



# **A Study into the Supervision Styles Used by Building Contractors for Improving Craftsmen Performance in Anambra State, Nigeria**

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## **Authors' contributions**

*This work was carried out in collaboration among all authors. Author OCE designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author OPE supervised every stage of the work while author EFO managed the analyses of the study. Author OCI managed the literature searches. All authors read and approved the final manuscript.*

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## **ABSTRACT**

Poor productivity of construction craftsmen is one of the causes of cost and time overruns in construction projects. Successful delivery of construction of projects within the measurable tenets is driven by effective site supervision. Nevertheless, the inability of many supervisors to organize, communicate with workers, and direct activities sufficiently is primarily connected to the quality of the construction. Hence, this study examined how enhanced supervision styles can lead to the improvement of craftsmen performance in Anambra State, Nigeria. Being a survey research, the study employed the use of review of related literature and structured questionnaire. Accordingly, a total one hundred (100) questionnaires administered and seventy-five (75) were retrieved. This corresponds to a response rate of 75%. Data garnered were analysed and presented using relative importance index, mean scores and frequency tables. The study found out that listening to subordinates or supervisees was the most important supervision styles for improved building

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craftsmen performance in the study area. Therefore, the study concluded by recommending team work and effective communication channels should be adopted for improving building craftsmen performance as regards project delivery.

*Keywords: Craftsmen supervision; craftsmen performance; craftsmen productivity; construction industry; Anambra State.*

## 1. INTRODUCTION

The construction industry employs substantial percentage of any nation's workforce, contributing greatly to nations' gross domestic product [1]. Generally, construction work involves lot of persons such as professionals, skilled and unskilled personnels to name but a few. While some of these personnels especially professionals and skilled labourer are properly trained and qualified the others are unqualified, unskilled and untrained labourers as a result, extra coordination and supervision is surely needed to ensure good project delivery. [2] affirmed that success in completing site activities, right from the beginning to the end, relies heavily on the quality of supervision. Project supervision covers monitoring, evaluative review, reporting, and technical assistance activities to identify project challenges, ascertain, prepare and recommend solutions to at the earliest possible time [3].

Project supervision is understood to be all activities undertaken to secure effective and efficient delivery of the project outputs and achievement of project outcome. It is also a means whereby craftsmen are being developed, equipped with professional knowledge and skills, also given the opportunity to communicate, coordinate, and cooperate within the team [4]. Assessment of project supervision does not assess the performance of projects per se but focuses on the work done in the supervision/ management of project implementation [5]. One of the most important parts of supervision work comes in terms of managing, motivating, and encouraging staff. There are usually a lot more tasks to do than any one person could do him or herself, and supervisors are often the ones who delegate, making sure that the right people are doing the right jobs, and that they're doing them both properly and on time [6].

To ensure maximum productivity of construction craftsmen, adequate supervision is required which are focused on coordinating, improving communication channel, engaging collaborative problem solving in supervision among the construction team; building right attitude in

workers towards their service delivery, training workers to adopt modern use of technology, and motivating the craftsmen to match requirement. Conversely, craftsmen productivity loss is one of the greatest problems and has been linked to many factors such as lack of adequate supervision, monitoring and control of the project. As a result, [7] opined that the construction craftsmen low productivity is one of the causes of cost and time over run which has mitigated the construction project objectives. Also, [8] noted that there are some unqualified supervisors and those experienced to supervise find it difficult to carry out their function due to their attitudes. In furtherance [8] argued that the inability of many supervisors to plan work, communicate with workers and direct activities adequately is basically linked with the quality of the construction.

Furthermore, in the study area, it is have been observed that some contractors employ site supervisor who are technically not capable of doing the job. Some employ even their relatives with little or no experience in construction, that earn less than their counterparts involved in the construction process. This often leads to low self-esteem, lack of coordination and poor supervision among others. Often than not, uphill and fight become the norm on the site because of bridge of communication, lack of explicit instruction and clear direction which often are due to inability to properly plan, coordinate, control and supervise site activities. This has caused high labour turnover and disagreement on construction sites. On this note, this study therefore sought to find out such supervision styles that can lead to the improvement of craftsmen performance in the study area.

