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A Strategic Approach to Local Competency Gap Reduction: The Case of the Oil and Gas Industry in Ghana

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Abstract

This empirical research explores local skill capacity gap in the petroleum industry in Ghana using a mixed method approach to study four public organisations. Matched samples of employees (226) were surveyed, while HR directors (9) were purposively sampled and interviewed. The findings suggest a wide local skill gap. Originality, this is one of the very few studies to explore the shortcomings of local skill capacity in public sector organisation. Research implications, more matched-sample studies are necessary to understand IOC's local skill capacity further. Practically, the study is of significance to the policymakers. The main contribution of the research amongst others is to conceptualise the concept of HRM in Ghana's context.

Keywords: Skill Gap, Capacity Building, Public sector, performance management.

1. Introduction

Oil and gas sector development has become crucial to the economic development of many countries, they have the potential to create jobs and improve the economy through investment in infrastructure development, education, and health (Arthur and Arthur, 2014). For example, Nigeria is considered one of the wealthiest natural oil resources but ranked the 20th most impoverished country in the world. This poverty and underdevelopment are attributed to the misguidance in governance, mismanagement of natural funds, various political issues and lack of infrastructure (Vaaland et al. 2012; Porter & Watts, 2016; Papyrakis, 2017). This situation has provided the evidence for many resource-rich developing countries adopting measures to promote and protect their local industries from International Oil and Gas Companies (IOCs) (Vaaland et al. 2012; Porter & Watts, 2016). Ghana is now considered an oil producing country, within this sector, policy, the legal and regulatory framework are a determinant of the prudent utilisation of resources (Van-Gyampo, 2011). Arguably, the government of Ghana envisaged the active involvement of Ghanaians in the industry, however, required local skills poses a significant challenge. This problem emanates from the unavailability of suitable domestic workers and contractors.

As a commitment on the part of the Government, the Legislative Instrument (LI) for the local content policy was approved by parliament in 2013 (Benin, 2017). It is argued that human resource (HR) capacity building/development policy is key to the survival of organisations in Sub-Saharan African countries (Analoui, 2007; Antwi et al., 2008; 2013, Armstrong and Taylor Falola et al., 2014; Bawole et al., 2014; Mensah and Babu, 2015; Benin, 2017). Recent studies on Ghana's oil and gas industry have concentrated in many areas, for example local content and participation (Ablo, 2015;), women, livelihood and oil and gas discovery (Boahene and Peprah, 2011: 185), the impact of employee perception in the successful institutionalisation and implementation of performance management system in developing countries (Ohemeng,

et al., 2018: 75), HR local content in Ghana's upstream petroleum industry (Benin, 2017), challenges in building the capacity of HR in decentralized local governments (Antwi and Analoui, 2008), efficacy of Nigeria's oil and gas industry domestic content policy (LCP) (Ugwushi et al., 2011). No such study has been carried out to explore existing local skill challenges, procedures, practices as well as strategies being used to address the local skill gap. Therefore, this study instead attempts to explore a basis for adopting a strategic approach to local competency gap reduction in public sector organisations in the oil and gas industry in Ghana.

Ghana and other donor partners are committed to building local skill capacity in the oil and gas industry (Benin, 2017) However; the question is: what strategies, policies and procedures been adopted by stakeholders in the industry to attain the needed skills for sustainable development and management of these resources? The paper aims at exploring the current local skill competency gap or challenges, and how it can be resolved. This article does not focus on the institutional and technical capacity building but instead concentrates on local skill competency development in the oil and gas industry.

2. Background

Upon oil discovery in 2007, Ghana started educating about 450 nationals abroad through the Ghana Educational Trust Fund (GETfund) in oil and gas related courses (Ghana Oil, 2012). Graduates are often returned without any form of experience and as a result trying to find jobs (Asante-Mireku, 2015). In decentralised local government, Antwi and Analoui (2008: 514) found workforce skill as a challenge and recommends improvement in core competencies of staff and management in the decentralised local government in Ghana because it has far-reaching policy implications. Examining local content participation in Ghana's oil and gas

industry found that only a few well-established media to large-scale Ghanaian enterprises can compete globally (Ablo, 2017).

Study of local content in Ghana's upstream petroleum industry revealed that training acquired by indigenous Ghanaians do not affect current local content in Ghana's upstream petroleum (Benin, 2017: 127). Research on the efficacy of Nigeria's oil and gas LCP revealed that local content legislation has boosted commercial activities and attempts to resolve Nigeria's socioeconomic challenges (Ugwushi et al., 2011). To corroborate the above, local content legislation in the oil and gas industry has contributed significantly to the domestication of the oil and gas sector using local-grown value addition in the Nigerian economy (Atsegbua et al., 2012). Various studies have been conducted into Performance management in public area in Ghana which found inefficiency of performance appraisal system and recommended a dynamic approach to the appraisal tool (Ohemeng, 2011; Gravina and Siers, 2011; Bawole, et al., 2013; Ohemeng, e al., 2015; Mensah and Badu, 2015; Brenya et al., 2016). Since 2007, there has been much research into Ghana's oil and gas, but there is a limited study into the existing local skill gap and how it is being addressed. There are many concerns about the capacity of the regulator and other public institution to monitor, evaluate and regulate oil and gas industry's requirement of local employment, procurement workforce development, and technology or skill transfer (Amoako-Tuffour et al., 2015; Ablo, 2017).

The major challenge facing local skills in Ghana's oil and gas sector is in two folds: the ageing workforce and the shortage of local skilled workforce (Tullow Ghana, 2010; Petroleum Commission, 2015; Ajimoko, 2015, Benin, 2017). In support of the above arguments, it is argued availability of suitable workforce a challenge for future oil and gas labour market, which requires a comprehensive local content plan for implementation (Ghana Oil and Gas, 2013; Amoako-Tuffour et al., 2015; Hays Oil and Gas, 2016). The question is: how strategic is Ghana's local skill capacity?

