Evaluating Communication Features of Human Resource Management Practices: The Construction Industry in Lagos State, Nigeria

Ifedolapo Helen Babalola 1,* and Clinton Ohis Aigbavboa 2

1 Department of Project Management Technology, The Federal University of Technology Akure, Akure 340110, Nigeria
2 SARChi in Sustainable Construction Management and Leadership in the Built Environment, University of Johannesburg, Johannesburg 2006, South Africa
* Correspondence: hibabalola@futa.edu.ng

Abstract: Human resource management practices (HRMPs) cannot thrive in an organisation without communication features. The communication attributes are essential as they are means through which meaningful information is shared or transferred in a functional organisation for effective and efficient work process. This study aims to evaluate the communication features of HRMPs in Lagos State, Nigeria, with a view to improving information dissemination among practising construction professionals and HRs in the built environment. Using a quantitative research design, a questionnaire was designed to achieve the quantitative strand through the target population. Data retrieved were screened and analysed using descriptive and principal component analysis (PCA). The Cronbach alpha and the Kruskal–Wallis H non-parametric tests were both utilised to evaluate the reliability of the data and to determine the respondents’ group opinions, respectively. This study was carried out in Lagos State, Nigeria and was limited to practising construction professionals (CPs) and HR in the built environment. The analysis showed that all the communication features ranked above the average mean, with a good communication network, formal communication methods, and use of appropriate communication channels ranking as the top three. PCA clustered the identified communication features into two components: feedback and involvement system, and communication methods. The originality of this study lies in its ability to display the communication features that will assist stakeholders and policymakers in channeling their resources appropriately with defined clusters rather than the usual mean ranking. Based on the findings, this study recommends that more attention should be given to the cluster groups (same as the two components mentioned above) in order to achieve the best optimal manner for efficiency and effectiveness of communication in the construction industry (CI).

Keywords: communication; construction industry; feedback; human resource management practices; professional bodies in Nigeria

1. Introduction

In organisations, the human resources (HRs) are otherwise regarded as a group of personnel at various levels who have relevant and specialised responsibilities that strengthen their organisation with a competitive advantage over their competitors [1,2]. However, to gain the competitive advantage, the effective management of HR is paramount for an organisation [3]. Human resources management (HRM) provides practices that create favourable conditions for HRs development [4]. Despite the development of machine capacity to overtake human activities in most establishments, especially the construction industry, it has become evident that machines still operate based on human directives [5]. Consistently, research has highlighted human use and engagement with machines to achieve desired and favourable outputs. In other words, even with the advancement in
machine learning and engagements, the importance of HRs as a necessary resource with the skills to see, learn, contribute, and control other resources, such as equipment, machines, materials (raw or finished), and finances, cannot be overlooked or overemphasised. In order to enable an effective work process, workers’ perceptions and experiences about organisational management practices must be understood. This is important because employees’ knowledge and experiences are basic ingredients that improve competitive advantages in the rapidly expanding global economy [6]. It is therefore necessary to implement effective HRMPs that make the best use of its employees.

HRMPs involve the interactions that shape employee attitude and behaviour to achieve quality and higher performance [7,8]. For improved job performance, HRMPs develop a higher level of workforce knowledge, competencies, and workforce capabilities [4]. The HRMPs acknowledge activities employed by an organisation to attract, develop, motivate, and retain the most valuable and capable human asset for their effective utilisation and smooth running of the firm’s operations in order to achieve organisational goals [9]. Specifically, within the Nigerian construction industry (NCI), the HRMPs continue to build organisations that support cooperation and interaction, promote human and social development, and encourage career growth [8]. Similarly, Ref. [10] argue that communicating HRMPs are major means through which the managers adequately disseminate information and execute events to the project workforce in an organisation, thereby impacting their performance.

Optimally, implementing HRM practices is not adequate in an organisation, but communicating effectively with employees concerning these practices will make them feel heard and increase their sense of belonging [10]. Through effective communication and its attributes, people in an organisation express and exchange information, ideas, and feelings, and transmit meaning from a sender to a receiver based on organisational activities [11]. Therefore, it is worth defining communication as an integral part of the construction process through which the construction project stakeholders (client, contractors, suppliers, users) interact to achieve improved performance of construction projects [12]. This means that communication encompasses effective HRs interactive relationships. The interactive relationship could be among a diverse workforce, whereby feedback is received for information that is transmitted [13]. These interpersonal skills could be regarded as communication attributes that enhances practices of HRM in an organisation. For this study, communication attributes are features through which information, facts, ideas, suggestions, feelings, emotions, fear, and knowledge are shared among project team players in construction firms.

