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DEVELOPING A FRAMEWORK FOR TRAINING TO BUILD THE CAPACITY OF SMALL-SCALE LOCAL CONTRACTORS IN GHANA

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DECLARATION

This is to certify that this work or any part thereof has not been previously submitted in any form to the University or to any other body whether for the purpose of assessment, publication or for any other purpose. I confirm that except for any express acknowledgements, references cited in the work, the original work is the result of my own efforts.

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ABSTRACT

This study is aimed at discovering the capacity needs of small-scale local contractors in the building sector of the constructions industry in Ghana which plays a pivotal role in the development of the national economy and therefore needs to be sustained. The industry is currently characterized by a large number of small contractors, and a small number of large foreign contractors dominating the construction market. Sustainable capacity needs are required to be built through the strengthening of the local contractors and other actors in the industry without prejudice to their foreign counterparts. The objectives of the study were to examine key constraints and challenges facing local contractors in terms of capacity building, identify aspects of training needs suitable for small contractors as well as design a training framework which addresses their training needs. Literature reviewed indicated that the issue of local contractor management is a topical issue in most third world countries, particularly in Africa. A quantitative form of research methodology was employed, while questionnaires were distributed to 40 respondents made up of contractors and their technical and professional staff. Theory of capacity buildings were applied to the study. The theory indicated that, approaches to capacity building often emphasize a particular dimension like investment in the human capital of individuals, group-oriented development, organizational development or institutional development. Findings indicated that contractors are very keen on their capacity building initiatives while the intervention of government in the capacity building efforts is not a key issue to them. Again, the findings indicate that local contractors are not aware or are ignorant about contractual claims preparation and payment and how it could impact positively on their work.

Again, inadequate payment of fluctuations was given a low rating (6^{th}) in the priority list of constraints faced by the small contractors. Working in a volatile economic setting like Ghana where price variation is a common feature, contractors must be skilled in the preparation of adequate compensation for fluctuation payments and contractual claims in order to avoid huge losses at the end of contract periods. Recommendations have been made for contractors' capacity to be built in the areas of site supervision, administration of construction works, project management techniques, negotiation techniques for claims and leadership skills.

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God bless you all.

DEDICATION

Dedicated to the three angels in my life, **Denise**, **David** and **Daniella Orhin**.

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INTRODUCTION

1.1 Introduction

University lecturer and writer Ofori (2012) posits that the construction industry is important because of the outputs and outcomes of its activities. It contributes to national socio-economic development by providing buildings which are used in the production of all goods in the economy.

There is no doubt that the Ghanaian Construction industry as in many other construction economies holds the key to the development of the nation. Construction contributes to the national socio-economic development by providing significant employment opportunities at non-skilled and skilled levels (Ahadzie, 2009).

Ahadzie (2009) further stated that, the industry provides the infrastructure and facilities required for other sectors of the economy to flourish such as; schools for education and training, factories and shops for commercial and business activities, housing for basic human needs, hospitals for health care, buildings for the national communications network and so on.

In a research, Osei (2013) argued that, the construction sector's share to overall Gross Domestic Product (GDP) has improved significantly over the past two decades.

The sector's share as percentage of GDP was 7.6 per cent in 1996 and this improved to 8.5 per cent of GDP in 1997. Due in part to the overall improvement in the macroeconomic landscape of the country as a result of the implementation of good macroeconomic policies, the sector's contribution to GDP rose steadily to 9.1 per cent of GDP in 2005 from 8.8 per cent in 2004.

The sector's share of GDP improved further to 9.8 percent in 2007 from 9.3 percent recorded in 2006. Again, the construction sector's contribution to the overall economy picked up to 9.9 percent of GDP in 2011 from 9.4 percent of GDP registered in 2010 and which compares favourably with 1993-2011 period average of 9.1 percent of GDP (Osei, 2013).

Ofori (2012) argued that the physical infrastructure built through construction activity is the nation's economic backbone as it forms arteries for the facilitation of productivity by enabling goods and services to be distributed within and outside the country.

The items built also offers social welfare benefits, for instance he argues that housing for instance fulfills one of the basic needs of humanity by providing shelter from physical elements (Ofori. 2012).

However, Adams (1997) discovered that major projects in most developing countries like Ghana and Nigeria and other African countries are carried out by foreign contractors because of deficiencies in the local construction capacity.

Laryea (2010) also describes Ghana as "harsh particularly for local contractors" that are often not paid on time and without compensation for late payment. He posits that local contractors who want to break through ought to formulate policies and the right strategic plans, develop innovative business strategies, develop professionalism, and merge with local firms with similar organizational values and characteristics.

In short, Laryea (2010) says local or indigenous Ghanaian contractors ought to face up to the reality of competition and the dynamics of modern business in order to survive, grow and become major players in the construction industry in Ghana.

Amoah et al (2011) posit that a feature of small-scale contractors (sometimes referred to as small contractors in this study) in the Ghanaian construction industry is that they are often believed to be one man enterprises, having low financial and capital base and also lacking the requisite managerial skills to adequately face up to the numerous and difficult challenges they often have to counter in a typical developing economy such as Ghana's own.

In spite of the difficulties however, Amoah et al (2011) believe that local contractors tend to have a wide geographical dispersion, championing local government development in the mainly rural and remotest part of Ghana.

Between 1995 and 2005, about 95% of a World Bank assisted project, involving the rehabilitation of road works in some depressed communities in Accra and an Urban Environmental and Sanitation Project (UESP) in six (6) District capitals of the country,

were awarded to local contracting firms as against their foreign competitors who were also registered to do local jobs. (URBAN III Project, 1996)

The potential therefore exists for local contracting firms to meet the challenges of the Industry. This desire is however being eroded by the complaints from clients about the low performance of local contractors.

Ablordeppey (2011) states that Ghanaian construction companies which have proven themselves in the industry must seek to remake the image of the local construction industry which has been touted as being inefficient, without capacity and deliver shoddy works. Ablodeppey (2011) lists the following as factors accounting for the non-performance of the local contracting firms, especially the small building contractors, which is the focus of this study.

(i) Lack of innovativeness

(ii) Less competence

(iii)Lack of technological skills

(iv)Lack of management/Entrepreneurship skills

(v) Lack of logistics/resources

1.2 The Research Problem

Contractors in Ghana have explained that there is a lack of qualified construction professional with basic knowledge in construction works. (Laryea, 2010). There is also a problem with supervision and managerial aspects of construction work in Ghana.

Previous training programmes aimed at training and building the capacity of local contractors have been associated with challenges affecting the continuity of the programmes. Continuous monitoring and evaluation of training programmes are necessary for the sustainability of contractor development programmes (Lantern, 1990)

Lantern (1990) further agrees that, the lack of involvement or soliciting some advice from local contractors' Associations has affected the success of most training programmes.

Again another militating factor towards the success of training programmes is the failure to extend the training programmes to cover wider issues related to the development of the contractors, i.e. improvement of the firm's operating environment (Lantern, 1990).

Laryea (2010) further reveals in a study that contractors complained that many workmen (artisans) lack the necessary training for carrying out their work. In current practice, "somebody just gets up and says I am a mason". There are no criteria or qualifications or a barrier to entry into artisanship.

To overcome the challenges faced by contractors, there is the need for the drawing up of effective training framework to build local contractor skills, knowledge and attitudes.

Training local contractors is therefore a major tool for improvement since an effective training will not only provide local contractors with the requisite skilled staff, managerial capabilities, tender and contract administration and productivity skills of the industry but will as well assist in broadening their knowledge in exploring the other avenues for overcoming their constraints (United Nations Centre for Human Settlements-HABITAT, 1996).

1.3 Aim of study

The aim of the study is to develop a framework for training towards small-scale local contractor development.

1.4 Objectives of study

The objectives of the study are as follows:

- To examine key constraints and challenges faced by small-scale building contractors in terms of capacity development
- To identify the training needs of small-scale building contractors and their staff.
- To design a training framework which addresses their training needs.

1.5 Scope of Study

The study focused on building contracting firms in the classification of D3, as per the financial classification of the Ministry of Water Resources, Works and Housing (MWR&WH) and identified by this study as small-scale contractors.

These contractors were drawn from the local contractor list of one of Ghana's leading Multi- disciplinary consulting firms with over 24 years experience in practice, working with both local and foreign contractors.

The study also focused on the kind of training suitable for small building contractors and their staff and time frame for such training programmes as well.

The survey for the study was based on the contractors registered to undertake jobs with The Consortium for Innovations In Human settlements Development (CIHSD) within the financial class of D3, of the MWR&WH for the last five years (2007-2012).