3. Human resource capacity building in Ghana

The unique feature of human resource management (HRM) is its strategic focus, and the links to organisational and business strategy, as well as their impact in improving corporate performance (Farnham, 2015: 161). The dynamic, efficient management and development of local skill are what referred to as the search for talent, capacity building, and investment in human capital or next generation (Sears, 2010). Lately, it emphasised that quality HR must be flexible, versatile, multi-skilled, committed, and reliable to achieve the desired results (Farnham, 2015). Considering labour utilisation work during the early stages the focus was on factories and workshops which insisted on a new discipline of the employees' management. Arguably, the third stage involves flexibility, dynamism, reliability as well as commitment (Thomas, 1991; Farnham, 2015, Armstrong, 2016).

HR capacity challenges in Ghana has enormous strategic, financial and policy-making implications on governance and other policymakers in the emerging oil and gas industry (Antwi & Analoui, 2008; Benin, 2017). This is because the government of Ghana relies mostly on its development partners and donor agencies for funding oil and gas related projects. For example, the \$38 million from the World Bank loan for capacity building in Ghana's oil and gas sector and the \$3 billion Chinese loans (World Bank, 2013). Several agencies and development partners have raised concern about capacity building issues, such as the Africa Leadership Forum organised in Nigeria on 21 June 1990 and the World Bank. These challenges hinge on local skill competency (Kahkonen and Lynyi, 2001; Armstrong and Baron, 2012; World Bank, 2013). The question that arises is how the government could achieve such policy aims? The capacity assessment offers the platform for policymakers to prioritise areas that need capacity building (UNDP, 2008: 6). In an emerging oil and gas economy like Ghana, local skill capacity building should encapsulate both needs assessment and interventions that is, how the development will occur, and what needs to change and funding? (UNDP, 2008). The critical

issue is to assist in initiating comprehensive and integrated programmes and resource response. The questions that will require answers are, ‘Why capacity?’, ‘capacity for whom?’ and ‘capacity for what?’ (UNDP, 2008: 7). The question regarding ‘capacity for why?’ will help to set the industries or government, and donors’ priorities their objectives and how to realise them. Capacity for ‘why?’ involves “the formulation of a capacity development response; act as a catalyst for action; confirms priorities for action; build political support for an agenda; offer a platform for change dialogue among stakeholders; provide insight into operational hurdles in order to unblock a programme or project.” (UNDP, 2008: 8).

Capacity for ‘whom?’ Comes into mind after outlining the purpose of the capacity building. This question helps to determine whose capacity requires development. On the other hand, the capacity for ‘what?’ is geared towards the specific capacity needs of the oil and gas industry in Ghana. “Capacity assessment starts from the assumption that the existing capacities can be developed. From this perspective, it is easier to create a viable, capable development response that nurtures and reinforce existing capacities (European Commission, 2013; UNDP, 2008: 17). Arguably the emphasis hinges on three levels of the capacity building (the individual, organisational and institutional levels); however, the present study focuses on the local skill capacity building. HR capacity will serve as the first and principal point of entry for capacity building for this project. Thus, to build HR capacity that can administer, enforce and manage the resources and proceeds from the oil and gas industry. Another issue of concern is the potential and difficulty in investing in local people in the oil sector. For example, what is required (HR gap) and how to address it?

The best practice HR, which refers to as ‘high-performance work system, or ‘high-commitment HR’ (Guest, 1997). Such bundles help to enhance or improve employee attitude and behaviours, reduce absenteeism, labour turnover, increased productivity and improved customer service (Analoui, 2007; Farnham, 2015; Ohemeng et al., 2018). The implication is

that 'best practice' thrives well where these practices are held (Youndt et al., 1996; Farnham, 2015; Gerrish, 2016; Narayan, 2016; Mizrahi, 2017; Neck et al., 2017).

4. The Local skill gap in the oil and gas sector in Ghana

The studies of Human resource development (HRD) revealed some somewhat puzzling issues about the oil and gas industry in Ghana. There exist in Ghana's upstream oil industry, an acute shortage of skills and competence in the face of an ever-growing rate of unemployment of graduate engineers and technicians (Ghana National Gas Company Limited, 2011; GNPC, 2013; Asante-Mireku, 2015; Benin, 2017). The workforce demographic gap with a high number of retiring experienced workforce as against many junior level inexperienced employees, leaving a significant difference in the workforce where middle-level expertise is a concern (Asante-Mireku, 2015).

Currently, some oil and gas projects are underway: Twenboah, Enyira and Ntomme (TEN), Jubilee Phase 2 and ENI's OCTP has commenced operation. Although, there exist measures to tackle these challenges in the long run, meeting skilled workforce demand for the industry remains a critical medium-term focus. It is argued graduates in internship programmes to acquire practical skills will ensure the benefit of the sector (Asante-Mireku, 2015).

The baseline study indicates that there is a situation of skill mismatch, because even though there is an acute shortage of 'skills in demand', there exists, at the same time, many unemployed graduates with qualifications in other disciplines including, Oil and Gas Management, which have less relevance in the oil and gas industry (Asante-Mireku, 2015). The initial desktop study confirmed the gap between supply and demand of skilled labour and identified specific skill sets as 'skills in demand' using; (i) work permit applications of expatriate throughout two years, and (ii) survey among oil and gas company executives. Results show that the shortage primarily affected six main areas of skills in demand: Engineering,

Geosciences, Technicians, Health and Safety Executives (HSE), Business and Logistics (Asante-Mireku, 2015).

