



Management Functions Required by Teachers for Training Students of Mechanical Technology Trade in Technical Colleges in Rivers State

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ABSTRACT

This study examined management functions required by teachers for training students of mechanical technology trade in technical colleges in Rivers State. A descriptive survey design guided the study. The population of the study comprised 17 teachers and 11 Instructors in Mechanical Technology. Due to small population size, there was no sampling. Four research questions were answered while four hypotheses were tested at 0.05 level of significance. The instrument used for data collection was a self-structured questionnaire which was validated by the researcher's supervisor and two other experts. The instrument for the study was partitioned into different sections and was patterned after Likert-5-point rating scale of agreement. Reliability Coefficient of 0.85 was established for the instrument using Cronbach Alpha coefficient reliability method. Mean and Standard Deviation were used to answer research questions. T-test was used to test the hypotheses. It was found that planning functions such as planning the workshop to take care of student's practical work in areas of construction of mechanical devices is a management functions used by technical teachers and instructors for training students of Mechanical Technology Trade in technical colleges in Rivers State. That organizing functions such as proper keeping of records of all the workshop equipment, tools and materials is a management functions used by technical teachers and instructors for training students of Mechanical Technology Trade in technical colleges in Rivers State. Based on the findings, it was recommended among others that technical teachers and instructors should adopt planning as workshop management functions in technical colleges in Rivers State. This will enhance effective training of students in mechanical Technology trade, and that technical teachers and instructors should ensure the adoption of organizing as workshop management functions in technical colleges in Rivers State. This will enhance effective training of the student in mechanical trade.

Keywords: Management functions, Controlling, Planning, Institutions, Technical.

INTRODUCTION

Mechanical technology trade are very important in technical and vocational education programs as it involves the acquisition of scientific knowledge in design, selection of materials, construction, operation and maintenance of engines of various kinds. It also helps to designs and manufactures products and processes of modern facilities which bring growth and development in the country. According to Egboh (2010) the difference between a developed country and developing country is the level of scientific and technological development in various areas of technical education most especially mechanical technology trade. Funmi (2016) noted that education without a doubt is the singular and most effective tool in the eradication of poverty while science and technology is used to measure the growth, development and success of any nation. While technology is the bedrock of development, it would not be wrong to say education is the bedrock of technology as technological knowledge and skills can only be transferred through education. Developing nations are poor because of their negligible investment in science and technological know-how and their people do not have the capacity to inform themselves in a comparative knowledge driven world. Increased competition in a

global market place, adds to the need and urgency to get right people, with the right skills, in the right place, at the right time (Okorafor, 2014).

Acquiring the right skills in technology education requires a well-equipped workshop. Mbaga (2018) stated that there is need for well-equipped workshops in technical education with adequate facilities to provide the required training and impart the necessary skills leading to the production of technical trade teachers and other skilled personnel who will be enterprising and self-reliant. Workshop is generally, a place where learner carries out practical activities involving measurement, cutting, sizing, smoothing, assembling, experiment, repairing, designing, constructing, and finishing among other activities (Ezeji, 2010). The workshop, therefore, provides a space where students of mechanical technology trade put into practice what they were taught in the classroom, as well as for storing the equipment, tools and materials used for such practical purposes. Fakomogbon, in Ogbonna, (2014) stated that effective teaching and learning of mechanical technology trade, demands a workshop in which the theory learnt in the classroom can be translated into practical demonstration by both staff and students. This is because mechanical technology cannot be taught successfully without equipment and tools which are appropriately kept in the workshop. According to Okoye and Okwelle (2014), a workshop is a unique learning situation in which learners may experiment, test, construct, assemble, disassemble, repair, design, create, imagine and study.

However, for effective workshop activities, there should be an effective management. Hence, teachers/instructors ought to have knowledge of management strategies. Planning is an inevitable aspect of an effective workshop management strategy. Planning, as in all management processes according to Ajuzie and Ezietula (2012), is the first logical step in facility management. Workshop planning function is a method or approach by which vocational education personnel, schools and industries in the day to day provision and utilization of workshop facilities for optimum achievement of set goals. Planning is the “process of preparing a set of decisions for action in the future, directed at achieving goals by optimal means” (Asiabaka, cited in Ogbonna, 2011) “Planning is proactive process and entails decision on how things will be done before hand. For a proper planning to take place, measure must be put in place for proper control.