Through communication, conflicts among the workforce are lessened, decision making is improved, and the project team members’ performances are adequately conveyed to project manager [14]. In addition, Ref. [15] posited that effective communication helps in achieving integration and collaboration in construction project delivery as well as serving as a valuable channel that influences teamwork. This claim was supported by [16], who asserted that strong communication platforms enable team members involved in a project to stay on track and have a grasp of daily activities. This is important as it creates a safe and an enabling environment that encourages project members to be more understanding. Ref. [17] mentioned that members of an organisation are able to make decisions on the way forward, regarding, direction, and development.

Over the years, HRs perception in HRMPs implementation in the CIs have been neglected. However, the implementation of HRMPs had been advanced in literature among the CPs to enhance the performance in the CI. Ref. [18] opined that HRMPs implementation bring about higher job satisfaction and project success among project managers. This implies that project managers feel accomplished and satisfied when HRMPs measures that encompasses training and development are implemented. Based on the opinion of [19], the implementation of HRMPs help to enhance labour productivity among the CPs through communicating a clear delegation of responsibility. To foster HR wellbeing, their concerns should be addressed through the communication attributes. Based on this,
extant studies emphasised that various attributes of communication guarantee effective HRM practices [11,20]. However, there is dearth of information on the perception of HRs on communication attributes that influence HRMPs. This study identifies and evaluates the communication attributes that influence HRMPs in the CI in Lagos State, Nigeria based on the perception of the HRs and CPs.

2. Communication and Human Resource Management Practices in the Construction Industry

2.1. Communication in the Construction Industry

Communication is a major medium through which information and events are adequately disseminated in an organisation to project workforce by the managers, which impacts their performance. Communicating with employees make them feel heard and increasing their sense of belonging [10]. According to [21,22], communication is the process through which information and knowledge are shared among team players in an organisation. Also, it is defined as a means by which people in an organisation express and exchange information, ideas, and feelings, and transmit meaning from a sender to a receiver based on organisational activities [11]. In the construction environment, communication is defined as ‘timely and appropriate generation, collection, dissemination, storage and ultimate implementation of project information, ideas, goals, knowledge resulting in shared meaning and understanding for enhancing project delivery [15,23]. Evidently, communication deals with HR approach and emphasizes its relevance to the construction industry.

Given that the construction industry activities are evidence-driven, this inevitably necessitates a large volume of information and documents to be generated and shared concurrently to complete several construction processes and tasks [24]. Studies, such as [25–28], have acknowledged the importance of effective communication between workers in an organisation, especially in the CI. Through the communication channel, the common goals of a building construction process are achieved, while influencing the personal, team and organizational relationships. Effective integration and collaboration in construction project delivery becomes challenging without communication [16].

Moreover, the importance of effective communication cannot be ignored, as they include employers’ ability to express organisational goals, policies, procedures, and mission to employees, and channel the human and material resources appropriately to the optimal level for efficiency and effectiveness [11,29]. Managers’ capability to plan, organize, direct, supervise, and appraise both human and material resources is also enabled through communication [11].

In addition, communication links employees while training, and development become easier, leading to achieving organisational goals and objectives [15]. This implies that an organisation’s ability to communicate fairly, openly, and transparently to promotion and demotion criteria employed by management on employees through appropriate communication methods, allows training and development to become easier. Therefore, an organisation should endeavour to identify these qualities to solve avoidable human challenges in an organisation as it is the life wire and engine room of every organisation.

Furthermore, a study carried out by [13] together with study by [30] concluded that interactions that involve the exchange of ideas, information, opinions, knowledge, and suggestions among construction project teams are possible through effective communication tools and media. Similarly, Ref. [31] together with [13], mentioned that through construction communication, relationships can be formed and maintained, bringing about support, values, and resolving differences through social and emotional interactions. Likewise, Ref. [14] asserted that the hidden element to success is found in effective communication that brings about a successful project with less risk. It is also the central nervous systems through which conflicts are resolved, and decisions about achieving project performance are made and conveyed from the project manager to the project team members. Ref. [32] also noted previously that work group efforts and activities can be achieved through the practice of group communication. This implies that regular and effective communication enhance
social interactions and conversation among construction workers at worksites [33]. Additionally, Ref. [15] emphasised that construction building project process and management largely depend on the communication effectiveness. Based on the foregoing, importance of communication to the construction industry is evident to organisation activities, HR functions, and relationships, as well as organisational performance and success.