The number and percentages of skills in demand are captured (see Table I & II). Authorities have issued about 760 work permits to expatriates for the Jubilee projects, contractors, and subcontractors (Asante-Mireku, 2015). Since production at TEN and OCTP projects commenced, the HR situation would not be different from that of the Jubilee field, if aggressive strategies are not developed and implemented within two to three years. The current 'skill in demand' workforce is approximately 2000 expertise needed for the industry. It shows the projected numbers (Asante-Mireku, 2017) (see Table I).

5. Strategies for capacity building

The petroleum industry risks losing considerable knowledge, skilled personnel and expertise as older people retire; succession planning must be in place for the development of the next generation (Hays Oil and Gas, 2016). In sum, 36% of respondents emphasised strategic succession planning (Hays Oil and Gas, 2016: 37). Addressing local skill gap, the areas worth consideration is ageing workforce, for example, the loss of workforce due to retiring employees, strict immigration laws preventing access to talents globally, and new professional and up-to-date skills set with the modern technological advancement. To bridge the existing local skill gap, Hays Oil and Gas (2016) recommends the following measures:

- Training and development
- Changes to retention and recruitment and selection practices
- Internship and apprenticeships
- Engagement of retired staffs
- Partnering with college and University, and
- Attracting female applicants

To address existing local skill shortage challenges, the Petroleum Commission (2015) outlines the following programmes:

- Professional Integration Programme
- Internship and Practical Training/Attachment

- Tertiary Institution Capacity Building Programme
- Skilled workforce database developments
- Education and Sensitization Strategies
- Career Development Strategies
- Monitoring and evaluation Strategies
- Expatriate work Permit Facilitation Strategies
- Technology and Skill Transfer Programmes
- Recruitment and Retention Strategy, and
- Remuneration and Rewards Strategies

6. Research methodology employed

According to Crotty (2012: 2), researchers need to consider first the methods and methods to be employed for the research. Onwuegbuzie and Leech (2005) argue that philosophical orientation guides the author in the selection of an appropriate topic, including the choice of research instruments employed for the study. It is argued that pragmatic approach to research is laudable and critical to this study in knowledge construct (Creswell, 1994, Tashakkori & Teddlie, 2010; Teddlie & Tashakkori, 2012; Armstrong, 2016).

The article uses the mixed-method approach to collect and analyse from four public organisations. Mixed-method refers to the adoption of two or more methods in a research project, producing both qualitative and quantitative data (Creswell and Plano Clark, 2007, Ohemeng et al., 2018). Matched samples of employees (226) working in four public sector organisations were surveyed using the simple random technique, while nine training and development directors (TDD) were purposively sampled and interviewed. It was a one-to-one interview unlike the qualitative approach with a lower number of interviewees; a questionnaire was adopted to obtain information from 320 (80 respondents per organisation) large sample of junior and senior staffs to enable us to determine the perception of employees of the existing local skill gap. An official letter was sent to HR of the four selected organisations indicating the purpose of this research and sought prior permission to interview chosen staff.

The researchers purposely selected twelve Training and Development Directors who deemed to have a fair knowledge of local skill capacity building in the industry. Unfortunately, nine out of twelve responded. An interview guide consists of questions were used. The researchers used secondary data to corroborate the study findings. The organisations selected were Ghana National Gas Company, Ghana National Petroleum Corporation, Petroleum Commission, and Ministry of Energy. The researchers argue that the use of mixed methods helps to combine qualitative and quantitative data to triangulate findings to mutually corroborate to produce a comprehensive account of the area of the inquiry to enhance the credibility and integrity of the results (Bryman, 2006a; Armstrong, 2016; Ohemeng et al., 2018).

The researchers employed SPSS package to generate a simple descriptive statistical analysis of each organisation, and comparisons made. The SPSS package facilitated the generation of frequencies, pie-chart and graphs and cross-tabulations for the categorical data. We purposely conducted some cross-tabulations of the categorical data to establish the relationship of some of the data obtained. However, the qualitative data collected were transcribed from the audio recording and then it was subjected to thematic analysis (see Figure II).

It was prevalent that Pragmatism was relevant with an exploratory approach which commenced with the collection and analysis of both quantitative and qualitative data using a survey questionnaire and interview, coupled with analysis of the secondary data. It is noteworthy that the study conducted a pilot survey, and a meeting to check the clarity and ambiguity of the question which helped the authors to changed or amend some of the issues. The research also ensured that some of the secondary data collected were updated to authenticate the argument adduced in the survey. The approach and sources of data collection instruments are captured in figure II, for example, the questionnaire, and interview guide for the primary data generation. Also, a desktop study was carried out to gather secondary data including the collection of

documents and information from organisations such as annual reports; policies and legislation (see Figure II).

7. Results

The enquiry into the perceived local skill gap in public organisations in the petroleum industry in Ghana revealed a vast difference in the civic organisation. For instance, at the Petroleum Commission and the Ministry of Energy, (86.3%) (65.6%) respectively believed that a wide local skill gap exists which has policy implications (see Table II). The study also found that one of the significant causes of skill shortage in the industry was the ageing workforce. In general, the findings suggest that about 62.8 per cent of the total workforce is ageing across all four organisations (see Table III). The results indicate that 62.8% of the participants are above 49 years, which signifies unavailability of succession planning and a long-term threat to the emerging oil and gas sector.

