

Suggestion Box as Tool for Improving Construction Site Health and Safety Performance in Nigeria

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Abstract

The importance of suggestion box for organisational efficiency has received much research attention in the banking, hospitals and manufacturing companies. In contrast, little or no research into suggestion box and construction site health and safety (H&S) performance has been conducted in Nigeria. Suggestion box is one of the simplest and most cost effective tools management has used and still using to collect information from workers, customers and the general public on how to improve products, services and workers' welfares. This simple management technique has the added advantage that allows anonymity of the worker or the public to make suggestion(s) on how to improve organisational efficiency.

This study aimed at exploring/examining the extent Nigerian construction companies employ this simple management tool for effective site (H&S) management. Questionnaire was structured from literature on H&S management which was administered to managers/supervisors and site workers. The questionnaire survey was complemented with walk about and interviews that were conducted with managers/supervisors and site workers from the five selected construction companies; one large, two medium and two small sized construction companies within the Lagos State.

The results findings revealed that majority of the construction companies did not provide suggestion box both at the head and site offices. Interviews conducted with managers/supervisors and workers however, indicated that provision of suggestion boxes by construction companies in respective of size could contribute positively to the improvement of site H&S performance. The study therefore, concludes that provision of suggestion boxes by construction companies will build trust between workers and management leading to improvement and sustainability of workplace H&S culture.

Keywords: Construction, health and safety, suggestion box, Nigeria

Introduction

Fatality and injury rates within the Nigerian construction industry remain a matter of concern to employers, government, workers and general public. The National Occupational Safety and Information Centre (NOSHIC) (2006) reports that accidents and fatalities rates in the industry are among the highest in all industrial sectors being second after transportation. The International Labour Organisation (ILO, (2010) estimates that at least 60,000 fatal accidents occur on construction sites around the world every year, that is one in six of all fatal work-

related accidents. The World Health Organisation (WHO, 2010) puts the figure much higher at 108,000 with construction responsible for 30% of all work related accidents.

More workers suffer from work related injuries and occupational diseases arising from exposure to dangerous substances such as dust, chemicals, and asbestos (Health and safety Executive (HSE, 2008, Goetsech, 2013). However, construction industry employs the highest number of skilled and unskilled workers and with highly paid comparable to other industries (Hughes and Ferrett, 2010). Despite being the economic hub of many nations, construction industry still remains the most dangerous, difficult and dirty place to work (WHO, 2010).

Employers have both moral and legal obligations to provide a working environment free from hazards. According to ILO (2010) it is a right for every working man or woman to return home without harm. ILO (2010) further maintains that of all of the deaths and injuries that occur in construction sites are foreseeable and preventable. A proactive H&S management system that allows workers to contribute in the decision making process of an organisation is for necessity. The workforce has direct experience of site conditions and often the first to identify the potential problems (Hinze, 2006, Geotsech, 2013).

However, management of construction H&S is complex. This can be traced to the unique nature of the construction industry due to its complex set of operations. Transient workforce is another major factors engendering implementation of proven H&S management systems in the industry (ILO, 2010). In addition, the industry is noted for its employment of rural migrant and unskilled workforce (Okorie and Smallwod, 2012). For these reasons, a proven management H&S system and culture become imperative.

Worker involvement in organisation's H&S decision making process has been recognised by researches amongst (Krause, 2003, HSE, 2008) as an important step for sustainable workplace H&S culture. Though management has the responsibility of establishing organisational H&S policy and allocate adequate financial resources for H&S. Effective H&S management system according Hughes and Ferrett (2010) should be proactive in nature and should be one that involves worker in the organisation's H&S decision making process.

Organisation that successfully manages workers' H&S, recognised the importance of worker's contributions as it concerns their worksites (ILO, 2010). Naoum (2011) argues that organisational H&S policies should align with other human resource management, designed to have a listen ear to workers complaints or suggestions and recommendations that promotes their well-being. Cooper (2010) and Lees and Austin (2011) argue that effective H&S management by a contracting organisation is largely dependent on involving and motivating workers to come up with suggestions and recommendations on how to improve their worksite conditions.

