PERSONNEL MANAGEMENT AND PRODUCTIVITY OF TECHNICAL STAFF IN UNIVERSITIES IN SOUTH-SOUTH – NIGERIA

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Abstract

The research work investigated on the personnel management and productivity of technical staff from South-South Universities – Nigeria. To achieve the aim of the study, four research questions were raised and four hypotheses were formulated to guide the study. Correlational research design was adopted for the study. The sample of the study consisted of 500 technical staff drawn from South-South Universities. The reliability of the instrument was established at coefficients between 0.75 and 0.83 using Cronbach Alpha reliability method. Stratified random sampling technique was used in the sample selection. A breakdown of the sample shows that there were 450 male and 50 female technical staff representing 10 percent of the population. The personnel management and productivity of technical staff questionnaire (PMPTSQ) was used to elicit information from the respondents. The instrument constructed on a 4 – point response scale. All the hypotheses were tested at 0.05 level of significance. The finding of the study revealed that there is significant contribution of personnel management and technical staff involvement in decision – making, provision of incentives, job security, increase of salary and head of department relationship with technical staff has constitute poor maintenance of laboratory equipment in the South-South Universities. Base on the results, it was concluded that personnel management practices to a large extent can bring about proper maintenance of laboratory equipment and sustainability for the effectives studies by the students. It will significantly assist the technical staff to sterilize the equipment. The study recommended among others that universities administrators should ensure adequate involvement of technical staff in decision making, provision of incentives, training of staff, motivating regular payment of staff salary, job security, increase of staff salary and head of department relationship with laboratory staff. This will encourage technical staff to be more committed and maintenance of laboratory equipment.

***Keywords**: Personnel Management, Productivity, Staff, Technical, Universities*

Introduction

Education is the key to succeed in all ramifications in life in the area of technology and national development. In the present-day context education is important means for individuals to improve personal endowments, build capacity levels, overcome constraints and the process, and enlarge their available set of opportunities and choices for a sustained improvement in well-being. It is the process of facilitating learning or acquisition of knowledge, skills, values, beliefs and habits. According to Saue and Victor (2021), education is the development of knowledge, skills or character. Education in Nigeria is seen as a panacea because it is described as an instrument ‘’per excellence’’ for effective and national development (Federal Republic of Nigeria, 2012). In the same vein Famade (2022), education is high and life.

Technical staff in the universities in South-South, Nigeria plays a vital role in educational system without which, educational goals cannot be attained. More emphasis is required for them to be efficient and effective in carrying out their job. According to Umar, Umar and Luba (2023) is on the view that human behavior are involved in affecting change in our society. In the related view productivity of technical staff is often involved in bringing about a favorite outcome in the students. If an outcome is

reached, especially if it is a positive one, it is likely that the productivity of the students will increase according to Effiom and Egan (2023). Productivity of Technical staff refers to the step at which technical staff executes their main responsibilities of maintaining laboratory equipment and conducting tests and experiments in the laboratory.

Managers can't promote productivity without quality equipment in the laboratory to be used for observations, experimentation and research by students and researchers. However, universities in South-South Nigeria cannot achieve its laudable goals and objectives without efficient and effective technical staff who are committed in performing their work. Therefore, personnel management and head of departments must be given technical staff in universities in South-South, Nigeria adequate attention on the issues that affect their welfare needs. This is because technical staff are the backbone and are central to the success of the university. Douglas (2023) stated that poor working environment, heavy work load, lack of promotion opportunities, job security and personnel/staff relationship hampered efficient and effective development of technical staff for higher productivity in universities in South-South Nigeria. Therefore, retraining and increase of staff salary in the university system is imperative becomes it encourages better services and enhances high productivity and continuation of the university system. It is observed that technical staff of universities in South-South Nigeria has been absent from work, lateness to work, lack of equipment maintenance, poor conducting of tests and experiment, to some extent, most of these staff are quitting the department as a result of poor welfare services to them in the department. The consequential effect of these has resulted to technical staff in ability to demonstrate the desire level of commitment to their work and proper maintenance of laboratory equipment to enhance high productivity in our educational system.

