

INFLUENCE OF TRANSACTIONAL AND TRANSFORMATIONAL LEADERSHIP ON MOTIVATION AND JOB PERFORMANCE AMONG METALWORK TECHNOLOGY EMPLOYEES IN TERTIARY INSTITUTIONS IN NORTH-WEST NIGERIA

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Abstract

The study determined the influence of transactional and transformational leadership on motivation and job performance among metalwork technology employees in tertiary institutions in North-West Nigeria. Three research questions and three null hypotheses guided the study. The study adopted a descriptive survey research design. The study was carried out in North-West Nigeria. A total population of 138 metalwork technology employees in tertiary institutions of learning in North-West Nigeria were selected for the study. No sampling technique was adopted. The instrument used for data collection was a structured questionnaire. The instrument was face validated by three experts. The internal consistency of the instrument was determined using Cronbach's Alpha formula and an overall reliability index of 0.89 was obtained. Mean and Standard deviation were used to answer research questions, while Z-test was used to test the null hypotheses at 0.05 level of significance. Based on the analyses, the study found out among others that the combined influence of transactional and transformational leadership on motivation of metalwork technology employees in tertiary institutions in North-West Nigeria includes promoting competition and fostering collaboration, emphasizing efficiency and inspiring a sense of purpose among others with a grand mean of 4.01. The study also found out that there is no significant difference between the mean responses of moderately experienced and highly experienced employees on the combined influence of transactional and transformational leadership on motivation among metalwork technology employees in tertiary institutions in North-West Nigeria. Based on the findings, the study recommended among others that the government should organize leadership training programme for metalwork technology employees in tertiary institutions in North-West Nigeria so that they can be educated on influence of transactional and transformational leadership on motivation.

Keywords: Job performance, Motivation, Transactional leadership, Transformational leadership.

Introduction

Tertiary institutions are post-secondary institutions in Nigeria where medium skilled and higher-level manpower such as Teachers, Civil servants, Engineers, Humanists, Entrepreneurs, Scientists and myriads of other personnel are produced for economic and national development. Tertiary institutions are collection of higher institutions of learning that include Universities, Polytechnics, Monotechnics and Colleges of Education. Tertiary education according to Federal Republic of Nigeria (2016) is designed to contribute to national development through high-level relevant manpower training, to develop and inculcate proper values for the survival of the individual and society, to acquire both physical and intellectual skills which will enable individuals to be self-reliant and useful members of the society among other goals. One of the educational programmes in tertiary institutions in Nigeria is metalwork technology education.

Metalwork technology education involves the application of scientific knowledge in the process of designing and construction of objects out of metal in an artistic and skillful way. Measuring, cutting, drilling, grinding, shaping, boring, assembling, as well as fabrication of objects are part of activities usually carried out in metalwork (Ekpoh & Akeke, 2021). At tertiary level, the programme is usually under the leadership of an highly experienced employee as head of department or head of section with other moderately experienced teaching and non-teaching employees who all work in various capacities to achieve the objectives of the programme. However, it is unfortunate that the aim of metalwork technology in tertiary institutions in Nigeria does not seem to be adequately achieved (Dupe *et al.*, 2020). According to Dupe *et al.* (2020), several stakeholders in education, public and private sector as well as studies have blamed the worrisome situation majorly on poor leadership in tertiary institutions.

Leadership is the process by which a superior person influences subordinate to work toward the actualization of organizational goals and objectives. Ajibade *et al.* (2017) described leadership as a dynamic process of influencing people which, in certain organizational conditions, can have an effect on other members, with the aim of meeting the objectives of the group. Many different leadership styles are exhibited by leaders. Leadership style is the way human resources are manipulated in furtherance of personal and organizational goals. Leadership in relation to tertiary institutions involves the process of directing, coordinating the activities and efforts as well as motivation of employees and students towards the attainment of educational objectives for which the institution or department is set to achieve. Leadership needs vary across employee levels of work experience. Issues of leadership in tertiary institutions in Nigeria have been raised in many instances as it has been linked to the observed poor standard and quality of tertiary education in Nigeria (Ajibade *et al.*, 2017). Most public and private tertiary institutions in Nigeria are bedeviled with various leadership crises which most times results in closure of schools and adversely affect employee motivation and job performance as well as students' academic performance. (Vigoda-Gadot 2021) noted that leadership styles such as transactional and transformational significantly influence employee job performance.

