

AN INVESTIGATION INTO THE LEVEL OF ADHERENCE TO THE BUILDERS DOCUMENT IN THE NIGERIAN CONSTRUCTION INDUSTRY

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ABSTRACT

Since 2006, the Builders documents have been on transition in gaining limelight from its inclusion as contract documents in the National Building Code. The Code solely recognises the Builder as being responsible for the preparation of the Project Quality Management Plan, the Project Health and Safety Plan and the Construction Methodology. This study investigates the level of adherence to the usage of the Builders documents amongst professionals in the Nigerian construction industry. Simple random sampling was used to fetch data from the 56 professionals studied through a structured questionnaire with only 40 of them returning after filling. It was found that even though 85 percent of the respondents are aware of the existence of the Builders documents, majority do not fully use all 3 documents and three of the professionals studied still choose not to use the even though they are familiar with them. It was recommended that while more enlightenment should be done on the imperatives of the Builders documents in Building project delivery, better implementation mechanisms of the documents should also be enforced by statutory authorities so that construction delivery will be more efficient.

Keywords: Builders' documents, Nigerian construction industry, professionals,

1.0 INTRODUCTION

The construction industry is very unique with distinctive characteristics when compared to other industries. One amongst the major distinctiveness of the industry is the increasing fragmentation of the design and construction processes as more and more specialist inputs are required and employed. That made Downing(2012) to assert that the industry is not only fragmented in terms of separate businesses but also by the diversity of professions and trades, and by the increasing numbers of self-employed people. Due to such, it thus becomes necessary for the efficient use of documents designed to standardize processes, minimize wastes and reworking, and increase profit. To achieve all such, the documents must however be articulated by professionals who are capable of seeing the bigger picture of the whole construction process.

The United Kingdom (UK), United States of America (USA) and other developed countries have taken giant strides by enforcing the preparation and provision of construction production management documents which spells out the construction planning of the proposed project to become part of the conditions of contract (Nunally, 2007). The Nigerian construction

industry is fast growing but Dodo(2008) asserted that the activities involved in building production in the Nigeria is characterized by features such as double handling, wasted labour hours, defective buildings with shorten lifespan, incessant buildings failure and collapse. The effect of all such is in many cases fatal to life and disastrous to property. In line with such vices, the Nigerian construction sector is undergoing a radical change driven by the emergence of the National Building Code. The Builder is solely responsible for the preparation of the Project Quality Management Plan, the Project Health and Safety Plan and the Construction Methodology of which the National Building Code necessitates their inclusion as part of the contract documents. This study investigates the level of adherence to the usage of the Builders documents amongst professionals in the Nigerian construction industry.

2.0 LITERATURE

2.1 The Nigerian Construction Industry

In Nigeria, the construction industry has characteristics which separately are shared by other industries but in combination appear in construction alone making it worthy of separate

treatment (Bamisile, 2004). Some of its unique characteristics of the construction industry according to Hillebrandt and Patricia (2005) are that its final product is large, heavy, immobile, expensive and mostly highly capital intensive. It therefore becomes important to appreciate some of the essential differences with regards to the building development process. These include the fact that almost all building projects are unique with inspection and supervision of building construction work being less systematic than in manufacturing where inspection procedures can be clearly controlled. Also, considerable mobility of design and production teams preclude development of long term production teams and each construction site is likely to have different team members. Lastly, while [feedback from the building in use to the designers is remote from the actual time of design and production] and often precludes the useful analysis of the defectiveness of design and construction, in manufacturing, testing for design and production deficiency and necessary remedial action can be implemented quickly (Dodo et. al. (2013) asserts that all such complexities necessitate the need for a thorough appreciation of the production documents by professionals and team players alike in the construction industry.)

Amidst all of these, the Nigerian construction industry has continued to exhibit the phenomenon of growth in the last decade with immense contribution to the country's Gross Domestic Product (GDP) by serving as a major source of employment and an index of growth amongst other numerous benefits it serves.

2.2 The Professional Builder and the Builders documents

Construction is teamwork. It has been acknowledged worldwide that the process of building an edifice is the collaborative responsibility of various professionals such as the Architect, Builder, Engineers and Quantity Surveyor. All over the world, the trend is that of specialization. This is because better performance, high productivity and cost effectiveness could best be achieved through specialization (Nunally, 2007). All facets of the advanced economies of the world have benefited from specialization and the construction industry should not be an exception.