Many H&S management systems have been employed to improve construction site H&S performance such as: job safety analysis; incidents investigations; safety committee and safety representative. However, a gap may exist between management and implementation of the abovementioned H&S management systems that act as communication link between the committee and management (Lingard and Rowlinson, 2005). As a result, suggestion box has the potential to act as an important mechanism that gives a worker the right(s) to communicate directly with the management by coming up with ideas, suggestions, complaints or recommendations on how to improve organisational efficiency. Cesarini, Hall and Kupiec (2013), emphasising the importance of suggestion box as tool for H&S management, stated that it gives a worker the freedom to communicate directly with the

management unlike the safety committee or safety representative that acts as a communication link between worker and management.

Much has been researched on other areas of H&S management systems such as safety representative and safety committee in Nigeria, but little or no research has been conducted that explore the importance/uses of suggestion box in the area of construction H&S management. However, this study tends to fill in this gap by exploring the importance/uses of suggestion box as a tool for improving construction site H&S performance in the Nigerian construction industry.

Aim and objectives of the study

The aim of this study was to determine the extent construction companies within the Lagos Metropolis use suggestion box scheme as tool for effective site H&S management and recommend strategies/measures that would help to sensitize Nigerian construction companies on the importance/usefulness of suggestion box in improving site H&S performance. Thus, the specific objectives of the study include:

- To determine the extent construction companies within the Lagos Metropolis provide suggestion box at the site and head offices for collection of information from worker on site H&S,
- To create awareness among large, medium and small sized construction companies on the importance/usefulness of suggestion box as tool for improving site H&S performance, and
- To highlight the importance of suggestion box scheme as one of the H&S management tools that could improve site H&S performance in the industry.

Review of related literature

H&S management systems

The link between H&S management systems and workers' H&S performance has been extensively investigated. Indisputably, H&S management systems are an important determinant of an organisation's H&S performance. For several decades, researchers and H&S experts have shown that H&S management systems have the potential to improve construction site H&S performance. For example, Lingard and Rowlinson (2005) explored the relevance of safety committee on construction site H&S performance in Hong Kong. They found that on site with active safety committee, the accidents and incidents rates were low. A recent qualitative study by the HSE (2010) reported that, in construction sites where management and site managers have active safety committee, safety representative and free mobile phone calls, there existed strong trust and commitment between workers and management resulting in lower site accidents. H&S management systems have in many cases proved to be effective in improving site H&S performance.

However, it has also been found that the traditional command and-control approaches of H&S management are no longer achieving the desired results. Flin and Yule (2003) added that the top down approach where safety is solely the responsibility of the safety director who visits the site periodically cannot bring about significant improvement in construction H&S performance. Consequently, the rates of construction site accidents particularly in the Sub-Saharan Africa countries like Nigeria are on the increase.

Lutchman, Maharaj and Ghanem (2012) argue that construction site H&S performance will be positively impacted when proper H&S management systems are put in place. They further maintained that such H&S management system should involve all categories of workers in H&S decision making. Hughes and Ferrett (2010) maintain that an organisation that wants to behave ethically and responsibly, should recognise the benefits of involving and motivating workers to come up with ideas, suggestions, complains and recommendations on how to improve their worksites H&S conditions. It has also been acknowledged that on construction sites where management involved workers in H&S decisions making, such sites have lower accidents records.

Relevance of suggestion box in construction site H&S performance

Suggestion box is one of the commonest management techniques that have been extensively used in the banking industry, hospitals and manufacturing sectors. The anonymity and cost effectiveness of suggestion boxes underscores its importance as a veritable tool that could be effectively used to improve products, customers' relations and worker's welfare, H&S inclusive. Worker can make a positive contribution relative to workplace H&S improvement (ILO, 2008). According to (Cesarini, et al. 2013), suggestion box gives worker the rights and privileges to make suggestions and recommendations directly to management, unlike the safety committee and safety representative that act as link between the worker and management.

According to Naoum (2012) workers are directly affected by site activities, and also the ones closest to the problems and can find problems first. On this note, Cesarini et al. (2013) maintain that organisation's H&S policy should recognise workers' suggestions and recommendations since they are always on the frontline of site operations. Additionally, suggestion box gives the workers the freedom to communicate directly to the management (HSE, 2008). Regrettably, this simple management tool that has been extensively used in other sectors to solve known management problems is not common in the construction industry (Cesarini, et al. 2013).

The construction industry is complex (Naoum, 2011), and the complexity is compounded by its transient workforce (Goetsech, 2013), as well as high level of illiteracy among site workers (Okorie and Smallwood, 2012). Therefore, implementation of H&S management systems like suggestion boxes has been made difficult.