Transactional leadership style is the process of appealing to employee needs to increase motivation and job performance. Transactional leadership according to Ohunakin *et al.* (2020) was introduced for the first time by Max Weber in his work on socio-economic considerations of the organization. Furthermore, a transactional leader according to Weber is a leader who earns leadership through normative rules and regulations, strict discipline and systematic control. Followers' obedience relied not only on rational values and rules, but also on laid down agreements. They are guided and at the same time limited to the tasks assigned to them. Remuneration is fixed on hierarchical order and organization's bureaucracy. A transactional leader clarifies and lays much emphasis on goals. A Study by (Vigoda-Gadot 2021) revealed that transactional leadership has positive correlation with employee job performance in the Banking institution. Transformational leadership style just like transactional leadership style is associated with employee job performance.

Transformational leadership is a style of leadership where the leader works with employees to identify the needed change, creating a vision to guide the change, and executing the change (Vigoda-Gadot, 2021). A transformational leader pays attention to concerns and developmental needs of individual followers, they change follower's awareness of issues by helping them to look at old problems in a new way and they are able to arouse, excite and inspire followers to put out extra effort to achieve group goals. Contrary to use force of personality (charismatic) or bargaining (transactional) to persuade followers, transformational leaders use knowledge, expertise and vision to change those around them in a way that makes them followers with deeply embedded buy-in that remains even when the leader that created

it is no longer on the scene. The leadership style promotes high performance, motivation and morale among followers. This therefore suggest that transformational leadership may likely aid in enhancing metalwork technology education employee job performance in tertiary institutions in Nigeria.

Employee job performance, refers to the efficiency and effectiveness of employees in achieving organizational, institutional or departmental goals and objectives. It consists of the observable behaviors that employees do in their jobs that are relevant to the goals of the institution or department. Employee job performance according to (Donohoe 2019) refers to how employees behave in the workplace and how well they perform the job duties obligated to them. In this study employee job performance will be considered as how metalwork technology employees meet expected standards and how well they perform their job duties assigned to them in tertiary institutions. Job performance of employees in tertiary institutions is important because good quality tertiary education is an important avenue towards nurturing the manpower needed in Nigeria.

Motivation can be defined as the complexity of forces that inspires a person at work to intensify his desires and willingness to use his potential to perform in order to achieve organizational objectives (Ekundayo, 2018). Motivation can be either extrinsic or intrinsic. Extrinsic motivations are those that are external to the task of the job, such as pay, work condition, fringe benefits, contract of service, the work environment and conditions of work. While intrinsic motivations are non-financial benefits such as recognition, security, title, promotion, appreciation, praise, involvement in decision making, flexible working hours among others. Motivation is a critical ingredient in employee performance and productivity. Motivated employees are enthusiastic to exert a certain level of effort (intensity), for a certain amount of time (persistence), toward a distinct goal or direction. A motivated employee feels less stress, enjoy their work, and as a result have better physical and mental health. This implies that job performance of metalwork technology employees can be significantly improved when motivated. Hence, this study determined the influence of both transactional and transformational leadership on motivation among metalwork technology employees (highly experienced and moderately experienced) in tertiary institutions in Nigeria.

Highly experienced employees are individuals who have accumulated a significant amount of practical work experience, typically spanning several years or even decades in a particular field, industry or job role. These employees possess a deep and comprehensive understanding of their domain, developed through hands-on exposure to a wide range of situations, challenges and tasks (Rosen *et al.*, 2019). In field of metalwork technology, they include employees who have 10 years and above practical work experience as either a teaching or a practicing metalwork personnel. Also, moderately experienced employees are individuals who have acquired a reasonable amount of practical work experience in their field or typically ranging from a few years to around a decade. These employees possess a solid foundation of knowledge and skills but their level of expertise and exposure may not be as extensive as that of highly experienced employees. Moderately experienced employees have a considerable amount of time, ranging from three (3) to nine (9) years of experience in their respective fields or industries (Switzer, 2020). In field of metalwork technology, they include both the academic and non-academic employees with three to nine years of experience in the field. These employees (highly and moderately experienced employees) are best fashioned to provide valid responses regarding the influence of transactional and transformational leadership on motivation and job performance of among metalwork technology employees in tertiary institutions.

Tertiary institutions are higher educational institutions that provide post-secondary education such as universities, polytechnics, colleges of education innovation and vocational enterprise institutions. These institutions offer a variety of academic programmes and degrees beyond secondary educational level. The success of tertiary institutions in Nigeria is highly dependent on the leadership style they adopt. Through an effective leadership, employees are motivated to contribute to the growth and development of their various institutions. However, it is worrisome to note from the reviewed literature that poor leadership and poor job performance among some employees (including metalwork technology education) of tertiary institutions in Nigeria appears to be a common thing. The need for leadership that will help motivate metalwork technology employees in tertiary institutions improve on job performance and to ensure that their graduates attain a minimum level of competence in their fields of study becomes imperative. This study therefore, needs to investigate the influence of transactional and transformational leadership on motivation and job performance among metalwork technology employees in tertiary institutions.

