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Assessments of Stakeholders Perception on Construction Skilled Labor Shortage and Training Programmes in Benin City of Edo State, Nigeria

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Abstract:*The study investigated the causes of construction industry skilled labor shortage and training programs in Benin City, Edo State, Nigeria. It identified and examined the skilled labor shortage in selected trades, factors responsible for the skilled labor shortage, and factors affecting apprenticeship enrolment in the various training programs in Benin City. Data were sourced through the administration of 180 structured questionnaires on construction professionals, craftsmen, and trainee providers. The information elicited from the returned 146 questionnaires (81% return rate) were analyzed using percentages, frequency, mean score, and relative severity index. Findings revealed a shortage of skilled labor in the study area (85.7% of craftsmen, 60.8% of professionals) especially among tillers and POP plasterers. This was due majorly to diminishing craftsperson training program (Manager's RSI=0.796, Craftsmen RSI=0.756), the desire of workmen to make quick money (Manager's RSI=0.674, Craftsmen RSI=0.836), and low wage (Manager's RSI=0.738, Craftsmen RSI=0.862). Also, low apprentice enrolment was a predominant challenge (Craftsmen MS=4.10, Benin Technical College MS=3.78), majorly due to the quest to make quick money through Motorcycle (okada) riding as means of transportation and internet fraud (Craftsmen MS=4.80, Technical college MS=4.48), traveling abroad (Craftsmen MS=4.76, Technical college MS=4.43) and low wages (Craftsmen MS=4.39, Technical college MS=3.91). The study concluded that there was a shortage of skilled labor (especially among tillers) because most potential workmen are impatient to learn a trade; eager to make quick money. The study thus recommends that the government should initiate more crafts persons training programs and subcontractors should improve on the current wage paid to apprentices working or training under them.*

Keywords:*Assessment, Construction, Programmes, Skilled Labor, Shortage, Training*

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I. Introduction

The term "labor shortage" is subject to various interpretations in literature but basically, labor shortage refers to an "absolute shortfall in the number of workers in a labor workforce" while at other times it also refers to a "mismatch between worker qualifications and the jobs which are available" [1-3]. In general, it is a situation where the demand for labor in a particular market exceeds the supply [1]. The skilled labor shortage in the construction industry happened worldwide in all countries including the United States, United Kingdom, Canada, India, Bahamas, Malaysia, and Nigeria [4-8]. Also, despite several education reforms, like changes to the school curricula, construction industries still face considerable skills labor shortages [9, 10, and 11] and the challenges are putting intense pressure on construction companies trying to not only compete within their sectors but also maintain safety at construction sites.

Labor shortages are often portrayed as a major problem for the economies in many countries because People are the most valuable asset for all industries including the construction industry and this phenomenon presents a great threat to the future of the industry [11, 12, 13]. Construction laborers play critical roles in executing the project [14], hence, the potential consequences of growing skills shortage in construction include poor quality of project performance, an increased focus on diversity, higher value (cost) on skilled workers, and implications for workplace safety and liability, less skilled workforce which in turn affects the quality of skilled workers available, the poor performance of the workforce, contractors not satisfied with the level of construction productivity, late delivery of construction projects, higher cost overrun and the adequacy of skilled workforce to understand and execute projects in line with sustainable goals [15-21].

According to the result of an industry-wide survey released by Autodesk and associated General contractor of America [22], 80% of construction firms report that they are having a hard time filling hourly craft positions that represent the bulk of the construction workforce. It further stated that shortages pose a significant risk to future economic growth. The problem of skilled labor shortage in the construction industry is rooted in the poor image of the industry, unclear career paths, lack of training and education, declining wages and poor

work environment, highly fragmented nature of the industry by small firms with poor human resource management practices and high rate of subcontracting [5, 23, 24 and 25]. [21] the most recent study identified four major causes of construction skilled labor shortage as training and education for skilled labor, poor image of the construction industry, aging skilled labor, and low wages.