How, researches that have been conducted in the social sciences domain concluded that suggestion boxes have proved to be effective in creating social harmony and trust between workers and management leading to improved productivity and workers' welfare. In an organisation, people are the most valuable asset, and so their ideas, suggestions and recommendations regarding their worksites conditions should be of utmost importance to management.

A good way to encourage the use of suggestion boxes according to (Cesarini et al, 2013) is by organising a monthly or bimonthly prize draw of all (non-anonymous) comments received. (Cesarini et al., 2013) further maintained that a free phone number can be integrated into suggestion boxes for large projects and multiple sites. Cesarini et al. (2013) also maintain that suggestion box is more effective when workers received feedback on their suggestions and recommendations promptly from the management.

Currently, however, there is no research on suggestion box relative to construction site H&S management in the developing countries like Nigeria. Though, in the United Kingdom, United State of America and other developed countries, researches have been conducted on the importance of suggestion box in site H&S management, the findings indicated that suggestion boxes build trust between workers and management and create a better workplace H&S culture resulted in improved site H&S performance.

Obstacles to effective use of suggestion box in the construction industry

Okorie (2014) identified poor leadership and lack of management commitment towards workers' H&S in the developing countries as factors impacting negatively on construction site H&S performance. Other possible factors could be the high illiteracy level among construction site workers (Okorie and Smallwood, 2012). In addition, Vazquez and Stalnker (2006) maintain that low education level has a negative impact on H&S performance.

Effective utilization of suggestion box entails that a worker should be able to write his or her suggestions, complaints and recommendations regarding the worksite H&S conditions. An illiterate site worker who cannot read or write cannot avail himself or herself of this opportunity. According to Vazquez and Stalnker (2006) that poor communication skills and understanding of spoken English within the work team contributed to site accidents and incidents. It has been pointed out that not only does low level of education among construction workers contribute to high rates of accidents, but also increases non-compliance to site H&S regulations. Arguably, low education level among construction workers in the developing countries like Nigeria could be an obstacle to effective use of suggestion boxes in the industry.

Research methodology

Seven construction companies were randomly selected within the Lagos metropolis, for the purpose of this study. Five companies accepted to participate for the study, one large, two medium and two small. Questionnaires were administered to managers, supervisors and workers on five companies that accepted to participate for the survey. The workers who completed the questionnaire were those that can read and write. The questionnaire was designed to elicit information from site managers, supervisors and workers on suggestion box as a tool for improving construction site H&S performance. The questionnaire was complimented with walk about and interviews conducted with managers at head and site offices and workers of the five construction companies that participated for the study.

One hundred and ten (110) questionnaires were distributed, six-five (65) were returned, and this resulted in a response rate of 59%. The response rate achieved for this research is similar to that achieved in other surveys (Sutrisna, 2009; Collins, 2008). It could be inferred from Sutrisna (2009) and Dainty (2008) that performing a statistical analysis in survey within the response rate equal to or above the threshold of thirty (30) is acceptable. Thus 59% response rate achieved in this survey provides reasonable data for analysis. Interviews were also conducted with five managers at the head offices from each of the company and selected literate workers. An interview is an interaction between two or more people to gain insight relative to problems (Leedy and Ormrod, 2010). The aim of the interviews was, to share their perceptions/views on suggestion box as a management tool for site H&S performance.

Two framed questions and a 5-point Likert-scale measurement were used to obtain the opinions of the respondents and to analyze the results. Leedy and Ormrod (2010) maintain

that Liket scales are effective to elicit participants' opinions on various statements. The statistica (version 10.0) was used to generate the descriptive and inferential statistics. When using Likert scales, it is imperative to calculate and report Cronbach's *alpha* coefficients as well as the internal consistency and reliability (Gliem and Gliem, 2003). Maree and Pietersen (2007) suggest that the following guidelines for the interpretation of Cronbach's *alpha* coefficient: 0.90 – high reliability; 0.80 – moderate reliability, and 0.70 - low reliability. The questionnaire survey shows a high reliability Cronbach's *alpha* of 0.90.

Data analysis

The majority of the responses (65%) were received from the site managers/supervisors and workers of the large, medium and small sized construction companies. Over 52% of the respondents have been involved in construction for the past 10 years; 20% have Bachelor degrees in various disciplines, while 40% have Ordinary National Diploma and Trade Tested Qualifications in construction-related trades.