2.2. Communication Features for Human Resource Management Practices

To incorporate the emerging new technologies and to ensure customers’ satisfaction, Ref. [34] opined that project team members (HRs) should enhance the level of communication skills within an organisation, as this is the key to project success and HRs performance. The level of quality communication can be viewed among HRs not only at the project planning stage/phase, but also when issues resulting from emergencies and variations call for project owners’ attention. The ability to deal with these crises define the level of communication effectiveness. Effective and quality communication depends largely on “the approaches employed in communicating” [11]. These approaches are the communication features as a subsequent determinants of effective HRM practices which are highlighted as: regular communication (feedback) on employee and organisation matters [35], feedback on employees’ meetings [10], feedback on workers matters and events, appropriate communication channels, and open-door communication policy [36], regular meetings between managers and workers and appropriate interaction between employer and employee [37], informal communication method [21], good communication network/linkages [38], appropriate interaction between employer and other stakeholders [39], feedback on firm’s matters and worker’s matters [35,36], formal communication methods [13], third party involvement in communication [40] and using electronic methods of communication [35,40], among others.

Ref. [15] after carrying out a detailed literature review on the nature of communication among work teams, grouped communication attributes into the following four groups: non-verbal, oral, textual, and digital. Body language usage, such as eye contact, was classified under the non-verbal group, face-to-face meetings were classified under the oral group, and the textual group included the use of letters, e-mail, and fax. The use of new technologies, such as BIM and augmented reality, was mentioned under the digital group for bridging the virtual gap among construction team members. These are summarised in Figure 1.

Based on the above reviews from literature, this study seeks to evaluate the communication attributes for effective human resource management practices, which has not been done in past studies, to determine the most influential attributes for HRMPs effectiveness. This will improve the information dissemination among the workforce in the Nigerian construction industry. Table 1 summaries the evaluated communication attributes for effective human resource management practices in Lagos State, Nigeria.

Table 1. Communication features to effective HRM practices in the construction industry.

| Code | Communication Attributes | Authors |
|------|--------------------------|---------|
| COM1 | Appropriate interaction between employer and employee | Ichniowski & Shaw, 1995 [37] |
| COM2 | Appropriate interaction between employer and other stakeholders | Kennedy et al., 2017 [39] |
| COM3 | Good communication network | Xie et al., 2010 [38]; Chukwuka, 2015 [11]; Adeleke, 2018 [14]; Alzyoud 2018 [36] |
| COM4 | Use of appropriate communication channel | Chukwuka, 2015 [11]; Alzyoud, 2018 [36] |
### Table 1. Cont.

| Code | Communication Attributes                                  | Authors                                                                 |
|------|-----------------------------------------------------------|------------------------------------------------------------------------|
| COM5 | Formal communication methods                             | Dainty et al., 2006 [13]; Hussain & Rehman, 2013 [21]                 |
| COM6 | Informal communication methods                            | Hussain & Rehman, 2013 [21]; Chukwuka, 2015 [11]                      |
| COM7 | Using electronic methods of communication                 | Xie, 2002 [41]; Chen et al., 2011 [29]; Umar et al., 2020 [40]        |
| COM8 | Third party involvement in communication                  | Umar et al., 2020 [40]                                                |
| COM9 | Feedback on meetings                                     | Cesario & Magalhaes, 2016 [10]                                        |
| COM10| Feedback on events                                       | Alzyoud, 2018 [36]                                                   |
| COM11| Feedback on firm’s matters                               | Scheepers & Shuping, 2001 [35]; Alzyoud, 2018 [36]                   |
| COM12| Feedback on worker’s matters                             | Scheepers & Shuping, 2001 [35]; Alzyoud, 2018 [36]                   |

Figure 1. Attributes of communication.