Public organisations have made an effort to build the capacity of local skills by putting in place some strategies, practices, and procedures by addressing the existing gap. For example, Petroleum Commission (PC) has put in place the following policies: Professional integration programme, Internship and Practical Training/Attachment, Education and sensitisation, Expatriate Work Permit Facilitations strategies, Overseas and Local Scholarship Programmes and many more. Ghana National Gas Company (GNGC) instead is relying on Technical and Vocational Training in-country and internship programmes because they the platform to train Ghanaians. Unlike MOEP where 57.4% of their staff's opinions pointed to the inefficiency of the strategies in place, but the general perception was that the procedures were efficient (See Table IV).

The study explored the efficiency and effectiveness of performance appraisal system in public organisations in the industry. It was found that over 50 per cent of employees received feedback

from appraisers. Majority of employees at GNGC (53.6%) and MOEP (63.9%) of respondents received no feedback from performance appraisal in 2014 (see Table V). To collaborate the study findings, one respondent (HRD2) stated: “the MOEP does not take performance appraisal seriously because the process is tailored towards promotion without recourse to individual development.”

According to Torrington *et al.* (2002), performance appraisal aims to build on current performance by identifying training needs, identify staff potential and focus on their career development. They further argued that prompt and positive feedback is vital to the effectiveness of the appraisal system (Torrington *et al.*, 2002; Analoui, 2007; Maran, 2018; Ohemeng *et al.*, 2018). Feedback from performance appraisal creates the opportunity to enable staff to address existing capacity gap (Armstrong, 2012). The data on input from appraisers suggest that public organisations do not take feedback seriously to improve performance. In general, about 57.9 per cent of appraisees had received information from their appraisers from the recent performance appraisal, while 26.5 per cent were not given any information. The analysis revealed that feedback from appraisers, not considered necessary. Comparatively, about 81.8% and 72.3% of the staff of PC and GNPC employees were given feedback at the last year’s appraisal. The rate of feedback at was about 46.4, while the ME had the least number with less than forty per cent (36.1%) of feedback from last year’s performance appraisal (see Figure V). The data revealed that the Public Sector in Ghana does not take input severe. Appraisers often do not communicate with the staff about their performance and the existing gap to be addressed. Instead, about 63.9 per cent of staff from ME received no feedback what so ever from the last year’s appraisal. Similarly, about 53.6 per cent of staff at the GG was not provided with feedback from appraisers. Unlike ME and GG, 27.7 per cent of GNPC’s staff received no feedback. About 18.2 per cent of PC’s team received no input from the appraisers (see Table V).

Prompt feedback provides staff with diverse and precise information about the effectiveness and efficiency of their performance (Ohemeng et al., 2018). To corroborate existing survey data analysis, a respondent (HRD5) stated that “staff takes feedback seriously because it is critical to PM and the survival of GNPC” (HRD5C). However, one respondent (TDD3) noted that “unlike the old appraisal system, the ME is yet to use a new performance appraisal system which categorically emphasises the need for prompt feedback” (TDD3). This was revealed during the data analysis (see Table V).

Also, TDD3 attributed inefficiency of the performance appraisal system at the MOEP to lack of prompt and constructive feedback in the traditional appraisal tool. The findings revealed that the inadequate and untimely release of funds by the government poses a challenge to local skill capacity building. The cost of the capacity building is enormous and has serious policy implications.

The analysed data showed that in total, about 72.1% of respondents had participated in the last year’s performance appraisal while about 17.3% were appraised in the previous two years (see Table VI). About 10.6% of the staff was not assessed. During last year’s performance appraisal about 77.3% of the staff at the Petroleum Commission participated, while GNPC had 76.9% participation rate. Ministry of Energy had 5.4% participation rate. The GNGC participation rate fell below 60 per cent (58.9%) (See Table VI). Further analysis revealed that the PC had the highest percentage of non-participation of about 18.2%. Comparatively, GG had about 32.1% of staff ‘not appraised’ last year (see Table VI). This signifies some form of inconsistencies in the performance appraisal system. Analysis of data indicated that the overall participation was very high except at GG during last year’s performance appraisal process.

“The staff at the ME did not consider performance appraisal seriously until when they are due for a promotion” (HRD2D).

The use full term at GNPC is robust. It intends to improve performance by setting out the training needs of each staff to address the existing gap.

8. Discussion

As anticipated by the government, the oil and gas sector face challenges concerning the required local skills for the industry (Ghana Government, 2010). Research indicates that many oil and gas producing countries in Sub-Saharan Africa, such as Nigeria are labelled with ‘Dutch Disease,’ which Ghana Government is strategising to avoid such syndrome. It is argued that the envisaged local skill (capacity) gap could have serious repercussion and consequences in the management and utilisation of the resources from the oil and gas sector (Ghana Government, 2010; Dartey-Baah *et al.*, 2012). It is argued that the perceived local skill (capacity) gap could have serious repercussion and consequences in the management and utilisation of the resources from the oil and gas sector (Ghana Government, 2012; Dartey-Baah *et al.*, 2012). To manage the resources prudently, there is an urgent need to build the local skill capacity to curb the high expenditure on service of expatriates and international companies. South African Local Government Association (SALGA) further noted that ‘the prioritisation of capacity building interventions must be informed by national imperatives and target, as well as by the local needs’ (SALGA, 2008-2011). In addressing the perceived local skill gap in the oil and gas industry, that the identification of the existing local skill gap precedes capacity building (Larbi, 1988).