Statement of the Research Problem

The primary aim of metalwork technology is to equip students with practical skills and technical knowledge in various metalwork processes such as welding, fabrication, machining, casting and forging. The programme is expected to produce medium and higher skilled manpower (such as technical teachers) with the intellectual and professional background adequate for teaching basic technology and metalwork or metalwork technology. According to National board for Technical Education (NBTE, 2022), the programme is expected to produce skilled, knowledgeable and industry-ready graduates or professionals who can contribute to the growth and development of various sectors that rely on metalwork processes and products. Tertiary institutions offering this programme assign leadership roles to some employees to direct, coordinate the activities and efforts as well as motivation of employees and students towards the attainment of educational objectives of the programme.

There is a huge gap between the skills possessed by metalwork technology graduates and the skills required of metalwork industries for employment in industries (Ekpo & Akeke, 2021). The quality of metalwork technology graduates produced from tertiary institutions is drastically declining due to the poor leadership styles of several stakeholders in tertiary institutions which cuts across teaching and non-teaching staff (Rosen *et al.*, 2019). Dupe *et al.* (2020) also reported that most public and private tertiary institutions in Nigeria are bedeviled with various leadership crises which often times results in closure of schools, loss of academic activities and consequently having a negative influence on students' academic performance as well as employee motivation and job performance. Hence, a large numbers of metalwork technology graduates have continuously been found incapable of meeting up with the employment requirements of the workforce and have thus been unsuccessful in either securing or keeping a job.

The observed situation if not addressed may continue to pose serious threats to the realization of the objectives of Metalwork technology education programs in particular, tertiary education and security of Nigeria in general. These unemployed and frustrated graduates are left with little options and most of them get involved in kidnapping, banditry, cyber crime, robbery and all forms of social vices just to earn a living. Metalwork technology program leaders in tertiary institutions need to adopt effective leadership styles with the potentials of influencing employee motivation and job performance that may reverse the present unsatisfactory situation. Hence the need to determine the influence of transactional and transformational leadership on motivation and job performance among metalwork technology employees in tertiary institutions in North-West Nigeria?

Aim and Objectives of the Study

The aim of this study was to determine the influence of transactional and transformational leadership on motivation and job performance among metalwork technology employees in tertiary institutions in North-West Nigeria. Specifically, the study determined:

1. The combined influence of transactional and transformational leadership on motivation among metalwork technology employees in tertiary institutions in North-West Nigeria.
2. The combined influence of transactional and transformational leadership on job performance among metalwork technology employees in tertiary institutions in North-West Nigeria.
3. The techniques for improving transactional and transformational leadership among metalwork technology employees in tertiary institutions in North-West Nigeria.

Research Questions

The following research questions were raised to guide the study.

1. What is the combined influence of transactional and transformational leadership on motivation of metalwork technology employees in tertiary institutions in North-West Nigeria?
2. What is the combined influence of transactional and transformational leadership on job performance of metalwork technology employees in tertiary institutions in North-West Nigeria?
3. What are the techniques for improving transactional and transformational leadership among metalwork technology employees in tertiary institutions in North-West Nigeria?

Hypotheses

The following hypotheses were formulated and tested at 0.05 level of significance.

- Ho₁:** There is no significant difference between the mean responses of moderately experienced and highly experienced employees on the combined influence of transactional and transformational leadership on motivation among metalwork technology employees in tertiary institutions in North-West Nigeria.
- Ho₂:** There is no significant difference between the mean responses of moderately experienced and highly experienced employees on the combined influence of transactional and transformational leadership on job performance among metalwork technology employees in tertiary institutions in North-West Nigeria.
- Ho₃:** There is no significant difference between the mean responses of moderately experienced and highly experienced employees on the techniques for improving transactional and transformational leadership among metalwork technology employees in tertiary institutions in North-West Nigeria.

