

# Assessing Educational Needs of Workers on Effective Health, Safety, Environment and Quality (HSEQ) Management System in Ghana's Oil Retail Industry

John Kwame Boateng<sup>1\*</sup> Alfred A. Buahing<sup>2</sup>

1. Institute of Continuing and Distance Education, University of Ghana,  
P. O. Box LG 31, Legon, Accra, Ghana
2. Engen Ghana Limited, Accra, Ghana

\* E-mail of the corresponding author: [jboat2009@gmail.com](mailto:jboat2009@gmail.com)

## Abstract

The study examined the knowledge of workers in ten Ghanaian indigenous and multinational oil marketing companies and assessed educational needs of workers to understand how the implementation of the Health, Safety, Environment and Quality (HSEQ) Management System would help in promoting health, safety, environment and quality culture in Ghana's oil retail industry. A semi-structured interview for management staff, managers, dealers as well as forecourt attendants of retail sites was used. The study revealed that, multinational oil marketing companies implemented HSEQ management systems in their quest to strengthen the safety culture of their companies whereas the indigenous oil companies saw implementation of such HSEQ management system as an additional overhead cost. Moreover, their approaches to achieve safety culture were deficient and failed to embrace holistic approach relying on interventions that lacked effective communication between major partners and stakeholders. The need for companies to formally communicate a procedure for the management of workers compensation claims to all employees prior to engagement and provide HSEQ training programme for supervisory personnel, educating subcontractors about HSEQ policies and procedures was expressed. Educational needs were also expressed for skills to investigate HSEQ incidents and ability to write reports and develop written action plans for prevention of similar incidents in future.

## 1.0 Background

The oil and gas industry is one that is naturally dangerous – fire and explosion are natural hazards of the product, mass and power inherent in the means of production, refinery, bulk storage, transportation and retail. Uttal (1983) defined safety culture as: 'Shared values (what is important) and beliefs (how things work) that interact with an organization's structures and control systems to produce behavioural norms (the way we do things around here)'. Thompson et al. 1996 speak of safety culture; as something an organization is (the beliefs, attitudes and values of its members regarding the pursuit of safety), and as something that an organization has (the structures, practices, controls and policies designed to enhance safety).

Both are essential for achieving an effective safety culture. Hofstede (1994), shows that hard as it is to change the attitudes and beliefs of adults by direct methods of persuasion, acting and doing, shaped by organizational controls, can lead to thinking and believing. An ideal safety culture is the 'engine' that drives the system towards the goal of sustaining the maximum resistance towards its operational hazards, regardless of the leadership's personality or current commercial concerns. Weick (1991) described safety as a dynamic non-event.

It is easy for non-events, to be taken for granted, particularly in the face of continuous and compelling productive demands (Buahing, 2012). As pointed out by Weick, (1991), safety is invisible in the sense that safe outcomes do not deviate from the expected, and so there is nothing to capture the attention. If no accident happened, people presume that nothing is happening, and that nothing will continue to happen if they continue to act as they had always done. In here lies a dangerous deception. This is so because investments in dynamic inputs are required to create stable outcomes.

According to Weick (1991), the best way to induce and then sustain a state of intelligent and respectful wariness, in the absence of frequent bad events, is to gather the right kinds of data. This means creating a safety information system that collects, analyses and disseminates information from incidents and near misses, as well as from regular proactive checks on the system's vital signs. All of these activities can be said to make up an informed culture in which those who manage and operate the system have current knowledge about the human, technical, organizational and environmental factors that determine the safety of the system as a whole.

### **1.1 Ghana's Petroleum Sector**

Ghana's petroleum sector is both upstream and downstream. The upstream activities include the procurement and refining of crude oil by the nation's only petroleum refinery, Tema Oil Refinery (TOR). The downstream activities include the marketing and distribution of petroleum products by Oil Marketing Companies (OMCs) and the pre-mixing of petroleum products for other industrial uses. OMCs operating in Ghana are mainly multinationals; however the last decade has seen an increase in the establishment of a number of small to medium scale OMCs.