1.6 Justification for small contractor capacity building

Field and Ofori (1988) stated that construction makes a noticeable contribution to the economic output of a country; it generates employment and incomes for the people and therefore the effects of changes in the construction industry on the economy occur at all levels and in virtually all aspects of life.

According to HABITAT Study (1996) there is the need for more information, more research and further developmental effort with regard to small contractors in developing countries for many reasons:

(a) There are high volumes of unmet needs, and the entire delivery system should be restructured and upgraded to improve upon its performance:

(b) Small contractors fulfill the construction needs of the poorer sections of the population, and their upgrading would bring direct benefits to a large section of the population:

(c) Only small companies are able and willing to undertake the small projects in isolated-rural and Local Government areas where about 60% of Ghanaians make their living (Amoah et al., 2011).

(d) The quality of work of small-construction companies needs to be upgraded to enable them to give greater value for clients' money;

(e) With improved expertise, small contractors can help reduce the reliance on imported inputs.

It must be mentioned that it is from the creation of a pool of resourceful small-scale contractors that we can gradually upgrade further to medium and large scale contractors.

1.7 Research Methodology

The methods employed for carrying out the study covered the following;

Literature review and the use of questionnaire from the following groups/bodies on existing and proposed training programmes to improve the capacity of the local small building contractors.

- Small -Scale building contracting firms
- Professional Architects, Engineers, Surveyors working for small-scale contracting firms
- Contractors' Associations

1.8 Dissemination of Report

Analyses, findings and recommendations drawn out from the study will be presented in written reports and made available to the following bodies:

- Research Institutions
- Government and Private sector clients in the industry
- Allied professional bodies
- Contractors' Associations

CHAPTER TWO

LITERATURE REVIEW

2.1 SMALL CONTRACTORS IN THE CONSTRUCTION INDUSTRY

2.2 Background

The construction industry has made significant contribution to the development, expansion and improvement of human settlements particularly in third world countries like Ghana.

Adams (1997) identified the constraints on indigenous contractors' performance in Nigeria as emanating from uncertainties in supplies and prices of materials, obtaining interim payment, procuring work, access to capital, negotiating variation payment, access to plant and equipment, inappropriate contract conditions, maintaining plant and equipment and resolving contract disputes. Other constraints Adams (1997) identified include : meeting contract deadlines, design changes, incomplete contract documents, transporting materials and equipment, materials control on site, providing reliable tenders, communicating with client/representatives, shortages of skilled labour, public image, accounting of financial management, inadequate supervision by client and project planning. The rests are site management, technical know-how; commitment to construction, company organization, personnel management, and providing quality workmanship.

A HABITAT report (1996) dubbed "Policies and Measures for Small Contractor Development in the Construction Industry" (PMSCDCI) posits that: "Contractors are a vital component of every country's economy". The over 170 Page book argues that the contribution of small contractors to a nation's development cannot be overemphasized, "They undertake the numerous small, relatively simple, scattered and often isolated projects which are necessary for economic development and social upliftment within urban communities and in the rural areas. A well functioning and efficient construction industry is therefore vital to the achievement of a nation's socio-economic development goals, including human-settlement development goals in every country."

The HABITAT study (1996) further explains that construction is perhaps the most complex business activity. The study believes that the management of a construction organization, even one undertaken by the smallest and most simple project requires the combination of several skills: technical, managerial, political and social.

The necessary skills according to the study transcend subjects covered in any one academic or training course and can only be acquired and progressively improved upon through experience. Above all, the contractor needs to be an entrepreneur, able to innovate and to seek and exploit opportunities in many geographical and business areas and combine a variety of resources in an environment fraught with uncertainty. (HABITAT, 1996)

Another issue raised by the HABITAT study (1996) is that there are several difficulties relating to attempts to define a "small" business enterprise. The yardstick for delineating

enterprises by size is usually one or more of the following: total number of employees, value of fixed assets, paid-up capital, annual turnover, or annual volume of physical production.

In a sharp contrast to the successful training and growth of small and medium-sized enterprises (SMEs) in manufacturing in most industrialized and newly-industrializing countries, and in agriculture and small-scale (artisanal) industry in many developing countries, the UN Study posits that similar effort has failed to achieve progress in construction. Many of the initiatives which succeeded in other areas have not been introduced into construction (HABITAT, 1996).

2.3 Defining the Small contractor

In construction, there are even greater difficulties with the definition of "smallness". The number of employees would not be a good indicator of size owing to the widespread practice of subcontracting. As a result of the lack of uniformity and certainty in contractors' workload and the tendency of projects to spread beyond one financial year, annual turnover is also not a useful yardstick. Moreover, capital holding is not a good determinant of the size of a construction company because of the variety of methods which can be used to undertake a particular item of work. (Miles, 1980)

In contrast to Miles' (1980) view on indicators of small contractors, the Habitat study (1996) defines a small contractor as a company operating at, or near the basic entry level

in the construction industry, with limited physical resources, usually as a sole proprietorship or simple partnership, and with the owner-manager involved in most of the company's key activities.

In every country, small contractors dominate the construction industry in terms of numbers, but are relatively unimportant in terms of output. Features of such firms are understood although there is the need for further information on them. The small-construction company in a developing country is often a sole ownership. The founder-proprietor-manager has a variety of educational backgrounds and experience. Some are graduates or technicians' diploma holders with experience in construction. Many are former tradespersons, trade or labour-only subcontractors, or suppliers. But others have no technical expertise (HABITAT,1996).

The Habitat study (1996) cites difficulties of small contractors mainly as the inadequacies of the owner-managers, and these include: lack of technical and managerial expertise necessary for running a construction business; lack of entrepreneurship; tight personal or family control of all aspects of the firm's operations; inability or unwillingness to employ qualified personnel; limitations in terms of variety of projects they can undertake; short horizon and limited plans for expanding the firm.

Miles (1980) on the other hand posits that the small contractor operates under harsh conditions as far as the business environment is concerned. Most often continuous absence of getting jobs on a steady basis has characterized the contractor's job position.

The contractor often undergoes rigorous prequalification procedures as used by the public sector in order to qualify for some type of jobs.

The government is a major user and consumer of the built environment in the form of infrastructure, housing and tertiary buildings. Ownership of the government estate is held at national, government, metropolitan and district assembly levels and follows largely the dispersal of assets determined by the 1992 constitution and subsequent decentralization policies.

Responsibility for and jurisdiction over, the built environment is shared mainly between two government ministries, namely, The Ministry of Housing and Public Works and the Ministry of Roads, State-Owned corporations and government ministries are major owners and occupiers of infrastructure such as schools, hospitals, ports and harbours, power stations, refineries, water and electricity distribution networks, dams, airports, railways and road networks (Osei, 2013).

2.4 Defining Training

Broadly there are five components of learning which make up any nation's human resource development plan. These are (1) preschool, (2) School education (3) college and professional education (4) Non-formal learning (5) Training (Benninger, 1998).

Benninger (1998) further states that the first three types of learning can be denoted as formal education and take place in classrooms which develop basic skills leading to higher levels where candidates are channeled into disciplines and professions.

Non-formal learning participants are usually self-employed artisans, agriculturist or groups of people in communities who face similar problems which can be resolved through enhanced skills and knowledge (Benninger, 1998).

Training however is on the Job learning and therefore presumes that the candidate is already employed or is about to be employed to undertake some specific functional role and will carry out particular tasks. Training then can be divided into four types, mainly (1) Introductory by training (2) Adaptation training, (3) Promotion Training and (4) Project training (IHS, 1998).

The past three decades have seen the emergence of numerous training programmes focused on human settlement. Many important innovative approaches have been undertaken. Training often forms a component of technical assistance. (IHS, 1998)

Teerlink (1999) stated that in the area of human settlement, project training is the most important, through new programmes. Project training links expected project outputs with organizational goals.

On training generally, Teerlink (1999) further advances that ,the first step begins with the need for organizations to determine the actual level of performance or competence of

staff compared with the desired level of competence required by the organization in order to determine staff training needs .

2.5 Need for expertise and capacity Building

Ahadzie (2009) posits that many modern societies such as the United Kingdom, United States of America, Australia, Malaysia, Chile, China, Singapore, Brazil and South Africa have the Construction Industry Development Agenda robustly integrated into their national development agenda and indications are that, this has not only contributed to improving the competitive advantage of the respective domestic construction organizations, making them not only significant national and international players but also helping largely to lift millions of their citizenry from poverty.

The Ghanaian leading daily newspaper The *Daily Graphic* in an editorial on March 10, 2009 stated that regular training for managerial and supervisory staff of local construction firms is a positive index for improved output. "It has been said that only a few schools exist for training artisans and other tradesmen." The paper further said on the job training programmes handled by men without technical expertise has been found to be less beneficial to the construction industry. (Daily Graphic, 2009)

A Habitat Report (1996) argues that each stage of a construction project involves difficulties, risks and uncertainties. To succeed, the construction company should be able to perform well on its projects, and also take measures to enhance its corporate prospects.

