A REVIEW OF THE LEADERSHIP ROLES OF CONSTRUCTION STAKEHOLDERS IN CURBING BUILDING COLLAPSE IN ENUGU STATE, NIGERIA

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Abstract

Poor leadership has been noted as one the reasons why buildings fail, largely because project participants lack essential qualities such as the ability to inspire subordinates, fostering team work, communication skills, passion, commitment, accountability, integrity, honesty, proactiveness and decision making abilities in critical situations. The study reviewed the importance of exercising leadership by the parties involved in building construction process, as a means to reduce building collapse, using Enugu State as a case study. Survey research design was employed and primary data was obtained through the administration of 170 questionnaires to respondents of which 165 were returned and formed the basis of the analysis. Statistical software (SPSS version 22) served as the data analysis tool. Frequency and percentages, mean score and standard deviation were used to analyze the data. Findings revealed that participants in the building industry do not work as a team and some are not usually involved at the inception stage of the project. Building professionals can also contribute to building collapse especially when they fail to perform their roles as stated in their professional codes of practice. Furthermore, leadership responsibility in building projects has been left solely to the project manager. This misconception has caused more harm than good since other parties see it as an opportunity to abdicate their leadership roles. It was thus concluded that all parties involved in the building construction process should execute their leadership roles from project inception in order to reduce building collapse. Leadership in construction should not be the duty of only the project manager but should be shown by all project participants in their various capacities.

Keywords: Leadership, Construction, Construction Stakeholders, Building collapse, Enugu State

Introduction

The success of any organization is dependent on the strength of the leadership. Buildings are structures, which serve as shelters for man, his properties, and activities. When a building collapses, it means that the structural and component states have failed and are not only unserviceable, but also unable to completely support intended loads, or lack stability due to excessive deformation. Such buildings are no longer safe to live in and are now nuisance. The absence of involvement and input of building professional from the design stage and throughout the construction stage will lead to collapsed buildings (Windapo and Rotimi, 2012).The fact remains that any pursuit of human endeavor has its cost, but the cost paid in the Nigerian building industry lacks justification. Each collapse carries along with it tremendous effects, which cannot be obliterated from the memories of its survivors (Ede, 2010).

Failures on buildings can be detected during either construction or when the building is already in use, and when a blind eye is turned towards these failures, they could lead to the collapse of the building. With so many known causes of building collapse, which include the negative impacts of political decisions when building contracts are awarded to unqualified contractors that cannot execute the needed jobs (Iyagba, 2009). Poor leadership screams has been pointed as one the reasons why buildings collapse which is quite unfortunate because it could have been easily addressed from the conception of the building. Northouse (2016) defines leadership as a process whereby an individual influences a group of individuals in order to achieve a common goal. Little wonder why the key participants in the building industry have the mistaken belief that leadership is the function of only the project manager. This misconception is the reason why key project participants in building disregard their leadership roles.

Poor leadership and unethical behaviors are widespread in the Nigerian building industry (Iyagba, 2009). This calls for concern by all the stakeholders, government, and the public concerning achieving sustainable, livable, and viable cities for the country (Okolie, Okorie and Ikekpeazu, 2016). All parties to building construction have a leadership role to play which will immensely check incessant building collapse.

In view of the forgoing, the study sought to review the leadership roles of parties involved in building construction process in order to curb the menace of building collapse in Enugu State metropolis of Nigeria.

Overview of Building Collapse and Leadership in the Building Industry

Buildings are required to provide conducive and safe environment for various human activities. They provide shelter and protection to human beings, and as such ensure safety of human life. For this reason, buildings are among the indispensable part of human existence. Unfortunately, buildings have failed in their primary functions of protection and provision of safety for human beings through incidences of building collapse. Building collapse have always left scores of injuries and deaths to humans and have equally left indelible emotional scars on the victims and those who witnessed them. They equally amount to wastes, both to the owner and the nation at large (Oloyede, 2010).