The downstream sector comprises refining, storage, importation, transportation, distribution and marketing of petroleum products (Buahing, 2012).

Downstream petroleum business operations have been dominated by indigenous Ghanaian oil marketing companies for several decades. Most of these companies have been dominant players in the bulk storage, transportation and retailing of petroleum products. The marketing and distribution of oil products is largely in the hands of private oil marketing companies. These include Total, Oando, Engen, GOIL and other small private operators (Buahing, 2012).

The National Petroleum Authority (NPA) has been mandated by the NPA Act, 2005, Act 691, to regulate, oversee and monitor activities in the petroleum downstream industry and to establish a unified petroleum price fund. It has been given the additional responsibility of granting license for the supply, bulk storage, transportation and retailing of petroleum products. In exercising this mandate, the NPA, stipulates in their Petroleum Products Retail Station License Clauses 4.0 and 6.0 on Health, Safety & Environment (HSE) and Quality & Purity of Petroleum Products. Currently, there are over sixty (60) OMC's in Ghana engaged in the business of the supply, bulk storage, transportation and retailing of petroleum products (Buahing, 2012).

Employers are required to examine and write down these workplace risks and record what to do about them. Ultimately, assessing educational needs about HSEQ risks means that anything in the workplace that could cause harm to employees, other people (including customers, visitors and members of the public) is carefully examined to identify shortfalls and bottlenecks for improvement. This allows you to estimate the magnitude of risk and decide whether the risk is acceptable or whether more precautions need to be taken to prevent harm. Employers are required to implement any improvements considered necessary by the risk assessment.

### **1.2 Objectives**

The aim of the study was to assess the educational needs of workers on the role of effective health, safety, environment and quality (HSEQ) management system in Ghana's oil retail industry. Specifically:

The study seeks to:

- Examine the key issues in health, safety, environmental (HSE) in Ghanaian oil retail marketing industry
- Assess respondents comprehension level of HSEQ management system
- Investigate whether there are training programs on HSEQ in the oil industry
- Evaluate Management attitude towards HSEQ management system in the oil industry
- Determine what training needs prevails for workers on the role of HSEQ management system in Ghana's oil retail sector

### **2.0 Literature Review**

A growing number of studies have been conducted to define and assess Health, Safety and Environment (HSE) culture in a variety of complex and high-risk industries. The purpose of the present study is to review role effective safety management system play in promoting excellent HSE culture.

Over the past several years, organizations in high-risk industries such as petroleum downstream and aviation have become increasingly aware of the role that safety culture plays in shaping reliable and safe operations. As a result, players and investors working in this and other high risks industries such as manufacturing, construction, chemical have also begun contemplating the role that safety culture might play in mitigating risks within these settings. The purpose of the present chapter, therefore, is to;

1. Establish the theoretical framework for the study
2. Review and synthesize previous health and safety culture literature
3. Analyze the role that an effective health and safety management system would play in achieving excellent safety culture.
4. Establish the relationship between safety culture and implementation of effective safety management

system.

## **2.1 Theoretical framework for the study**

### *Behavioural Decision Model*

The theoretical framework for this study was based on a model used by Cudmore & Beardwell (2008), A key question is how 'culture' and other elements of health and safety processes and practices can be altered to influence people and how they act in relation to risks. People decide how to behave based on their assessment of risks and hazards present in their work environment, their perceived ability to do something about them, and how easy or hard it is to act due to their perception of factors in their working environment. They then try to carry out that behaviour. Their experience in carrying out that behaviour - whether it is achievable or not, the impacts the behaviour has - is then incorporated into their mental model of the work environment. This then influences their future behavioural choices. Fundamentally people will consider if there is anything in the work environment that is dangerous (Hazard identification). And they will assess how dangerous it is (Risk assessment). People will like to know what can be done about it (Identification of appropriate action).

As individuals, they would want to know what they are able to do about it (Identification of actions that the individual feels confident that they can carry out effectively). People also would want to know the implications of their actions (Identification and assessment of perceived implications to the individual of carrying out identified action).