According to [26], the ultimate goal of the construction industry is to improve the quality of the work completed by construction trades firms, ameliorate the worker shortage facing firms, and most importantly create new opportunities for workers to develop a family-sustaining career in the construction trades in the industry. The advantages of tackling the problem of skilled workers' shortage include; productivity improvement which in turn leads to lower costs, shorter construction periods, better value for money, and higher Return on Investment (ROI) [27]. The availability and quality of skilled workers are considered an essential driver towards the effectiveness and efficiency of the construction organizations [28]. In the construction industry, workers who receive regular job-related training contribute more effectively to maintaining their company's competitive advantage. Employee training and development is essential as it improves the overall performance of the construction industry [29].

The quantity of craftsmen training programs in Nigeria has declined and their quality is poor compare to other developing and developed countries [30]. Skilled workers are highly instrumental in the performance of any construction organization. Yet, skilled workers in Nigeria are dwindling especially in particularly skilled trades such as carpenters, tilers, Electricians, Iron benders, Plasterers required by the construction organizations [5, 7, and 8]. The rationale for this study is based on the view of construction professionals and scholars that skilled labor shortage is preponderant in the Nigerian construction industry even though there is a high level of youth unemployment in Nigeria and that the perceived skills shortage contributes to a decrease in productivity and product quality [10].

This paper, therefore, investigates the prevalence of skilled labor shortage in selected construction trades and skill areas within the construction industry in Benin city of Edo State, Nigeria. The paper identifies and examines factors responsible for the construction labor shortage, the main method of workplace learning and training within the industry, and identified and examined the factors affecting students/apprenticeship enrolment in the various training programs and challenges faced by trainee providers in the study area.

II. Material and Methods

The survey research was undertaken for this study. The population of the study was construction professionals (site managers/ supervisors) and craftsmen in some selected medium and small-scale contracting firms in Benin City of Edo State, Nigeria. The choice of small and medium construction firms was based on the premise that the Nigerian construction industry is made up of 78% indigenous firms and 22% foreign firms [31]. The indigenous firms are predominately small and medium-sized which are more prevalent in the study area [31]. In Nigeria, small and medium scale construction firms are categorized as firms that have a total asset of less than 500 million Naira, with 11-100 employees as a permanent staff [32, 33]. Also, Subcontractors - craftsmen training providers and Staff of Technical School in the study area were sampled.

A total of one hundred and eighty (180) well-structured questionnaires self-administered through a purposive technique to the targeted respondents. Thirty (30) questionnaires each were administered to managers/supervisors in medium and small-scale contracting firms, sixty (60) questionnaires to craftsmen with thirty each to small and medium contracting firms. Also, thirty (30) questionnaire each were administered to technical school staff and Sub-contracting craftsmen training providers. One hundred and forty-six (146) questionnaires representing 81.11% were retrieved and used for the analyses. The questionnaire sought to gather information about the respondents. It also contains questions to know the factors responsible for the construction labor shortage, the main method of workplace learning and training within the industry, the factors affecting students/apprenticeship enrolment in the various training programs, and challenges faced by trainee providers in the study area.

The data obtained were analyzed using descriptive statistics such as frequency, percentages, and Mean Items Score (MIS), and severity index. However, This study made use of frequency and percentages for the general information of managers, supervisors, training providers, and craftsmen., while Mean item score and severity index were used to rank rating of the selected trades in terms of skilled labor shortage, factors responsible for the skilled labor shortage, reasons for low enrolment of craftsmen training, challenges faced by training providers in the study area.

$$\text{MIS} = \frac{5n_5+4n_4+3n_3+2n_2+1n_1}{n_5+n_4+n_3+n_2+n_1} \quad (1)$$

Where n is the frequency of each of the rankings.