## 2. LITERATURE REVIEW

### 2.1 The Need for Supervision on Construction Sites

Supervision is considered as a means to enhance staff development and helps to equip the workers with the professional knowledge and skills necessary to do their job effectively and

gives workers the opportunity to communicate, coordinate, and cooperate with one another as a team [4]. [9] stressed that supervisory works have become more complex and demanding, it requires professional and interpersonal skills. However, supervision is needed in construction projects based on the following reasons to ensure that specified standard are maintained to ensure that works are completed on time and schedule to ensure that operators put honesty in their work to compile a final report on the construction activities to determine whether the contractor meets the requirements for performing construction activities, regulated by the law to immediately inform the appropriate authority with all the disadvantages or irregularities perceived during construction work and the measure to be taken. A large site may have up to two or three supervisors with supporting trades foreman. However, a medium size site may not have more than one supervisor while a small site may not need the service of a supervisor but in its place, the trades' foreman will step in [10].

## 2.2 Responsibilities of Site Supervisors

The main responsibility of a site supervisor is to see to the execution of daily activities on site to the required specification through the provision of good leadership. The work crew and individuals look unto him for direction as to what is expected of them. In other words, he assigns responsibilities to site operatives in line with programme of work [11]. [12] observes that site supervisors are called by different names in the construction industry depending on company or site. Such names include site manager, general foreman, site coordinator, and site agent. Anyone identified as a site supervisor according to [11] is not only expected to have the required skill but also able to transfer the skill to others working under him. He reports directly to the project manager or construction director depending on the title the officer bears. [12] describes the level of a supervisor as higher than site operatives but below the rank of full management. He describes a supervisor as a middle man between the management and the operatives. It is in the consideration of this status that [13] argued that sixty to hundred decisions taking on site in respect of time, cost, quality and safety at work are taken by supervisors. [12] further observes that the quality of work done is dependent on the skilfulness of those involved and the key to achieving this good quality work is site supervisors. Hence, their role in the success or failure of any project cannot be overemphasized.

## 2.3 Factors Affecting Supervision

In a perfect world, building projects from the inception will be executed smoothly, within the stipulated time, within cost budget and in conformity with required standard, but the fact is, we don't live in a perfect world, hence, the need for contractors and site supervisors to anticipate problem that could occur during building production process before agreement to any contract. If anything goes wrong during construction process the hammer falls on the quality of supervision [14]. Supervision entails the planning, implementation, coordination and monitoring of site work, materials, labor, plants and equipment. For adequate supervision to be achieved, certain measures must be in place and without this measures supervision will fail. Communication, Constant variation, Lack of planning, Inadequate documentation of day to day activities on site, Employment of quacks, Indiscipline, Low motivation are such factors that could affect supervision [15].

## 2.4 Importance of Supervision on Project Delivery

[16] pose it that construction supervision is one of the most crucial factors or elements in the construction process in the attainment of high-quality performance on construction projects. Thus, the effective supervision of field labour is critical to the success of any project delivery with quality of performance in mind. This performance in turn requires supervisors who are skilled in communicating with individual workers and in planning and directing the work in a manner which is efficient towards the attainment of quality project delivery. The absence of proper supervision on most construction sites has led to or contributed to the continued increase of construction cost. The inability on the part of supervisors to plan, work, communicate with workers and direct work adequately is believed to be an important factor in increasing cost of construction work and reduction in quality of performance. The inabilities of the supervisors in this context can be improved by formal training. Most of the project's managers attested to the fact that formal training can be used to improve upon the skills of supervisors, decline rework cost and improve quality performance on construction projects [17]. According to [16], the quality of site supervision on construction project has positive influence on the overall quality performance and efficiency of the project and posed it that inadequate supervision for the past

years in the construction industry has been noted as one of the major causes of construction rework increasing cost of production as well as decrease in quality performance standards. Therefore, experienced and well-trained supervisors have important role in ensuring quality performance on construction project and minimize the amount of rework due to construction defects in the cause of project delivery. The combination of attention to detailed design and effective supervision could largely improve the current efficiency and quality performance of most construction projects and this would be the development direction in the consulting services [18]. In effect, construction supervision when effectively done could reduce unnecessary cost within the industry and maintain the desirable standard intended to be achieved.