Research Methodology

The study adopted a descriptive survey research design. The study was carried out in the North-West region of Nigeria. A total population of 138 metalwork technology employees in tertiary institutions of learning in North-West Nigeria were selected for the study. No sampling technique was adopted due to the manageable size of the population. The instrument used for data collection was a structured questionnaire titled "Influence of Combined Transactional and Transformational Leadership on Motivation and Job Performance of Metalwork Technology Employees Questionnaire (ICTTLMJPMTEQ)". The instrument was face validated by three experts. It was pilot tested on 10 metalwork technology employees in tertiary institutions of learning in North-East Nigeria. The internal consistency of the instrument was determined using Cronbach's Alpha formula and an overall reliability index of 0.89 was obtained. Mean and Standard deviation were used to answer research questions while Z-test was used to test the null hypotheses at 0.05 level of significance. Decision on the research

questions was made based on real limit of numbers. Statistical Package for Social Sciences (SPSS) version 26 was used for the analysis.

Results

Research Question One

What is the combined influence of transactional and transformational leadership on motivation of metalwork technology employees in tertiary institutions in North-West Nigeria? The data for answering research question one is presented in Table 1.

Table 1: Mean and Standard Deviation of Responses on Combined Influence of Transactional and Transformational Leadership on Motivation of Metalwork Technology Employees in Tertiary Institutions in North-West, Nigeria N =119

S/N	Items	\bar{x}_1	SD_1	\bar{x}_2	SD_2	\bar{x}_A	SD_A	Remark
1	Providing clear goals, and consequences while inspiring a shared vision	4.15	0.40	4.43	0.65	4.29	0.53	A
2	Offering contingent rewards and recognizing achievements	3.67	0.85	3.88	0.99	3.78	0.92	A
3	Monitoring performance and providing coaching and feedback.	4.06	0.73	4.29	0.52	4.18	0.63	A
4	Emphasizing adherence to procedures and encouraging creativity	3.28	0.83	3.40	0.58	3.34	0.71	D
5	Maintaining a structured hierarchy while empowering employees	3.51	0.81	4.02	0.96	3.77	0.89	A
6	Using disciplinary measures while building trust and respect	3.89	0.94	4.46	1.01	4.18	0.98	A
7	Focusing on task completion and promoting continuous improvement	3.82	0.66	3.90	0.80	3.86	0.73	A
8	Offering limited autonomy and encouraging risk-taking	4.11	0.88	3.72	0.46	3.92	0.67	A
9	Promoting competition and fostering collaboration	4.72	0.38	4.84	0.78	4.78	0.58	SA
10	Addressing immediate issues and promoting long-term development	3.81	0.74	4.00	0.59	3.91	0.67	A
11	Maintaining formal relationships and serving as a role model	2.82	0.67	3.40	0.48	3.11	0.58	D
12	Encouraging adherence to standards and promoting ethical behavior	4.52	0.72	4.74	1.02	4.63	0.87	SA
13	Providing structured training and opportunities for growth	3.48	0.45	4.33	0.86	3.91	0.66	A
14	Emphasizing efficiency and inspiring a sense of purpose	4.62	0.55	4.78	0.83	4.70	0.69	SA
15	Using positional power and promoting employee involvement	3.09	0.96	3.28	0.77	3.19	0.87	D
16	Focusing on short-term goals and promoting a shared vision	2.95	0.41	3.88	0.67	3.42	0.54	D
17	Offering little autonomy and encouraging critical thinking	4.56	0.46	4.78	0.68	4.67	0.57	SA
18	Promoting compliance and fostering a supportive environment	4.60	0.83	4.66	0.77	4.63	0.80	SA
19	Using negative reinforcement and recognizing achievements	2.88	0.47	3.45	0.81	3.17	0.64	D
20	Prioritizing immediate results and encouraging continuous learning	3.67	0.48	3.52	0.99	3.60	0.74	A

21	Offering contingent rewards and promoting work-life balance	4.43	0.94	4.79	0.80	4.61	0.87	SA
22	Emphasizing productivity and promoting diversity and inclusion	4.75	0.63	4.80	0.75	4.78	0.69	SA
23	Promoting accountability and fostering a sense of ownership	3.47	0.82	4.01	0.96	3.74	0.89	A
Grand Mean/Standard Deviation		3.86	0.68	4.15	0.77	4.01	0.72	Agreed

Key: \bar{x}_1 = Mean of moderately experienced employees, \bar{x}_2 = Mean of highly experienced employees, \bar{x}_A = Average of the means, SD_1 = Standard deviation of moderately experienced employees, SD_2 = Standard deviation of moderately experienced employees, SD_A = Average Standard Deviation N = Number of respondents, SA = Strongly Agree, A = Agree, D = Disagree.