Constant weights were assigned to each response in the questionnaire (ranges from 1 for Not important, 2 for less important, 3 for important, 4 for very important, and 5 for extremely important). A cut-off point means score > 2.5 on a 5-point Likert-type scale has been declared to be sensible to decide critical or noteworthy variables [34]. Consequently, [35] prescribed a 3.50 cut off point on a 5-point Likert-type scale, this was thought

to be high when contrasted and different entries. This paper embraced ≥ 2.5 mean scores as a cut-off point.

III. Results and Discussion

i. General information of respondents (Supervisors and Managers)

Table 1. *Respondent's profession.*

Description	Frequency	Percent
Architecture	5	9.8
Building	23	45.1
Civil engineering	9	17.6
Quantity surveying	14	27.5
Total	51	100

Table 1 shows the general information including the personal details of respondents. It shows that the majority of supervisors and managers sampled were Builders (54.9%), Quantity Surveyors (27.5%), Civil Engineers (17.6%) who possess the required knowledge and training in the construction industry to contribute their quota to this study.

Table 2. *Respondents working experience.*

Description	Frequency	Percent
Less than 2 years	3	5.9
2-4 years	6	11.8
5-7 years	9	17.6
8-10 years	12	23.5
Over 10 years	21	41.2
Total	51	100

Table 2 presents the number of years respondents have worked with their present companies. 82.3% of the respondents had five years and above working experience in the construction industry. This shows the respondents have the relevant working experience in the industry to respond to the questions asked.

Table 3. *Nature of business set up.*

Description	Frequency	Percent
Sole proprietorship	26	50.98
Partnership	14	27.45
Private limited liability company	11	21.57
Total	51	100

Table 3 presents the analysis of the contracting firms business set up. 50.98% were sole proprietors which were the small-scale construction firms. 27.45% were partnership firms, while 21.57% were private limited companies which both make up the medium-scale contracting firms.

Table 4. *Nature of work undertaken.*

Description	Frequency	Percent
Building works	20	39.2
Civil engineering works	2	3.9
Both Building and Civil engineering works	29	56.9
Total	51	100

Table 4 shows the works undertaken by the construction firms sampled. It reveals that most of them undertake mostly Building and Civil Engineering works (56.9%), Building works (39.2%).

Table 5. *Prevalence of the skilled labor shortage.*

Description	Frequency	Percent
Yes	42	82.35
No	9	17.45
Total	51	100

Table 5 presents the prevalence of the skilled labor shortage. It shows that 82.35% of professionals admit that they have experienced a skilled labor shortage in their construction projects while only17.45% have not experienced a skilled labor shortage.

General information of Craftsmen

Table 6. *Type of trade.*

Description	Frequency	Percent
Tile, marble, terrazzo setters	8	16.3
Electricians	19	38.8
Reinforcement fixers (iron benders)	12	24.5
Plasterers	10	20.4
Total	49	100

Table 6 presents the type of trade selected for the study. The four trades sampled were Electricians (38.8%), Reinforcement fixers (i.e. iron benders) (24.5%), POP plasterers (20.4%), and Tile, marble, terrazzo setters (16.3%).

Table 7. *Sex of craftsmen.*

Description	Frequency	Percent
Male	48	98.0
Female	1	2.0
Total	49	100

Table 7 presents the sex of craftsmen. It reveals that most of the craftsmen were male (98%) which shows that the workforce was male-dominated.

Table 8. *Age of respondents.*

Description	Frequency	Percent
18-25 years	4	8.2
26-33 years	12	24.5
34-41 years	16	32.7
42-49 years	8	16.3
Above 50 years	9	18.4
Total	49	100

Table 8 depicts the age distribution of craftsmen. It shows that age 34-41 years has the highest frequency (32.7%). This is followed by 26-33 years (24.5%). This shows that 57% of the workforce were within the prime age. However, 34.7% of the workforce were above 41years old which is already in the region of the aging workforce. Only 8.2 % of the workforce were between 18-25 years old which means that the entrance of young people into the crafts trades was very low. The implication of this is that the industry cannot easily replace the aging workforce and poses a threat to the future of the construction industry.

