Industrial Management Trainee Program Cost: Imperative for Strategic Relationship between Industries and Higher Education Institutions in Nigeria

1Ahunanya Stella; 2Okpara Enyinna and 3Uche, Chineze M.

1Nigerian Army School of Finance and Administration, Nigeria.
2Nigerian Defence Academy, Nigeria.
3University of Port Harcourt, Nigeria.

Corresponding Author: Ahunanya Stella

Abstract
The deficiency in the human capital development program of Nigerian higher education institutions (HEIs) has resulted in competency gap between skills and abilities acquired by the graduates and industrial needs. This has made Nigerian industries to restructure their Management Trainee Program (MTP) with increased financial expenditure in retraining the new graduates to close the gap. Using a case study research design with purposive sampling of an industry and a higher education institution, an analysis of the financial expenditure of the MTP was made and compared to the social and private cost of education of a Nigerian engineering student in Lagos State resulting in a significance difference in the cost of retraining graduates and training of engineering students. Among the recommendations is that industries could invest such monies through their Corporate Social Responsibility (CSR) functions with the HEIs so that the competency gap could be narrowed to a minimal extent.

Keywords: human capital, management trainee program, competency gap, training and retraining and corporate social responsibility.

INTRODUCTION
Human beings are the greatest assets of any nation in that they contribute to economic growth, technological progress and political stability hence nations invest in education in order to maximally harness the potentials of the citizens. According to the Human Capital Theory, there must be investment in the development of human resources to meet the manpower needs of every nation and it is the ability of this human resource to harness all other resources effectively and efficiently that leads to development (Ahunanya and Akinyemi, 2010). Rawat and Chauhan (2007) noted that higher education plays a key role in the development of the various sectors of the economy, by providing skilled manpower. Dabalen, Oni and Adekola(2001) stated that current theories of long run growth identify two ways by which higher education is crucial for economic growth as highly skilled driving technological innovation through research and that a country with highly skilled labor force has better chances of growing than one with a lesser skilled workforce.

Green defined quality of higher education as "producing graduates to meet the human resources needs of an organization in the business, industrial and service sectors” in Dubey, Goyal,Pathak and Rajput (2009), Cheng and Sapai (2007) noted that in a knowledge economy, competent workers are an expectation that is, being a graduate does not guarantee employment but at the same time without a paper degree one will not even be considered viable in a globalized knowledge economy. A global market means global competition and hence today graduates are required to possess value added knowledge and be a ‘skilled worker’.

Higher institutions of learning therefore have to ensure that they possess a robust quality assurance system that enables them to deliver programmes that are relevant to the manpower needs of the country and industries.

The extent of how far higher education graduate functionality fits into the productive system of Nigeria is directly dependent on the level of competence he has acquired in his field of study in higher education. This is particularly because most employers of labour in Nigeria adopt the competency based approach in graduate employment selection which entails ability to exhibit experience and quality of skills such as initiative, professionalism, communication skills, adaptability, team work, leadership and problem solving ability, (Metaru, 2007). However, researches findings reveal that the level of professional competence of the Nigerian graduate is low, particularly the Engineering graduate (Oladapo and Ike 2010).

This deficiency in the human capital development program of Nigerian higher education institutions (HEIs) which has resulted in a competency gap
between skills and abilities acquired by the graduates and industrial needs has made Nigerian industries to restructure their Management Trainee Program (MTP). Initially, most manufacturing industries in Nigeria introduced the MTP to familiarize new graduates recruited into the organization with the organizational culture and various departments and this orientation program lasted between one and four weeks. The restructuring of the MTP also led to increased financial expenditure in retraining the new graduates to close the competency gap. Generally, the training of employees entails cost in terms of time and financial resources.

According to Metaru (2006), global annual spending on tertiary education is about US$300 billion which represents 1% global economic output and in Sub-Saharan Africa, the cost of ensuring quality assurance in Engineering education is US$450,000 annually. In Nigeria, how much is spent on the MTP and couldn’t that amount be used in assuring better quality graduates before they join the job market in a strategic manner?

The purpose of this study is to find out if there is a significant difference in the cost of retraining a Nigerian graduate and the training of the student in the higher education institution.

STATEMENT OF PROBLEM
This study examines the cost of Management Trainee Programme for Engineers and compares it with the cost of graduate engineering training in a higher education institution. It also looks into the financial implications of this extra training cost to the employers, higher education institutions and the society at large.