### 3. Methodology

The communication features of HRMPs in Lagos State, Nigeria were evaluated using a quantitative research design. Through the adoption of the research design, a questionnaire was designed to retrieve data from the target population. Regarding this study population, the entire group of construction professionals and HR personnel in Lagos State construction...
firms formed the population. This study purposively selected some construction companies in Lagos State, Nigeria with a staff strength of at least fifty (50). A total of 11,655 registered construction professionals and experts (engineers, builders, quantity surveyors, contractors) and HR personnel formed this study population. The target populations are professionals in the built environment who engaged and are engaged in other workforces in Lagos State construction firms. A simple random sampling technique was utilised using [42–44] formula with the acceptable amount of precision or sampling area of 0.05, the proportion of the expected population to be chosen at 0.5, and value associated with the confidence level at 1.96. A Google Form (e-questionnaire) was designed to reach a large part of the sample within a short period of time (one month and three weeks, between October and November 2021) and be convenient by using the snowball technique. Due to the location constraints and confidentiality of professional members, information about respondents were retrieved through the sampled construction firms. The questionnaire designed was based on the extant literature reviewed. The questionnaire was designed to provide respondents with variables to rank based on individual experience, knowledge, and opinions. The survey was carried out in Lagos State, Nigeria. Lagos State is dominated by physical projects, which contribute to the country’s economy. Two sections were employed in the questionnaire: the respondents’ background for the study’s suitability, and the influence of the communication features on effective human resource management practices on a 5-point Likert scale; 5 being a very high influence and 1 being no influence. A total of 354 copies were retrieved out of the 372 questionnaires sent out, representing a 95% response rate. The copies of questionnaire retrieved were screened and cleaned to confirm their fitness for analysis and show that the 354 responses were suitable.

Data retrieved was analysed using descriptive and exploratory factor analysis (EFA) technique. Before carrying out the analysis, the normality of the data gathered was evaluated using the Shapiro-Wilk (S-W) test for normality. This was followed by descriptive statistics to analyse respondents background information and rank the communication features in the order of which they influence HRM practices in the NCI. A Kruskal– Wallis H-test (K–W) was adopted to determine the significant difference between group responses from engineers, human resource personnel, quantity surveyors, and builders. The Kaiser–Mayor–Okline (KMO) and Barlett’s tests were also evaluated. The collected data reliability was measured using the Cronbach alpha. Factor analysis is appropriate when the KMO cut-off value is ≥0.7 [45]; Bartlett’s test of a significant level is less than 0.0001 for appropriateness of the factors [45] and minimum value of the Cronbach alpha is 0.7 [46]. This indicates the reliability of data collected and valid responses obtained. EFA was used to regroup the communication features which influence HRMPs in this study into a more significant subscale [46]. This study utilised PCA as the extraction method and oblimin rotation as the rotation method. The twelve (12) communication features were regrouped into two components.

4. Findings

4.1. Respondents’ Background Information

Analysis of the respondents’ background information (as shown in Table 2) revealed that more engineers participated in this study representing 49.4% of the total population. This is followed by quantity surveyors, builders, and HR personnel; all had a significant representation of 24.3%, 17.5% and 8.8%, respectively. Findings showed that only 22% of the respondents had below five years of work experience, with over 77% having above five years of work experience. This indicates that the respondents for this study possess a significant educational level within the study field to answer the research questions. Furthermore, a total of 5.1%, 15.0%, and 7.9% of the respondents have ordinary national diploma, higher national diploma, and a postgraduate diploma, respectively. This is followed by a bachelor’s degree (39.0%), master’s degree (29.7%), and doctorate (3.4%). These respondents are spread across the contracting, consulting, government, and construction sectors with a significant representation of 8.8%, 17.5%, 36.4%, and 37.3%, respectively.
Table 2. Respondents’ background information.

|                              | Frequency | Valid Percent |
|------------------------------|-----------|---------------|
| **Current profession**       |           |               |
| Engineers                    | 175       | 49.4          |
| Quantity surveyors           | 86        | 24.3          |
| Builders                     | 62        | 17.5          |
| Human resources              | 31        | 8.8           |
| **Years of experience**      |           |               |
| Less than 12 months          | 21        | 5.9           |
| 1–5 years                    | 57        | 16.1          |
| 6–10 years                   | 67        | 18.9          |
| 11–15 years                  | 60        | 16.9          |
| 16–20 years                  | 80        | 25.1          |
| Above 20 years               | 60        | 16.9          |
| **Level of education**       |           |               |
| Ordinary National Diploma    | 18        | 5.1           |
| Higher National Diploma      | 53        | 15.0          |
| Postgraduate Diploma         | 28        | 7.9           |
| Bachelor’s degree            | 138       | 39.0          |
| Master’s degree              | 105       | 29.7          |
| Doctorate                    | 12        | 3.4           |
| **Organisation status**      |           |               |
| Contracting firms            | 31        | 8.8           |
| Consulting firms             | 62        | 17.5          |
| Government                   | 129       | 36.4          |
| Construction firms           | 132       | 37.3          |