8.1 Characteristics of HR in Oil and Gas

The issue of an ageing workforce is revealed as a challenge in the oil and gas industry in Ghana, especially in the public sector. In general, it emerged that 62.8% of staff are above 50 years old. The survey findings are consistent with the previous research findings in relation to the ageing workforce in the public-sector organisations in the petroleum industry in Ghana (Antwi,

2005; Agyenin-Boateng, 2006; Mba, 2007; Government of Ghana, 2010; Ghana Oil and Gas, 2013; Asante-Mireku, 2015). On the contrary, study findings from the current profile of UK upstream oil and gas sector workforce dispel the ageing 'workforce' myth, where the proportion of over 55 years is lower than the national average (13% vs 32%). The findings from the UK upstream petroleum sector revealed that the perceived gap at the mid-career is not as significant as previously thought; it showed the industry has a high proportion of mid-career professional with half of the workforce aged 25-45 (Oil and Gas UK, 2015: 5). A survey of over 67,000 experienced members of Oil and Gas IQ, found that 50% of the workforce in the oil and gas sector is ready to retire (Ajimoko, 2015). This is consistent with the findings, which revealed that in general, the majority (62.8%) respondents were fifty years or more. The four organisations, GNPC (63.1%), PC (68.2%), GG (53.6%) and ME (59.0%) surveyed confirmed previous research findings on the ageing workforce in the petroleum industry in Ghana. According to research by Schlumberger Business Consulting (ILO, 2012: 7) revealed that the petroleum industry especially in Africa where deep-water and exploration activities are on the increase in the region, will face a net loss of about 5,500 experienced staff aged over 35 years by 2015 was consistent with this research findings.

Present study findings, in general, indicated that 77.4% of the respondents were male while only 22.6% were female. Comparatively, the study findings from GNPC (81.5%), GG (80.4%), PC (79.5%) and ME (68.9%) corroborated the general conclusions of the present study. The results confirmed previous research findings (Antwi, 2005; Agyenin-Boateng, 2006; The Economist, 2006; Mba, 2007; Government of Ghana, 2010; Ghana Oil and Gas, 2013; GSS, 2014; GSS, 2015; Petroleum Commission, 2015). It is evident that most effort has been placed on developing the capacity of a female in the petroleum sector. Statistics on women in petroleum-related activities are often hard to find, inconsistent, incomplete or lumped together with other categories such as race. Unquestionable though the gender gap still exists, and even

scarcer in the engineering field and technical areas, which is the core and engine of Poland gas business (Oil and Gas UK, 2015: 5). The shortage of labour adds to demographic challenges for which measures should be taken by the Government to ensure gender balance in the workforce in the petroleum sector (ILO, 2012). Findings from the Boston Consulting Group study collaborate on the study findings.

The study findings showed that about 72.5% of the respondent had ten years or more experience in the industry. These findings are the significant result that collaborates previous research on the expertise required before being employed in the sector.

8.2 Process of performance appraisal

Employees in the Civil Service in Ghana are noted for lackadaisical attitude towards performance appraisal system due to organisational culture in the public service in Ghana. Civic organisations in the oil and gas industry have to implement annual performance appraisal system which bears characteristics of traditional evaluation process technique (Wood, 1999; World Bank, 2008a; Ohemeng, 2011; Mensah and Babu, 2015). In the last three decades, performance management has attracted critical attention of employers and organisations attempted to enhance efficiency, effectiveness, and accountability of public sector organisations in Ghana (Dodoo, 1997; Antwi, 2005; GOG, 2007; Antwi et al., 2008; Ohemeng, 2011; Mensah and Babu, 2015; Ohemeng et al., 2015). Research has shown that since the introduction of performance appraisal in the public sector in Ghana, public sector workforce awareness rate has been high, but participation has recorded a low figure (Latham and Wexley, 1994; Oldham, 1976; Dodoo, 1997; Antwi, 2005; Antwi, 2006; GOG, 2007; Antwi et al., 2008; Ohemeng, 2011; Mensah and Babu, 2015; Ohemeng et al., 2015).

The study findings suggested a high rate of staff awareness (87.2%) of performance appraisal in the four organisations, which corroborate previous research findings. These findings come

as no surprise in the sense that earlier findings from previous research in public sector performance appraisal pointed in the same direction. It is important to note that many studies of performance appraisal in public sector organisations in Ghana indicate that government of Ghana attempt has failed (Dodoo, 1997; Antwi, 2006; Ministry of Public Sector Reform, 2006; Wereko, 2008; Ohemeng, 2009; Ohemeng, 2011.). Previous studies revealed that lack of active participation and engagements are a significant factor, and it is consistent with the findings of the present study which showed that in general about 72.1% were appraised in 2014, while about 27.9% are not. In comparison, GG (41.1) per cent were not evaluated in 2014. The research conducted by Analoui and Fell (2000) is consistent with the present study findings. Their investigation revealed that staff had limited knowledge about the appraisal process which corroborates the interview statement made by HRD2 as captured in this study. However, as TDD2B stated, in terms of procedure, his organization appraise staff on an annual basis which is consisting of previous research conducted on performance appraisal, Ohemeng et al., (2015: 186), and other studies have also shown that performance appraisal is an annual affair (Dodoo, 1997; GOG, 2007; Antwi, 2005; Antwi et al., 2008; Antwi et al., 2008; Ohemeng, 2011; Mensah and Babu, 2015). The Structural Adjustment Program (SAP I, SAP II) probably failed due to the inactive participation of employees and the weaknesses in the HR department that were expected to implement the program, which corroborates the statement made by HRD2 (HRD2D; Hutchful, 2002). It is argued that the inability of the Civil Service Sector Reforms Program to improve the service's performance through job analysis, classification, and reassignments including rationalisation of staff levels led to the establishment of the new program. The Civil Service Performance Improvement Program (CSPIP) to improve employees performance and efficiency in the public organisation (Antwi et al., 2008; Antwi et al., 2008; Ohemeng, 2009; Ohemeng, 2011). Despite the development and signing of a performance agreement between government and employees at the various ministries,

departments and agencies, active participation in performance management and appraisal failed due to limited knowledge of the performance appraisal system in the petroleum industry in Ghana. The public service in Ghanaian public sector is vague and unclear performance standards (Bratton and Gold, 1999; Agyenin-Boateng, 2006; Boxall and Purcell, 2011).