A wide range of skills is required to ensure this success. Whereas larger contractors can employ persons with the relevant qualifications and experience to undertake each of the specialist tasks, the ability of the small firm to engage such personnel is limited.

Thus, the development of small contractors to enhance their effectiveness and efficiency is beneficial and worthwhile (UN, Habitat 1996).

2.6 Small contractors and their development

Small contractors need to have technical and managerial skills as well as access to material, financial and other resources in a good environment.

Muttagi (1998) posits that a trainer must be concerned with measuring the effectiveness or otherwise of the training. Evaluation must be undertaken to ensure the following:

1. To ensure that objectives of training programmes are clearly defined;
2. To compare objectives verses results –measuring the output before, during and after training.
3. To test the knowledge and skill acquired;
4. To make each trainee rate the value of the programme , his individual progress as satisfactory and the trainer effectiveness;
5. To introduce follow up measures (Muttagi, 1998).

While the use of training is valued as a means of building institutional capacity, there is too little awareness among planners that it can be operated by an agency to obtain specific actions from its staff or even from another agency (Mattingly, 1998) .

Mattingly (1998) further stated that experience in manufacturing shows that it is possible to upgrade the capabilities of small enterprises using a combination of support, incentives and direct assistance. However, attempts to do this in construction have been largely unsuccessful. While the elements of "a suitable strategy" for promoting the construction industry are known, a successful way of implementing this strategy is elusive.

Mattingly (1998) says it is hard not to be cynical about the lip service paid to training in the past in several developing countries. Training as an institution building function has received little support in practice. Training as implementation tool could be more successful.

Therefore the main aim of small-contractor development in developing countries is to seek the emergence of sufficient numbers of such companies and their upgrading to enable them to effectively compete in the open market for jobs that they are capable of undertaking, and systematically and continuously grow in size and capability. The objectives are that small contractors should be able to: (i) Perform the role expected of them by providing adequate volumes of buildings and infrastructure; (ii) Develop the basic building facilities and infrastructure; (iii) Create employment; (iv) Use local materials; (v) Apply appropriate technologies; and (vi) Produce to highest quality (Ofori, 1998).

An Independent Review on World Bank support to Capacity Building in Africa (2005) in all sectors of the economy including the Road sector examines three dimensions of capacity building in the public sector which will eventually trickle down to the private sector as follows:

(i) Institutional capacity that includes policies, procedures, and legislation and the systems of goals and incentives that constitutes the "rules of the game";

(ii) Organizational capacity, groups of individuals bound together for a specific purpose, with objectives, internal mechanisms, and resources;

(iii) Human resource capacity, people with the ability to define objectives, design and manage programmes, and raise resources for the delivery of public services(World Bank, 2005).

A more recent study from Erasmus University, Korning et al (2006) quotes a widely used Organization for Economic Cooperation and Development (OECD) definition for capacity building as the process by which individuals, groups, organizations, institutions and societies increase their abilities to i) perform functions, solve problems and achieve objectives and ii) understand and deal with their development in a broader context and in a sustainable manner (Korning et al, 2006).

The Study (2006) states that in practice approaches to capacity building often emphasize a particular dimension like investment in human capital of individuals, group oriented development, organizational development and institutional development.

Korning et al,(2006) further argue that capacity development is a dynamic process whereby different actors on different levels try to improve their abilities in relation to each other.

In Ghana, the lack of capacity of local contractors has attracted the concern of both government and donors.

The Minister for Roads has recently added his voice to the call for capacity building for road contractors. The Minister, Alhaji Amin Amidu Suleimana said that the inability of local contractors to meet the benchmark of International financial institutions that fund road construction in the country is becoming a great source of worry (Ennin, 2013).

The latest intervention was an advert placed in Ghana's leading daily Newspaper known as the *Daily Graphic* which invited Expression of Interest for international short-listing for consultancy services to train local contractors in connection with roads and community development projects. (Daily Graphic, 2011) The text of the advert read:

"The Government of Ghana has received a loan from the African Development Fund (ADF) to the amount of 53.59 million units of accounts (US$78.64 million) towards the cost *of Awoshie-Pokuase* Road and it is intended that part of the proceeds will be applied to eligible payments under the contract for capacity building for Local contractors." (Daily Graphic,2011).

Added to these, members of Greater Accra Road Contractors Association, Ghana, in April 2012 appealed to the government to pass an Act that would enforce prompt payment to contractors after they had executed jobs as well as build their capacity.

They said the Act would compel contractors to execute works on time and avoid shoddy work. The Association, explained that delays in the preparation of certificate by scheduled officers before payment contributed to delays in effecting payments (GNA, 2012).

It is not only the Contractors who are concerned about their well-being and capacity building initiatives, the legislative arm of government has also called on the government to build the capacity of local contractors. As recent as July 5, 2013, Members of the Select Committee on Water Resources Works and Housing in Parliament called on the Ministry of Water Resources Works and Housing to invest more in building the capacity of local contractors, so as to enable them undertake construction of sea defense projects (GNA, 2013).

The committee was of the view that, often time, sea defense project was not being constructed by the nation's local contractors, which to them was not the best.

The committee, though pleased with the progress of the work and its advantage to the communities, yet was of the view that, they would have been more satisfied if the work was done by their own local contractors.

The Committee further suggested that the nation cannot be relying on foreign contractors to build the sea defence project, saying "we want more local contractors in this field, we are pleased with the work but if our contractors can perform this way, then we have a good future." The committee further noted. (GNA, 2013).

In view of this, the committee called on the Ministry of Water Resources Works and Housing to start building the capacity of local contractors. (GNA, 2013)

Laryea (2010) also reveals in a study that contractor associations like Association of Road Contractors in Ghana (ASROC) have called on the government of Ghana to allocate a percentage of public projects to local contractors, even when the project is awarded to a foreign contractor. However, this may not be a viable call in practice. Local construction firms ought to be competitive and win work on meritorious rather than nationalistic reasons. Most contractors interviewed admitted to significant organizational problems that they needed to sort out in order to become self reliant.

A Study commissioned by the Building and Road Research Institute (BRRI) of the Council for Scientific and Industrial Research in 1989 recommended induction training, manpower training, and supervisory training as well as apprenticeship for small-scale local contracting firms in Ghana (BRRI,1989).

The BRRI (1989) study undertaken by 17 researchers also highlighted basic managerial, technical and financial techniques to be pursued to achieve improved performance at the operational levels of the small-scale construction firms in Ghana.

2.7 Infrastructural Services: Provision of Basic Infrastructure

A UESP URBAN III (1995) report identified that in Ghana, the Government and the Private Sector have not only attempted to address the housing situation but also made efforts to look at the provision of basic infrastructural services such as roads, drainage, toilet facilities and water supply which go with every housing development. In Accra, apart from the few first class residential areas namely, Airport residential area, East Legon, Cantonment, Labone and Roman Ridge which are basically under the jurisdiction of the government and managed by the Lands Commission Secretariat, most residential areas lack the above mentioned basic services. The results are unhealthy ponding of stagnant water and sometimes localized flooding.

To alleviate the condition of residents living in such depressed areas, an investment programme for the provision of basic infrastructure was carried out within some selected cities of the country in 1995. The table below gives information on the programme and the involvement of the local construction firms.

The investment in the provision of basic urban infrastructure in Ghana remains important for two reasons:

1. It has a direct impact on the welfare and productivity of the urban poor
2. It fosters economic development by enabling the growth of industry, agriculture and services (UESP/URBAN III, 1995).

Table 2.1: Construction of basic infrastructure by small-medium scale contractors for some selected cities in Ghana. (1995-1999)

Town	**Project Name**	**Project Description**	**Expected Social/Economic Benefits**	**Type of local Contractors involved**
Accra(Abeka ,Sukura,Cho kor,Teshie-Nungua	construction of access roads and storm drainage	provision of basic infrastructure like access roads, drains, public bathhouses and stand pipes	improved sanitation, water supply, accessibility, alleviation of perennial flooding	medium/ small scale
Agona Swedru, cape Coast/Elmina	demolition/re-construction of public toilets	demolition of dilapidated structures and reconstruction of new toilets	improved sanitation systems, creation of more public toilet facilities	small scale
-Do-	rehabilitation/const ruction of markets and lorry parks	construction of market structures and car parking areas,	revenue generation to district assembly,	medium/small scale
Kumasi	civil works at Aboabo and Oforikrom	construction of roads, storm drains water and electricity supply	promotion of intercity transport/trading, flood alleviation and sanitation improvement and water supply	medium/scale

SOURCE: UESP/URBAN III, 1999

As illustrated above, Table 2.1 shows the expected contribution of the local contractor to the improvement of the economic and social life of the populace. The importance of this cannot be over-emphasised. A performance upgrading of the capacities of the local contractors to meet the present and future needs of the industry is therefore necessary. (UESP/URBAN III, 1996)

2.8 Main Thoughts and Theories Concerning Capacity Building for Small Contractors

a) Systems and Participatory Approach to Capacity Building of Local Contractors

Several theories can be applied to a study on training for local contractors which are all rooted in theories connected to the training and building the capacity of local contractors.