Apart from planning, workshop activities need to be organized. Organizing workshop is the division of works to be performed by individuals, the arrangement and assignment of equipment, tools and materials to be used and the development of structures to facilitate and ensure its completion. According to Okparaeké (2010), the activities involved in workshop management include; arrangement of the productive resources available for effective use; grouping students to execute specific practical or workshop projects; procuring tools and materials for the school practice or workshop; preparation of workshop timetable for varying practical or workshop events/projects; assigning specific tasks/project to students.

Hill and Brown (2010) pointed out that traffic flow and class supervision is predicated on how equipment in the workshop is organized. Intelligent and efficient organization of the workshop will yield greater possibilities of effective supervision and free movement of both staff and students and vice versa. Hill and Brown (2010) maintained that certain principles have to be observed in a sequential manner when arranging equipment on the laboratory floor. Basically, this research will expose the workshop management functions for training students of mechanical technology trade in technical colleges in Rivers State.

Statement of the Problem

In technical colleges, there are frequent damages to tools and machines, wastage of materials by students and teachers. Many workshops seem not to be well organized and planned for daily routine activities. Accidents occur frequently in the workshops and the few facilities in the workshop are not well managed to achieve the objectives of vocational technical education. Highlighting on the above stated problems Ogundu (2012) pointed out that it is absurd for a total of 207 and 211 tools and equipment to be lost or be non-functional respectively in 12 departments within an interval of three years, whereas the departments continue to graduate students. Regrettably, Ogundu (2012) noted that many of the equipment are not installed; uncared for and under-utilized and that such attitude negates the basic purpose of accelerating technology education for which the equipment were provided, considering the life expectancy of the machine and tools. It follows that poor management functions of equipment could be attributed to management functions used in the workshop.

Unfortunately, the management functions in practice by technical teachers in technical colleges' workshop in Rivers State leave a lot to be desired. Tripene (2013) observed that the poor workshops management functions adopted in these workshops by both the teachers and workshop attendants have caused a lot of problems ranging from waste of materials, indiscriminate missing of tools, poor quality work, piecemeal purchase due to lack of planning, poor work space keeping, damaged equipment, students exposure to workshop hazard, cases of accident and students graduating without management skills for effective use in their occupation. To arrest these problems, the study seeks to identify workshop management functions that will be suitable for training students of mechanical technology trade in technical colleges in Rivers State.

Purpose of the Study

The main purpose of this study was to identify Workshop management functions for training students of mechanical technology trade in technical colleges in Rivers State. Specifically, the study sought to determine;

1. Planning functions required by technical teachers for training students of mechanical technology trade in technical colleges in Rivers State.
2. Organizing functions required by technical teachers for training students of mechanical technology trade in technical colleges in Rivers State.

Research Questions

The following research questions guided the study:

1. What are the planning functions required by technical teachers for training students of mechanical technology trade in technical colleges in Rivers State?
2. What are the organizing functions required by technical teachers for training students of mechanical technology trade in technical colleges in Rivers State?

Hypotheses

The following four null hypotheses were formulated to guide the study, and was tested at 0.05 level of significance;

1. There is no significant difference between the mean responses of Technical Teachers and Instructors on the planning functions required for training students of mechanical technology trade in technical colleges in Rivers State.
2. There is no significant difference between the mean responses of Technical Teachers and Instructors on the Organizing functions required for training of students of mechanical technology trade in technical colleges in Rivers State.

REVIEW OF RELATED LITERATURE

Planning Functions needed in the Management of Mechanical Technology Trade Workshops

The technical graduates from technical college are expected to be trained to attain full occupational mastery in their respective occupations. As this will enable them to be self employed or gainfully employed in companies and industries. In order to achieve this, the planning of school workshops becomes necessary, as this would improve the effectiveness of instructional outcomes and consequently will lead to the production of efficient technical graduates. Okoro (2011) pointed out that a good quality programme is housed in physical facilities which are adequate, well-planned and properly equipped to provide realistic education. In the same vein, UNESCO (2010) stressed that for quality assurance in technological development to be achieved; responsible national authorities should establish criteria and standards, subject to periodic review and evaluation, to be applied to all aspect of technical and vocational education. Such criteria and standards should include physical facilities, buildings, libraries, workshop layout, quality and type of equipment, as well as safety measures meant for a conducive learning environment. Such a recommendation is aimed at planning of workshop facilities to enhance instructional activities and subsequent achievement of the objectives of setting up the programme it is pertinent, therefore, to note that most workshops used for mechanical technology trade in Rivers State need to be properly planned.