Key elements that have been identified from the literature (including: Cudmore and Beardwell, 2008) as making people and organisations focus on good performance in safety culture are:

- Strong, consistent senior management commitment and leadership to achieving good health and safety that is visible to members of their organization
- Visible line-management involvement and interest in supporting staff in improving health and safety – people follow the lead of their line-managers
- A shared belief between members of an organisation that management, from the top down, are serious about safety and that staff will not be rewarded rather than penalized for acting to improve it
- Organisational procedures and practices that support safe working; through providing best practice and feedback on current performance and enabling upward and downward feedback about safety issues and concerns, current performance and suggestions for improvement
- People may not know what they are expected to do in relation to safety and their work activities. They know that they are accountable and responsible for working safely. They may lack the necessary given feedback and support on achieving it. They may not be involved in identifying and managing their risks.

## **2.2 Company systems**

These are company-specific standards and systems for managing HSE issues. Company systems can be adapted to the unique structure and objectives of the company and may exceed typical industry requirements. Due to their unique nature, company specific systems may not be well-suited beyond the originating organisation. The cycle is based on ISO 9001 (quality management), ISO 14000 (environmental management), and OHSAS 18001 (Occupational Health) are designed for an OHS management system. The key elements of such a management system are set out above (HSE, 1997).

Effective HSEQ Management means developing, coordinating, and controlling a continuous improvement process by setting and adjusting HSEQ standards. The corporate policy is summarized in a vision, containing perspectives for the future and providing an idea of identification for all members of the organization. Policy and strategy are translated into planning processes. Both internal and external assessment methods should be used for the evaluation of a strategy's effectiveness and efficiency. Regular reviews of performance based on data from monitoring activities and from audits of the HSEQ management system may serve as instruments (HSE, 1999).

## **3.0 Methodology**

### **3.1 Research Design**

The study employed both qualitative and quantitative data collection method

### **3.2 Population**

The target population of this study consisted of the management of Oil Marketing Companies (OMC's), Fuel Service Station Dealers and Managers and Fuel Service Station Forecourt Attendants (front liners) in the Accra-Tema metropolis. In all the population for the study was estimated to be 500.

### **3.3 Sample size**

The sample consisted of two (2) top management of members of the 10 Oil Marketing Companies (OMC's); twenty individuals in all; 40 Fuel Service Station Dealers/Managers and 40 Fuel Service Station Forecourt Attendants (front liners) in the Accra-Tema metropolis. In all the sample size was 100.

### **3.4 Sampling technique**

Stratified, simple random method was used. A stratified sampling method was used to put the respondents into various strata as Oil Marketing Companies (OMC's), Fuel Service Station Dealers and Managers, and Fuel Service Station Forecourt Attendants (front liners). A simple random method was used to select the ten (10) OMC's. A list of all names of the Oil Marketing Companies (OMC's), was obtained from the National Petroleum Authority (NPA) manager in charge of Human Resource. The names were written on pieces of paper folded and put in a cup. Samples were picked without replacement. One was picked randomly, it was then shaken, another one was picked again and it was shaken again, this process continued until all the 10 Companies were picked. In the case of the management members, they were purposefully selected. This was because of the sensitivity of the oil industry, thus the companies determined the members who had to answer the questions. The same process was replicated to select all the subjects in the Fuel Service Station Forecourt Attendants (front liners). However, with the Fuel Service Station Dealers/Managers, the researcher adopted purposeful method to select them.

### **3.5 Data collection instrument**

A questionnaire was used as the main data collection instrument. The questionnaire was used due to the fact that it allowed the independent will of the respondent. Three categories of separate questions were answered. Management of Oil Marketing Companies (OMC's) answered 34 closed ended questions, with 2 opened ended questions. The Fuel Service Station Dealers and Managers also answered 12 closed ended questions, with 2 opened ended questions and the Fuel Service Station Forecourt Attendants (front liners) answered 23 questions

### **3.6 Administrative procedure**

Respondents were met at their convenient hours to fill the questionnaires. Researchers distributed the questions to the participants by moving from one office to the other. Respondents had up to a week to fill the questionnaires. On the third day, the research assistant called respondents on the telephone and followed up with a visit to their offices to find out whether they had completed. On the sixth day the researcher went round to their offices and collected completed questionnaires.