Consequently, Evans (2018) postulated that motivation is a mechanism through which an employee is reinforce, espouse, provision of basic needs to enable him do more and what he would have not done ordinary. Technical staff are the creator of knowledge and skill for future leaders and only motivated technicians would perform well and produce good result by delivering quality instruction and imparting relevant skill to students. Technical staff in universities in South-South, Nigeria will not only produce good quality leaders but also contribute to the sustainable development of any country. Therefore, it is pertinent to keep technical staff of universities in South-South, Nigeria satisfied with their job and careers. In universities in South-South, Nigeria, it has been reported that many technical staff do not report to work as expected. Many head of technicians and head of departments complain of many technical staff not taking proper stock of laboratory equipment and showing a high degree of truancy.

The poor approaches to work are signs of poor work productivity by technical staff. In support of this finding, Owan (2022) reported that effective collaboration of head of department and technical staff is the key to ensure teaching effectiveness and functional education. However, developments have been made in terms of purchase of laboratory equipment, availability of materials to be used for tests and staff motivation through regular payment of universities in South-South, Nigeria technical staff salaries, the involvement of head technical staff in making schools' decisions, and other such improvements if implemented would generate a change in the work productivity of university technical staff. Sadly, the same undesirable problems bordering on productivity of technical staff persists, on this note, the researcher sought to know if personnel management has any contribution to productivity of technical staff.

Statement of the Problem

The poor performance of technical staff of universities in South-South, Nigeria have been observed to be inefficient in their work, poor conduct of experiments and tests approaches, poor attitude towards interpreting tests results, poor maintenance of laboratory equipment, lack of self-control and lateness to work, absent from work without excuse from the head of department and corrupt attitude in diverting the school material into their private use.

Several efforts were made by the government, management, administrators, managers and stakeholders to improve the quality of productivity of technical staff, the problem is still maintaining. The consequential effect has transformed to the poor academic outcome of university students recorded in laboratories experimentations. Universities were established for the society as a means of producing quality students who can be resourceful, and who can function as worthy contributions to the higher education level. It was anticipated that members within the universities including the administrators, manager, teaching and non-teaching staff and students, show important roles in transforming the conduct of university students through teaching, learning and research.

Since all efforts made have yielded little no results, the researcher wonders whether personnel management have any relation to university technical staff productivity. Therefore, the problem of this study position in question procedure is; how does personnel management relates to productivity of technical staff in terms of experimental delivery, conducting tests and experiments, interpreting tests results, sterilizing the equipment, attendance to laboratories experimentation, maintaining laboratories equipment and ensuring proper safety measures in the laboratories, in universities in South-South, Nigeria. This study seeks to provide answer to this question.

Purpose of the Study

The main purpose of this study was to;

1 ascertain the extent to which personnel involvement in decision making relates to productivity of technical staff in universities in South-South, Nigeria.
2 examine whether provision of incentive relates to productivity of technical staff in universities in South-South, Nigeria.
3 determine the extent to which promotion relates to productivity of technical staff in universities in South-South, Nigeria

Statement of Hypotheses

The following null hypotheses guide the study.

1 There is no significant relationship between personnel involvement in decision making and productivity of technical staff.
2 There is no significant relationship between incentive and productivity of technical staff.
3 There is no significant relationship between promotion and productivity of technical staff.

Methods

Correlation research design was used for the study. The choice of this design in the study indicated that the research work showed relationship with the variables. For instance, personnel management and productivity of technical staff in universities in South-South, Nigeria. This study is carried out in universities within South-South States, Nigeria. The institutions include; University of Uyo, Akwa Ibom State, University of Port Harcourt, Rivers State, University of Science and Technology, Otuweke, Bayelsa State, University of Benin, Edo State and University of Calabar, Calabar.