Organizing Functions needed in the Management of Mechanical Technology Trade Workshops

Organizing workshop is the division of works to be performed by individuals, the arrangement and assignment of equipment, tools and materials to be used and to development of structures to facilitate and ensure its completion. According to Okparaeke (2010) the activities involved in workshop management include; arrangement of the productive resources available for effective use; grouping

students to execute specific practical or work shop projects; procuring tools and materials for the school practice or workshop; preparation of workshop timetable for varying practical or workshop events/projects; assigning specific tasks/project to students. Hill and Brown [2010] pointed out that traffic flow and class supervision is predicated on how equipment in the workshop is organized. Intelligent and efficient organization of the workshop will yield greater possibilities of effective supervision and free movement of both staff and students and vice versa. Hill and Brown [2010] maintained that certain principles have to be observed in a sequential manner when arranging equipment on the laboratory floor. Such principles, according to the authors include:

1. The equipment must be arranged to facilitate instruction such that it will be easy for the teacher to teach and the students to learn. Deliberate and organized duplications are sometime used to avoid some production restraints and enhance supervisory and traffic efficiently.
2. The organization of equipment must facilitate the movement of people point-to- point in the workshop, whatever the type of activity is in progress. Teachers as well as students have to be able to walk quickly and safely from one area of the laboratory to another.
3. The equipment has to be laid out in such a way that the organization promotes safety. Poor layout obstructs the necessity for supervision and destroys the effectiveness of the traffic lane system.
4. The equipment should be arranged in a manner that it will assist the teacher to effectively manage the laboratory and programme. Any aversion from this may lead to a poor traffic pattern which can develop in a laboratory that is not easily kept tidy and is poorly managed. It is important to note that time needed for instruction will be wasted for control if the workshop was not well organized.
5. Equipment has to be organized in such a pattern as to yield the most efficient flow of materials from the storage to finished products.

It is evident that when all these principles are strictly adhered to, the movement of semi-finished projects between the project storage rooms, the finishing rooms, the bench area r the project assembly area presents a minimum problem (Mohammed, 2012). He also stressed that the division of students into groups for workshop activities will help the technology teacher in various way, including the following: it makes the teaching of Mechanical Technology trade skills easy, because students are in small groups that could be accessed easily by the teachers; it allows the students to observe the teacher's demonstration with ease due to the small size of the groups; it makes supervision of the students at work during implementation easier; it is easier for the teacher to identify incorrect implementation steps and correct them immediately; it makes assessment of the students easy for the teacher; it makes it easy for students to learn from one another and engenders cooperative efforts. Logical sequences of activities are required in order to effectively organize a basic technology workshop. Different sources indicated that there are a lot of challenges to absorb and those factors conducive for effective learning experiences have to be maintained.

According to Olaitan (2010) the following guides are suggested for organizing new and existing facilities: review the occupational objectives and goals of the programmes; list and arrange the learning activities which are meant to take place in the laboratory; examine the equipment and materials necessary for the projected learning activities; determine and arrange the approximate boundaries of each equipment and general tool cabinet and work benches desired for the learning activities; layout the furniture and equipment on a plan to scale for ease of adjustment before permanent installation; prepare a set of notes about procedures and safety precautions for implementing the organizational plan; prepare a step-by-step plan for the installation of the equipment as they are procured. Ezeji (2007) warned that the equipment and its placement should meet state and national safety and health standards. He went on to state that; machines and work areas must be properly placed to allow a normal sequence of operations within a minimum of cross traffic. Generally, materials move from delivery to bench area for processing and fabricating, to finishing. Machines must have sufficient access area to permit their maintenance as well as operation. Light should come from the proper direction to eliminate shadows on the working surface. He stressed that; Clearance between machines should be wide enough so that traffic flow does not interfere with operations. A large assembly area should be left clear in wood working, construction and manufacturing laboratories. The work benches should be clustered to more adequately serve as a