4.2. Communication Features
4.2.1. Descriptive Analysis and Non-Parametric Test

This section explained the descriptive statistics and the Kruskal–Wallis H test that was carried out in this study to analyse respondents’ responses on the communication features towards HRMPs. The respondents’ opinions were retrieved (as indicated in Table 3) by ranking identified variables on a five-point Likert scale; 1 being no influence to 5 being a very high influence. “Good communication network” was ranked first with an overall mean value of 3.57, Kruskal–Wallis H test (K-W) of 5.327 and sig. value of 0.149; “Formal communication methods” ranked second with an overall mean value of 3.56, K – W of 5.252, and sig. value of 0.154; in third ranking is, “Use of appropriate communication channel”, with an overall mean value of 3.51, K – W test of 2.950, and sig. value of 0.399. Furthermore, “Informal communication methods” was ranked tenth by the respondents with an overall mean value of 3.24, K – W test of 5.236 and sig. value of 0.155. In the eleventh position is, “Feedback on events”, with an overall mean value of 3.40, K – W test of 3.490, and sig. value of 0.332, while “Third party involvement in communication matters” ranked twelfth and lowest with an overall mean value of 2.99, K – W test of 2.298, and sig. value of 0.513. From the overall result, it is distinct that all the communication features evaluated had a mean value score \((M)\) of an above average of 3.0, except the twelfth factor which could be approximated to an average of 3.0. This indicates that there is an agreement on all the communication factors, as they are subsequent determinants influencing effective HRMPs in the NCI.

However, the S-W test conducted (Table 3) showed that the data utilised was not normally distributed. This occurrence is common for large samples of data [47]. According to [48], social research data tend to be imbalanced, thereby making them not normally distributed. Therefore, the K-W test, a non-parametric test [48], was employed due to the non-normality of the data to determine the difference in the respondent’s opinion from the four groups. Table 3 also showed a difference, but it was not significant in the communication features rating, as all the factors gave a \(p\)-value more than the given threshold of \(<0.05\). However, the difference revealed existence of some convergence in the view of the four groups of respondents in the rating of the twelve features, as they recorded
a *p*-value above 0.05. This indicates that the respondents’ view is in complete agreement, based on the significant influence of the communication features.

### Table 3. Ranking of the communication features influencing HRM practices in NCI.

| Features | Eng. M Rk | HR M Rk | Q/S M Rk | Bldr. M Rk | Overall M Rk | S-W Stat. | Sig. | X² Sig. | K-W Stat. | Sig. |
|----------|-----------|---------|----------|-----------|-------------|-----------|------|-------|-----------|------|
| COM3     | 3.50 2    | 3.42 7  | 3.58 3   | 3.81 1    | 3.57 1      | 0.894 0.000 | 5.327 0.149 |
| COM5     | 3.53 1    | 3.32 10 | 3.65 1   | 3.66 2    | 3.56 2      | 0.888 0.000 | 5.252 0.154 |
| COM4     | 3.43 3    | 3.48 2  | 3.58 3   | 3.65 3    | 3.51 3      | 0.896 0.000 | 2.950 0.399 |
| COM2     | 3.42 4    | 3.42 7  | 3.49 6   | 3.56 4    | 3.46 4      | 0.887 0.000 | 1.242 0.743 |
| COM9     | 3.35 6    | 3.42 7  | 3.53 5   | 3.56 4    | 3.44 5      | 0.903 0.000 | 2.683 0.443 |
| COM12    | 3.36 6    | 3.42 7  | 3.53 5   | 3.56 4    | 3.44 5      | 0.903 0.000 | 2.683 0.443 |
| COM7     | 3.35 6    | 3.48 2  | 3.47 7   | 3.48 8    | 3.41 7      | 0.905 0.000 | 1.448 0.694 |
| COM11    | 3.42 4    | 3.48 2  | 3.56 9   | 3.42 10   | 3.41 7      | 0.899 0.000 | 0.277 0.694 |
| COM1     | 3.33 8    | 3.55 1  | 3.28 11  | 3.45 9    | 3.36 9      | 0.904 0.000 | 1.848 0.604 |
| COM6     | 3.13 11   | 3.45 6  | 3.30 9   | 3.35 11   | 3.24 10     | 0.904 0.000 | 5.236 0.155 |
| COM10    | 3.33 8    | 3.32 10 | 3.47 7   | 3.55 6    | 3.40 11     | 0.899 0.000 | 3.490 0.332 |
| COM8     | 2.93 12   | 2.81 12 | 3.09 12  | 3.13 12   | 2.99 12     | 0.916 0.000 | 2.298 0.513 |

Notes: Eng. = Engineers, HR = HR personnel, Q/S = Quantity surveyors, Bldr. = Builders, M = Mean Item Score, Rk = Rank, S-W = Shapiro-Wilk test, X² = Chi-square, K-W = Kruskal-Wallis H-test.