The instrument used for data collection is a questionnaire titled Personnel Management and Productivity of Technical Staff Questionnaire (PMPTSQ). The instrument has three sections A, B and C. Section A sought for demographic data of the respondent. Section B and C were constructed on a modified 4 – point Likert scale of Strongly Agreed (SA), Agreed (A), Disagreed (DA) and Strongly Disagreed (SD. The instrument was validated by two experts in the department of measurement and evaluation and educational management department to vet the items for face validation. Ambiguous items were discarded and replaced with valid ones. The instrument was certified appropriate before the researcher uses it for the study. The internal consistency reliability test was adopted in establishing the reliability of the instrument. The most commonly used was Cronbach alpha coefficient at the range of

.05 and 0.83. This indicated that the instrument was reliable. Reliability concerns that extent to which a measurement of a phenomenon provides stable and consistent result (Carnines and Zeller 1979). Reliability is also concerned with repeatability. The researcher formally obtained permission from the institutional authority for the administration of the questionnaires to technical staff. The researcher visited the school with two research assistance for the distribution of the questionnaires. Explanation was given out to the respondence on how to fill the questionnaire without errors. At the completion of the research work, the researcher collected the questionnaire for procession.

A system was developed to guide for coding the data collected for analysis. The items were sorted out according to questionnaire. A 4 point response options was used: Strongly Agreed (SA), Agree (A), Disagree (D) and Strongly Agree (SD). For all the negatively worded items the scoring technique will be reversed. The stratified random sampling technique was adopted for this study. It is a sampling technique that ensures that all the sub-unit in the population were adequately represented in the study. According to Odu (2001) agrees that stratified random sampling is a sample involves the division of population into smaller sub-group known as strata. The sample comprises of 500 technical staff for the sample institution.

Results

Hypothesis One

There is no significant relationship between personnel involvement in decision making and productivity of technical staff. The results from the analysis of data using Pearson Product Moment Correlation Coefficient and the result presented in Table 1.

Table 1
Correlation between personnel involvement in decision making and productivity of technical staff

Variables	N	$\overline{(x)}$	SD	Df	Cal. r-value	Crit. Value	Decision
Personnel involvement in decision making	**267**	3.3515	40.276				
				266	.165	.047	Rejected
Productivity of Technical Staff	**267**	3.1293	57.031				

From the table above, the correlation value is .165 and the P value is .047. Since the P value (0.047) is less 0.05, we reject the null hypothesis and conclude that there is a significant relationship between personnel involvement in decision making and productivity of technical staff.

Hypothesis two

There is no significant relationship between incentive and productivity of technical staff. The results from the analysis of data using Pearson correlation is presented in Table 2

Table 2: Summary of Pearson Correlation results showing the relationship between incentive and productivity of technical staff

Variables	Mean	Std. Deviation	Cal. R	Sig.
In-service training	23.61	7.519	1	.000
Experimental delivery	23.80	7.610	.166**	.000
Conducting tests and experiments	23.72	7.513	.247**	.000
Interpreting tests results	23.20	7.606	.436**	.000
Sterilizing the equipment	24.15	7.501	.429**	.000
Attendance to laboratories experimentation	24.10	7.002	.451**	.000
Maintaining laboratories equipment	22.41	7.322	.435**	.000

Ensuring proper safety measures in labs	24.04	7.022	.446**	.000

The results presented in Table two shows indicate a weak positive relationship between in-service training and experimental delivery (r=166) and conducting tests and experiment (r=247). The results disclosed that there was a moderate relationship between in-service training and interpreting tests results (r=.436), sterilizing the equipment (r= .429), attendance to laboratories experimentation (r=451), maintain laboratories equipment r=435) and ensuring proper safety in the laboratories (r= .446). It indicated that the more adequate in-service training the more likelihood of their high productivity in the organization.

Hypothesis Three: There is no significant relationship between promotion and productivity of technical staff. The results from the analysis of data using multiple regressions are presented on table 3.

Table 3 Multiple regression results summary of the relationship between personnel involvement in decision making, in-service training, incentive and promotion with productivity of technical staff.