Korning et al (2006) explains the various theories relating to capacity building. He posits that in practice, approaches to capacity building often emphasize a particular dimension like investment in the human capital of individuals, group-oriented development, organizational development or institutional development.

Korning et al (2006) again observe that it is not always that clear what is understood by institutions. It often refers to mechanisms (regulations, laws, norms and incentives) by

which the behaviour of individuals and organizations can be influenced. But also organizations that play a role in enforcing regulations are sometimes called institutions.

Muttagi (1998) also posits that an important task of researchers and trainers is to develop training courses which cater the ameliorative as well as development needs of urban areas. It requires preparing a large number of tailor -made, comprehensive courses incorporating, where required technical components, behavioural science inputs and material relating to management skills.

According to Narayanasuwami (1998) it is now widely recognized that the availability of physical, technical and financial resources is not a sufficient condition for successful socio-economic development. He believes that the strengths and weaknesses of institutions as well as behavioural factors play a significant role in determining the nature and pace of the development process.

According to Korning et al (2006), the systems approach acknowledges that improved abilities of some individuals, groups, organizations or institutions may not give the expected results as all of them are interrelated. So, it may be necessary to improve the abilities in several parts of the system at the same time.

From this perspective, capacity development is a dynamic process whereby different actors on different levels try to improve their abilities in relation to each other (Korning et al, 2006).

Korning et al (2006) further argues that, societies are very complex systems and therefore systems approach may also become highly complex leading to over-ambitious projects.

Capacity building projects often involve a strong involvement of experts from outside. If the outsiders play a dominating role there is the typical danger that projects stay a temporary thing besides the old routine. And there is real danger that after the project the old routine continues and that little remains of the project.

The participatory approach implies that the beneficiaries are in charge of the process and consider themselves the owners of the project. It is crucial that the project is relevant for the beneficiaries, but also that, the latter feel that way, they are motivated and play an active role in shaping the project (Korning et al 2006).

This is closely related to the concept of empowerment. A participatory approach seems to be crucial for reaching sustainable results.

Osei (2013) also suggests that, the involvement of contractors in planning and implementation of programmes for their own development is crucial for their success. Most local contractors are very much aware of their problems and their causes. What is then required involves appropriate interventions at both policy and technical level and support to overcome these problems.

Different types of interventions may be used in capacity building project and programs. Korning et al, points first of all to transfer of knowledge and skills. These may refer to such things as policy options to deal with a specific problem, the international

experiences concerning the costs and benefits of the options, the ability of civil servants and NGO staff to perform certain tasks, legislation in other countries, ways to enforce laws, etc. However, capacity building may also include the development of tools and investment in equipment, particularly ICT-related equipment.

Walters (2007) on her part posits that capacity development as a concept or field of intervention has seen some developments in the last decade. What has not changed however is that capacity development is firmly anchored in development paradigms and is linked to the development process of individuals, organizations, institutions and societies at large (Walters, 2007).

Walters (2007) further explains that the current understanding of the concept of capacity development recognizes that there is no situation in which capacity does not exist. The question is whether the existing capacities are being recognized and whether the existing capacities are capacities that enable individuals and organizations to perform well what they want to achieve.

In Ethiopia, the Roads Authority has confirmed that the following achievements, such as reduction in cost of road due to increasing involvement of local contractors as well as improvement in standard workmanship, were made after what it termed as "tailor made training modules" were developed for local contractors to build their capacity (Mengestie, 2012).

Again, in Lesotho, 65 small- scale contractors trained under a special programme dubbed, the Contractor training programme enabled the contractors to undertake 100 percent upgrading and routine as well as maintenance of civil works in that country (Subhash, 2004).

Added to these, in South Africa, training programmes for local contractors took the form of classroom training for 24 months period with two full days of training per week as well as work place experience with the latter supported by mentors (Hauptfleish &Vestor 2007).

Osei (2013) argues that the construction industry in Ghana in particular plays a pivotal role in the development of the national economy. Its sustainability is crucial to the growth and survival of the economy. The industry is currently characterized by a large number of small contractors, and a small number of large foreign contractors dominating the construction market especially in the area of donor funded projects. Sustainable capacity needs to be built through the strengthening of the local contractors and other actors in the industry without prejudice to their foreign counterparts. Growth and sustainability will not come overnight. It can only be achieved through the creation of an appropriate business environment where both local and foreign partnerships can flourish, thus facilitating technology transfer.

Walters (2007) argues that there is an underlying agreement that capacity building is about change, making things better, adding value, developing new assets or talents, it is

about how best to develop new capabilities (institutional assets or collective skills and new competencies, individual skills and energy.

From the aforementioned theories, it is evidently clear that theoretically, local or small contractors lack capacity and need support from government, donors and civil society to develop and grow for a nation's national development.

Walters (2007) reveals that official agencies such as United Nations Development Programme (UNDP) academic writers, international Non –Governmental Organizations (NGOs) and local practitioners all agree that capacity building: is a complex, human process that involves changes in relationship between elements of open-systems. It involves shifts in power and identity -capacity involves 'people acting together to take control over their own lives' an endogenous process that involves the main actor taking responsibility for the process of change.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research method

This research opted for the quantitative form of research where the views of small-scale local contractors and their staff (technical and other professional staff) where elicited through the use of questionnaires. Contractors who are members of the Association of Building and Civil Engineering Contractors of Ghana (ABCECG) where included in the questionnaire survey.

On most of the questions, respondents were asked to express their views on a five-point Likert scale (from"1"to"5"i.e.from highly important (significant) to Not important at all) .The responses were analyzed with the help of the five –point Likert Scale. The analysis was made easier by use of the Microsoft Excel 2007 package.

Responses were requested on issues ranging from background and experience of firm; their idea about training and capacity building for small-scale contractors; their challenges and constraints to identification of training needs.

Based on the scores of the factors (or issues) assigned by the respondents, each of the factors was ranked according to the mean scores μ calculated using the formula:

$$\mu = \frac{\sum fx}{\sum f}$$

Where f is the frequency of score x for the issue concerned.

From the above method a mean score of 1 indicates highly important (significant) whilst a mean score of 5 indicates not important at all.

3.2 Sampling Technique and Sample Size

The study considered all the 40 registered and active Class D3 building contractors from the year 2007 to 2012 on the building contractors' Register of "The Consortium Ltd" working in the Greater Accra Region only.

The questionnaire was administered to cover all the study population of Class D-3 building contractors and their staff numbering forty (40). The total number of questionnaire administered was forty-five (45). Forty (40) responses were received from the respondents for analysis.

The Consortium for Innovations in Human Settlements Development(CIHSD) was selected because it is one of the leading consultancy firm in building and civil engineering works with over 24 years experience and has supervised contractors to carry out major developments in the country and elsewhere.

CHAPTER FOUR

RESULTS, ANALYSIS AND DISCUSSION

4.1 Analysis of Study

All the forty (40) responses received were analyzed as follows:

4.1.1 Background and Experience of Contractors

All the 40 respondents did indicate their inclination mainly to the construction of buildings.

From Figure 1, 62% of the contractor-respondents indicated that, they have less than 15 years experience in the industry. This is an indication of the Class D3 being an entry point for most contractors ,from where they endeavour to grow into medium and large scale contracting firms. Again 25% of the respondents stated that their firm has been operating between 15 and 30 years. About 13% of the respondents did indicate that they have been in the business for more than 30 years.

On the method of procurement of works for the last five (5) years, 25 respondents did mention that they had participated in open-competitive tendering. Ten (10) of the respondents mentioned they had been selected through a short-list of contractors (restrictive tendering) for the proposed works. Five (5) of the respondents did however indicate that they had been called directly to solely take-up the job (single source) .

Majority of the small-scale contractors are engaged in open competitive tendering and hence the need to sharpen their skills and be abreast with the competitive method of works procurement.