### 4.2.2. Exploratory Factor Analysis

The twelve (12) identified communication features which could help influence human resource management practices were subjected to EFA to group them into clusters. With the EFA, an approach of factor analysis was employed to identify and reduce the large set of variables into a small coherent subscale [49]. Accordingly, large samples give a reasonable result [50]. In this study, a sample of 354 was utilised and considered large enough for EFA to be carried out. Prior to the EFA, the KMO measure of sampling adequacy and Bartlett’s test of sphericity (Table 4) was assessed on the data to confirm the factorability of the communication features. Past studies [48,49] mentioned the threshold of 0.6 for KMO, while Bartlett’s test of sphericity must be significant at *p*-value < 0.05. For this study, the KMO value of 0.918 was obtained, while Bartlett test gave an *X²* value of 2633.534 and a *p*-value of 0.000. This indicates that the result supports the threshold for both tests that confirmed the factorability of the utilised data.

### Table 4. KMO measure and Bartlett’s test for communication features.

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | 0.918 |
|-----------------------------------------------|------|
| Bartlett’s Test of Sphericity                  |      |
| Approx. Chi-Square                            | 2633.534 |
| Df                                             | 66   |
| Sig.                                           | 0.000 |

The communalities of the variables (Table 5) explained how variables were determined with no less than 0.500 as the extraction value. However, Ref. [48] stated that values as low as 0.3 have been utilised for communalities in some studies. This study also examined both the pattern matrix for cross and wrong loading [51]. None of the variables have a low extraction value, nor a cross or wrong loading, which made the factor loading reliable. All the variables fit well with other variables in their component, and there is no variance in the variables. For this study, the communalities ranged from 0.553 to 0.730.
Table 5. Communalities.

| HRMPs Communication Features                                      | Initial | Extraction |
|-------------------------------------------------------------------|---------|------------|
| Appropriate interaction between employer and employee             | 1.000   | 0.621      |
| Appropriate interaction between employer and other stakeholders   | 1.000   | 0.617      |
| Good communication network                                        | 1.000   | 0.730      |
| Use of appropriate communication channel                          | 1.000   | 0.684      |
| Formal communication methods                                      | 1.000   | 0.553      |
| Informal communication methods                                    | 1.000   | 0.581      |
| Using electronic methods of communication                         | 1.000   | 0.599      |
| Third-party involvement in communication                          | 1.000   | 0.666      |
| Feedback on meetings                                              | 1.000   | 0.670      |
| Feedback on events                                                | 1.000   | 0.643      |
| Feedback on the firm’s matters                                    | 1.000   | 0.633      |
| Feedback on worker’s matters                                     | 1.000   | 0.602      |

Extraction Method: Principal Component Analysis.

Table 6 shows the total variance of the variables and indicates the eigenvalues using Kaiser’s criterion. For this study, eigenvalues above 1.0 were considered which indicates that the first two components meet the criteria as shown under the column of initial eigenvalue’s total. These components explain a percentage cumulative of 63.328 of the variables. Additionally, the scree plot (Figure 2) displayed an intermission after the second component. The steep slope revealed the clusters to be utilised for this study factor analysis; subjected to direct oblimin rotation because of the correlation of the twelve variables with each other. This rotation method resulted in the pattern matrix (Table 7) to unveil the variables grouped under each cluster of the two components identified jointly in the total variance explained. A reliability test (Table 7) was carried out on each component cluster, and a minimum value of 0.700 was recorded. This indicated adequacy of internal consistency, reliability in the measures and scale, and validity for the cluster of each variable.

Table 6. Total variance explained.

| Component | Initial Eigenvalues | Extraction Sums of Squared Loadings | Rotation Sums of Squared Loadings a |
|-----------|---------------------|-------------------------------------|-------------------------------------|
|           | Total               | % of Variance                        | Cumulative %                        | Total               | % of Variance | Cumulative % | Total               |
| 1         | 6.539               | 54.493                              | 54.493                              | 6.539               | 54.493        | 54.493        | 6.331               |
| 2         | 1.060               | 8.836                               | 63.328                              | 1.060               | 8.836         | 63.328        | 3.435               |
| 3         | 0.929               | 7.741                               | 71.069                              |                     |               |              |                    |
| 4         | 0.689               | 5.740                               | 76.810                              |                     |               |              |                    |
| 5         | 0.605               | 5.043                               | 81.853                              |                     |               |              |                    |
| 6         | 0.517               | 4.310                               | 86.163                              |                     |               |              |                    |
| 7         | 0.380               | 3.164                               | 89.327                              |                     |               |              |                    |
| 8         | 0.328               | 2.733                               | 92.060                              |                     |               |              |                    |
Table 6. Cont.