RESEARCH QUESTION
- Can the cost of MTP of an engineering graduate be compared with the cost of training a graduate of engineering in a public higher education institution?
- Is there a significance difference in the cost of MTP and the cost of training an engineering undergraduate?

REVIEW OF RELATED LITERATURE
Dahne (2007) listed 21 responsibilities of a college or university and one of the most popular of these responsibilities is to prepare undergraduate students for a career. Therefore, the society has since looked upon higher education institutions to turn out career-oriented graduates annually. The recent wave of student explosion has led to increased enrolment in schools. Consequently annually colleges and universities send to the labour market graduates in all fields, employable or unemployable. The unemployable ones lack the competencies required by the industries. According to Arthur, Brenna and De Weert (2007), competency refers to the abilities of the graduates to attain goals in concrete tasks in every day situation and contests set by the industry where they are employed. These abilities include cognitive aspects as well as attitude and skills. To make graduates employable depends on the extent to which quality is assured during their training. Cheng and Sapai (2007) is of the opinion that quality assurance (QA) activity provides evidence needed to establish confidence by the users of the product that quality-related activities are being performed effectively by the product. QA guarantees the existence and effectiveness of procedures that attempt to ensure in advance that the expected levels of quality will be reached by the graduates through accreditation procedures by the regulatory agencies. Ethnis (2001) noted that the accreditation of programmes is an important way of assuring the public and industry that the qualifications gained by graduates are relevant to economic as well as employer needs, and are of a standard acceptable to and recognized by employers. Of recent, employers of labors have complained that the graduates of colleges and universities are not meeting up to their expectations skill and competency-wise, (Brooks, 2007; Oku & Uche, 2008). In a similar study Uche & Kpe (2007) examined the Nigerian labour market and skilled oriented graduates and established that students were not exposed to practical lessons relevant to industry and work place. Hence the knowledge and skills acquired at school have no significant relationship with those required on the job. This study recommends that students should be taught and prepared to be multi-skilled to improve their employment prospects. Many researchers have constantly warned that if institutions continue to pay little attention to the labour market requirements, if the universities continue to be disconnected from the industries, the goal of them providing manpower for the industries will not be achieved (Bardan, 2006; Brook, 2007; Onyene, Uche & Nwogbo 2008). In support of the above view, Arthur, Brenna and De Weert, (2007), noted that in Europe, the complaints and concerns expressed by employers of labour about deficiencies in the knowledge and skills of new graduates suggests that there is a problem of employability. They contend that where graduates lack the required competency on entry to employment, it is the employer’s responsibility to equip them for work by retraining them.

Modi in Dubey et al (2009) concluded that fresh graduates, who join the industries, require six months to 2 years as gestation period to show their contribution and, many a time, they leave the organization before they start showing results. This is due to the gap between theory and practice. Webster’s Online Dictionary (undated) defines management trainee program as new workers performing assigned duties under the direction of experienced personnel to gain knowledge and
experience across each phase of the business. California Occupational Guide (1998), notes that a trainee’s assignment is rotated across the various departments to help the trainee develop familiarity with the whole organizational functions. The instructions may include hands on machine training, lectures, guest speakers, projects and tests. Empirically, Dabalen et al (2001) noted that there is a large mismatch between university output and labor market demand. They interviewed employers who expressed disappointment with the preparation of the graduates in the skills necessary for problem solving and enhancing business productivity. Employers stated that graduates had not been exposed to equipments used in the workplace as a consequence firms put their recruits through intensive post-employment training to prepare them for their responsibilities in the workplace. According to Oladapo and Ike (2010), in Nigeria when locally trained engineers are employed, they usually go through training within the company and outside the country before they are assigned any significant roles. Engineering graduates in other African countries also lack enough practical training to enable them to cope with economic and technological development. In Dar es Salaam for example, locally trained engineers have to go through retraining programs before they are given technical assignments (Halfani, in Oladapo and Ike 2010). In Kenya, locally trained engineers also need to be retrained to be able to measure up to the standard of foreign trained ones (Otieno & Luti, 1995).