Antwi *et al.*, (2008) attributed the inactive participation to poor performance appraisal (PA) design and implementation while Adei and Boachie-Danquah (2003) argue that PA has failed because the organisations thought the mere signing of performance contracts could work effectively without recourse to awareness creation and education. Based on Ohemeng's research on performance management, the identified specific factors which corroborate the study findings are lack of staff's involvement, education (knowledge) and participation (Ohemeng, 2011). The culture, belief and political influence have a negative impact on HRM in the public sector in Ghana (Izuogu, 2015). The effectiveness of performance appraisal depends on the extent to which public sector employees accept the system as part of the organisation's culture (Ohemeng, 2011). Research in Ghana indicates there is a significant relationship between organisational culture and employee behaviour (Apau and Yobo, 2014). Corporate culture shapes how the employees are expected to behave and adhere to rules and their approach to work (Ehtesham *et al.*, 2011; Apau and Yobo, 2014). Research shows that organisational culture influences employee behaviour in the Ho Municipal Assembly in the Volta Region of Ghana (Apau and Yobo, 2014). It revealed that more employees live by the norms and values of the organisation.

The study findings revealed that the organisational culture in Ghana's public sector affects performance appraisal. The situation in Nigeria is not different because human resource management is impacted or influenced by the community's culture as well as political culture. Ayoade (2000) opined that subjective recruitment, selection, appointment and promotion in public service are influenced by an organisation's culture, resulting in recruitment of

incompetent people to the public sector in Nigeria. For example, the ratio of Nigerian employees in Saipem and that of expatriates (Izuogu, 2015). The culture, belief and political influence have a negative impact on HRM in the public sector in Ghana (Izuogu, 2015).

Research has shown that prompt and positive feedback embedded in the performance management system cannot be overlooked (Dodoo, 1997; Torrington et al, 2002; Agyenin-Boateng, 2006; Ministry of Public Sector Reform, 2006; Analoui, 2007; Antwi et al., 2008; Antwi, Analoui, Nana-Agyekum, 2008; Ohemeng, 2009; Wereko, 2008; Ohemeng, 2011; Armstrong, 2014). The study revealed that in general, about 57.9% received feedback from the last performance appraisal in 2014. It is not surprising to find out that the study findings suggested that 42.1% of staff are not given input after performance appraisal, it corroborates previous research findings (see Table V). However, GNPC (72.3%) and PC (81.8%) received feedback from appraisers which requires improvement.

Comparatively, a high percentage of ME staff (63.9) received no feedback which is consistent with the literature and previous research findings (see Table V). These findings are consistent with Mayer's (1991) performance appraisal feedback, performance management in the public sector by Mensah and Babu (2015), and many other research (Ayee, 2001; Colyvas, 2006: 306; Latham and Mann, 2006: 296; Owusu, 2006; Aguinis, 2009; Ohemeng, 2009; Ohemeng et al., 2015; Su and Baird, 2016; Maran et al, 2018; Ohemeng at al., 2018)

According to Mensah and Babu's research, about 70% of the respondent noted that for performance appraisal to work effectively and efficiently, there is the need for prompt and positive feedback to employees (Mensah and Babu, 2015: 103). Colyvas and Powell argue that delayed feedback defeats the purpose and objectives of performance appraisal (PA), there is the need for appraisers to give prompt and positive feedback (Colyvas and Powell, 2006: 306). According to a survey conducted by The Industrial Society (1997), one of the three most critical

functions of appraisal was the provision of prompt and constructive feedback on employee performance.

In support of the issue of 'no-feedback' or 'delayed-feedback' associated with public sector organisation in the oil and gas sector, previous research findings suggest compromised performance appraisal in Ghana's public organisations. Feedback is crucial to improving the motivation of employees, and criticism, if delivered in the appropriate platform will help boost staff's confidence (Analoui, 2007). It is argued that due to 'no-feedback' or delayed-feedback in the petroleum sector organizations, the PA is fraught with abuse, bias, favouritism and political influence which makes the credibility of the PA process questionable (Nkrumah, 1991; Ayee, 2001; Antwi, 2006; Latham and Mann, 2006; Antwi et al., 2008; Aguinis, 2009; Bawole et al., 2013; Ohemeng et al., 2015).

Previous research has also suggested that feedback mechanism embedded in the performance appraisal system is critical to the sustenance and effectiveness of the system (Aguinis, 2009; Bawole et al., 2013; Ohemeng et al., 2015).

Performance management should be seen as a continuous process of measuring and identifying performance gap, recommend development and ensure coaching is inherent in the process (Latham and Mann, 2006; Aguinis, 2009). A public employee in Ghana is inclined to seek feedback where the perceived benefit outweighs the perceived costs (Asumeng, 2013). It is further argued that the implication in organisations when managers understand the usefulness of feedback in enhancing performance and development, employees will take appraisal issues seriously. Ghana's public-sector organisations are noted for a culture of lackadaisical attitude to performance appraisal.

9. Conclusions

In this study, the objective was to explore the local skill gap as well as the effectiveness of performance appraisal as a tool to build local skill competency. The localisation of the emerging oil and gas industry in Ghana is vital to the survival and prudent utilisation of the resources. Some researchers have revealed a wide local skill gap in the industry. According to the study findings, there is a vast local skill gap which poses a threat to the survival and a drain on the nation's purse. The government of Ghana has attempted to address the existing local skill gap by enacting local content legislation Law (LI2204) to regulate stakeholders in the industry. Considering the findings, there is a need to build the capacity of HR in the oil and gas industry.