| Component | Initial Eigenvalues | Extraction Sums of Squared Loadings | Rotation Sums of Squared Loadings a |
|-----------|---------------------|-------------------------------------|-----------------------------------|
|           | Total % of Variance | Cumulative %                         | Total % of Variance | Cumulative % | Total |
| 9         | 0.270               | 2.253                                | 94.313                |              |       |
| 10        | 0.264               | 2.199                                | 96.512                |              |       |
| 11        | 0.238               | 1.984                                | 98.496                |              |       |
| 12        | 0.181               | 1.504                                | 100.000               |              |       |

Extraction Method: Principal Component Analysis.

Figure 2. Scree plot.

4.2.3. Factor Cluster

As shown in Table 6, twelve (12) variables identified from the literature were factored into two clusters which are presented as below:

**Component factor one:** This component accounts have nine factors which are all related to the communication features loaded to the first cluster. These include “good communication network” (90.7%), “appropriate interaction between employer and employee” (84.3%), “use of appropriate communication channel” (84%), “appropriate interaction between employer and other stakeholders” (82.7%), “feedback on meetings” (76.7%), “feedback on events” (73.7%), “feedback on firm’s matters” (70.4%), “feedback on worker’s matters” (69.3%), and “formal communication methods” (62.2%). The factor loadings for each variable are the values shown in parenthesis. This component has an eigenvalue of 6.539 and the highest percentage variance explained at 54.5% of the total variance. Based on the latent similarity amongst these variables in addressing communication features, this component was termed ‘feedback and involvement system.’

**Component factor two:** This component has three factors loading and has a total variance explained at 8.8% of the total variance with an eigenvalue of 1.060. These factors are “third party involvement in communication” (85.9%), “informal communication methods” (69.7%), and “using electronic methods of communication” (56.3%). The factor loadings for
each variable are the values shown in parenthesis. The cluster largely relates to methods and is named ‘communication methods’ influencing human resource management practices.

Table 7. Pattern matrix $^a$.

| HRMPs Communication Features                                | Component 1 | Component 2 |
|--------------------------------------------------------------|-------------|-------------|
| Good communication network                                  | 0.907       |             |
| Appropriate interaction between employer and employee       | 0.843       |             |
| Use of appropriate communication channel                    | 0.840       |             |
| Appropriate interaction between employer and other stakeholders | 0.827       |             |
| Feedback on meetings                                       | 0.767       |             |
| Feedback on events                                         | 0.737       |             |
| Feedback on the firm’s matters                              | 0.704       |             |
| Feedback on worker’s matters                                | 0.693       |             |
| Feedback on worker’s matters                                | 0.693       |             |
| Formal communication methods                                | 0.622       |             |
| Third-party involvement in communication                    | 0.859       |             |
| Informal communication methods                              | 0.697       |             |
| Using electronic methods of communication                   | 0.563       |             |
| Cronbach’s alpha of each component                          | 0.926       | 0.700       |

Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalisation. $^a$ Rotation converged in 4 iterations.

5. Discussion of Results

The findings of this study from the descriptive statistics revealed that good communication networks and formal communication methods are the most communication features influencing HRMPs in the CI in Lagos State, Nigeria. It is believed that when there is an effective good communication system in place among the diverse workforce in the construction industry, the project team improves on their project delivery process. This brings about clear information dissemination at the right time, place, and to the right person during project execution; thus, it helps to lessen project risk. These findings are in agreement with the study carried out by [11,14,29,36] who argued that good communication network is a variable that influence the practices of HRM. Ref. [3] also opined that a good communication network helps employees understand their roles, thereby enhancing their contribution to project and firm success. Ref. [21] submitted that formal communication, which is an official communication channel involving direct information and feedback from the top management, enhances HRM practices.

The non-parametric test using the Kruskal–Wallis H test showed there is no statistically significant difference in the opinion of the four groups (engineers, quantity surveyors, builders, and HR personnel), as the $p$-value is greater than 0.05. Therefore, the converging view on all these variables can be attributed to how respondents perceive these factors based on their contribution to implementing HRM practices in Lagos State, Nigeria and their different affiliations. The respondents are in agreement with all the variables with the lowest mean value of approximate 3.00, representing influence on the five-point Likert scale. Using the EFA to proffer answers to the communication features influencing HRMPs in the CI in Lagos State, Nigeria, two factor clusters were produced and are explained below.

