentage point increase in the employment share of these middle aged workers increases productivity by approximately 204 Euros per head. The employment share of older workers aged 50 years or older also has a positive coefficient, although it is not statistically significant at conventional levels. The committee has considered the implications of its review of the relationship between the aging of the workforce and productivity and innovation. There are multiple pathways from a changing age distribution to the growth of productivity and income and their eventual magnitude. The most important in the long run is the rate of total factor productivity. The United States has been a major contributor to technological change, so it is important to ensure that policies are well-designed for innovation in an aging society (Campbell & Kuncel, 2001).

With an ageing labour force, the labour market position of older workers is a matter of policy concern. Currently, in many countries older workers are not very likely to lose their job but once they have lost their job they need a long time to find a new one. This situation is often attributed to the gap between wage and productivity, i.e. older workers having a wage that is higher than their productivity. At their current employer, older workers are protected by employment protection legislation including seniority rules. But once older workers become unemployed, employers are reluctant to hire them. Surprisingly little is known about this relationship. Most employers – and probably most employees – seem to believe in a rule of thumb that average labour productivity declines after some age between 40 and 50. This assumption is so common that few attempts have been made to gather supporting evidence: “why bother to prove the obvious?” It is

not easy to establish the relationship between age and productivity. Productivity is difficult to measure at the level of the individual since it is usually a group phenomenon. Since a group of workers usually consists of workers of different ages the relationship between age and productivity is not straightforward (Rowden & Shamsuddin, 2000).

#### D. EFFECT OF EMPLOYEE PARTICIPATION ON PRODUCTIVITY

Right kind of participation of employees yields both motivation and knowledge relevant to the issue on which decisions are being taken. The intensity of application of both the skill and organic ability of the employee to the production enhances productivity. Participation also provides recognition. But still managers have to take decisions after weighing the pros and cons of various alternatives (Rowden & Shamsuddin, 2000).

#### E. EFFECT OF QUALITY OF WORK LIFE ON PRODUCTIVITY

Quality of Work Life (QWL) has a base on sociotechnical system approach to management and it uses knowledge from multiple subjects, industrial and organizational psychology and sociology, industrial engineering, organization theory and development, motivation and leadership theory, and industrial relations. Weirich and Koontz indicate that QWL programmes are being promoted by well-managed companies to promote productivity and improve working conditions (Campbell & Kuncel, 2001).

#### F. EFFECT OF EMPLOYEE SATISFACTION ON PRODUCTIVITY

Job satisfaction generally increases and self-esteem improves when employees better understand the workings of the company. Training can also enhance morale on the job and loyalty to the company. Workers who believe their company offers excellent training opportunities are generally less likely to leave their companies within a year of training than employees with poor training opportunities.

#### G. EFFECT OF TRAINING ON EMPLOYEES ATTITUDE

Training plays a key role in employee commitment, too. The training program must meet the expectations and needs of the employees, though. Companies are more likely to retain employees who view their training as relevant to their jobs and subsequently have a positive commitment to their company. A successful training program consists of management providing employees with accurate information and communication about the training as well as a program that ensures that training is relevant to their jobs. Training can be done internally by current employees, or by hiring an external company or consultant. Determine what it is you want your employees to learn through training. Then see if someone in your organization has those skills and would be able, and have the time, to do the training. Keeping well-trained employees pays off significantly for companies because the cost of

employee turnover can be high. Costs include separation costs, such as exit interviews, administrative functions related to termination, severance pay and unemployment compensation. Replacement costs consist of attracting applicants, entrance interviews, testing, travel and moving expenses, pre-employment administrative expenses, medical exams and supplying employment information (Campbell & Kuncel, 2001).

Any institution of higher learning or business whose goals are to survive and prosper in this present day diverse and regressed economy has found it imperative to invest in ongoing training and development to improve proficiencies in production as well as to acquire the greatest return in investment of human capital. Although this area of training effectiveness seems paramount, and although training is an integral part of the employer-employee relationship. Direct evidence about company training practices based on representative samples of diverse employing organizations is almost non-existent. Furthermore, several authors have suggested that training is most extensive only in establishments which operate in complex market environments. There is limited research on human resource development in small and mid-sized businesses. According to these authors, most people believe that small businesses do little, if any, development of their workers. In summary, a slowly growing number of authors are currently doing more research in the areas of training and development and its effects on employees that we have not seen in past literature (Tsai, Yen, Huang & Huang, 2007).

Months of research failed to locate objective evidence in support of connecting training and attitude, its impact on job proficiencies, and the employee's perception that lack of meaningful training directly affects proficiencies and attitude (Campbell & Kuncel, 2001).

The importance of training and its impact on job performance:

While employee performance is one of the crucial measures emphasized by the top management, employees are more concerned about their own productivity and are increasingly aware of the accelerated obsolescence of knowledge and skills in their turbulent environment. As the literature suggests, by effectively training and developing employees, they will become more aligned for career growth—career potential enhances personal motivation. One might clearly imagine how failure to provide training and education by the organization could result in conflict between employer and employee. Such conflict could potentially lead to any number of complicated scenarios, including but not limited to formal complaints by the employee which eventually become actual law suits against the organization, all of which could cost the industry time, energy, and money. When universities or businesses withhold opportunities for training and development, they also fail to demonstrate an understanding of how to identify organizational conflict (Tsai, Yen, Huang & Huang, 2007).