Provision of suggestion box in construction sites and head offices

Table 1 indicates the respondents' perceptions of the "Yes" "No" and "Not sure" question relating to provision of suggestion box by the construction companies both at the sites and head offices. The data analysis shows that .4.6% of the respondents indicated that their companies provide suggestion box, 72.4% indicated that their companies did not provide suggestion box both at head and site offices and while 23.1% were not sure. However, during the walk about, the researcher found that it was only one large company which is multinational provided suggestion box at the head office. This research finding corroborated the work of (Cesarini et al., 2013) that the use of suggestion box is not common in the construction industry.

Table 1: Provision of suggestion box in the construction site and head offices

| Statement | Frequency | Percentage |
|-----------|-----------|------------|
| Yes | 3 | 4.6 |
| No | 47 | 72.4 |
| Not Sure | 15 | 23.1 |
| Total | 65 | 100 |

Importance of suggestion box in an organisation

Table 2: below shows the respondents' perceptions relating to question on the importance of suggestion box in an organization. The data analysis revealed that 27.69% indicated that suggestion box could lead to improved products, 26.15% indicated improved services, 23.08% indicated improved customers' relations, 13.85% indicated improved workers' welfare and 9.23% indicated improved workplace H&S performance. The finding revealed that management of construction companies in Nigeria is yet to employ some of the known management techniques like suggestion box for effective site H&S management. This research finding supported literature that lack of management commitment towards workers' H&S, poor leadership and poor H&S culture are some of the major factors militating against

effective site H&S management in the developing countries like Nigeria (Lutchman et al, 2012, Okorie, 2014).

Table 2: Importance of suggestion box in an organisation

| <u>Statement</u> | <u>Frequency</u> | <u>Percentage</u> |
|--|------------------|-------------------|
| Improve products | 18 | 27.69 |
| Improve services | 17 | 26.15 |
| Improve customers' relations | 15 | 23.08 |
| Improve workers' welfare | 9 | 13.85 |
| <u>Improve workplace H&S performance</u> | <u>6</u> | <u>9.23</u> |
| <u>Total</u> | <u>65</u> | <u>100</u> |

Manager's/supervisor's views on suggestion box as a tool for site H&S performance

The questionnaire examines manager's/supervisor's views on suggestion box as a tool for improving construction site H&S performance. Table 3 indicates the respondents' perceptions/views relative to the identified statements on suggestion box as a tool for improving construction site H&S performance. It shows in terms of percentage responses to a scale of 1 (minor) to 5 (major), and mean score (MS) ranging between 1.00 and 5.00. It is notable that eight statements MSs were above the midpoint of 3.00, which, with an average MS of 3.34, indicates that the respondents perceived that the identified statements on suggestion box could lead to improvement of construction site H&S performance in Nigerian.

Table 1: Manager's view on suggestion box as a tool for improving site H&S performance

| Statement | Uns ure | Response (%) | | | | | MS | Ran k | | |
|---|--------------------|------------------------|----------|----------|----------|----------|-----------|------------------|--|--|
| | | Minor.....Major | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | | | | |
| Motivate worker to contribute in H&S decision making | 4.2 | 6.3 | 11.9 | 25.2 | 29.4 | 23.1 | 3.51 | 1 | | |
| Worker become more committed to organisation's H&S policy | 9.1 | 4.9 | 9.8 | 27.9 | 27.9 | 20.3 | 3.49 | 2 | | |
| Site accidents and incidents are reduced | 7.7 | 5.6 | 14.7 | 23.1 | 28.7 | 20.3 | 3.43 | 3 | | |
| Worker has sense of belonging | 8.4 | 7.7 | 10.5 | 27.9 | 31.5 | 13.9 | 3.34 | 4 | | |
| Worker has more trust on management | 6.3 | 5.6 | 11.9 | 40.6 | 12.7 | 13.9 | 3.27 | 5 | | |
| Increase worker's morale | 5.6 | 9.1 | 12.6 | 29.4 | 32.2 | 11.2 | 3.24 | 6 | | |
| Improves workplace H&S culture | 7.0 | 9.9 | 16.9 | 26.1 | 24.7 | 15.5 | 3.23 | 7 | | |
| Worker communicate H&S directly | 7.7 | 6.9 | 18.2 | 30.8 | 27.3 | 14.1 | 3.21 | 8 | | |

Literature review supported the research findings. According to Cesarini, et al (2013), suggestion box gives worker the rights and privileges to make their suggestions and recommendations directly to management, unlike the safety committee and safety representative that act as link between the worker and management. Workers are directly affected by site activities, and also the ones closest to the problems and can find problems first. Organisation's H&S policy should recognise workers' suggestions and recommendations since they are always on the frontline of site operations (Cesarini et al. 2013).