Table 9. *Nature of employment.*

Description	Frequency	Percent
Daily paid	22	44.9
Subcontractors	27	55.1
Total	49	100

Table 9 presents the nature of the employment of permanent staff. This comprises subcontractors (55.1%) and daily-paid craftsmen (44.9%). The implication of this is that about 45% of the employee were not permanent staff and as such was not to guarantee regular jobs in the industry.

Table 10. *Employment qualification for craftsmen/ trades.*

Description	Frequency	Percent
No formal education (apprenticeship)	3	6.1
Primary school plus apprenticeship	14	28.6
Modern school plus apprenticeship	6	12.2
Secondary school certificate plus apprenticeship	18	36.7
Technical school graduate	8	16.3
Total	49	100

Table 10 represents an employment qualification for craftsmen trades. The analysis revealed that 83.6% of the

craftsmen were from sub-contractor craftsmen training programs while only 16.4% graduated from technical colleges. ***Table 11.*** *Level of satisfaction of employee with a wage.*

Description	Frequency	Percent
Very good	1	2
Good	9	18.4
Fair	14	28.6
Poor	14	28.6
Very poor	11	22.4
Total	49	100

Table 11 depicts the level of satisfaction of craftsmen employees with wages. This shows that 28.6% of the employee rated their pay fair and poor while 22.4 % rated their wages very poor. It reveals that 79.6% of the employee were not satisfied with their wages.

Table 12. *Participation in training programs.*

Description	Frequency	Percent
Very regular	4	8.2
Regular	2	4.1
Not regular	7	14.3
Never been sent for training	36	73.5
Total	49	100

Table 12 represents the level of craftsmen employee participation in training programs. It shows that 73.5% of employee craftsmen have never been sent for training. The implication is that most of the firms are not training and re-training their workforce.

Table 13. *Type of training.*

Description	Frequency	Percentage
Induction training	4	8.2
On the job training	36	73.4
Skill upgrading	5	10.2
Practical demonstration	4	8.2
Total	49	100

Table 13 highlights the type of training craftsmen participate in. It shows that the majority of them learn on the job (73.4%). Others do skill upgrading (10.2%), practical demonstration training (8.2%), and induction training (8.2%)

Table 14. *Construction trades' skilled labor shortage (Supervisors and managers).*

Construction trade	5 (VH)	4 (H)	3 (A)	2 (L)	1 (VL)	Mean	Rank
1. Tile-setters	0	5	0	0	0	4.00	1
2. Electricians	1	3	2	0	0	3.83	2
3. Iron benders	5	0	12	0	2	3.32	3
4. Plasterers	4	0	2	4	2	3.00	4

ii. Factors Responsible for the Construction Labor Shortage

Table 18, 19, 20 reveals the opinions of professionals viz those of craftsmen on factors responsible for the skilled labor shortage in Benin City. The result of the analysis from managers and supervisors perception on the rating of factors causing skilled labor shortage revealed that the most severe factors responsible for skilled labor shortage were diminishing craft person training program (RSI=0.796), followed by the introduction of new technologies (RSI=0.788), low wages (RSI=0.738), no clear cut career path (RSI= 0.686), quick money (RSI=0.674), dissatisfactions with labor organization (especially the unstable workload) (RSI=0.674) and the high mobility of construction workers (RSI=0.670). While the result of the rating of factors causing skilled labor shortage from craftsmen, on the other hand, revealed that the most severe factors responsible for skilled labor shortage were low wages (RSI=0.862), followed by the quest to make quick money (RSI=0.836), diminishing craft person training program (MS=0.756) and poor safety of construction workers (RSI=0.702) [which ranked least with construction professionals], dissatisfaction with labor organization (especially the unstable workload (RSI=0.648). Both the professionals and craftsmen agree that the poor image of the industry is a weak factor responsible for skilled labor shortage ranking 10^{th} and 11^{th} (last) respectively in the study area.