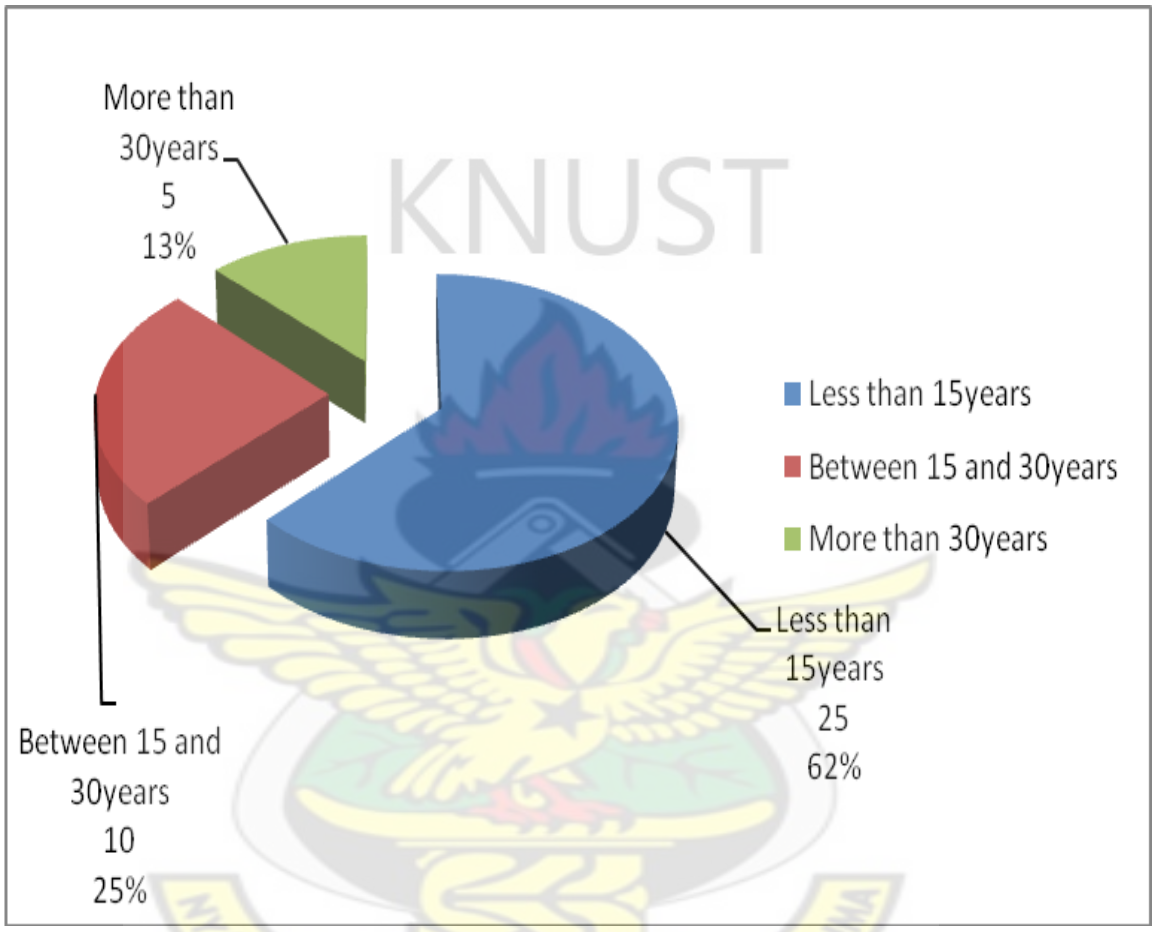

Figure 4.1: Work experience of contractors

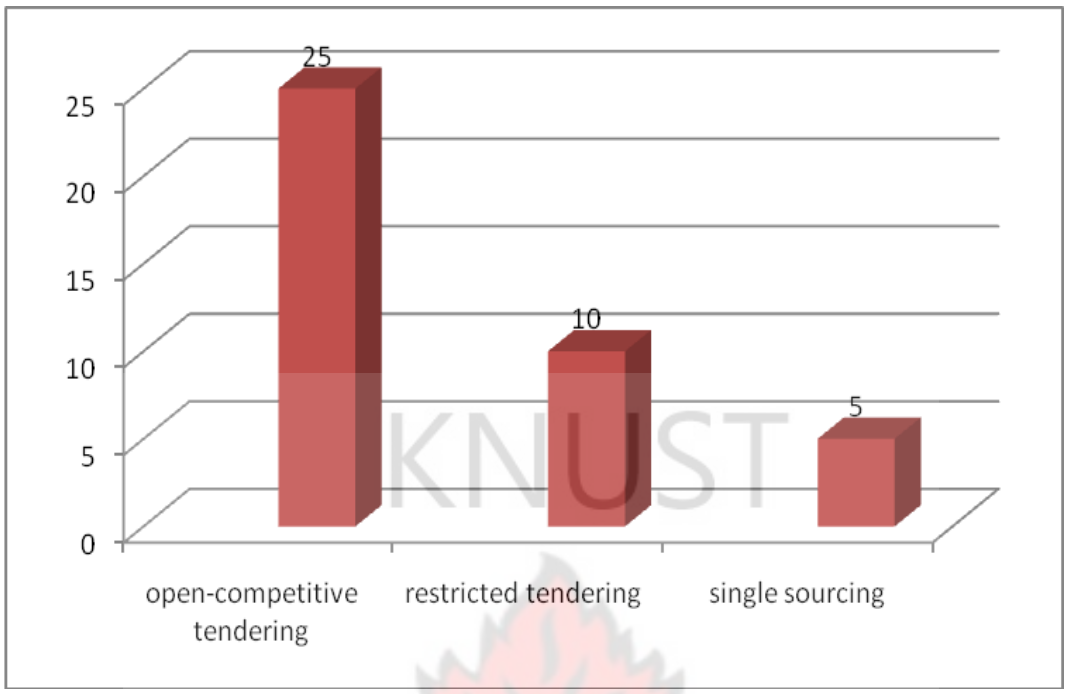

Figure 4.2: Method of works procurement by contractors in last five years

4.2 Training and Capacity Development Programmes

Concerning the level of importance of training and capacity building programmes to small contractors, the respondents believed that training and development programmes leads to increase in performance of small-scale local contractors, thereby ranking this first with a score of 1.30.

Table 4.1 indicates that with a mean score of 1.30, the respondents were of the view that, training programmes are key factors for the performance improvement of local contractors.

This was followed by the need for organising refresher courses for small local contractors which were ranked second with a score of 1.55 by the respondents.

The third ranked factor was in respect of the fact that *training programmes help local contractors to overcome their difficulties*. This was represented by a mean score of 1.70 by the respondents. This confirms the study of Adams (1997) as one of the key needs of small-local contractors.

The need for sustaining capacity of training programmes was ranked fourth with a representation of 2.08 mean score.

The least ranked was the issue of high training delivery costs making training programmes unattractive .This, the contractors considered as least important.

Table 4.1: Responses on Importance of Training and Capacity Development Programmes (T&CD)

Item No.	Statement	Mean of Responses	Ranking
1	T&CD increase performance of SME's	1.30	1st
2	Organise refresher courses for SME's	1.55	2nd
3	SME's overcome Difficulties through T&CD	1.70	3rd

Table 4.1: Responses on Importance of Training and Capacity Development Programmes (Cont'd)

4	High training delivery costs make T&CD unattractive	2.73	6th
5	Sustain T&CD programmes	2.08	4th
6	Gov't to assist with T&CD programmes	2.13	5th

4.3 Challenges /Constraints of Small Local Contractors

4.3.1 Technical Constraints

Key constraints identified were the lack of technical understanding of drawings and specifications which was ranked first as the highest constraint or challenge. This was represented with a mean score of 1.65 as in Table 4.2 below.

The second ranked challenge or constraint was the lack of skilled site supervisors or personnel. Here a mean score of 1.75 was recorded.The respondents were therefore of the view that skilled site supervisors is a key issue.

The third ranked constraint or challenge was inadequate work supervision representing 1.93 of the score.

Lack of knowledge in planning techniques using computer and site techniques and work method were both ranked fourth with 2.1 score each.

The least ranked in the constraints section was inadequate computer operating skills.

4.3.2 Managerial Constraints

Lack of familiarity with estimating techniques and tendering procedure was ranked first as key managerial constraint of most local contractors recording 1.73 for the mean score as shown in Table 4.3 below.

Again lack of managerial development as company grows was ranked second with a score of 1.78.The third ranked managerial constraint was the lack of use of project management techniques with a 1.88 score by the respondents attesting to that.

The lack of leadership and communications as well as negotiation techniques for claims ranked fourth and fifth, respectively in the survey.

4.3.3 Financial Constraints

In the matter of financial challenges, delayed payments to the local contractors were ranked first recording 1.55 mean score.

This was followed by the lack of access to working capital recording 1.75 while lack of cash flow management system recorded third ranking with a mean score of 2.00.