5.1. Component One—Feedback and Involvement System

This study revealed that factors associated with feedback and involvement system might impact effective HRMPs. They are good communication networks, appropriate interactions between employer and employee, use of appropriate communication channels,
appropriate interaction between employer and other stakeholders, feedback on meetings, feedback on events, feedback on firm’s matters, feedback on worker’s matters, and formal communication methods. The mentioned factors relate to team members responsibilities in the Nigerian construction industry in ensuring adequate dissemination of information across boards. This attribution agrees with the findings of [11,36] who asserted that good and appropriate communication channels alleviate decision making and bring employees together to understand their roles to achieve organisational goals and objectives. Refs. [29,40] asserted that communication practices could be improved and suggested different measures, such as sending e-mails for follow-up, consistency among managers in decision making, and encouraging translation of messages to the best knowledge of all concerned. Refs. [10,36] also concluded that employee feedback is an important measure to influence HRM practices.

5.2. Component Two—Communication Methods

Three factors in total loaded onto this cluster: third-party involvement in communication, informal communication methods, and using electronic methods of communication. These factors relate to the medium through which communication takes place in the Nigerian construction industry to ensure good implementation of HRM practices. Ref. [11], together with [21], opined that informal communication should be implemented for a conducive atmosphere that encourages open conversation, information, mutual understanding, and trust in an organisation. Ref. [11] further classified various forms of informal communication as an unofficial method outside the formal channels that could be relied upon for its evaluative nature. Ref. [40] also concluded that e-communication helps to facilitate flexible, effective, and efficient work performance outcome.

6. Practical Implications

The theoretical review is consistent with the empirical findings of this study. As indicated by the respondents, good communication network is an important factor influencing HRMPs implementation. Based on this, the communication network among HRs and CPs impact decision making and bring employees together for flow of information to achieve organisational goals and objectives.

7. Conclusions and Recommendations

Implementing HRM practices is not adequate in an organisation, but communicating effectively with employees concerning these practices will make them feel heard. Limited studies are put to investigate the communication attributes for effective HRMPs in the CI in Lagos State, Nigeria. Based on this, this study identified and evaluated the communication features influencing HRMPs in Lagos State, Nigeria. Using the questionnaire survey, the communication factors influencing HRM practices from the analysed data are good communication networks, formal communication methods, use of appropriate communication channels, appropriate interactions between employer and other stakeholders, and feedback on meetings, among other factors. Considering the results of this study, it was concluded that as part of the managerial efforts to revive the CI as well as ensure transparency among the stakeholders, focus should be given to the communication attributes, especially good communication methods, formal communication methods, and use of appropriate communication channels. These factors were further grouped into two distinct subgroups. By recommendation, when deciding on the strategic way of managing the workforce to achieve higher performance and quality, there should be a formal communication system that must be used appropriately in disseminating information and feedback among project team members in the construction industry. Moreover, during construction project execution, information on paper may likely not be same with what is on site. This could affect the quality, time, and cost of such project. Therefore, the need for investigating into effective communication features, which this study has impacted on the body of knowledge of, has not been considered in past studies. Additionally, EFA that involves the use of
PCA was utilised in this study, though it has not been used in scrutinising communication features in previous studies. Theoretically, the findings of this study serve as a platform for future studies to discover the communication attributes that enhance the implementation of HRMPs in the CI. As there is a dearth of studies on the communication attributes for effective HRMPs implementation in the context of construction firms in Lagos State, Nigeria, future researchers can adopt and build upon the two major dimensions for other states and other developing West African countries having the same characteristics within the study area. This study was only limited to Lagos State, Nigeria due to cost, distance, and time constraints. However, the findings of this study could not be generalised for other states in Nigeria and other countries, but can be considered for the NCI and useful for other developing West African countries having the same economic condition as Lagos State, Nigeria. However, it is noticeable that this study does not include HR willingness to communicate while implementing HRMPs. As a result, some of the identified factors may not be generalised for all the construction organisations, but may be a guiding principle towards implementing HRMPs. Based on the above stated need for the CI, the variable should be considered and investigated on other CI and stakeholders, such as architects and project managers, for their opinions. Moreover, confirmatory factor analysis may be employed to verify the already explored factor structure.

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