## **2.5 Building Construction Supervision Styles in Improving Craftsmen Productivity**

According to human resource authors the term supervision in its raw form cannot stand alone but integrated into efficient management practices in the attainment of quality performance on the delivery of construction projects [19]. That notwithstanding, supervision as a function of management practice is a key element in the delivery of quality performance on any project. This section of the literature seeks to bring forth all the relevant key supervision styles which when employed, would help towards the attainment of better productivity of craftsmen and quality performance of construction projects. Furthermore, safety control is also an important aspect of supervision of construction works. The study seeks to present construction project supervision work in “four controls, three managements and one- coordination”. The four controls with regards to construction project supervision meant progress control, cost control, quality control and safety control since safety practices on site also ensure quality performance on construction projects. The three managements with regards to construction project supervision in this context meant, effective contract management, document management and effective information management as far as effective supervision is concerned in the quest for quality performance of projects and the one coordination meant organization and coordination [20]. According to [21] the complexity and unpredictable nature of construction projects generates serious challenges for supervisors as

far as quality performance of project delivery is concerned and as a result of this, many researchers have tried to identify key project supervision styles that is geared towards the attainment of quality performance in the construction industry and to cope with these challenges and improve on them. Furthermore, he poses it that, existing studies have identified various factors that influence project quality performance. [21] again refers that, for quality performance to be achieved, the body of knowledge obtained from other projects by effective supervision would positively contribute to the quality performance on construction projects. According to [22], for quality performance of project to be achieved, the issues of outsourcing of very complex projects need to be put under serious scrutiny, for sometimes the outsourcing of complex project leads to poor quality performance on construction projects, moreover according to [23] essential or communal knowledge mechanism has statistically significant impact on the quality performance outcome.

The following from literature reviewed can be presented as key supervision styles which could ensure quality performance of construction projects in the construction industry, Listening to subordinates or supervisee, Being transparent to subordinate, Mission-focus/ priority-setting, Performance appraisal, Delegation ability, Taking responsibility and giving praises, Being Realistic or setting achievable targets, Availability of supervisor, Allowing room for innovations, Insisting on accountability, Encouraging positivity, Providing room for learning, Celebrating with employees after achieving milestones, Practicing good communication skills, Accepting challenges during execution of work, Encouraging teamwork.

## **3. RESEARCH METHODOLOGY**

The study was quantitative and was aimed at finding out such supervision styles that can lead to the improvement of craftsmen performance in the study area. A structured questionnaire used for data collection were sent to a random sample of 100 professionals within the study area with 75 successfully filled and returned, being a response rate of 75%. The questionnaires were analysed using descriptive statistics technique such as percentages and tables. The issues in the questionnaire used in this research were structured on a 5–point likert scale: Strongly disagree (SD=1), disagree (D=2), undecided

**Table 1. Supervision styles used in improving craftsmen performance in the study area**

S/N	Supervision Styles	SD		D		UN		A		SA		Mean	Rank
		F	%	F	%	F	%	F	%	F	%		
1	Listening to subordinates or supervisee	0	0.0	0	0.0	0	0.0	29	38.7	46	61.3	4.6133	1
2	Encouraging teamwork	0	0.0	4	5.3	0	0.0	34	45.3	37	49.3	4.3867	2
3	Availability of supervisor	0	0.0	0	0.0	14	18.7	29	38.7	32	42.7	4.2400	3
4	Mission-focus/ priority-setting	0	0.0	2	2.7	10	13.3	34	45.3	29	38.7	4.2000	4
5	Being Realistic or setting achievable targets	2	2.7	2	2.7	12	16.0	28	37.3	31	41.3	4.1200	5
6	Performance appraisal	0	0.0	4	5.3	13	17.3	30	40.0	28	37.3	4.0933	6
7	Encouraging positivity	0	0.0	4	5.3	14	18.7	31	41.3	26	34.7	4.0533	7
8	Practicing good communication skills	0	0.0	5	6.7	18	24.0	20	26.7	32	42.7	4.0533	8
9	Accepting challenges during execution of work	0	0.0	0	0.0	19	25.3	34	45.3	22	29.3	4.0400	9
10	Being transparent to subordinate	2	2.7	4	5.3	12	16.0	29	38.7	28	37.3	4.0267	10
11	Providing room for learning	2	2.7	2	2.7	8	10.7	43	57.3	20	26.7	4.0267	11
12	Insisting on accountability	4	5.3	4	5.3	10	13.3	27	36.0	30	40.0	4.0000	12
13	Taking responsibility and giving praises	2	2.7	6	8.0	15	20.0	25	33.3	27	36.0	3.9200	13
14	Allowing room for innovations	0	0.0	3	4.0	29	38.7	19	25.3	24	32.0	3.8533	14
15	Celebrating with employees after achieving milestones	2	2.7	13	17.3	9	12.0	25	33.3	26	34.7	3.8000	15
16	Delegation ability	2	2.7	2	2.7	27	36.0	24	32.0	20	26.7	3.7733	16