Practical contribution: The article attempts to contribute to public organisations in the petroleum industry by demonstrating local skill capacity inadequacy. Additionally, it shows a wide local skill gap in civic organisations. For example, it reveals inefficiencies of operations and staff capacity. There are policy implications for HRM and associated economic and financial underpinnings. It is noteworthy to add that funds for local skill capacity building must be adequate and release on time by the government and the other stakeholders.

This article recommends proper and adequate communication to Ghanaians about the technical nature of the industry and to educate them on potential job requirements of the petroleum industry. The paper further recommends that recruitment into the oil and gas sector should place much emphasis on young graduates through internship and professional integration programmes to build on their experience. It is also reiterated that there are a need and urgency to educate Ghanaians on the current and future requirements, to inform the citizens that shortage or mismatch of expertise leads to ever increasing unemployment.

It was also argued that the PA system in its current form signifies inefficiency which impacts negatively on policy-making decisions. Thus, it is recommended the adoption of a performance management system that incorporates performance appraisal which encapsulates employee development, rewards, and retention. For performance appraisal to be valid, appraisers must ensure continuous, prompt and constructive feedback. It is argued that ‘no-feedback’ or delayed-feedback, the PA is fraught with abuse, bias, favouritism and political influences making the credibility of the PA process questionable.

To address issues associated with performance appraisal system. The public organizations in the oil and gas sector should see performance appraisal as a continuous process and not just annual project which has become yearly practice in the general area in Ghana, and also to adopt a modern performance appraisal technique such as Performance Management System, for example Key Performance Indicators which should cut across all public sector organisations in the industry to help management to set targets and direct attention to individual or group performance targets and use more than one form of performance appraisal, for example, 360-degree employee appraisal technique.

Theoretical Contribution: This study makes an essential contribution to the debate on the perception of the inadequacy of local skills and competency in the oil and gas industry in Ghana. It highlights the existing shortcomings in local skill capacity that relates to gender, ageing workforce, experiences required in the industry as well as the strategies and practices in the sector. Previous studies have examined legislation and its impact on oil and gas management and utilisations, but not by local skills capacity or competency building. Inadequate local skill capacity is impacting negatively on the socio-economic status of Ghanaians. For example, it was found that Ghana National Gas Company spend about \$24 million annually on the salaries of foreign expatriates who operated the Gas Plant until 2014. It is considered a threat to the operations of the Gas plant. Finally, it must be acknowledged

that further empirical research as the present one will pave the way to better understanding of the PA and its operations and impact in the sector organisations.

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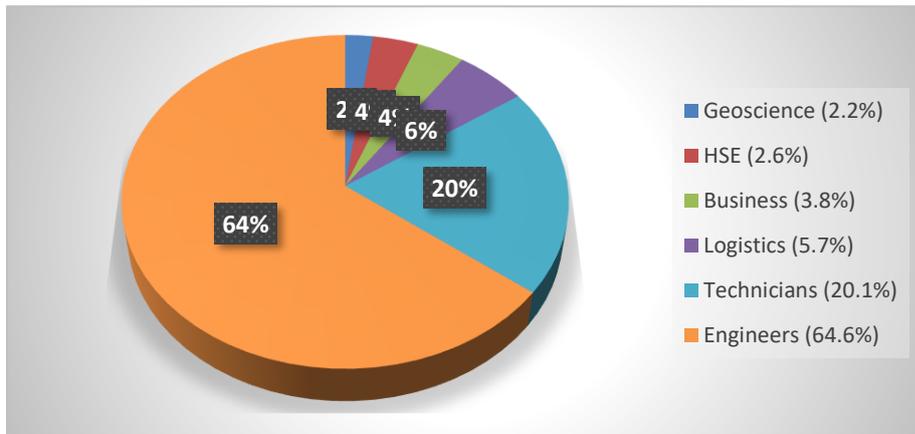
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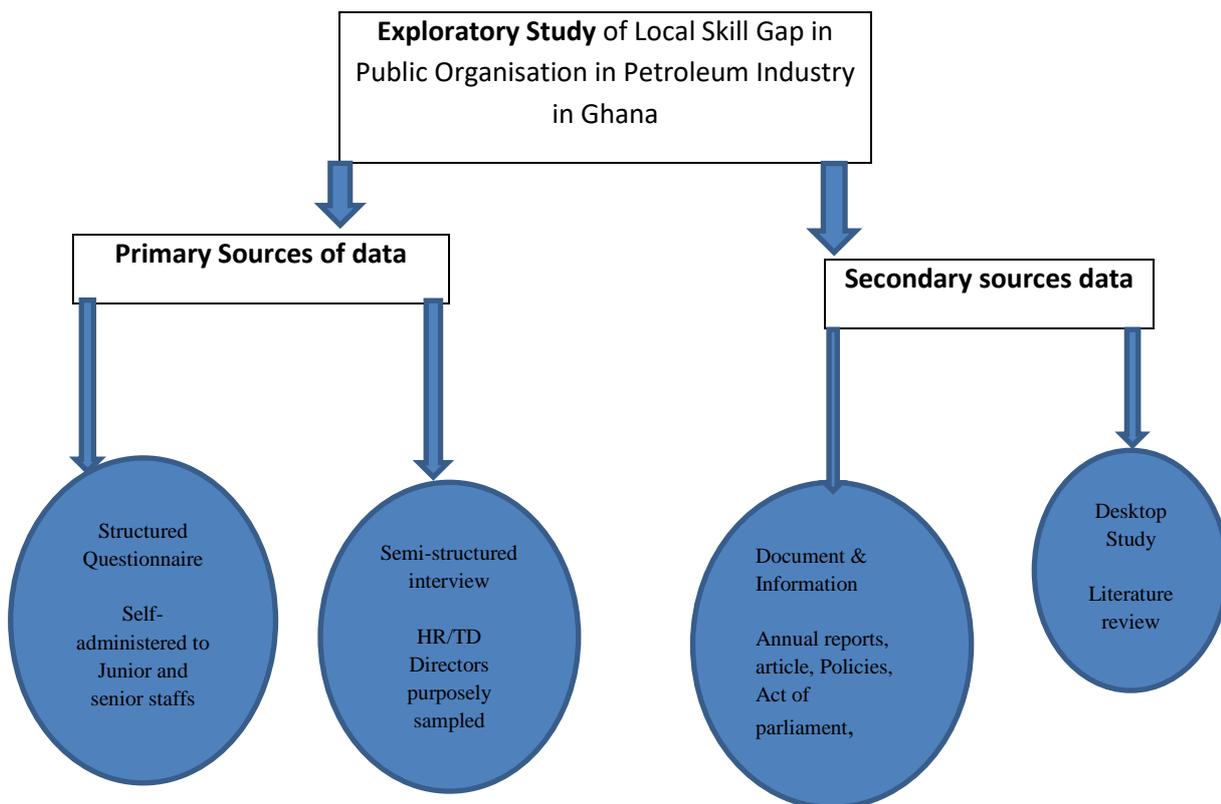
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Figure I: Skills in demand in the Ghana oil and Gas industry