demonstration area. It is not enough to organize only the workshop equipment, tools and materials in the most efficient manner. Before appropriate goals realization is achievable, personnel have to also be organized. Such personnel include the Mechanical Technology trade teacher, the laboratory attendant, cleaner, storekeeper as well competent supportive personnel. All or some of these personnel, at every point, are required to prepare materials and equipment for students with respect to work experiences in mechanical technology trade workshop. Nwachukwu (2011) referred to this group as knowledge personnel and insisted that these personnel need to be familiar with workshop activities in schools in order to positively influence learning experiences. The first step in workshop organization should be decision making. Therefore, Nwachukwu (2011) suggested that the teacher decides which organizing element among those within the chosen system will be most relevant, most meaningful and most useful materials for the specific students who should work and gain experiences using materials. The teacher should also be able to check and ensure safety of both human and physical facilities; and then, he assesses the work carried out by the students ensuring that adequate knowledge and skill has been gained by the students in course the experimental process. The workshop is organized in a coordinated, systematic and sequential manner in order to evoke logical thinking from both staff and students.

In order to facilitate progress in mechanical technology trade, the course of study has to be organized as well. The organization of course of study will enhance students' appreciation of the programme and help in their carrier choice. According to National vaster-Plan (2001) at the junior secondary school, the following will form distinct specialization areas Agriculture, Business Studies, Home Economics and Computer practice. Basic technology should be split into three main components; Construction Technology and Technical Drawing; Mechanical and Manufacturing Technology and Technical Drawing; Electricity, Electronics and Services and Technical Drawing. In support of the recommendation of the Master-Plan, Okoro (2010) stated that the organization of a Technical Colleges as it affects mechanical technology trade is similar to that of technical colleges. The author suggested that in large schools where enrollment is large and where several workshops for different areas exist, separate departments for those subjects might be necessary. The main contribution of organization is that it ensures proper utilization of available materials. Ebe (2007) lamented that most the school workshops in Nigeria are underutilized because the school teachers lack the skill to operate the equipment there in. Therefore, Ogwo and Oranu (2008) suggested that both teachers of technology and support staff be masters of their individual areas.

Towards achieving this, Hill and Brown (2010) advised that in addition to adequate training technology teachers and workshop staffs on any new equipment, comprehensive information about any equipment to be acquired have to be provided by the manufacturers. They maintained that certain criteria are to be considered very important in equipment selection. They include: that the manufacturers should provide adequate directions for installation, maintenance and repair; there should be adequate technical assistance with installation if necessary, there should be complete and well-illustrated operating guide; availability of training sessions fashioned to prepare the teachers with the use of the equipment detailed policy of design modifications for proper incorporation in their models; adequate instructional aides to facilitate the comprehensive explanation of the use of the equipment. It therefore becomes imperative that the proper organization of the available facilities for basic technology in Rivers State be effectively implemented. This will bring efficiency in teaching and learning of the course and help in the realization of the essence of the Universal Basic Education.

MATERIALS AND METHODS

Descriptive research survey design was used for this study. The study was carried out in Rivers State. Rivers State is a state in the southern part of Nigeria with a projected population of 6,966.279 people (National Population Commission Office, 2018). The state has seven tertiary institutions, such as: University of Port-Harcourt, Rivers State University, Ignatius Ajuru University of Education, Ken Saro-Wiwa Polytechnics, Port-Harcourt Polytechnics, Federal Polytechnics and Federal College of Education (Technical) Omoku.

The entire population was used for the study due to the small population size. Hence there was no sampling technique.

Research Instrument

The instrument for the study was a self-constructed questionnaire tagged Workshop Management Functions for Training Students Survey Questionnaire (WMFTSSQ) to assess the workshop management functions for training students of mechanical technology trade in technical colleges in Rivers State. The instrument was partitioned into four sections and structured in the pattern of 5 point Likert rating scale of Strongly Agree (SA-5), Agree (A-4), Undecided (U-3), Disagree (D-2) and Strongly Disagreed (SD-1).

Validation of the Instrument

The instrument was validated by the research supervisor and two teachers of Mechanical Technology from Government Technical College, Ahoada. The teachers were given a copy of the instrument; they critically checked each item of the questionnaire for clarity and suitability of the item statement. Their observations and suggestions were incorporated and was used in the final draft of the instrument before administration.