Interviews with managers at head offices of the five companies revealed that suggestion boxes could be of immense value to management and construction site workers alike. Suggestion box, unlike other site H&S management systems gives the worker the rights to communicate site H&S conditions directly to management.

One of the interviewees agreed that suggestion box has the potential to improve construction site H&S performance and that its applicability in the industry should be researched. He made the following statements.

"Suggestion box schemes have gained much prominence in the others sectors like manufacturing, but with the complex nature of construction its uses will be little difficult... transient workforce and illiterate site workers."

Literature corroborated his views on the obstacles that can militate against the effective use of suggestion box in the industry. Vazquez and Stalnker (2006) pointed out that not only does low level of education among construction workers contribute to high rates of accidents, but also increases non-compliance to site H&S regulations.

Worker's view on suggestion box as a tool for site H&S performance

The questionnaire examines worker's view on suggestion box as a tool for site H&S performance. Table 4 indicates the respondents' perceptions/views relative to the identified statements on suggestion box as a tool for improving site H&S performance. It shows in terms of percentage responses to a scale of 1 (minor) to 5 (major), and mean score (MS) ranging between 1.00 and 5.00. It is notable that five MSs were above the midpoint of 3.00, which, with an average MS of 3.61, indicates that the respondents perceived that the identified statements were relevant and that suggestion box could be an important tool for site H&S improvement in the Nigerian construction industry. The findings from this study indicate that Nigerian construction site workers welcomed the idea of their direct involved in H&S management.

Interviews conducted with site workers revealed that suggestion box could significantly improve construction site H&S performance. This question was asked to site workers. Do you think that suggestion box can contribute to construction site H&S performance?

Table 4 Worker's view on suggestion box as a tool for site H&S performance

| Statement | Unsure | Response (%) | | | | | MS | Rank | | |
|--|--------|-----------------|------|------|------|------|------|------|--|--|
| | | Minor.....Major | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | | | | |
| Reduction of site accidents and incidents | 4.1 | 6.1 | 11.2 | 25.1 | 29.1 | 23.2 | 3.46 | 1 | | |
| Motivate workers to higher productivity | 8.1 | 4.2 | 9.1 | 27.2 | 27.1 | 21.3 | 3.47 | 2 | | |
| Commitment to organisation's H&S policy | 7.3 | 5.1 | 14.2 | 23.6 | 25.7 | 21.2 | 3.45 | 3 | | |
| Creates sense of belonging and trust | 8.1 | 7.3 | 9.5 | 23.2 | 30.5 | 12.9 | 3.35 | 4 | | |
| Worker communicate site H&S directly to management | 6.5 | 5.7 | 10.7 | 41.4 | 13.6 | 14.4 | 3.32 | 5 | | |

All the interviewees answered yes. However, one of the workers made the following statements.

"In this part of the world construction site workers cannot be given the right to communicate site H&S conditions directly to management. If there is any existing safety committee, worker should communicate through such body".

It was also noted in the literature that lack of management commitment towards workers' H&S, poor leadership and poor H&S culture are some of the major factors militating against effective site H&S management in the developing countries (Okorie, 2014). Effective H&S management system should be one that involved and encourage workers to actively participate in an organisation's H&S decision making process. Suggestion box schemes which collect information, suggestions, complaints and recommendations directly from workers fill in this gap.

Conclusions and recommendations

Based on the research finding of this study it could be concluded that provision of suggestion boxes among Nigerian construction companies both large, medium and small sized are very low. The study also revealed that provision of suggestion boxes by construction companies will build trust between workers and management leading to improvement and sustainability of workplace H&S culture. The results of interviews conducted with managers/supervisors and workers indicated that provision of suggestion boxes by Nigerian construction companies could contribute significantly to the improvement of site H&S performance in the industry. The study therefore recommends that:

- Management of construction companies should demonstrate visible leadership and commitment towards workers' H&S by providing suggestion boxes both at the head and site offices,
- Site managers/supervisors and workers should undergo H&S training on use of suggestion box as one of the tools for effective site H&S management,

- Management should regularly give feedback on every suggestions, complaints and recommendations made by workers on site H&S conditions.

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