### **3.7 Data Processing**

After collecting the entire questionnaire, a check for completeness was done to ensure that the incidence of non-response to some questions was reduced. Data were presented as tables and chart.

## **4.0 Results and discussion**

In all 100 questionnaires were given out and 90 questionnaires were received given a response rate of 90%. Assessments of educational needs are by the views or perceptions of 20 top management members coming from ten oil marketing companies; thirty fuel service station dealers/managers and forty fuel service station forecourt attendants (front liners).

### **4.1 Perception of Top Management on Educational Needs**

Of the 20 top executives whose opinions were sought on HSEQ educational needs of workers in the downstream oil sector in Ghana, 8 (40%) had less than 5 years working experience in the sector; 7 (35%) had working experience ranging between 5 to 10 years; 2 (10%) had working experience ranging between 11 to 15 years and 3 (15%) had working experience ranging between 16 to 20 years. This shows that 60% of respondents in this category of research subjects had been working in the oil downstream sector for 5 to 20 years. Of the 20 top executives considered, 6 (30%) worked as CEOs, 4 (20%) worked as Health and Safety Managers and 10 (50%) worked as Operations Managers.

Regarding the existence of written Health and Safety Policy, Table 1 indicates that 10 respondents representing 50% strongly disagreed that such a policy existed; four respondents representing 20% remained uncertain, with 5 respondents (25%) agreeing (i.e. strongly agree/ agree). What above response implies is that, companies in the downstream oil sector marketing oil may not have a formal written statement on Health and Safety issues.

In examining perceptions of top management as to whether the Board of Directors take the issue of health and safety very serious, the responses from the Table 2 showed that 5 (25%) respondents disagreed with the statement, with 7 (35%) respondents being uncertain about the position of Board of Directors with regards to HSEQ issues. Eight (40%) of respondents agreed with the statement that Board of Directors are very concerned about HSEQ issues pertaining to companies in the downstream oil sector.

On perceptions about educational needs for health and safety management systems planning, 8 executives (40%) responded in the affirmative, 7 executives (35%) responded no, while 5 (25%) were not sure about whether the companies they serve had in place mechanisms that regularly reviewed by management of HSEQ performance (Table 3). On HSEQ training programme for supervisory personnel, 8 top executives (40%) confirmed that it is so whilst 10 (50%) said it is not so specifying a need. Two top executives (10%) were not sure about the statement.

**Table 1: Existence of written Health and Safety Policy**

<b>Responses</b>	<b>No of Respondents</b>	<b>Percentage</b>
Strongly Disagree	10	50
Disagree	1	5
Uncertain	4	20
Agree	3	15
Strongly Agree	2	10
<b>Total</b>	<b>20</b>	<b>100</b>

**Table 2: Perception of Top Management on Concerns of the Board of Directors towards HSEQ Issues**

<b>Responses</b>	<b>No of Respondents</b>	<b>Percentage</b>
Disagree	5	25
Uncertain	7	35
Agrees	8	15
<b>Total</b>	<b>20</b>	<b>100</b>

Concerning whether all employees arriving on site for the first time receive company HSEQ induction training in addition to any project induction, the Table 3 reveals that, 8 top executives (40%) responded in the affirmative whilst 12 (60%) responded in the negative. On whether the companies these top executives served formally communicated a procedure for the management of workers compensation claims to all employees prior to engagement, results showed a mixed result. Eight top executives (40%) responded in the affirmative while 8

(40%) responded no. Probing further on whether all company sites have an established Emergency Plan, revealed that 10 out of the 20 top executives (50%) thinks this is so whilst 6 (30%) responded no, 4 (20%) could not declare their stand (Table 3).