A builder is the professional academically trained and statutorily registered whose role in building development process generally revolves around the physical construction of buildings. He/she does this by taking charge of the activities on a building construction site in translating designs, working drawings, schedules and specifications into a physical structure (Bamisile, 2004). In constructing buildings, a builder performs several roles among others are: carry out buildability and maintainability analysis; prepare production management documents; and manage the production process on site.

Hussin and Omran (2005) asserted that each contractor tendering for a building project should be made to submit Production Management Documents (also known as the Builder's documents). In line with such, the Nigerian National Building Code (2006) makes it clear that the Construction Methodology, Project Quality Management Plan, Project Health and Safety Plan shall be prepared by a registered Builder (Dodo et. al., 2013).

2.2.1 Construction Methodology

According to Bamisile (2004), Construction Methodology is a professionally thought out synthesis of the construction of a building project on site, with the minimum cost and with the objective thought to minimize cost and the optimum use of resources, to give a suitable level of production flow. The builder studies each operation critically, with a view to finding the most

optimum method of building production. If the designs for two buildings are similar, since they are to be built on separate sites (even though they are adjacent to each other) the access may not be the same, the topography etc will not be the same. In view of this, Adams (2004) opined that Construction Methodology must be unique and be specific to a particular project. It is not something to be copied from one project to another. This makes it very difficult to prepare an all situation construction methodology.

2.2.2 Project Health and Safety Plan

The construction industry has changed markedly over the years. All of the changes, whether positive or negative that have occurred in the industry have had an effect on the safety of the construction job site (Goetsch, 2003). In fact, some developments have made certain aspects of construction work safer. Effective health and safety management demands a clear vision, a systematic approach and a sustained commitment to improvement. According to Ahmed (2001), Health and Safety is a paramount consideration for all construction professionals. It impinges upon the work of planning authorities, clients, consultants, contractors, in fact anyone who works on or is in the vicinity of a construction project. According to Alan and Tim (2001) the best strategy against risks related to people, property or material is one of prevention through appointment of people competent with good health and safety records. As such, the Health and Safety Plan spells out obligations of the parties as follows:

- a. The client's obligation regarding Health and Safety is to ensure construction work does not start unless the plan has been prepared;
- b. Designers' obligation is to address Health and Safety at the time designs are being prepared; and
- c. The contractor's obligation is to ensure that everyone on site complies with all the rules of the Health and Safety Plan.

Dodo et. al. (2013) assert that The Health and Safety Plan should aim at the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations; the prevention amongst workers of departures from health caused by their working conditions; the protection of workers in their

employment from risks resulting from factors adverse to health; and the placing and maintenance of the worker in an occupational environment adapted to their physiological and psychological capabilities on the job.

2.2.3 Project Quality Management Plan

The achievement of specified quality requirements by the construction team (production team) has long been a problem (Bamisile, 2004). Construction consumes time, financial and resources (both human and material) in form of waste each year because of inefficient or the non-existence of a co-ordinated quality management system in the construction industry.

The Quality Management Plan (QMP) describes and defines participants' roles, quality review responsibilities and activities; quality requirements for design/construction integration; the specific quality measures and application instructions; and necessary quality assurance (QA) documentation and verifications to which technical reports, project documents, design drawings, engineering calculations and construction documentation must comply (WSDOT, 2012). Also, according to VPISU (2012), the QMP determines quality policies and procedure relevant to the project for both project deliverables and project processes, defines who is responsible for what, and documents compliance.

Some of the reasons why parties should be concerned about the quality of our buildings as put

forth by Griffith and Howarth (2000) are: loss in value of the development; disruption to users; increase in insurance premium; loss of market share/goodwill; waste of time due to rework; disruption of management procedures; loss of bonus by operatives; moral at low level; scarcity of quality buildings; and loss of international market to competitors;

Dodo et. al (2013) insisted that according to the Council of Registered Builders of Nigeria (CORBON), the quality plan should include the following:

- a. **A quality policy statement: (vision and mission);** This outlines the intentions and aims of the company with respect to achieving quality work. Usually, this statement will refer to meeting or exceeding requirements of the client and will be a broad statement of intent.
- b. **Project Quality Structure & Quality Management System;** This sets out how quality achievement is incorporated into the project and who is responsible for achieving quality at project level. The system for dealing with quality documentation should be set up at the planning stage and should be clearly delineated in the plan so that each person on the project knows where the information is and how to access it.
- c. **Quality objectives for the project;** These objectives will be read alongside the contract documents and scope of work information. The plan will refer to the drawings and specifications and will outline the specific objectives that need to be met in respect of different quality aspects of the project
- d. **Rectification of Problems and Prevention of future problems;** This part of the plan will set out the ways in which any problems will be rectified, including a system for dealing with wastage should it arise, and collective action to be taken in order to deal with any problems.