A building collapses when its structural and component parts have failed, and are not only unserviceable but also unable to adequately support intended loads and lacks stability due to excessive deformation. Building collapse could be partial, that is, when some parts fail to effectively perform their function in the building, or complete, which is the summation of failed components, elements or units in the structure (Jambol, 2012).

Causes of Building Collapse

Scenes of collapsed buildings evoke unpleasant feeling in humans and the next reaction is the quest to know the causes. Oloyode, Omogun and Akinjare (2010), in their research findings revealed different views of different population on the causes of building collapse as follows:

- **i.** Firstly, building experts blamed building collapses on the use of low quality building materials coupled with employment of incompetent artisans and weak supervision of workers on site.
- **ii.** Secondly, public opinion revealed that the increase of building collapse were due to non-compliance with specifications and standards, use of substandard building materials and equipment and the employment of incompetent contractors.
- **iii.** Third, opinion of the academia on remote causes of building collapse showed that the root causes are mainly the non-enforcement of existing laws and endemic poor work ethics of Nigerians at large.

Furthermore, various authors and reports tendered by formal visitors to sites of building collapse incidences revealed the causes of building collapse in Nigeria. They range from the

use of substandard materials and construction methods, design errors and changes in design, use of non-professionals, poor workmanship, inadequate of quality supervision, poor maintenance, non-adherence to building byelaws and codes, professional incompetence and politics, to inadequate quality of supervision by relevant agencies and experts.

Man's negligence in some important areas of construction like soil investigation, incorporating design for extra load, stress from winds, earthquakes, uneven terrain, poor monitoring and overall poor workmanship have caused buildings to collapse (Oloyode, *et al*, 2010). In addition, natural disasters such as landslides and floods can cause buildings to collapse. Other causes include omission, carelessness leading to the use of deficient structural drawings, absence of proper supervision of projects, alteration of approved drawings, corruption in the Nigerian system, building without approved drawings and translocation of building plans to different sites. It is proper to note that efficiency in skill and experience are vital in creating valuable workmanship in building construction. Nevertheless, accusing finger were pointed to all parties in the building industry, which include the clients, architects, engineers, town planners and contractors, stating that they have contributed to building collapses (Chendo and Obi, 2015). Obviously, there are many causes of building collapse.

Leadership

Leadership is a necessary part of the social process. Any group, association, organization, or community functions the way the leader leads it. Leadership is an integral part of work and social life. In fact, in any given situation where a group of people wants to accomplish a common goal, a leader may be required. Leadership behavior occurs in almost all formal and informal social situations. Even in an informal situation such as group of friends, some sort of a leadership behavior occurs wherein one individual usually takes a lead in most of the group activities. Providing meaning and support, focusing on right things to do, structuring environment to achieve the organization's goals, getting others to do what you want, motivating people to get things done willingly, enabling others to take responsibility, empowering others to do what they think is right, and helping people to be more confident (Guilleux, 2010). Leadership is a process whereby an individual influences a group of individuals to achieve a common goal. Leadership as a process means that it is not a trait or characteristic that resides in the leader, but rather a transactional event that occurs between the leader and the followers. Process implies that a leader affects and is affected by the followers (Northouse, 2016).

With the above definition, leadership becomes available to everyone. It is not restricted to the formally designated leader in a group. Leadership involves influence. It is concerned with how the leader affects followers. Influence is an essential condition in leadership. Leadership does not exist in the absence of influence. Leadership occurs in groups, which refers to the context in which leadership takes place. It involves influencing a group of individuals who have a common purpose. The building industry needs leaders who inspire trust, demonstrate honesty and integrity in their deeds (Okolie *et al.*,2016).

The profile of a good leader varies from situation to situation. Implementation of high quality building during construction depends on leadership commitment, which affects followers' behaviour (Sunigijo and Zou, 2012).