The result presented in Table 1 reveals the mean and standard deviation of responses from moderately and highly experienced employees regarding the combined influence of transactional and transformational leadership on motivation of metalwork technology employees in tertiary institutions in North-West Nigeria. The two groups of respondents strongly agreed with 7 items, agreed with 11 items and disagreed with 5 items. In summary, the respondents agreed that the highlighted items are influences of both transactional and transformational leadership on motivation of metalwork technology employees with means ranging from 3.11 to 4.78 and a grand mean of 4.01 was obtained. Also, the standard deviation for the items ranged from 0.53 to 0.98, none of the standard deviations obtained by the items was above 1.96 which indicates that the responses were not too far from the mean. The closeness of responses to the mean adds value to its reliability.

Research Question Two

What is the combined influence of transactional and transformational leadership on job performance of metalwork education employees in tertiary institutions in North-West Nigeria? The data for answering research question two is presented in Table 2.

Table 2: Mean and Standard Deviation of Responses on Combined Influence of Transactional and Transformational Leadership on Job Performance of Metalwork Technology Employees in Tertiary Institutions in North-West, Nigeria N =119

S/N	Items	\bar{x}_1	SD_1	\bar{x}_2	SD_2	\bar{x}_A	SD_A	Remark
1	Enhancing job performance through shared expertise	4.5	0.9	4.3	0.7	4.4	0.8	A
		2	5	6	6	4	6	
2	Enhancing job satisfaction among employees	4.0	0.7	3.9	0.4	4.0	0.6	A
		9	7	5	3	2	0	
3	Increasing the productivity of employees	4.4	0.5	4.8	0.4	4.6	0.4	SA
		7	0	0	7	4	9	
4	Improving overall organizational performance	3.6	0.8	3.5	0.9	3.5	0.9	A
		2	8	1	7	7	3	
5	Increasing organizational commitment	3.8	0.4	4.2	0.5	4.0	0.5	A
		0	8	2	4	1	1	
6	Improving employee well-being in the institution	4.6	0.5	4.7	0.6	4.6	0.6	SA
		6	9	0	6	8	3	
7	Enhancing creativity among employees	3.9	0.8	4.1	0.7	4.0	0.8	A
		8	4	1	9	5	2	
8	Improving problem-solving skills among employees	4.2	0.9	4.5	0.6	4.3	0.7	A
		0	1	4	3	7	7	

9	Increases employees' professional development	3.8	0.6	3.9	1.0	3.8	0.8	
		3	4	1	0	7	2	A
10	Improves quality of work	4.5	0.8	4.1	0.5	4.3	0.7	
		2	1	6	8	4	0	A
11	Empowering employees to take ownership of their work	3.4	0.5	3.2	0.4	3.3	0.5	
		0	9	9	4	5	2	D
12	Ignites passion and dedication	2.9	0.5	3.0	0.8	3.0	0.7	
		8	7	7	9	3	3	D
13	Fostering a sense of belonging and shared responsibility.	3.1	0.7	4.1	0.8	3.6	0.7	
		8	3	0	4	4	9	A
14	Fosters a culture of continuous learning and improvement.	4.3	0.6	4.6	0.5	4.4	0.6	
		0	1	2	8	6	0	A
15	Improve morale and drive to excel	2.7	0.7	3.8	0.4	3.2	0.6	
		2	7	6	8	9	3	D
16	Encourages employee to embrace new technologies and techniques in their work	3.9	1.0	4.0	0.8	4.0	0.9	
		6	1	5	5	1	3	A
17	Leads to higher levels of job proficiency	4.2	0.4	4.1	0.6	4.2	0.5	
		2	6	9	9	1	8	A
18	Results in increased job satisfaction	4.6	0.8	4.7	0.7	4.7	0.8	
		8	8	3	6	1	2	SA
19	Creates a dynamic work environment for employees	4.0	0.5	4.3	0.7	4.2	0.6	
		7	3	3	4	0	4	A
20	Fosters efficiency and accountability	4.0	0.8	3.9	0.9	3.9	0.8	
		0	1	6	0	8	6	A
Grand Mean/Standard Deviation		3.9	0.7	4.1	0.7	4.0	0.7	Agreed
		6	2	2	0	4	1	

Key: \bar{x}_1 = Mean of moderately experienced employees, \bar{x}_2 = Mean of highly experienced employees, \bar{x}_A = Average of the means, SD_1 = Standard deviation of moderately experienced employees, SD_2 = Standard deviation of moderately experienced employees, SD_A = Average Standard Deviation N = Number of respondents, SA = Strongly Agree, A = Agree, D = Disagree.