**Table 3: Perceptions of Top Management on Educational Needs for Health and Safety Management Systems Planning**

Educational Need	R		E		S		P		O		N		S		E	
	Yes						No						Not sure			
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Regularly review by management of HSE performance	8	40	7	35	5	25										
The company has a HSEQ training programme for supervisory personnel	8	40	10	50	2	10										
All employees arriving on site for the first time receive company HSE induction training in addition to any project induction	8	40	12	60	0	0										
The company formally communicate a procedure for the management of workers compensation claims to all employees prior to engagement	8	40	8	40	2	20										
All company sites have an established Emergency Plan	10	50	6	30	4	20										

The table 4 reveals expressed educational need in first-aid training for employees (50%). The expressed educational need for HSEQ responsibilities for management was 60% and for awareness creation about HSEQ issues (60%). Regarding procedures to ensure that all subcontractors have education about HSEQ policies and procedures the expressed educational need by the perceptions of the top executive was 60%.

Educational need of 60% was also expressed for systems that should be in place for hazard identification, risk assessment and control (Table 4). Other areas where educational needs were expressed included; investigating HSEQ incidents and reporting accordingly by management (60%); Emergency preparedness (45%); Developing action plans for prevention of negative HSEQ incidents (60%); Injury management and rehabilitation programme for employees (40%).

**Table 4. Educational Needs for Health and Safety Management Systems implementation and Monitoring**

	R E S P O N S E					
	Yes		No		Not sure	
	Freq	%	freq	%	freq	%
The company provide first-aid training to employees	10	50	7	35	3	15
There is an organisation chart showing HSEQ responsibilities for management	8	40	9	45	3	15
Documented system in place to ensure all employees are aware of HSEQ	8	40	9	45	3	15
The company has procedures to ensure that all subcontractors have HSEQ policies and procedures explained to them	8	40	5	25	7	35
There are system in place for hazard identification, risk assessment and control	8	40	7	35	5	25
The company has emergency drills	11	55	0	0	9	45
Reported incidents are investigated by company management and reports always prepared	8	40	10	50	2	10
Investigation reports include a written action plan for prevention of similar incidents	8	40	10	50	2	10
There is an injury management and rehabilitation program in place for employees who are injured at work	12	60	3	15	5	25

#### 4.2 Educational Needs of Retail Service Station Managers on HSEQ

This section presents findings from the thirty (30) retail service station managers. On the basis of yes and no responses, retail service station managers have showed (in Table 5)

Determining whether management has ensured that employees in the retail sector are familiar with the hazardous chemicals they use day, including emergency procedures. The Table 5 depicts that out of the 30 retail service managers 18 (60%) affirmed the statement, 9 (30%) disagreed that the employees are familiar with the hazardous chemicals they use daily and are also familiar with emergency procedures. Three respondents (10%) could not decide on the issue. Regarding emergency response plan and training, the Table 5 revealed that out of the 30 respondents 17 (56.7%) affirmed the statement, 12 (40%) did not. Sixty-three percent of respondents affirmed the fact that there are accessibility to telephones and first aid kits in each work area, with necessary supplies available, and are with 8 (26.7%) rejecting the statement.



**Table 5: Perception of Retail Service Station Managers on Training opportunities in the downstream sector**

	R		E		S		P		O		N		S		E	
	Yes				No				Not sure							
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Employees are familiar with the hazardous chemicals they use daily, including emergency procedures	18	60	9	30	3	10										
The company has an emergency response plan for first aid and fire been developed	17	56.7	12	40	1	3.3										
Are emergency phone numbers posted	19	63.3	11	36.7	0	0										
First aid kits are easily accessible to each work area, with necessary supplies available, periodically inspected and replenished as needed	22	73.3	8	26.7	0	0										
The company organizes induction training when a new attendant joins the company	17	56.7	13	43.3	0	0										
You have safety meetings with your staff members	18	60	12	40	0	0										
The safety committee members been trained and instructed in duties, responsibilities, hazard identification and control, and accident investigation procedures	14	46.7	14	46.7	2	6.7										

### 4.3 Educational Needs of Service Station Forecourt Attendants on HSEQ

This section presents findings from the forty (40) service station forecourt attendants. On the basis of yes and no responses, retail service station managers have showed (in Table 5). It was revealed in the study that the level of service station forecourt attendants' understanding of the health and safety policy varied. Eleven (27.5%) of the staff rated their understanding of the health and safety policy as poor, but the majority of the respondents rated their understanding between average and excellent, with 29 (82.5%) stating that they had a good understanding of the HSEQ issues in the oil and gas industry.