Table 15. *Factors responsible for construction labor shortage (Supervisors and Managers).*

Factors	5	4	3	2	1	Mean	RSI	Rank
1. Diminishing craft person training program	22	18	4	2	5	3.98	0.796	1
2. The introduction of new technologies	21	18	2	8	2	3.94	0.788	2
3. Low wages	16	16	5	10	2	3.69	0.738	3
4. No clear cut career path	6	26	9	4	6	3.43	0.686	4
5. quick money	14	14	3	12	6	3.37	0.674	5
6. The dissatisfactions with labor organization (especially the unstable workload)	12	19	2	12	6	3.37	0.674	5
7. High mobility of construction workers	7	24	4	12	4	3.35	0.670	7
8. ethnic characterization (cultural differences)	14	14	6	9	8	3.33	0.666	8
9. The growth of self-employment	6	21	4	14	6	3.14	0.628	9
10. The poor image of the industry	8	12	11	14	6	3.04	0.608	10
11. The poor safety of construction works	6	17	2	18	8	2.90	0.580	11

Table 16. *Factors responsible for construction labor shortage (Craftsmen).*

Factors	5	4	3	2	1	Mean	RSI	Rank
1. Low wages	35	2	8	0	4	4.31	0.862	1
2. quick money	35	4	0	4	6	4.18	0.836	2
3. Diminishing craft person training program	25	2	12	6	4	3.78	0.756	3
4. The poor safety of construction works	19	9	8	4	9	3.51	0.702	4
5. The dissatisfactions with labor organization (especially the unstable workload)	2	26	8	8	5	3.24	0.648	5
6. High mobility of construction workers	0	11	16	16	5	2.69	0.538	6
7. The growth of self-employment	4	6	18	12	9	2.67	0.534	7
8. ethnic characterization (cultural differences)	12	0	15	4	18	2.67	0.534	7
9. No clear cut career path	0	10	24	4	11	2.67	0.534	7
10. The introduction of new technologies	11	9	2	6	21	2.65	0.530	10
11. The poor image of the industry	4	7	12	19	7	2.63	0.526	11

Table 17. *Comparative analysis of the opinion of professionals and craftsmen on the factors responsible for the skilled labor shortage.*

Factors	Mean (Managers)	RSI	Rank	Mean (Craftsmen)	RSI	Rank
1. Low wages	3.69	0.738	3	4.31	0.862	1
2. quick money	3.37	0.674	5	4.18	0.836	2
3. Diminishing craft person training program	3.98	0.796	1	3.78	0.756	3
4. The poor safety of construction works	2.90	0.580	11	3.51	0.702	4
5. The dissatisfactions with labor organization (especially the unstable workload)	3.37	0.674	5	3.24	0.648	5
6. High mobility of construction workers	3.35	0.670	7	2.69	0.538	6
7. No clear-cut career path	3.43	0.686	4	2.67	0.534	7
8. ethnic characterization (cultural differences)	3.33	0.666	8	2.67	0.534	7
9. The growth of self-employment	3.14	0.628	9	2.67	0.534	7
10. The introduction of new technologies	3.94	0.788	2	2.65	0.530	10
11. The poor image of the industry	3.04	0.608	10	2.63	0.526	11

Craftsmen opinion on enrolment in apprenticeship program (Craftsmen workshop schemes)

The minimum qualification required by subcontractors' (senior craftsmen) apprenticeship workshops is a primary school leaving certificate. The number of years required to train in each of the selected trades was found to be three and a half years($3\frac{1}{2}$ years) while the average number of people that enrolled for training in each of the trades in the last five years was twenty. Hence, the average number of people that enroll for training (say reinforcement fixing) in 2015 was 5. The same holds for years 2016, 2017, 2018, 2019, and the other trades (POP plastering, electrician, tillers). Also, the average number of drop-outs each year in each trade was 0. Thus, an average of 5 students graduated from the apprenticeship program in 2015 and the following years. Thus, the craftsmen workshop training schemes recorded a very low enrolment into the programs.