The fourth ranked item was lack of diligence in keeping financial statements and records, while the fifth ranked was low profit margin due to competition. The least ranked was inadequate payment of fluctuations recording 2.23.

4.4 Training Needs

On the training needs of the small local contractors, respondents identified the following and ranked them as follows with (1) being and highest and (8) being the least:

1. Estimating and tender pricing for works
2. Application of project management techniques to construction works
3. Management of plant, equipment and materials on site
4. Work's programming, progress monitoring and evaluation
5. Project Cash flow management
6. Procurement of Construction works
7. Administration of Construction works/contracts
8. Preparation of contractual claims and negotiation for works.

Table 4.2: Technical Challenges/Constraints of small-scale contractors

Item No.	Technical Challenges	Mean of responses	Ranking
1	Lack of technical understanding of drawings and specifications	1.65	1st
2	Inadequate work supervision	1.93	3rd
3	Inadequate computer operating skills	2.25	5th
4	Lack of knowledge in planning techniques using Gantt /Bar Charts	2.10	4th
5	Lack of basic site techniques and work methods	2.10	4th
6	Lack of skilled site personnel	1.75	2nd

Table 4.3: Managerial Challenges/Constraints of small-scale contractors

Item No.	Managerial Challenges	Mean of responses	Ranking
1	Lack of use of Project Management techniques	1.88	3rd
2	Lack of Managerial Development as company grows	1.78	2nd
3	Lack of familiarity with estimating techniques and tendering procedures	1.73	1st

Table 4.3: Managerial Challenges/Constraints of small-scale contractors (Cont'd)

Item No.	Managerial Challenges	Mean of responses	Ranking
4	Lack of leadership and communication skills	2.05	4th
5	Lack of negotiation techniques for claims against contract variations	2.25	5th

Table 4.4: Financial Challenges/Constraints of small-scale contractors

Item No.	Financial Challenges	Mean of responses	Ranking
1	Delayed Payments	1.55	1st
2	Lack of access to working capital	1.75	2nd
3	Low profit margin due to competition	2.15	5th
4	No Cash flow management system	2.00	3rd
5	Inadequate payment of fluctuations	2.23	6th
6	Lack of diligence in keeping financial records and statements	2.13	4th

Table 4.5: Training Needs of small-scale contractors

Item No.	Training Needs	Mean of responses	Ranking
1	Estimating and tender pricing for works	1.40	1st
2	Procurement of construction works	1.78	6th
3	Application of project management techniques to construction works	1.53	2nd
4	Project cash flow management	1.75	5th
5	Administration of construction works contract	1.80	7th
6	Preparation of contractual claims and negotiating for works	1.90	8th
7	Management of plant, equipment and materials at site	1.70	3rd
8	Works programming, progress monitoring and evaluation	1.73	4th

4.5 Development of Training Framework

The development of the training framework is based on the literature survey of the study, the challenges faced by small contractors through the quessionnaire study and analysis as well as the identified training needs of the local small contractors.

Figure 4.3 shows the Training Framework developed for small-scale contractors in Ghana.

The framework will serve as a systems model for training and indicates how training programmes should be developed and implemented. It consists of three key phases of training:

a) Assessment Phase b) Training and Development Phase c) Evaluation Phase

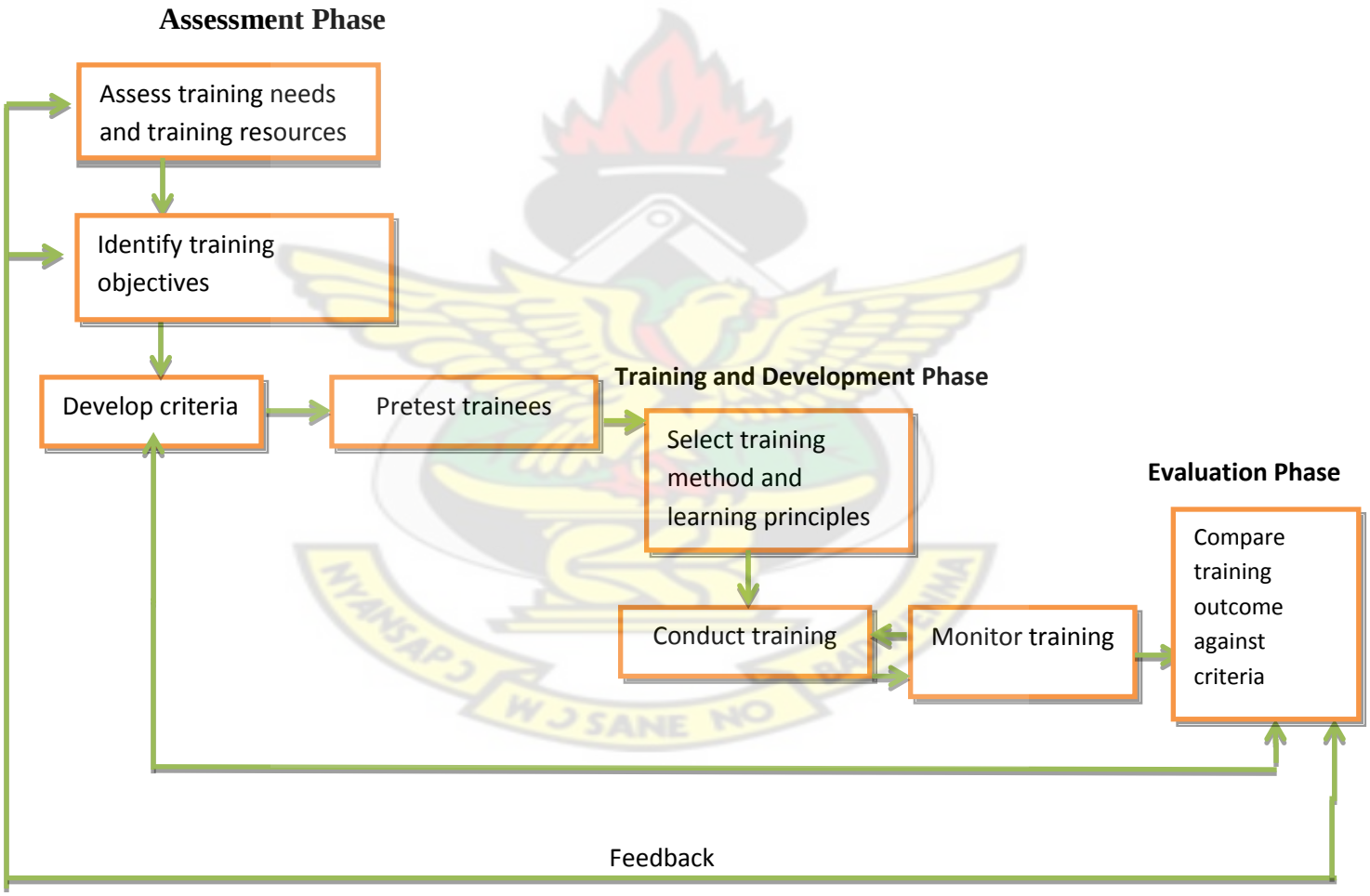

Figure 4.3: Training Framework for Small Contractors in Ghana

(a) Assessment Phase

This phase considers who should be trained; what sort of training is needed and how much training will benefit the Organisation. The resources available to provide the training both within the organization and in the external environment are also examined here. The objectives of the training are derived in the assessment.

The training objectives play a pivotal role in both the development of the training programme and its subsequent evaluation.

(b) Training and Development Phase

The training is designed and presented in the training and development phase.It is expected that training must contain activities and learning experiences that satisfy the objectives set in the assessment phase. A pretesting of the trainees may be carried out on a preparatory measure to know the methods to be adopted for the training **.**Monitoring the training will involve marching planned training methods with the actual expectations and readjusting to achieve the desired results within time, cost and quality.

c) Evaluation Phase

The evaluation phase occurs after training has been conducted.It is required that the the evaluation criteria are decided here.The criteria are based on initial objectives of the training.Once the criteria have been established ,the trainees can be evaluated to see if the training was successful. A feed back on training (see figure 4.3) emphasizes the idea that

training is ongoing. It should be seen that training is an ongoing process of assessing needs, presenting programs and evaluating results to determine whether organizational needs have been satisfied.

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CHAPTER FIVE

SUMMARY OF FINDINGS/ RESULTS

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The study found out that local contractors are keen on capacity building initiatives having observed that, it affects their sustainability and continued stay in business.

For instance, the respondents felt that training and development programs help improve performance of contractors thus ranking it first among the category of issues affecting small local contractors.

On the other hand, the Contractors did not see much need for government to intervene in their capacity building activities geared towards their improvement. It was ranked 5th among six category of items. The least item ranked was the fact that high training delivery costs is not a deterrent to them in their pursuit for training.