The analysis result presented in Table 2 show the mean and standard deviation of responses from moderately and highly experienced employees regarding the combined influence of transactional and transformational leadership on job performance of metalwork education employees in tertiary institutions in North-West Nigeria. Averagely, both respondents strongly agreed with 3 items, agreed with 14 items and disagreed with 3 items. In summary, the respondents agreed that the highlighted items are influences of both transactional and transformational leadership on job performance of metalwork technology employees with means ranging from 3.03 to 4.71 and a grand mean of 4.04 was obtained. Also, the standard deviation for the items ranged from 0.49 to 0.93, no item had a standard deviation above 1.96 which indicates that the responses were not too far from the mean. The closeness of responses to the mean adds value to its reliability.

Research Question Three

What are the techniques for improving transactional and transformational leadership among metalwork technology employees in tertiary institutions in North-West Nigeria? The data for answering research question three is presented in Table 3.

Table 3: Summary of the Qualitative Response of Employees on Techniques for Improving Transactional and transformational Leadership among Metalwork Technology Employees in Tertiary Institutions in North-West, Nigeria N =119

S/ N	Items	\bar{x}_1	SD ₁	\bar{x}_2	SD ₂	\bar{x}_A	SD _A	Remar k
1	Establishing achievable targets and goals.	3.8	0.3	4.2	0.6	4.0	0.4	
		5	2	1	1	3	5	A
2	Motivate employees through effective communication.	4.4	0.6	4.0	0.8	4.2	0.7	
		7	5	9	7	8	6	A
3	Developing a system for monitoring employee performance.	3.8	0.5	4.1	0.9	4.0	0.7	
		6	3	3	2	0	3	A
4	Providing timely verbal feedback without documenting.	3.1	1.0	3.3	0.8	3.2	0.9	
		9	3	4	8	7	6	D
5	Using disciplinary measures for non-compliance.	3.7	0.7	4.4	0.8	4.0	0.7	
		3	1	2	6	8	9	A
6	Offering opportunities to improve employees' skills.	4.0	0.9	3.9	0.9	4.0	0.9	
		9	9	2	1	1	5	A
7	Fostering a culture of accountability among employees.	4.4	0.6	3.8	0.8	4.1	0.7	
		2	6	4	3	3	5	A
8		3.4	0.4	3.4	0.6	3.4	0.5	
	Building trust by less monitoring	5	8	2	7	4	8	D
9	Promoting collaboration among employees and departments.	4.8	0.3	4.8	0.7	4.8	0.5	
		2	8	8	0	5	4	SA
10	Challenging employees to take calculated risks.	3.9	0.7	4.0	0.6	3.9	0.7	
		2	4	2	9	7	2	A
11	Promoting a culture of respect for individual differences.	4.0	0.6	3.4	0.9	3.7	0.8	
		2	7	1	8	2	3	A
12	Encouraging good ethical behavior and social responsibility.	4.5	0.8	4.2	0.7	4.3	0.8	
		2	2	6	7	9	0	A
13	Fostering a competitive environment among employees.	3.9	0.8	4.2	0.8	4.1	0.8	
		9	3	3	2	1	3	A
14	Encouraging adherence to safety protocols.	3.5	0.6	4.3	0.3	3.9	0.5	
		7	2	8	9	8	1	A
15	Promoting teamwork among employees.	4.9		3.9	0.9	4.9	0.8	
		2	0.8	1	4	2	7	SA
	Grand Mean/Standard Deviation	4.0	0.6	4.0	0.7	4.0	0.7	Agree
		5	8	3	9	0	4	

Key: \bar{x}_1 = Mean of moderately experienced employees, \bar{x}_2 = Mean of highly experienced employees, \bar{x}_A = Average of the means, SD₁ = Standard deviation of moderately experienced employees, SD₂ = Standard deviation of moderately experienced employees, SD_A = Average Standard Deviation N = Number of respondents, SA = Strongly Agree, A = Agree, D = Disagree.

The result presented in Table 3 show the mean and standard deviation of responses from moderately and highly experienced employees regarding the techniques for improving transactional and transformational leadership among metalwork technology employees in tertiary institutions in North-West Nigeria. Averagely, both respondents strongly agreed with 2 items, agreed with 11 items and disagreed with 2 items. In summary, the respondents agreed that the highlighted items are the techniques for improving transactional and

transformational leadership among metalwork technology employees in tertiary institutions in North-West Nigeria with means ranging from 3.27 to 4.92 and a grand mean of 4.00 was obtained. Also, the standard deviation for the items ranged from 0.45 to 0.96, no item had a standard deviation above 1.96 which indicates that the responses were not too far from the mean. The closeness of responses to the mean adds value to its reliability.

Hypothesis One

There is no significant difference between the mean responses of moderately experienced and highly experienced employees on the combined influence of transactional and transformational leadership on motivation among metalwork technology employees in tertiary institutions in North-West Nigeria. The data for testing hypothesis one is presented in Table 4.