Trainee providers' opinion on enrolment in the training schools' program

The minimum qualification required for admission of candidates into Benin Technical College is a junior secondary school certificate, while the minimum number of years for training is three years. An average of thirty-five students was admitted into each department (or trade) at the Technical College while most personal craftsmen's workshops enroll up to five persons each year. None of the trainees was sponsored by a construction firm for the two trainee providers. The technical colleges recorded a very low enrolment into the

program.

iii. Reasons for low enrolment in the apprenticeship training program (Craftsmen workshop schemes)

Tables 18, 19, 20 show the rating of the perception of training providers on reasons for low enrolment into the apprenticeship program (Craftsmen workshop schemes) and trainee provider (Benin Technical College).

Table 18. *Reasons for low enrolment in apprenticeship programs (Craftsmen workshop schemes).*

Reasons for low apprenticeship enrolment	5 (VH)	4 (H)	3 (A)	2 (L)	1 (VL)	Mean	Rank
1. quick money (Okada riding, Internet fraudster)	39	10	0	0	0	4.80	1
2. Travelling Abroad	38	10	1	0	0	4.76	2
3. low wages	25	22	0	0	2	4.39	3
4. diminishing craftsperson training program	7	34	2	4	2	3.82	4
5. the growth of self-employment	12	24	2	9	2	3.71	5
6. the introduction of new technologies	10	22	9	0	8	3.53	6
7. high mobility of construction workers	8	12	26	1	2	3.47	7
8. the dissatisfaction with labor organization (especially the unstable workload)	1	10	33	3	2	3.10	8
9. Lack of awareness about construction trades	6	14	17	2	10	3.08	9
10. the poor safety of the construction workers	5	15	4	23	2	2.96	10
11. The high cost of training tools	4	25	0	4	16	2.94	11
12. The long duration of training required (some trades 5 years)	8	17	4	4	16	2.94	11
13. Low image of skilled trade discourage parents from sending their children for training	1	9	26	11	2	2.92	13
14. no clear cut career path	6	1	18	22	2	2.73	14
15. the poor image of the industry	1	16	1	23	8	2.57	15
16. ethnic characterization (cultural differences)	1	13	11	8	16	2.49	16
17. High school fees or financial burden	0	18	2	14	15	2.47	17

Table 18 shows the result of the analysis of the perception of craftsmen training schemes on the reasons for low enrolment in the apprenticeship program. The findings reveal the germane reasons to be the quest for quick money (MS=4.80), traveling abroad (MS=4.76), low wage (MS=4.39), diminishing craftsperson training program (MS=3.82), the growth of self-employment (MS=3.71), introduction of new technologies (MS=3.53), high mobility of construction workers (MS=3.47). It is noteworthy that high school fees or financial burden ranked third to the last in the Table. This is because the College is funded by the government and students don't pay school fees. Likewise, among personal craftsmen' apprenticeship scheme, school fee is least and unburden some (MS=2.47).

Table 19. *Reasons for low enrolment in apprenticeship program (Technical school).*

Reasons for low apprenticeship enrolment	5 (VH)	4 (H)	3 (A)	2 (L)	1 (VL)	Mean	Rank
1. quick money (Okada riding, Internet fraudster)	30	8	8	0	0	4.48	1
2. Travelling Abroad	30	8	6	2	0	4.43	2
3. low wages	14	18	10	4	0	3.91	3
4. diminishing craftsperson training program	12	16	8	8	2	3.61	4
5. the growth of self-employment	6	14	11	14	0	3.27	5
6. the poor safety of the construction workers	0	20	14	12	0	3.17	6
7. the poor image of the industry	4	18	10	8	6	3.13	7
8. Lack of awareness about construction trades	2	16	14	8	6	3.00	8
9. the dissatisfaction with labor organization (especially the unstable workload)	0	14	16	12	4	2.87	9
10. The high cost of training tools	2	14	10	14	6	2.83	10
11. Low image of skilled trade discourage parents from sending their children for training	2	8	16	12	8	2.65	11
12. The long duration of training required (some trades 5 years)	6	4	10	16	10	2.57	12
13. the introduction of new technologies	2	4	16	20	4	2.57	12
14. no clear cut career path	2	2	24	8	10	2.52	14
15. High school fees or financial burden	0	10	12	8	14	2.41	15
16. high mobility of construction workers	0	4	18	12	12	2.30	16
17. ethnic characterization (cultural differences)	2	0	12	8	24	1.87	17