Promotion of technical staff	**R**	**R2**	**Adj. R2**	**F**	**Sig**
Experimental delivery	.205[a]	.051	.077	22.422	.000
Conducting tests and experiments	.438[a]	.241	.291	110.134	.000
Interpreting tests results	.560[a]	.332	.350	236.121	.000
Sterilizing the equipment	.677[a]	.458	.427	359.681	.000
Attendance to laboratories experimentations	.666[a]	.451	.411	332.541	.000
Maintaining laboratories equipment	.551[a]	.321	.340	229.110	.000
Ensuring proper safety measures in labs	.766[a]	.519	.414	426.574	.000

a. Predictors: (Constant), Management leadership, supervisory and communication skills

The results presented in table indicates that there is a joint multiple correlation of personnel involvement in decision making, in-service training, incentive to technical staff and promotion to technical staff with experimental delivery (R = .205), conducting tests and experiments (R = .438), interpreting tests results (R = .560), sterilizing the equipment (.677), attendance to laboratories experimentations (R = .666), maintaining laboratories equipment (551) and ensuring proper safety measures in labs (R = .766). The three variables equally accounted for 8.8%, 28.9%, 46%, and 63.7% of the total variance in technical staff experimental delivery (Adj. R2 = .051), conducting tests and experiment (Adj. R2 = .241), interpreting tests results (Adj. R2 = .332), sterilizing the equipment (Adj. R2 = .458), attendance to laboratories experimentation (Adj. R2 = .451), maintaining laboratories equipment Adj. R2 = 321) and ensuring proper safety measures in laboratories (Adj. R2 = .519) respectively, as indices of productivity of technical staff. With the remaining 91.2%, 71.1%, 54% and 36.3% respectively, due to other variables not included in this study.

The results further disclosed that p-values .000, .000, .000, and .000 obtained for experimental delivery, conducting tests and experiments, interpreting tests results, sterilizing the equipment, attendance to laboratories experimentation, maintaining laboratories equipment and ensuring proper safety measures in the laboratories all less than .05 level of significance. With this result, the null hypothesis was rejected while the alternate hypothesis was upheld. The conclusion is that; personnel management involvement in decision making, in-service training, incentive to technical staff and promotion to technical staff have multiple influence on productivity of technical staff in terms of experimental delivery ($p < .05$; $F = 22.422$), conducting texts and experiment ($p < .05$; $F = 110.134$), interpreting tests results ($p < .05$; $F = 236.121$), sterilizing the equipment $p<.05$; $F = 359.601$, attendance to laboratory experimentation ($p<.05$; $F = 332.541$), maintaining laboratories equipment ($p<.05$; $F = 229.110$), and Ensuring proper safety measures in labs ($P < .05$; $F = 426.574$). Therefore, the R values

of .205, .438, .560, .677, .666, .551 and .766 respectively for the various indices of productivity of technical staff, were not due to chance. Both data for independent and the dependent variables were obtained with modified 4-point Likert scale questionnaire.

Discussion of Findings

The findings of this study established that; personnel involvement in decision making has significant relationship with productivity of technical staff in terms of experimental delivery, conducting tests and experiments, interpreting tests results, sterilizing the equipment, attendance to laboratories experimentation, maintaining laboratory equipment and ensuring proper safety measures in the laboratories in universities in South-South, Nigeria. This result implies that in universities where personnel management showed good attributes, productivity of technical staff will also increase, in terms of experimental delivery, conducting tests and experiments, interpreting tests results, sterilizing the equipment, attendance to laboratories experimentation, maintaining laboratory equipment and ensuring proper safety measures in the laboratories. However, this result does not imply that university administrators are the cause for productivity of technical staff growing or reducing.

The finding also corroborates the finding in a study by Nzabonimpa (2021) which examined the influence of secondary school head teachers' general and instructional supervisory practices on teachers' work performance. Pearson Correlation Coefficient was used to establish the extent of relationship between head teachers' supervisory practices and teacher' work performance. The findings revealed among others, a moderate correlation between secondary school head teacher's supervisory practices and teacher's work performance. The relationship existed at the 0.001 level (2-tailed) with Pearson Correlation Coefficient of 0.636. And the coefficient of determination was 0.4044 or 40% indicating a moderate relationship between supervision and teacher performance. However, the educational managers need to comply with the introduction of personnel involvement in decision making.