Leadership in the Building Construction Industry

Buildings collapse due to failure of leadership, unethical behavior or both. Clients' lack of commitment in the appointment of competent professionals, poor supervision by clients' agents, poor designs, use of substandard materials, and absence of building plan approval are manifestations of failures in leadership while bribery, fraud, unfair practices, and corruption among public office holders are forms of unethical behavior (Okolie *et al*, 2016). According to Oloke (2010), there are many differences between leadership in

building process and contractor's site management and supervision. He further pointed out that leadership in building process is a strategic function that involves the input of all the key project leaders during the project planning stages, while site management is an operational function of the contractor in terms of site supervision, management, and coordination of materials. Concerning the causes of building collapse, leadership must commence during the project planning stages and throughout the construction stage. To achieve this, the application of the needed leadership skills from the key project participants is necessary (Okolie *et al*, 2016). To be a good leader, one must have the ability and personality to influence, direct, and motivate workers to achieve organizational goals. It is worthy to note that these leadership qualities are lacking among the key project leaders in the building industry and this has led to collapse of buildings. Identifying and applying the leadership roles by the key project leaders will effect a positive change in the building industry, hence, reductions in building collapse.

Methodology

Research design is the heart of any study. It is a plan, a roadmap and blueprint strategy of investigation conceived to get answers to research questions (Kothari, 2008). This research adopted survey research design.

The research population for this study comprised of Civil Engineers, Quantity Surveyors, Architects, Builders, and Town Planners in Enugu State metropolis. In this study, the participants were experienced and had highest educational qualifications of either Ph.D, M.Sc, B.Sc, B.Eng, or HND. By consulting the Professional Bodies in Enugu State as at March, 2018, the population of Civil Engineers were 68, (Nigerian Society of Engineers, NSE), Quantity Surveyors: 50, (Nigerian Institute of Quantity Surveyors, NIQS), Architects: 52, (Nigerian Institute of Architects, NIA), Builders: 65, (Nigerian Institute of Building, NIOB), and Town planners: 60, (Nigerian Institute of Town Planners, NITP). The total population was equal to 295.

Purposive sampling technique was used for this study and the sample size was calculated using Taro Yamane (Yamane, 1973) formula with 95% confidence level. The calculation formula of Taro Yamane is presented as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Where: n = sample size required
N = number of people in the population
e = allowable error (%) = 0.05

Substitute numbers into formula: $n = \frac{295}{1 + 295(0.05)^2}$

$$n = 170$$

After calculating the sample size by substituting the numbers into the Yamane's formula, the numbers of sample was 169.78 persons. In order to obtain reliable data, the number of sample size was increased to 170 persons. Therefore, the sample size (n), was equal to 170 persons.

Structured questionnaire was used for data collection and data was derived from primary sources which is the first hand data collected by the researchers.

The data received were coded into the statistical software SPSS version 22, ready for analysis. SPSS stands for statistical package for social sciences, and it is an application that can aid in quantitative data handling. Data collected from the study were analyzed using frequency, percentage, mean, and standard deviation. Mean scoring helped in ranking the

variables. Frequency, which is the rate at which something occurs in a given sample and percentage, which is the rate of the variables in each hundred, were used to analyze the demographic information of the respondents. Mean which is the calculated central value of a set of numbers, and standard deviation which denotes a quantity expressing by how much the members of a group differ from the mean value for the group, were used to analyze the answers to research questions.

For the mean decision rule,
Strongly disagree = 1
Disagree = 2
Neutral = 3
Agree = 4
Strongly agree = 5

Sum of Nominal value = $5+4+3+2+1 = \frac{15}{5} = 3.00$

Therefore, 3.00 served as a baseline for accepting or not accepting an item in a research question. Any score above 3.00 mean value was rated "agree" or "high" while any score below 3.00 was rated "disagree or low".

Results and Discussion
Questionnaire distribution and response rate

Table 1.Questionnaires Distributed and Returned

S/N	Respondents' occupation	Questionnaire Distribution	No of Questionnaires Returned	Percentage (%)
1	Builders	34	34	20
2	Quantity Surveyors	34	32	19
3	Architects	34	34	20
4	Civil Engineers	34	34	20
5	Town planners	34	31	18
	Total	170	165	97

Source: Researchers' fieldwork, 2018.