Table 19 shows the result of the analysis of the perception of the staff of the technical school on the reasons for low enrolment in their training program. The analysis revealed the most predominant reasons for low enrolment in their training program where the quest to make quick money (MS=4.48), traveling abroad (MS=4.43), low wage (MS=3.91), diminishing craftsperson training program (MS=3.61), growth of self-employment (MS=3.27), and poor safety of construction workers (MS=3.17).

iv. Challenges Faced by Trainee Providers

Table 20 presents the challenges faced by both senior craftsmen and staff of the Technical College in providing training. It shows that both craftsmen and Technical College staff agree the low apprenticeship enrolment and trainee drop out from program were the most important challenges (MS=4.10, 3.80; MS=3.78, 3.65 respectively). Likewise, both agree that the lack of proper funding by parents is less of a concern.

Table 20. *Challenges faced by Training providers (Craftsmen and Technical school staff).*

Challenges in providing training	Mean (Craftsmen)		Mean (Technical school	
1. low Apprenticeship enrollment	4.10	1	3.78	1
2. trainee drop out of the program	3.80	2	3.65	2
3. Infrastructural decay	3.12	4	3.26	3
4. Lack of proper funding by the parents (or government)	2.69	5	3.04	4
5. Non-availability of trainee equipment	3.29	3	2.91	5

Table 20 presents the result of the analysis of the perception of challenges faced by both senior craftsmen and staff of the Technical College on the challenges faced in providing training.

The result of the analysis revealed that both craftsmen and Technical College staff agreed that the low apprenticeship enrolment and trainee drop out from program were the most severe challenges (MS=4.10, 3.80; MS=3.78, 3.65 respectively).

IV. Conclusion

The study assessed the causes of construction of skilled labor shortage and existing construction training programs in Benin City, Edo State, Nigeria. It identified and examined various skilled labor shortages in selected trades, factors responsible for the skilled labor shortage, and factors affecting apprenticeship enrolment in the various training programs in Benin City. The study revealed that 35% of the workforce were above 41years old which is in the region of an aging workforce and the entrance of young people into the craftsmen trade was very low representing only 8%. The study found that 45% of the employee were not permanent staff of contracting firms, 73.9% of permanent staff have never been sent on training by their firms, and that 79.6% of the employee were not satisfied with their wages. These could be a low motivating factor for the low entrance of young people into the crafts trades in the construction industry.

The study found that there were shortages of skilled labor in the study area, especially among tilers. This was due majorly to diminishing craftsperson training programs, the desire of workmen to make quick money, and low wages. Also, low apprentice enrolment is the predominant challenge in Benin Technical College as well as among craftsmen trainee providers. Respondents in both categories (i.e. staff of the college and craftsmen) reported that reasons for low enrolment include the quest to make quick money through okada riding and internet fraud, traveling abroad, low wages, and diminishing craftsperson' training program. The study concluded that there is a shortage of skilled labor (especially among tilers) because most potential workmen are impatient to learn a trade; eager to make quick money.

The study thus recommends that the government should initiate more crafts persons training programs and subcontractors should improve on the current wage given to apprentices working or training under them

However, despite the immense contribution the study brings, care must be taken in generalizing its findings as it is limited based on the sample size and the selected construction trades. The study was limited to four construction trades (Tile-setters, Electricians, Iron benders, and Plasterers), hence, further studies should be conducted to include more construction trades. More so, the study was conducted in Benin City, Edo State, hence further studies can be conducted in other states within the country, to compare results and also garner information on a larger sample size.

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