Thus, the majority of the respondents had a good knowledge of the HSE policy in the industry, perhaps due to the awareness initiatives as well as the effectiveness of the medium used in communicating the policy to the staff. It was noted that the common means by which the health and safety policy was communicated to staff was during recruitment (45%) and seminar (17.5%).

The companies used diversified means to communicate information on health and safety policy to the staff. Of the 40 respondents 20 (50%) responded that induction training was given to them at the time they joined the company. In regards to respondents' awareness about the hazards or risk factors in their work area, only 1 (2.5%) responded that they did not know. Nineteen (47.5%) were not sure, even though half of the respondent were aware on the risk factors.

On the frequency at which service station forecourt attendants undergo health, safety and environment training on forecourt, it was revealed that 18 (45%) had undergone health, safety and environment training on forecourt quarterly, whilst 17 (42.5%) indicated that they had undergone health, safety and environment training on forecourt every six months. It must, however, be noted that 2 (5%) of the respondents said they had undergone health, safety and environment training on forecourt once in a year. Asked about the quality of HSEQ training



they had participated in, respondents had this to say (Table 6).

**Table 6: Quality of HSEQ training programmes respondents have participated in**

Quality of training	Frequency	Percent
Very poor	5	12.5
Poor	6	15
Good	23	57.5
Average	1	2.5
Very good	3	7.5
Excellent	2	5
Total	40	100

Eleven of the 40 respondents (27.5%) were not impressed with the quality of the training programme they have participated in and described them as either poor (15%) or very poor (12.5%), the majority of the respondents (57.5%) were impressed with the quality of the trainings they have participated in and rated them between average and excellent. Consequently, when the respondents were asked whether the methods used in the training programmes they have participated in had any impact on their skills, 31 (77.5%) as against 9 (22.5%) affirmed that indeed the methods in the training programmes had an impact on their skills. This indicates that perhaps the methods used in training programmes on the forecourt were very effective and made expected impact on the skills of the staff.

## 5.0 Conclusions

The aim of the study was to assess the educational needs of workers on the role of effective health, safety, environment and quality (HSEQ) management system in Ghana's oil retail industry. This is an attempt to probe into and discover the issues and prospects to promote excellent Health, Safety, Environment and Quality (HSEQ) culture in Ghana's oil retail industry. In determining the key issues in health, safety, environmental (HSE) in Ghanaian oil retail marketing industry. It was found out that, the oil industry is a very sensitive area that demands constant enforcement of strict rules and regulations.

There was an expressed educational need to constantly expose workers including top executives, service station dealers/managers as well as service station forecourt attendants to quality training in health and safety management systems planning. Of peculiar importance were providing all employees arriving on site for the first time with company HSEQ induction training in addition to any project induction, Also of importance was the need for the company to formally communicate a procedure for the management of workers compensation claims to all employees prior to engagement and provide HSEQ training programme for supervisory personnel, educating subcontractors about HSEQ policies and procedures,

With regards to health and safety management systems implementation and monitoring educational needs were expressed for HSEQ responsibilities for management, educating subcontractors about HSEQ policies and procedures, putting mechanisms in place for hazard identification, risk assessment and control. Educational needs were also expressed for skills to investigate HSEQ incidents and ability to write reports and develop written action plans for prevention of similar incidents in future.

Majority of respondents in the service station forecourt attendant category seemed to have a good knowledge of the HSEQ policy in the industry, perhaps due to the awareness initiatives as well as the effectiveness of the medium used in communicating the policy to the staff. It is however, worth it recalling that in Table 1, 75% of the top executive responded in the negative about the existence of HSEQ policy and their knowledge of it. This is interesting because it shows that people at the lower levels probably know a lot more about HSEQ policy and issues than those at the top.