The finding emanating from this study disclosed that; there is significant relationship between provision of incentive and productivity of technical staff in terms of experimental delivery, conducting tests and experiments, interpreting tests results, sterilizing the equipment, attendance to laboratories experimentation, maintaining laboratory equipment and ensuring proper safety measures in the laboratories. This finding agrees with the findings of Ghasemizad *et al.* (2012) which also showed that there was a significant relationship between principals' leadership and job satisfaction (R=.40). There was a significant relationship between principals' leadership and productivity (R=.32). There was a significant relationship between principals' leadership and quality of work life (R=.41). It was established through the finding from this study that; there is significant relationship between in-service training and productivity of technical staff in terms of experimental delivery, conducting tests and experiments, interpreting tests results, sterilizing the equipment, attendance to laboratories experimentation, maintaining laboratory equipment and ensuring proper safety measures in the laboratories. This relationship implies that an improvement in in-service training will bring growth in the productivity of technical staff. The finding supports the finding of Fashiku (2021) which revealed that; leaders' communication pattern is significantly related to lecturers' performance.

Ghasemizad *et al.* (2012) investigated the relationship between principals' leadership, quality of work life, job satisfaction and productivity of teachers in Kerman high schools. Findings from the study showed that there was a significant relationship between principals' leadership and job satisfaction (R=.40). There was a significant relationship between principals' leadership and productivity (R=.32). There was a significant relationship between principals' leadership and quality of work life (R=.41). There was a significant relationship between job satisfaction and productivity (R=.34). A significant relationship was observed between job satisfaction and quality of work life with (R=.54). A significant relationship was observed between quality of work life and productivity (R=.68). All these relationships were significant at the level of $p < 0.01$.

This study established that; promotion of technical staff have significant influence on productivity of technical staff in terms of experimental delivery ($p < .05$; $F = 22.722$), conducting tests and experiments ($p < .05$; $F = 110.134$), interpreting tests results ($p < .05$; $F = 236.121$), sterilizing the equipment ($p < .05$; $F = 359.681$), attendance to laboratories experimentation ($p<.05$; $F=332.541$), maintaining of laboratory equipment ($p<.05$; $F=229.110$ and ensuring proper safety measures in the laboratory ($p<.05$; $F=426.574$. This implies that when management exhibit promotion of technical staff with pay rapidly, furnish their offices and attach with cars would constitute high productivity of technical staff in terms of experimental delivery, conducting tests and experiments, interpreting tests results, sterilizing the equipment, attendance to laboratories experimentation, maintaining laboratory equipment and ensuring proper safety measures in the laboratories. By implication, technical staff will be closely supervised, they will also know their roles expectations, and will be interested to work as a result of managements' boosted promotion and attach with high salary.

Conclusion

The finding of this study revealed that personnel management significantly relates with productivity of technical staff in universities in South-South Nigeria. Conclusively, adoption of personnel management practices will greatly provide intrinsic and extrinsic needs of technical staff which will increase the productivities of the staff in term of punctuality, knowledge in the maintenance of equipment and tools in the laboratory. Technical staff will work assiduously in the teaching and learning of students in universities in South-South, Nigeria. It was also concluded generally that personnel management is significantly related to productivity of technical staff. Personnel involvement in decision making, in-service training, incentives and promotion influence productivity of technical staff in terms of experimental delivery, conducting tests and experiments, interpreting tests results, sterilizing the equipment, attendance to laboratories experimentation, maintaining laboratory equipment and ensuring proper safety measures in the laboratories.

Recommendations

The following recommendations were made following the outcome of the findings:

1 The personnel management of laboratory equipment should ensure that technical staff of the unit should be inculcated in the decision making.
2 Educational managers of the institution should ensure that budget is made and allocated to the various departments for the in-service training through seminars, symposium and conference for the staff in order to refurbish staff knowledge.
3 Head of department of the institution should meticulously inculcate the style of promotion with pay, incentive, bonuses and health facilities to staff hence will improve their productivity.
4 Educational managers should ensure that incentive for the technical staff in the universities in South-South, Nigeria should be evenly distributed.
5 Management should integrate activity and interests of staff in the organization so as to actualize its objectives and quality results.
6 They should show concern towards technical staff and recognize them as important in the development and promotion of the university system.

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