Dodo et. al. (2013) further opined that an effective QMP result in reduction of inefficiencies, wastes, improved work practices, increased morale and the opportunity for a greater market share. All these benefits are achieved through the implementation of QMP which project stakeholders should perceive as a wide-scale failure prevention programme that will lead to costs savings.

3.0 METHODOLOGY

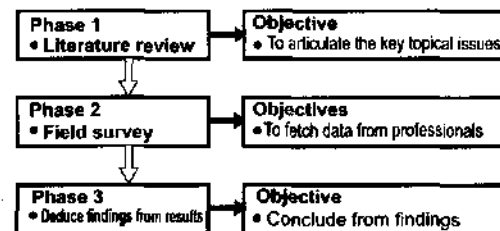
3.1 Data source

For primary data, a structured questionnaire was used to fetch data for this research. Secondary data sources for this study are: journals; published/unpublished articles; conference scripts; textbooks; and the World Wide Web (websites).

3.2 Sampling method, sample size and research framework

Simple random sampling was used for this study. Fifty six questionnaires were distributed to professionals (respondents) in construction firms in Kano, Kaduna and Abuja. The questions were a mixture of open ended and close ended. The framework for this study is as presented in Table 1.

Table 1: Research framework



Source: Researcher (2013)

4.0 RESULTS

Out of the 56 questionnaires distributed, a total of 40 (71 percent) were successfully retrieved in the field survey conducted in the study. Since the overall return rate for the questionnaires in the work of Morris and Dennison (2005) and that of Dodo et. al. (2013) was all over 70 percent, as such the return rate of this research is justifiable.

4.1 Profession of respondents

Six professionals that the National Building Code recognises participated in this study. In an ascending order, professionals that participated in this study constitute 15 Builders, 8 Quantity Surveyors, 6 Engineers, 5 Architects, 3 Town Planners and 3 Land Surveyors. Such is as shown in Figure 1.

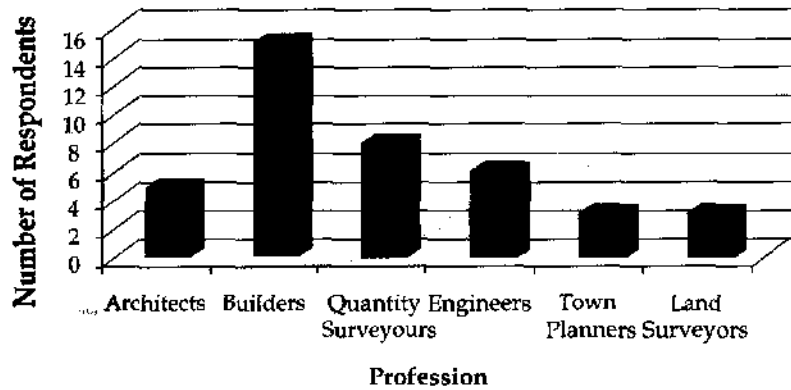


Figure 1: Number of respondents by profession

Source: Field Survey (2013)

4.2 Working experience of respondents

The Builders document which is captured in the National Building Code came into limelight in 2006. As depicted in Figure 2, 40 percent (16) of the respondents have 1-7 years working experience (after the Builders documents came into limelight) while 60 percent (24) have over 8 years of working experience (have been practicing before the Builders documents came into limelight).



Figure 2: Working experience of respondents

Source: Field Survey (2013)

4.3 Projects handled

Results in Table 2 show that all the respondents attested to the fact that they have handled at least one project in the last 7 years since the National Building Code was established.

Table 2 Number of Projects Handled in the last 7 years

Range of Project	Frequency	Percentage (%)
1-5	2	5
6-10	9	22.5
11-15	13	35.5
16-20	14	35
21 and above	2	5
TOTAL	40	100%

Source: Field Survey (2013)

4.4 Familiarity with the Builders Documents

From Table 3, 85percent of the respondents attested that they are familiar with the Builders Documents while 15percent attested to the fact that they are not aware of any of them.

Table 3 Familiarity with the Builders document

Range of Project	Frequency	Percentage (%)
YES	34	85
NO	6	15
TOTAL	40	100%

Source: Field Survey (2013)

Figure 3 shows that out of the 34 respondents that are familiar with the Builders documents and of the Builders documents (Construction Methodology; Project Health and Safety Plan; and Project Quality Management Plan) studied, 10 respondents know only one document, 10 respondents also know only 2 of the documents while 14 respondents know all the three documents studied.