Table 4: Z-Test Analysis of Moderately and Highly Experienced Employees on the Combined Influence of Transactional and Transformational Leadership on Motivation among Metalwork Technology Employees in Tertiary Institutions in North-West Nigeria

		Leven's Test for Equality of Variance		Z-test for Equality of Means						
		F	Sig.	Z	df	Sig. (2- taile d)	Mea n diff.	Std. erro r diff.	95% interval of the difference	
									Lower	Upper
Transactional motivation	Equal variance assumed.	.935	.24	1.68	117	.512	4.15	2.96	-1.02	4.09
	Equal variance not assumed.			1.92	117	.776	3.86	3.44	-1.17	4.55

Table 4 shows z-test analysis that compares the mean response of moderately experienced and highly experienced employees on the combined influence of transactional and transformational leadership on motivation among metalwork technology employees in tertiary institutions in North-West Nigeria. The data presented shows Leven's test with a p-value of 0.24 which implies that equal variance is assumed. Furthermore, the z-value obtained from the analysis was 1.68 and a p-value of 0.512 which is greater than 0.05 level of significance. Therefore, the null hypothesis was accepted implying that there is no significant difference between the mean responses of moderately experienced and highly experienced employees on the combined influence of transactional and transformational leadership on motivation among metalwork technology employees in tertiary institutions in North-West Nigeria.

Hypothesis Two

There is no significant difference between the mean responses of moderately experienced and highly experienced employees on the combined influence of transactional and

transformational leadership on job performance among metalwork technology employees in tertiary institutions in North-West Nigeria. The data for testing hypothesis two is presented in Table 5.

Table 5: Z-Test Analysis of Moderately and Highly Experienced Employees on the Combined Influence of Transactional and Transformational Leadership on Job Performance among Metalwork Technology Employees in Tertiary Institutions in North-West Nigeria

		Leven's Test for Equality of Variance		Z-test for Equality of Means						
		F	Sig.	Z	df	Sig. (2- taile d)	Mea n diff.	Std. erro r diff.	95% interval of the difference	
									Lower	Upper
Transactional and Transformational Leadership	Equal variance assumed.	.775	.041	0.53	117	.142	3.96	0.93	-0.72	1.39
	Equal variance not assumed.			0.81	117	.212	4.12	0.40	-1.01	1.45

Table 5 shows z-test analysis that compares the mean response of moderately experienced and highly experienced employees on the combined influence of transactional and transformational leadership on job performance among metalwork technology employees in tertiary institutions in North-West Nigeria. The Leven's test shows a p-value of 0.041 which implies that equal variance is not assumed. Also, the z-value obtained from the analysis was 0.81 and a p-value of 0.212 which is greater than the 0.05 bench mark. Hence, the null hypothesis was accepted implying that there is no significant difference between the mean responses of moderately experienced and highly experienced employees on the combined influence of transactional and transformational leadership on job performance among metalwork technology employees in tertiary institutions in North-West Nigeria.

Hypothesis Three

There is no significant difference between the mean responses of moderately experienced and highly experienced employees on the techniques for improving transactional and transformational leadership among metalwork technology employees in tertiary institutions in North-West Nigeria. The data for testing hypothesis three is presented in Table 6.

Table 6: Z-Test Analysis of Moderately and Highly Experienced Employees on the Techniques for Improving Transactional and transformational Leadership among Metalwork Technology Employees in Tertiary Institutions in North-West Nigeria

		Leven's Test for Equality of Variance		Z-test for Equality of Means						
		F	Sig.	Z	df	Sig. (2-tailed)	Mean diff.	Std. error diff.	95% interval of the difference	
									Lower	Upper
Transactional Techniques	Equal variance assumed.	2.17	.221	1.53	117	.492	4.52	0.43	-0.81	2.46
	Equal variance not assumed.			1.22	117	.527	4.61	0.35	-1.14	3.27

Table 6 shows z-test analysis that compares the mean response of moderately experienced and highly experienced employees on the techniques for improving transactional leadership among metalwork technology employees in tertiary institutions in North-West Nigeria. The Leven's test shows a p-value of 0.221 which implies that equal variance is assumed. Also, the z-value obtained from the analysis was 1.53 and a p-value of 0.492 which is greater than the 0.05 bench mark. Therefore, the null hypothesis was accepted implying that there is no significant difference between the mean responses of moderately experienced and highly experienced employees on the techniques for improving transactional leadership among metalwork technology employees in tertiary institutions in North-west Nigeria.