Table 1 shows that out of 170 questionnaires distributed, 165 copies were correctly filled and returned. This means that five copies of the questionnaires out of 170 copies distributed were completely discarded from the analysis because they were not returned. The rest, (165 questionnaires) formed the basis of the analysis.

Respondents' Occupation
The respondents identified their occupation as shown in Table 2.222

Table 2. Occupation of respondents

S/N	Respondents' Occupation	Frequency	Percent	Cumulative Percent
1	Builders	34	20.6	20.6
2	Quantity Surveyors	32	19.4	40.0
3	Architects	34	20.6	60.6
4	Civil Engineers	34	20.6	81.2
5	Town Planners	31	18.8	100.0
	Total	**165**	**100.0**	

Source: Researchers' fieldwork, 2018.

The frequency and percentage of the Engineers, Architects, and Builders were 34 and 20.6% respectively, the Quantity Surveyors had a frequency of 32 with 19.4%, while the Town Planners had a frequency of 31 and a percentage of 18.8%. The Engineers, Architects, and Builders ranked highest while the Town Planners ranked the least. The frequency shows that the distribution of the questionnaire was not biased.

Years of Experience

Table 3. Respondents' years of experience

S/N	Years of Experience	Frequency	%	Cum. %
1	1-5	41	24.8	24.8
2	6-10	66	40.0	64.8
3	11-15	17	10.3	75.2
4	16-20	25	15.2	90.3
5	Above 20	16	9.7	100.0
	Total	**165**	**100.0**	

Source: Researchers' fieldwork, 2018.

Table 3 represents respondents' years of experience. Those with experience that falls within six to ten years had the highest ranking with a percentage of 40%, followed by respondents with one to five years of experience with a percentage of 24.8%. The least ranked were respondents with above 20 years of experience with 9.7%. The respondents were familiar with the built environment.

Causes of Building Collapse

Table 4. Respondents mean ratings on the causes of building collapse

S/N	Causes of building collapse	X	SD	Mean Score Ranking	Remarks
1	Use of substandard materials and construction methods.	4.39	0.68	2	Agreed
2	Design errors and changes in design	4.32	0.65	4	Agreed
3	Poor supervision	4.21	0.84	6	Agreed
4	Poor maintenance	3.68	1.23	12	Agreed
5	Non adherence to building codes	4.34	0.79	3	Agreed
6	Foundation problems	4.47	0.61	1	Agreed
7	Quality management	4.11	1.01	8	Agreed
8	Poorly skilled workmen	4.09	0.84	9	Agreed
9	Unprofessional conduct	4.19	0.90	7	Agreed
10	Prices of building materials and services	3.85	1.11	10	Agreed
11	Careless attitude towards leadership functions	4.30	0.84	5	Agreed
12	Natural occurrence	3.80	0.94	11	Agreed
	Grand Mean	**4.15**			**Agreed**

Source: Researcher's fieldwork, 2018.

Table 4 shows that the respondents agreed that the 12 listed causes of building collapse were culprits to known cases of building collapse in Enugu State Metropolis. The mean ranged from 3.80 to 4.47, with natural occurrence having a mean value of 3.80 while foundation problems had a mean value of 4.47. The grand mean value of 4.15 that fell within the agreed category (3.00) shows that on the whole, the respondents agreed to the causes of building collapse. The standard deviation from the respondents ranged from 0.61 to 1.23. This indicates that the respondents were not wide apart in their mean ratings.