Under Technical constraints and challenges of local contractors, the respondents ranked planning techniques using computer and lack of site techniques as No.4 in their order of importance. Interestingly the respondents ranked inadequate computer operating skills as a 5th item of importance, though the world is moving towards an integrated communication systems using sophisticated ICT techniques.

Under Managerial constraints, respondents ranked the lack of use of project management techniques third in their priority list, while the lack of leadership and communications as well as negotiation techniques for claims ranked fourth and fifth, respectively.

In the matter of financial challenges, delayed payments to the local contractors were ranked first in the order of importance.

Again under financial Constraints, lack of access to working capital was ranked second by the respondents recording a mean score of 1.75, while lack of cash flow management system recorded third ranking.

The fourth ranked was lack of diligence in keeping financial statements and records, while the fifth ranked was low profit margin due to competition. The least ranked was inadequate payment of fluctuations recording scoring 2.23.

Under training needs of local contractors, it was discovered that administration of construction works/contracts and preparation of contractual claims and negotiation for works done were ranked at the bottom, seventh and eighth respectively.

5.2 Interpretation of Findings/Discussions

Findings indicate that local contractors are desirous of building their capacities through training and development.

They are however not so keen in getting government support in terms of building their capacities and that of their staff.

Government participation in capacity building will go a long way to help local contractors improve upon their work, as expressed by Ennin (2013) in literature survey.

Again, the findings indicate that local contractors are not aware or are ignorant about contractual claims preparation and payment and how it could impact positively on their work. Again inadequate payment of fluctuations was given a low rating (6^{th}) in the priority list.

Working in a volatile economic setting like West Africa where price variation is a common feature, contractors must be skilled in the preparation of contractual claims and adequate compensation for fluctuation payments to avoid huge losses at the end of contract periods.

5.3 Conclusions

This study aimed at discovering the capacity needs of local contractors in the building sector of the construction works industry in Ghana. The objectives of the study were to examine key constraints and challenges facing local contractors in terms of capacity building, identify aspects of training needs suitable for small contractors as well as design a training framework which addresses their training needs.

A quantitative form of research methodology was employed, while questionnaires were distributed to 40 respondents made up of small-scale building contractors and their staff as well as recognised members of the Association of Building and Civil Engineering Contractors of Ghana (ABCECG).

The study showed that contractors required capacity building in key areas to enable them compete effectively with their foreign counterparts as well as remain in business.

The key identified constraints/challenges of the small-scale contractors were:

i) Lack of technical understanding of drawings and specifications,

ii) Lack of skilled site supervisors or personnel,

iii) Lack of familiarity with estimating techniques ,tendering procedures and project management techniques

vi) Delayed payments to the local contractors

The following were also identified as the key training needs of the small-scale contractors:

i) Preparation of estimates for works and pricing of tenders

ii) Preparation of Project Cash flow statement and financial appraisal of works

iii) Application of project management techniques to construction works

iv) Procurement of works and contract administration

v) Work's programming, progress monitoring and evaluation

vi) Preparation of contractual claims and negotiation for works.

5.3.1 Proposed Training Framework

From the discussions and analysis a training framework which serves as a systems model for training and indicates how training programmes should be developed and implemented is illustrated in Figure 4.3 above.

5.4 Recommendations

It is recommended that the three- phased training framework proposed above and arising out of the study be further developed and used by the underlisted organisations for the training and development of small-scale local contractors in the country and beyond. The organizations in the built environment include-

- Contractors' Association Bodies,
- The Professional Association Bodies such as the Ghana Institution of Surveyors (GhIS), Ghana Institution of Engineers (GhIE), Ministries, Departments and Agencies (MDAs)

- The Metropolitan, Municipal and District Assemblies (MMDAs) ,
- The Building and Road Research Institute (BRRI).

The critical issue that must be attended to in the interim is that all local contractors must be made aware of the importance of price variations and contractual claims in contract execution, also familiarity with works estimation and pricing even before the proposed training commences. This could be discussed at the periodic meetings of the contractor associations to enable them seek professional expertise for the sustenance of their businesses as well as improved service delivery.

5.5 Limitation of studies

This study did not look out for training of artisans in various constructions sites. The study was limited to designing training framework for construction site supervisors and their superiors.

Again the study only examined building contractors in the financial category of D3 (US$75,000-US$200,000) and their staff as well as recognized members of the Association of Building and Civil Engineering Contractors of Ghana.

5.6 Future Study

Future studies may look at how local contractors have negotiated for contractual claims over the years against the background of their low capacity in that area and also contract administration practices by small-scale local contractors.

REFERENCES

- Ablodeppey S, (2011) *Local Contractors Lift up their Game* In Daily Graphic, Graphic Communications Group, Accra, December 21, 2011.
- Adam, F., (2013) *Ghana: Water Ministry Asked to Build Capacity of Local Contractors*, The Chronicle Newspaper, July 5, 2013, Accra .
- Adams, O. (1997) *Contractor development in Nigeria: perceptions of contractors and Professionals, Construction Management and Economics*, 15(1), 95-108.
- Ahadzie, D.K., (2009) *Ghana-Need of Construction Industry Development Agenda*, Centre for Settlements Studies, Kwame Nkrumah University of Science and Technology, Kumasi .
- Amoah-Mensah, K, (1989) Management Improvement Manual for Small- Scale contractors, BRRI.
- Amoah, P., Ahadzie, D., & Dansoh, A.,(2011) *Factors affecting Construction in Ghana, perspectives for small- scale building construction*.In The Ghanaian Surveyor Journal 2011, Vol. 4 No.1, Accra .
- Benninger,C.C,(1989) Improvement of Training in Human Settlements, 4(1),London ,1989.

- Daily Graphic, (2011) *Request for Expression of Interest, International short listing,*Graphic Communications Group Ltd, Accra, August 31, 2011.

- Daily Graphic, (2009) *Challenges Facing Ghana's Construction Industry*, In Daily Graphic, Graphic Communications Group, March 10, 2009 Editorial Page, 2, Accra.

- Ennin, E, (2013) *Roads Minister Worried Over Capacity of Road Contractors*, in Daily Graphic, Graphic Communications Group, Accra October, 7, 2013 pg.47.

- Ewusi K .(2005) *Report-The Ghanaian Economy,* University of Ghana ,Legon, Accra.

- Field,B and Ofori, G. (1988) *Construction and Economic Development – A case study*. Third World Planning Review, 10(1), 41–50.

- Ghana News Agency,(2012**)** *G/R Road Contractors Association end capacity building Workshop, Accra* .

- Ghana News Agency, (2013) *Committee Satisfied with Sea Defence project* retrieved from the Internet at http://www.ghana.gov.gh/index.php/2012-02-08-08-32-47/general-news/1619-committee-satisfied-with-sea-defence-projects September10,2013.

- Hauptfleisch, AC and Vester JJP,(2007) *Mentoring, A key intervention in small Construction Contractor Capacity Building in South Africa*. In; Boyd, D (Ed.) procs 23rd Annual ARCOM Conference -2-5Septemeber, Belfast UK, Association of Researchers in Construction management pg.33-42
- I.H.S (1998) Institute for Housing Studies, Rotterdam-Readers Manual, July 1998,pp324.
- Korning, J. D et al (2006) Evaluation of European Social Fund (ESF) Support to Capacity Building, Erasmus University, Rotterdam.
- Laryea, S. (2010) *Challenges and opportunities facing contractors in Ghana* : Laryea,S.,Leiringer,R .and Hughes, W. (Eds) Procs West Africa Built Environment Research (WABER) Conference, 27-28 July 2010, Accra, Ghana, 215-226.
- Lantern J.M.(1990)-*Developing Domestic Contractors for Roadwork's in Africa*, World Bank Road Maintenance Quaterly.Vol.1(2)p.8-9.
- Mattingly M (1998) *Implementing planning with teaching: Using training to Make it Happen* -The Institute of Housing and Studies Journal 74 (1998) Rotterdam**.**
- Megestie D, (2012) *Success Story- Infrastructure*- Publication of Centre for Development Enterprise (CDE) ,Eastern Africa, Ethiopia Pg.1

- Muttagi, P. K., (1998) *Training Personnel of Local Government in Developing Countries –A Comprehensive Approach*, In Institute of Housing Studies Journal 74, 1998 Rotterdam .

- Miles, D., (1980) *Guidelines for the Development of Small Construction Enterprises, training Contractors for Results*, ITDG publishing,United Kingdom

- Narayanasuwami, C., (1998) *Institution Building for Development: Lessons Learned and Tasks Ahead,* In the Institute of Housing and Studies Journal 74 (1998) Rotterdam **.**

- Ofori G., (1998) *The Construction Industry, Aspects of its economics and Management, Accra.*

- Ofori G., (2012) *Developing the Construction Industry in Ghana: the case of a Central Agency*, Singapore National University, Singapore, pg.4.