Source: Petroleum Commission, (2015)

Figure II: Approach and sources of data collection instruments



Source: Adapted from Antwi and Analoui (2008: 509)

Table I: Skills in demand in the Ghana oil and Gas industry

Skills Set Area	Number of visas issued	Percentages (%)	Specific Skill in Demand
Geoscience/Science	17	2.2	Geology, Geophysics, Chemistry,
HSE	27	3.6	Environmental, Science, Safety, Health
Business	29	3.8	Accounting, Administration, Finance, Management Taxation
Logistics	43	5.7	Logistics, Materials, Assets, Contract, procurement
Technicians	152	20.1	Welders, Electricians, Control Room Operator, Mechanical, Installation, Maintenance, Sandblaster
Engineers	488	64.6	Construction, Production, Operations, Completion, Cost, Drilling, Mud, Well, Test, Facility
TOTAL	756	100	

Source: Petroleum Commission, 2015.

Table II: Perception of HR Gap in the organisation (N=266)

HR Gap %	Overall score	GNGC %		GNPC %		PC %		MOEP %		Total
Below 50	93	41	73.2	45	69.2	4.0	9.1	3.0	4.9	41.2
50-70	68	10	17.9	14	21.5	14	31.8	30	49.2	30.0
Above 70	38	0.0	0.0	4.0	6.2	24	54.5	10	16.4	16.9
I don't know	27	5.0	8.9	2.0	3.1	2.0	4.5	18	29.5	11.9
Total	226	56	100	65	100	44	100	61	100	100

*GNGC=Ghana Gas Company, GNPC= Ghana National Petroleum Corporation, PC= Petroleum Commission, MOEP= Ministry of Energy.
Jnr Staff=junior, Snr Staff=Senior, Percentages = %

Source: Data Analysis

Table III: Ages of Respondents and Companies (N=226)

Age	Overall Score	Gender		Companies								Jnr. Staff	Senior Staff	Total %
		Mal	Female	GG		GNPC		PC		ME				
<30	24	14	9	11	19.6	4	6.2	6	13.6	15	24.6	13	11	10.6
30-49	60	40	20	15	26.8	20	30.8	8	18.2	10	16.4	15	45	26.6
50>and above	142	121	22	30	53.6	41	63.1	30	68.2	36	59.0	21	121	62.8
Total	226	175	51	56	100	65	100	44	100	61	100	49	177	100

Source: Data Analysis

Table IV: Efficiency of HR Strategy in the Organization (N=266)

Rate of Efficiency	Institutions								Total %
	PC	%	GNPC	%	MOEP	%	GG	%	
Efficient	35.0	79.5	57.0	87.7	17.0	27.9	30	53.6	65.0
Not Efficient	2.0	4.6	5.0	7.7	35.0	57.4	14	25.0	21.3
I don't know	7.0	15.9	3.0	4.6	9.0	14.8	12	21.4	13.7
Total	44	100.0	65.0	100.0	61.0	100.0	56.0	100.0	100.0

*GG=Ghana Gas Company, GNPC= Ghana National Petroleum Corporation, PC= Petroleum Commission, ME= Ministry of Energy. Jnr Staff=junior, Snr Staff=Senior, Percentages = %

Source: Data Analysis

Table V: Feedback from appraisers (N=266)

	Overall score	Organisation								Total %
		GG		GNPC		PC		ME		
Yes	131	26	46.4	47	72.3	36	81.8	22	36.1	57.9
No	95	30	53.6	18	27.7	8	18.2	39	63.9	42.1
Total	226	56	100	65	100	44	100	61	100	100

Source: Data Analysis

Table VI: Efficiency of performance appraisal system (N=266)

Level of Efficiency	Overall score	Organisation								Total %
		GG %		GNP %		PC		ME %		
V/Efficient	54	4	7.1	42	64.6	2	4.5	6	9.8	23.9
Efficient	69	24	42.9	15	23.1	19	43.2	11	18.0	30.5
N/efficient	80	21	37.5	8	12.3	19	43.2	32	52.5	35.3
I don't know	23	7	12.5	0.0	0.0	4	9.1	12	19.7	10.2
Total	226	56	100	65	100	44	100	61	100	100

V/Efficient=Very Efficient, N/Efficient = Not Efficient

Source: Data Analysis