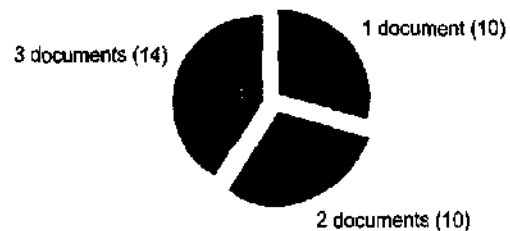


Figure 3: Number of Builders documents used

Source: Field Survey (2013)

Table 4 shows the extent of usage of the Builders documents among the 34 respondents that admitted to being familiar with the Builders documents. About 12 percent of the respondents 'always' use the

Builder's documents in project execution. About 26 percent of the respondents 'frequently' use the documents. About 53 percent of the respondents 'rarely' use the documents and 3 percent have 'never' used the documents at all.

Table 4 Usage of Builders Document in executing projects

Range of Project	Frequency	Percentage (%)
Always	4	11.76
Frequently	9	26.47
Rarely	18	52.94
Not at all	3	8.82
Total	34	100%

Source: Field Survey (2013)

4.5 Benefits of Builders documents

On contribution of the Builders documents to construction efficiency, 70.59 percent of the respondents are of the opinion its contribution is 'very high', 14.71 percent of the respondents are of the opinion its contribution is 'high', 5.88 percent of the respondents are of the opinion its contribution is 'low', and 8.82 percent admitted that the contribution is 'very low'. Results are as shown in Table 5.

Table 5 Contribution of the Builders Document to construction efficiency

Range of Project	Frequency	Percentage (%)
Very High	24	70.59
High	5	14.71
Very Low	2	5.88
Low	3	8.82
Total	34	100%

Source: Field Survey (2013)

From Figure 4, while 85.29 percent of the respondents agree to the fact that the Builders Document serves as a major source of project information, 14.71 percent of them do not agree to such fact.

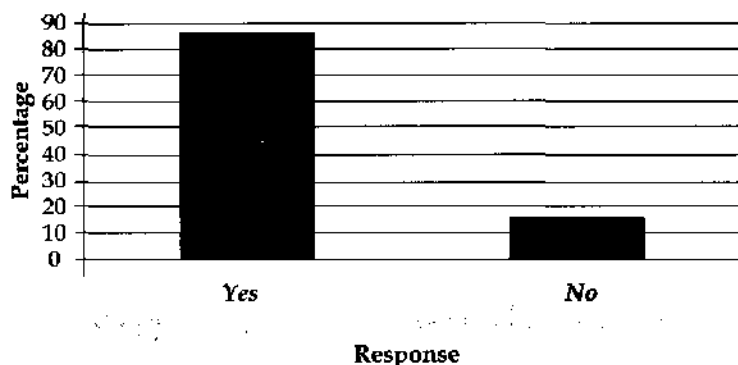


Figure 4: Builders Document as a source of project information

Source: Field Survey (2013)

Table 6 shows that over 88 percent of the respondents agree to the fact that Lack of awareness of the Builders Document leads to project flaws and about 12 percent of the respondents do not agree to that fact.

Table 6 Lack of awareness of the Builders Document leads to project flaws

Range of Project	Frequency	Percentage (%)
Yes	30	82.24
No	4	11.76
Total	34	100%

Source: Field Survey (2013)

5.0 SUMMARY OF FINDINGS AND CONCLUSION

From the results against the backdrop, the following findings may be deduced:

- a. Six professionals are still not familiar with the Builders documents even though they have handled at least one project after the emergence of the National Building Code in 2006;
- b. Of those familiar with the Builders documents, 3 respondents do not use it at all in executing projects;
- c. The 3 respondents that are familiar but do not use the Builders documents believe that the Contribution of the Builders Document to construction efficiency is very low, the Builders Document do not serve as a source of project information and Lack of awareness of the Builders Document does not lead to project flaws;
- d. Not up to half of the respondents use all 3 documents.

It may be concluded that the Builders documents are not being

fully used in the Nigerian construction industry even though they serve enormous benefits to construction efficiency. Furthermore, some professionals do not welcome the Builders documents as contract documents in the Nigerian construction industry. As such, it is recommended that while more enlightenment should be done on the imperatives of the Builders documents in Building project delivery, better implementation mechanisms of the documents should also be enforced by statutory authorities so that construction delivery will be more efficient.

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