According to these same authors, all organizations should have a conflict management system. When conflict is manifested in the organization by clusters of employees who are dissatisfied, this group dissatisfaction state of mind can result in frenzied chaos, dissatisfaction, grievances, and

turmoil in the organization. Again, having a conflict management system in place would potentially be able to short circuit such a disruptive process. Clearly, it is extremely important that employees benefit from ongoing employer provided training. "One of the most frequently encountered human capital development interventions is training" (Campbell & Kuncel, 2001). To enhance job performance, training skills and behaviors have to be transferred to the workplace, maintained over time, and generalized across contexts (Holton & Baldwin, 2000). Consequently, specific job training is a complicated matter and has been the focus of much of the training literature (Chiaburu & Teklab, 2005). More specifically, in addition to the exact nature of job training, training is seen as relevant to fostering a positive relationship between learning satisfaction and the effectiveness of applied learning (Liu, 2002; Wang, 2001). As an aside, even though authors have suggested that training programs are vital to organizations (Knoke & Kalleberg, 1994; Liu, 2002; Wang, 2001), training programs are often the first to go (Young, 2008). This trend to cut training programs during poor economic times seems shortsighted, if in fact, training does affect job proficiency and relieves workplace conflict. The definition of results and empirical data included in this study demonstrates that employee do, in fact, perceive that training directly effects job proficiency is an indicator which many employers interested in sound business management and growth in the marketplace should subscribe to initiating and maintaining offerings of soft skill (leadership, effective communications, and coaching) and technical proficiency training.

Moreover, several authors have also written about the importance of staff development. Both formal and informal training opportunities are thought to provide a forum for the development of talent. When talent is fostered and nurtured, competitive advantages in performance are untainted. Furthermore, the organizational commitment or "the relative strength of an individual's identification and involvement in a particular organization" depends on effective training and development programs. According to these authors, organizations demonstrating keen insight make provisions for satisfying the training needs of their current workforce. indicate that adequate training produces marked improvements in employee communication and proficiency of performances as well as extending retention time. Moreover, when programs target communication skills with coworkers, there are significant increases in profit as well as a greater number of reported positive working relationships that are formed. Employees with good communication skills gather more information concerning procedures and technologies related to job performances, thus assuming greater accountability and subsequent responsibility, both of which effect improve proficiency. Also, training and education have been shown to have a significant positive effect on job involvement, job satisfaction, and organizational commitment (Anschutz, 1995).

Employees with positive attitudes become stakeholders in the process and job accomplishment is of a higher priority. Furthermore, successful organizations achieve a partnership between workers and management. The partnership includes participation in teamwork activities and continuous learning

application. The reported findings further suggest that an employee's participation in decision making and problem solving develops organizational trust. Corporations and businesses need to grow and innovate continuously, pursue sustained development, and cope with rapid changes in their external environments as well as increasingly competitive international markets. Hence, organizations need to strengthen or expand the knowledge base, skills, and abilities of their employees. For this purpose, education and training must be incorporated into a systematic and formal system if the goals of employees and corporation are to be attained (Campbell & Kuncel, 2001).

Training, as defined in the present study "is the planned intervention that is designed to enhance the determinants of individual job performance". Training is related to the skills an employee must acquire to improve the probability of achieving the organization's overall business and academic goals and objectives. Positive training offered to employees may assist with reduction of anxiety or frustration, which most employees have experienced on more than one occasion during their employment careers. According to Campbell & Kuncel (2001), employees who are committed to learning showed a higher level of job satisfaction that has a positive effect on their performance. Moreover, job satisfaction is a pleasurable or positive emotional state resulting from a positive appraisal of the job or job experiences. The literature suggests that commitment results from adequate training and development for successful job completion and an increase in job performance.

In addition, the larger the gap between the skills required to perform a task and the actual skills available for performing a task, the greater the lack of job satisfaction and the greater the increase in employee turnover within the organization. Conversely then, not having the skills to perform a job correctly can set up employees for failure and put the business at a less-than-competitive disadvantage. The resulting high turnover would predict the need for even more training that would then have a direct impact on the bottom line of any business. Moreover, poor performance reviews due to inadequate job training can produce employee dissatisfaction and conflict. Although there is no direct link in the literature between training and job satisfaction, the most thoroughly trained employees will better satisfy the needs of their customers and employees (Anschutz, 1995).

### III. CONCLUSION AND RECOMMENDATIONS

The ability of an employee to cope with new challenges or changes affects productivity. This is directly related to his/her physical and mental abilities. In most cases, it is related, too, to the employee's level of acclimatization, adaptation and learning in the workplace. Although the literature strongly suggests a direct relationship between job training and job performance as well as job training and employee attitudes, there is little empirical support for this suggestion. Clearly, there is a need to provide such empirical support. It is therefore recommended that a proper or effective selection of workers be carried out considering all the necessary human factors to enhance productivity.

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