Discussion of Findings

The findings of research question one showed that the combined influence of transactional and transformational leadership on motivation of metalwork technology employees in tertiary institutions in North-West Nigeria includes promoting competition and fostering collaboration, emphasizing efficiency and inspiring a sense of purpose among others. The combination of transactional and transformational leadership styles has a positive influence on motivation of metalwork technology employees. Leveraging on the strengths of the two leadership styles translates into a lively work environment where employees are motivated and highly productive. The finding from hypothesis one revealed that there is no significant difference between the mean responses of moderately experienced and highly experienced employees on the combined influence of transactional and transformational leadership on motivation among metalwork technology employees in tertiary institutions in North-West Nigeria. Although the level of experience of the respondents was not the same, the opinions were similar, making the findings from research question one more credible. In support of this finding are studies carried out by Angriani *et al.* (2020) and Boateng and Ackon (2015), these studies also revealed the effect of both transformational and transactional leadership on motivation of employees in a work environment. Furthermore, the respondents also had similar opinions regarding the subject matter irrespective of their level of experience.

The findings from research question two revealed the combined influence of transactional and transformational leadership on job performance of metalwork education employees in tertiary institutions in North-West Nigeria includes increasing the productivity of employees, improving employee well-being in the institution among others. A blend of the two leadership styles would surely have a positive influence on the job performance of metalwork education employees. As educators possessing the right leadership qualities is very essential for effective job performance in tertiary institutions. The findings of hypothesis two show that there is no significant difference between the mean responses of moderately experienced and highly experienced employees on the combined influence of transactional and transformational leadership on job performance among metalwork technology employees in tertiary institutions in North-west Nigeria. Though highly experienced employees might have held more and higher leadership positions in these institutions but their opinions regarding the influence of the mentioned leadership styles on job performance was the same. This finding is in line with the assertion of Hoxha and Heimeher (2019) from the study conducted to examine the effect of leadership styles, namely transformational and transactional leadership on employee performance. It was found out that the leadership styles have a positive effect on employee performance. Similarly, Maskurochman *et al.* (2020) analyzed the effect of transformational leadership, organizational support, and job satisfaction on work motivation in improving employee performance. The study revealed that there is no difference in opinions of respondents regarding the influence of leadership styles on job performance of employees.

The findings from research question three revealed that the techniques for improving transactional and transformational leadership among metalwork technology employees in tertiary institutions in North-West Nigeria includes establishing achievable targets and goals, promoting open communication channels for employees among others. Though metalwork technology employees might possess some qualities of transactional and transformational leadership however, improving leadership qualities is crucial in enhance productivity. The techniques for improving transactional and transformational leadership would also help metalwork employees to overcome workplace challenges that hinder effective application of this leadership style. The finding from hypothesis three revealed that there is no significant difference between the mean responses of moderately experienced and highly experienced employees on the techniques for improving transactional leadership among metalwork technology employees in tertiary institutions in North-west Nigeria. All respondents irrespective of the level of experience had the same opinion regarding techniques for improving transactional and transformational leadership among metalwork technology employees. They practically re-echoed the techniques for improving transactional leadership among metalwork technology employees. This finding is in line with that of Brahim *et al.* (2015) who found out that employees possess poor transactional leadership skills hence suggested techniques for improving them such as promoting teamwork, rewarding employees, encouraging adherence to safety protocols among several others. Similarly, Angriani *et al.* (2020) also mentioned strategies for improving transactional leadership skills among workers and further suggested that leadership training workshops should be organized for workers.

Conclusion

This study determined the influence of transactional and transformational leadership on motivation and job performance among metalwork technology employees in tertiary institutions. It also suggested the techniques for improving the adoption and effective implementation of transactional and transformational leadership among metalwork technology employees. This was achieved by collecting and analysing opinions of moderately experienced and highly experienced employees of metalwork technology in tertiary institutions in North-West Nigeria. Transactional and transformational leadership styles are capable of positively

influencing motivation and job performance of employees which will translate to the production of skilled metalwork technology graduates.

Recommendations

Based on the findings of the study, the following recommendations were made.

1. The government should organize leadership training programme for metalwork technology employees in tertiary institutions in North-West Nigeria so that they can be educated on influence of transactional and transformational leadership on motivation.
2. The government should organize leadership training programme for metalwork technology employees in tertiary institutions in North-West Nigeria so that they can be educated on influence of transactional and transformational leadership on job performance.
3. Management of tertiary institutions in North-West Nigeria should organize seminars and workshops for metalwork technology employees to train them on the techniques for improving their transactional and transformational leadership skills.

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