It was noted that the common means by which the health and safety policy was communicated to staff was during recruitment (45%) and seminar (17.5%). It seems to appear that during the recruitment of service station forecourt attendants more emphasis is on health and safety policy was communicated to staff than when top

executives are being recruited. This could be as a result of differences in the job functions of front liners and top executives.

It further indicates that perhaps the methods used in training programmes on the forecourt attendants were very effective and made expected impact on the skills of the staff. The rationale for an effect of extensive training on organizational performance is further strengthened by research done by Harvey & Denton, (1999), Kamal, et al., 2008, Power & Waddell, (2004) as well as Senge, (1990).

The arguments put forth by these workers suggest that by upgrading employees' skills and knowledge, they are put in a better position to observe high-quality safety standards in the most cost-effective way, and contribute to company competitiveness through product or process innovation. It is important that in the Ghanaian downstream oil retail industry, all categories of workers (from top executives through retail service dealers/managers to front liners) be targeted for high-quality health, safety, environmental and quality standards in the most cost effective ways.

### 5.1 Recommendations

The following recommendations are made based on the findings of the study: There should be strong and holistic legal/regulatory frameworks to mitigate the anomalies in the oil and gas sector with regards to public health, safety, environment and quality. In addition, Ghana must have a sound and all-encompassing Health, Safety and Environmental and Quality Management System (HSEQ MS) Framework that would provide safety to lives of employees.

Furthermore, it is recommended that, the HSEQ MS Framework should be governed by an independent and legal multi-sectoral body that includes government representatives, non-governmental organizations and civil society groups on the environment. The body should be funded by the government and not solely on external funds to ensure consistency in its operations. Finally, there should be more capacity building programmes by the oil companies to strengthen their employees from top executives through retail service dealers/managers to forecourt attendants (frontliners) in health, safety, environmental and quality issues.

### 6.0 References

- Harvey, C. and Denton, J. (1999). To come of Age: Antecedents of Organizational Learning. *Journal of Management Studies*, 37 (7), 897-918.
- Health and Safety Executive (HSE; 1992): *Workplace Health, Safety and Welfare Regulations*, London: TSQ
- Health and Safety Executive (HSE; 1997): *First Aid at Work – Approved Code of Practice and Guidance Revised*, London: TSQ.
- Health and Safety Executive (HSE; 1999): *Management of Health and Safety at Work Regulations*, London, TSQ.
- Hofstede. 1994, *Cultures and Organisational: Intercultural Co-operation and its Importance for Survival* (London : Harper Collins).
- Kamal B., Clegg, C., Patterson M., Robbinson A., Stride C.B., Wall T.D., Wood, S.J. (2008): The Impact of Human Resource and Operational Management Practices on Company Productivity. A longitudinal Study. *Personnel Psychology*, 61, 467-501.
- Maxwell, R. (1984): Quality assessment in health. *British Medical Journal*, vol 288pp, 1470-2.
- Power, J and Waddell D. (2004): The Link Between Self-managed Work Teams and Learning Organization Using Performance Indicators. *The Learning Organization*, 11, 244-259.
- Senge, P.M. (1990): *The fifth Discipline: The Art and Practice of the Learning Organization*, Doubleday, New York.
- Thompson, Stradlinsg, Murphym, & O'Neill, P. 1996, Stress and Organisational Culture, *British Journal of Social Work*, 26, 647-665.
- Uttal, B. 1983, The Corporate Culture Cultures. *Fortune Magazine*, 17 October
- Weick, K. E. 1991, Organizational Culture as a Source of High Reliability, *California Management Review*, 29, 112-127.

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage:  
<http://www.iiste.org>

## CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

**Prospective authors of journals can find the submission instruction on the following page:** <http://www.iiste.org/journals/> All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

## MORE RESOURCES

Book publication information: <http://www.iiste.org/book/>

## IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digital Library, NewJour, Google Scholar