Oni in Oladapo et al (2010) suggested that for Nigerian trained engineers to be productive; there is need for an appropriately designed institutional framework and policy environment where university laboratories and private sectors are encouraged to build a network of information and personnel exchanges. There is no doubt that Nigeria has the resources for industrialization. However, poor managerial capacity and weak technological institutions constitute major constraints. Nigeria’s revision of educational policy has not been so effective in engineering departments in Nigerian universities owing to governmental bureaucracy, which usually results in well-intentioned policies by government though, producing undesired outputs (Dahlman in Oladapo and Ike 2010).

Among the causes of this competency gap according to Dabalen et al (2001) are; inadequate financing, insufficient and irrelevant learning materials, poorly paid and trained academic staff, outmoded and inflexible managerial structures, unplanned expansion of enrollment and irrelevant curriculum. Schiller and Leifner (2007) found out that universities in developing countries tend to be under-funded and unable to purchase and apply the latest research equipment. Their faculty and staff tend to be less qualified on average. Science and technology programs of most universities are suffering from a lack of equipment and outdated curricula. In conclusion, Yazid (2009) said that most research laboratories in Africa no longer fulfill international standards which are constantly evolving in the age of new technologies and that lecturers’ and researchers' salaries are verging on the ridiculous resulting to poor motivation in performing their duties.

The concept of corporate social responsibility (CSR) of business according to Davies (on-line) is a type of self-regulation that organizations adopt as part of their corporate conscience and citizenship as they institute actions that will reflect their giving back to the society. He further stated that the business goal of CSR is to encourage organizations actions toward the positive impact of consumer, community and employee responsibility.

Masibus (on-line) viewed CSR as a comprehensive set of policies, practices and programs that are integrated into business operations wherever the organization is doing business that honor ethical values, respect people, communities and the natural environment. CSR addresses the legal, ethical commercial and other expectations society has for business reflected in the moral check of ‘what you do and how you do it’. According to Saraf (on-line), the key drivers of CSR are enlightened self-interest, social investment, transparency and trust and increased public expectation of business. He is of the opinion that the notion of CSR is crucial for developing and underdeveloped economies as the concept of sustainability means that organizations see that local communities must exist after making profits. He states for many businesses, education is an important part of their plans since the need for human resources exist in all geographical areas, across all subject areas and all kinds of people with the bottom line that educational outreach efforts have to make the potential and lasting difference for all segment of the society so organizations get involved in education for a number of strategic reasons including building positive reputation and building a more educated workforce among other reasons. So if they invest in education through CSR then the whole society will benefit sustainably.

In Nigeria, businesses such as banks and telecommunication have invested in information and communication technologies in higher education running into millions of naira. For instance, UBA Plc has provided ICT facilities to the University of Nigeria and University of Benin at the cost of over fifty million naira each while MTN Nigeria Limited has provided virtual libraries in the University of Lagos as well as Ahmadu Bello University in Zaria valued at millions of naira respectively, (Nasidi 2007 and Ovia 2007). Such CSR should go beyond
building structures to include exchange of human capital for mentoring and strategic trainings.

**RESEARCH METHODOLOGY**

Based on purposive sampling method, a publicly quoted company and the Engineering faculty of a public university in Lagos State was selected for the study. The simple random sampling technique was used to select students from the Engineering faculty in a public university in Lagos state and a checklist was used to obtain information on the Management Trainee costs of engineering graduates from the public quoted company.

**DATA ANALYSIS AND PRESENTATION OF RESULTS**

Table 1 below presents the costs incurred as a result of giving management training to 14 members of staff in 2009 as well as the costs of training 14 undergraduates in 2009 through their four years University Education. Besides, the information in the table constitutes the data used in analyzing the research question that was raised in this study.

Table 2 presents the descriptive statistics of the cost of management trainee programs as well as the cost of training undergraduates in higher educational institutions. In addition, the table shows that the mean amount for re-training an individual graduates for MTP is $\text{N}907,142.86; while the mean amount for training undergraduates in a higher educational institution is $\text{N}586,002.93. This result shows that in terms of monetary value, the amount spent on MTP for employees is higher than what it will take to put them through higher institutional education.

In answering the research question raised in the study that can the cost of MTP of an engineering graduate be compared to the cost of training a graduate of engineering in a public higher education institution, from the figures stated in Table 1, the difference in cost is high and cannot be compared. The cost of retraining 14 graduates is about four million naira higher than that of training 14 graduates. Figure 1 below shows the comparison between the cost of management trainee programs and the cost of training engineering undergraduates in higher educational institution. From the figure, the heights of the bars show the difference in the MTP and HEIs costs for the respective individual employees. Besides, the heights of the bars reveal that the cost of management trainee program for individual employees is higher than what it will cost to be trained in a higher educational institution.