(UN=3), agree (A=4) and strongly agree (SA=5). The mean cut off point for this scale is calculated thus:

$$\bar{x} = \frac{1 + 2 + 3 + 4 + 5}{5} = \frac{15}{5} = 3.0$$

This implies that any issue that has the mean of the responses to be 3.0 will be regarded as “agreed”, while those whose mean of their responses are less than 3.0 will be regarded as “disagreed”. Mean and standard deviation of each item was determined, and ranking were then assigned to them.

The sixteen supervision styles studied were generated from the review of related literature (see section 2.4).

#### 4. RESULTS AND DISCUSSION

From the response in Table 1, about 61% of the respondents strongly agree on the use of listening to subordinates or supervisee as supervision style within the study area; ranking 1<sup>st</sup> with a mean score of 4.61. Similarly, about 49% and 42.7% of the respondents also strongly agree on the use of encouraging teamwork and availability of supervisor as supervision styles within the study area; which ranked 2<sup>nd</sup> and 3<sup>rd</sup> with mean score of 4.39 and 4.24 respectively. Hence, it's apparent from Table 1 that all the styles listed are important as agreed by the respondents but listening to subordinates or supervisee, encouraging teamwork and availability of supervisor are the mostly utilized supervision style in enhancing construction craftsmen performance in the study area.

Furthermore, the study observed that, “Listening to subordinates or supervisee” is the best effective supervision style for improved craftsmen performance in the study area. Encouraging teamwork and availability of supervisor are also very important supervision styles practice for better craftsmen performance in a construction project in the study area. Other supervision styles which are also important in the study area are: Mission-focus/ priority-setting, being realistic or setting achievable targets, performance appraisal, encouraging positivity, practicing good communication skills, accepting challenges in the course of execution of work, being transparent to subordinate, providing room for learning, insisting on accountability and others (see Table 1).

#### 5. CONCLUSION

It is clear from the study that supervision plays an important role in the performance of construction craftsmen. Identifying the effective styles used in carrying out good supervision work has helped top managers with the necessary knowledge in maintaining good work standard by educating and equipping their supervisors with accurate information on the best approach for maximum craftsmen performance in the study area. The effective use of these styles will reduce some project problems such as rework, material wastages, shabby work and delays. From the study, the supervision styles used in the study area are: Listening to subordinates or supervisee, Encouraging teamwork, Availability of supervisor, Mission-focus/ priority-setting, Being Realistic or setting achievable targets, Performance appraisal, Encouraging positivity, Practicing good communication skills, Accepting challenges in the course of execution of work, Being transparent to subordinate, Providing room for learning, Insisting on accountability, Taking responsibility and giving praises, Allowing room for innovations, Celebrating with employees after achieving milestones, and Delegation ability. The following recommendations were deduced from this study:

1. Construction supervisors are expected to listen to subordinates, encourage teamwork during execution of work, and to aid foster improvement in the quality performance of construction projects.
2. Construction managers must organize and take the initiative to educate their supervisors on the identified key supervision styles in this study.
3. Supervisors should monitor the activities of construction craftsmen and control every work section throughout the project duration to achieve good project delivery.
4. Site supervisor must always stay on site to direct and encourage the craftsmen on every section of work till day work is over in order to collectively and efficiently solve any work-related problem that may arise from the course of the project.

#### CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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