Leadership Roles of Project Participants

Table 5. Mean score ranking of the leadership roles of project participants

S/N	Leadership Roles of Project Participants to Curb Building Collapse.	$\bar{X}$	SD	Mean Score Ranking	Remark
1	Clients appointing qualified design team, providing correct site information and insisting on getting quality service.	4.63	0.65	4	Agree
2	Incorporation of quality in design and specification of quality materials by the designer.	4.82	0.84	2	Agree
3	Builders analyzing the buildability and maintainability of the buildings, prepares construction methods and programs, assesses the workmanship skills of the artisans, and suggests solutions to technical problems, insisting on correct concrete mix, ensuring that concrete gain the required strength before being loaded, and ensuring that formworks are properly fixed.	5.00	0.00	1	Agree
4	Adequate allocation of financial resources by the quantity surveyor.	4.50	0.79		Agree
5	Approval of building permit and regular site inspection by the town planner.	4.68	0.61	3	Agree
6	Engineers carrying out various analysis and calculations before arriving at the optimal solution, and engage in regular site inspection to ensure that the general work done complies with the Engineering drawing.	5.00	0.00	1	Agree
	Grand Mean	**4.77**			**Agree**

Table 5 shows the respondents agreement on various leadership roles of project participants, to help palliate building collapse in Enugu State Metropolis. The mean value ranged from 4.50 to 5.00. Leadership roles of quantity surveyors lowest mean value of 4.50 while Builders and Engineers leadership roles got the highest mean value of 5.00. The grand mean was 4.77. From the mean decision rule in method of data analysis of chapter 3, the mean response from the respondents was higher than 3.00. This shows that the respondents agreed to the ways which leadership can help to reduce building collapse. The standard

deviation from the respondents ranged from 0.00 to 0.84 which shows that the respondents were not wide apart in their mean ratings.

Importance of implementation of leadership roles by key project participants

Table 6. Mean score ranking of the importance of leadership by key project participants

S/N	Project Participants	$\bar{X}$	SD	Mean Score Ranking	Remark
1	The quantity surveyor	4.88	0.33	2	High Extent
2	The town planner	4.75	0.43	4	High Extent
3	The architect	4.82	0.38	3	High Extent
4	The builder	5.00	0.00	1	High Extent
5	The civil engineer	5.00	0.00	1	High Extent
7	The client	4.58	0.87	5	High Extent
	Grand mean	**4.15**			**High Extent**

Source: Researchers' fieldwork, 2018.

Respondents ranked the project participants based on their leadership roles in building as shown in Table 6. The mean value ranged from 4.58 to 5.00. Builders and Engineers ranked highest with a mean value of 5.00 while client had the least ranking with a mean value of 4.58. The grand mean was 4.15. From the mean decision rule in method of data analysis the mean response from the respondents was higher than 3.00, which indicated the importance of exercising leadership in the whole process of building construction by project participants to mitigate collapse. The standard deviation from the respondents ranged from 0.00 to 0.87, which proved the respondents were not wide apart in their mean ratings.

Summary of findings

1. Importance of leadership implementation by building construction participants: It is very crucial for building construction participants to exercise their individual and group leadership roles from the beginning to the end of any project. High rate of importance was given to all of them from the research findings, but the builders and engineers got the highest mean ratings. The study revealed that the involvement of construction professionals in the design and construction of buildings is the most effective way of reducing building failures.
2. The effects of building collapse are numerous, they are better imagined than experienced. Leadership in building has been left as a sole responsibility of the project managers. This misconception caused more harm than good because others involved in building ignored their leadership functions. Dutiful execution of leadership by all project participants will definitely reduce building collapse.

Conclusion

Leadership in building has been left as a sole responsibility of the project managers. This misconception caused more harm than good because others involved in building ignored their leadership functions. Dutiful execution of leadership by all project participants will go a long way in curbing building collapse.

Recommendations

Based on the findings, the following recommendations were made.

- All building professionals should execute their leadership roles judiciously at all levels of construction, without losing sight of their professional ethics.
- The participants in building should work as a team right from design stage to completion of building.
- There should be enforcement of existing laws and sanctions for defaulters, to eradicate building collapse.
- Clients should appoint qualified design team, provide correct site information, and insist on getting quality service.
- There is need to organize periodic public awareness campaign through electronic and print media to sensitize the public on advantages of using professionals as the way of realizing safe buildings

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