- Osei, V.(2013), *The Construction Industry and Its Linkages to the Ghanaian Economy- Polices to Improve the Sector's Performance*, International Journal of Development and Economic Sustainability Vol. 1, No.1, March 2013, pp56-72

- Shah, V. (1990) *Human Resource Development in the Building Industry: a study in Bombay.*

- Subhash S. (2004) *Small Scale Contractors for Rural Road maintenance in Lesotho; Some lessons from Experience,* Africa Transport Technical Note: World Bank SSATP 36, March 2004, Lesotho

- Tawiah F, (2012) G/*R Road Contractors Association and capacity building workshop in Winneba. Retrieved at* http://www.modernghana.com/news/389360/1/gr-road- contractors-association-end-capacity-build.html on October 16,2013.

- Teerlink H, (1998) *Introduction to Education, Human Resource and Capacity Building*- Institute for Housing Studies, Rotterdam-Readers Manual, June 1998,pp145-147.

- Urban Environmental Sanitation Project (UESP) URBAN III , 1996, Second quarter report, prepared by The Consortium(CIHSD) for Ministry of Local Government &Rural Development, Accra.

- United Nations Centre for Human Settlements (UNCHS)- HABITAT, (1996) - *Policies and Measures for Small Contractor Development in the Construction Industry* Executive Summary, Nairobi, Kenya.

- Walters, H. (2007) *Capacity Development, Institutional Changes and Theory of Change: What do we mean and what are the linkages*. Wageningen International, November 2007 ,pg 1.

- World Bank (2005): *An Independent Review of World Bank Support to Capacity Building in Africa, The Case of Ethiopia*, Operations Department, World Bank, Washington DC

APPENDIX A

DISSERTATION QUESTIONNAIRE –Msc Procurement Management, KNUST

TOPIC: ''Developing a Framework for Training to Build the Capacity of Small-Scale Local Contractors in Ghana.

The questionnaire is designed to request for information on some key constraints and challenges faced by small-scale (financial class D3) local contractors in relation to their capacity development in the construction industry in Ghana. It examines aspects of training needs required and develops a training guide for small-scale local contractor improvement.

The questionnaire can be completed either manually or electronically. Please contact me on

0274 485158 for any clarifications. Information from respondents will be treated as confidential.

To complete this questionnaire electronically, first double left click on the appropriate box(s), then at the *Default value* click on *''Checked''* where applicable, *''Not checked''* if you want to reverse your decision and finally click on *''OK ''* in both cases to register your response.

A) BACKGROUND

Organisation :

Position of Respondent :

Address :

Date :

1. Which of the following category best describe your establishment?

☐ Public sector client ☐ Private sector client ☐ Private consultancy

☐ Multi-national outfit ☐ Contractor (State MWRWH* Classification).....

☐ Suppliers ☐ Other (please specify).....

*Ministry of Water Resources, Works and Housing

2. How long has your establishment operated in the construction industry?

☐ 1 – 15yrs. ☐ 16 – 30yrs. ☐ 31 – 45yrs. ☐ more than 45yrs.

3. What type of project(s) are you involved in?

☐ Residential ☐ Health ☐ Educational ☐ Offices

☐ Civil ☐ Other (please specify).....

4. As a small-scale contractor from which of the following tendering method(s) do you procure your jobs ?

☐ Open Competitive ☐ Selective ☐ Price Quotations

☐ Single Sourcing ☐ Other (please specify).....

B) TRAINING AND CAPACITY DEVELOPMENT OF SMALL-SCALE CONTRACTORS

5. Please indicate the level of importance of the following statements in relation to small-scale training and development

Please use: 1= Highly Important; 2 = Important; 3 = Less Important; 4 =Not Important;

5= Not Important at all

Item	Statements	1	2	3	4	5
i	Training and development programmes help improve performance of contractors	☐	☐	☐	☐	☐
ii.	Refresher courses are to be organised by Contractors' Association and Allied Bodies for contractors and staff	☐	☐	☐	☐	☐
iii	Training opens knowledge for small-scale contractors to overcome difficulties.	☐	☐	☐	☐	☐

Item	Statements(Cont'd)	1	2	3	4	5
iv.	Training and development programmes are not attractive due to high cost.	☐	☐	☐	☐	☐
v	Training and development for small contractors must be sustainable	☐	☐	☐	☐	☐
vi	Government must assist in small contractors training and development	☐	☐	☐	☐	☐

C) CONSTRAINTS OF SMALL-SCALE CONTRACTORS

6. Indicate how significant the following constraints affect the development capabilities of small-scale contractors .

Please use : 1= Highly Significant; 2 = Significant; 3 = Less Significant;
4= Not Significant ; 5 = Not Significant at all

Item	Constraint	1	2	3	4	5
A	***TECHNICAL FACTORS***					
i.	Lack of technical understanding of drawings and specifications	☐	☐	☐	☐	☐
ii	Inadequate work supervision	☐	☐	☐	☐	☐
iii	Inadequate computer operating skills	☐	☐	☐	☐	☐
iv	Lack of knowledge in planning techniques using Gantt /Bar Charts	☐	☐	☐	☐	☐
v	Lack of basic site techniques and work methods	☐	☐	☐	☐	☐

Item	Technical Constraint(Cont'd)	1	2	3	4	5
vi.	Unfamiliarity with programming software - Microsoft project etc.	☐	☐	☐	☐	☐
vii	Lack of skilled site personnel	☐	☐	☐	☐	☐

B	*MANAGERIAL SKILLS*	1	2	3	4	5
i	Lack of use of Project Management techniques	☐	☐	☐	☐	☐
ii	Lack of Managerial Development as company grows	☐	☐	☐	☐	☐
iii	Lack of Procurement Management skills	☐	☐	☐	☐	☐
iv	Lack of familiarity with estimating techniques and tendering procedures	☐	☐	☐	☐	☐
v	Lack of leadership and communication skills	☐	☐	☐	☐	☐
vi	Lack of negotiation techniques for claims against contract variations	☐	☐	☐	☐	☐
vii	Delay in completing works on schedule	☐	☐	☐	☐	☐
viii	Lack of site management techniques	☐	☐	☐	☐	☐
ix	Lack of diligence in physical records	☐	☐	☐	☐	☐
x	Bad company organisation and policy regulation	☐	☐	☐	☐	☐

C	***FINANCIAL MANAGEMENT SKILLS***	**1**	**2**	**3**	**4**	**5**
i	Delayed Payments	☐	☐	☐	☐	☐
ii	Lack of access to working capital	☐	☐	☐	☐	☐
iv	Low profit margin due to competition	☐	☐	☐	☐	☐
v	No Cash flow management system	☐	☐	☐	☐	☐
vi	Undervaluing of work done	☐	☐	☐	☐	☐
vii	Unfavourable credit purchases from suppliers	☐	☐	☐	☐	☐
viii	Inadequate payment of fluctuations	☐	☐	☐	☐	☐
ix	Lack of book keeping systems	☐	☐	☐	☐	☐
x	High and unstable Inflation	☐	☐	☐	☐	☐
xi	Improper preparation of financial statements and Audited accounts	☐	☐	☐	☐	☐
xii	Lack of control of equipment cost and usage	☐	☐	☐	☐	☐
xiii	Other (Please specify).....	☐	☐	☐	☐	☐

D) SMALL-SCALE CONTRACTOR TRAINING NEEDS

Please Rank with the following level of importance:

1= Highly Important; 2 = Important; 3 = Less Important; 4 =Not Important;
5= Not Important at all

	TRAINING NEEDS	**1**	**2**	**3**	**4**	**5**
i	Preparation of Estimates for Works and tender pricing	☐	☐	☐	☐	☐
ii	Procurement of Works	☐	☐	☐	☐	☐
iii	Application of Project Management Techniques to Works	☐	☐	☐	☐	☐
iv	Preparation of Project Cash Flow and financial appraisal	☐	☐	☐	☐	☐
v	Project Contract Administration and Law	☐	☐	☐	☐	☐
vi	Contractual claims preparation and negotiation skills	☐	☐	☐	☐	☐
vii	Site management techniques	☐	☐	☐	☐	☐
viii	Plant, Equipment &Materials management	☐	☐	☐	☐	☐
ix	Works Programming, Progress Monitoring and Evaluation	☐	☐	☐	☐	☐
x	**Other (Please specify).....**	☐	☐	☐	☐	☐

End of Questionnaire and thank you for your time and assistance.