Table 3 presents the t-test analysis of the difference between the costs of sponsoring management training programs for employees and the costs of training undergraduates in higher educational institution. The t-test value of 202.603 with $P < 0.0000$ is found significant at 0.05alpha levels given 13 degrees of freedom.
freedom. This result upholds that a significant difference exists between the amount of money spent on sponsoring MTP for employees and the amount of money to be spent on training them through higher institutional education.

FINDINGS
Findings reveal that the average cost of Management Trainee Programmes is ₦907,143.00. For training program durations of 6months, the management Trainee costs were ₦5,442,857.00 per trainee, compared with the average undergraduate engineering training cost of ₦586,002.93 (Five Hundred and Eighty Six Thousand, Two Naira and Ninety Three Kobo); and total cost of ₦3,516,018 (Three Million Five Hundred and Sixteen Thousand and Eighteen Naira), per graduate, for a six months period. This results shows that the cost of Management trainee programs far exceeds the conventional engineering graduate training at higher education institutions. There is therefore the need for strategic relationship between the higher education institutions and the industries as this will enable the higher education institutions to know the actual industrial and societal needs with the industries bearing part of the cost of higher education. This will reduce the general cost of engineering programs to the firms and the institutions of higher learning and the same time the quality of the engineering graduate will be guaranteed and competent human capital will be available to enhance all round growth of the individual, institutions, firms and societal productivity.

DISCUSSION OF FINDINGS
The findings that industries spend money to retrain graduates of higher education institutions to reduce the huge gap between what diplomas say and what they can do in the real world is of concern to employers according to Jensen (2012). On asking employers on ‘the graduateness’ of university students, Jensen (2012) noted that he has not heard a positive comment about the readiness for work. In the same vein, a member of the Steel and Engineering Industries Federation of South Africa in Jensen’s report said that university graduates are not prepared for work place leading to additional training burden on the industry money and time-wise. Based on a result of a research by the Council of Higher Education on the state of new lawyers, De Vos (2010) said that the Law Society of South Africa has expressed concern most of them lack essential skills to practice and this places a great burden on the old practitioners who instead of saving money to train new lawyers in legal transactional skills, use the money to update their skills by retraining. Arthur, Brenna and De Weert (2007) noted that Higher Education experts interviewed in their study stressed the need for a closer link with the world of work as members of the teaching staff do not have the necessary background and experiences with regard to labour market needs. Education and retraining should not be left to future employers so Higher Education should more and collaborate with industries and employers.

Oni in Oladapo and Ike (2010) suggested that for Nigerian trained engineers to be productive; there is need for an appropriately designed institutional framework and policy environment where university laboratories and private sectors are encouraged to build a network of information and personnel exchanges. Cheng and Sapai (2007) is of the view that higher institutions of learning have to ensure that they possess a robust quality assurance system that enables them to deliver programs that are relevant to the manpower needs of the country and industries. Navarro (2003) who recommended strategic industry-university collaboration noted that it has proved beneficial to students, industries and the schools themselves. He stated that students acquire workplace orientation and opportunity to apply their skills, knowledge and proper work attitude with better chances of career mobility when industries and HEIs relate well. For the companies prospective workers are developed according to the companies’ specifications and quality is assured from the industries point of view. For the schools, there is reduced need for sophisticated equipment and facilities as industries make sure that current technology is used. He further stated that technology providers, training hospitals, manufacturing firms, and companies in the service industry have started to lend their experts to serve as consultants in selected private colleges and universities.

RECOMMENDATIONS
Based on the findings of the study, the following recommendations are made:

- There should be a curriculum review of higher education syllabus that must include the in-put of industrialists to meet their expectations of human capital development.

- To narrow the skill deficiency gap of higher education graduates, industries must collaborate with the schools through exchange of personnel not only through sabbaticals but through mentoring programs.

- CSR in education should include not only building of structures and equipping them but allowing students to participate in special programs set up by the businesses to inculcate the right skills needed instead of spending so much to retrain them later.

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APPENDIX

Figure 1: Showing the Comparison of the Cost of MTP and the Cost of Training Undergraduates in HEI in 2009