Reliability of the Instrument

The reliability of the instrument was established using Cronbach Alpha Reliability Coefficient method for a measure of internal consistency of the instrument. Copies of the instrument were administered to 6 mechanical technology trade teachers and 6 workshop instructors in Government Technical College, Rivers State which were selected through simple random sampling technique. The data obtained from these respondents were used to compute the reliability. A reliability coefficient of 0.85 was established through Pearson Product Moment Correlation (PPMC) coefficient.

Method of Data Collection

The researcher administered the questionnaire to the respondents with the help of four research assistants. Each research assistant distributed and retrieved the questionnaire from the four technical colleges, while the researcher collated the retrieved questionnaire from the four research assistants. The questionnaires were then distributed to all the administrators, teachers; of mechanical technology trade and workshop staff in the four Technical Colleges in Rivers State. The researcher and his assistants gave an interval of one week between the distribution and collection of the questionnaires. This was to allow the respondents enough time to think thoroughly and give realistic responses and also not to allow them too much time in order not to misplace the questionnaires.

Method of Data Analysis

Research questions were analyzed using statistical mean. Any item with a mean of 3.00 and above was considered as a technique needed for mechanical technology trade workshop management while any item below the mean of 3.00 was regarded as a technique that is not needed for mechanical technology trade. The hypotheses were analyzed using t-test. The reasons for this statistical tool were made appropriate where two groups of respondents are to be sampled (Uzoagulu, 2013). Each of the four hypotheses was tested at 0.05 level of significance. Any item with a mean value of 3.00 and above was agreed while item with mean value less than 3.00 was disagreed. For hypotheses testing, if the calculated value of t (t_{cal}) is less than the critical value of t (t_{crit}), the hypothesis was accepted but if the calculated value of t (t_{cal}) is equal to or greater than the critical value (t_{crit}), the hypothesis was rejected.

ANALYSES AND RESULTS

Research Question 1: *What are the planning functions required by technical teachers for training students of mechanical technology trade in technical colleges in Rivers State?*

Data to provide answer to this research question were analysed and presented in Table 4.1.

Table 4.1: Mean Scores of Respondents on Planning Functions Required by Technical Teachers for Training Students of Mechanical Technology Trade

S/N	Planning Functions Required by Technical Teachers for Training Students of Mechanical Technology in Technical Colleges	Teachers			Instructors		
		\bar{X}	SD	RMK	\bar{X}	SD	RMK
1	Improvisation of consumable materials such as cables and maintenance of existing facilities	2.16	0.90	D	1.53	0.62	D
2	Equipment and materials should be planned based on mechanical technology curriculum	3.22	1.04	A	3.66	0.76	A
3	Improvisation of workshop facilities base on current students' enrollment for mechanical technology	3.62	0.87	A	3.01	0.66	A
4	Locating equipment, switches and socket outlets for convenience and safety in mechanical workshop	3.70	0.51	A	3.90	1.11	A
5	Tools, equipments and materials used in teaching mechanical technology should be planned yearly	2.53	1.22	D	2.20	0.73	D
6	Planning the workshop to take care of students practical work in areas of construction of mechanical devices	3.85	0.82	A	3.57	0.69	A
7	Maintenance schedule for regular maintenance of tools, equipments and machines in mechanical workshop	2.21	0.72	D	2.34	0.91	D
8	Listing explicitly the roles expected to be performed by the mechanical technology teachers	2.33	1.03	D	2.90	0.50	D
9	Examining tools and materials necessary for the activities to be done in mechanical workshop	3.63	0.89	D	3.88	0.75	D
Average Mean/SD		3.03	0.89	A	3.00	0.75	A

Source: *Researcher's Field Result, 2019*

Table 4.1 shows the planning functions required by technical teachers for training students of mechanical technology trade in technical colleges in Rivers State. The results revealed that planning functions required by technical teachers include planning equipment and tools based on mechanical technology curriculum, improvisation of workshop facilities based on current students' enrollment for mechanical technology, yearly planning of tool and equipment, planning the workshop to take care of students' practical work in areas of construction of mechanical devices among others. The results of

the study show those teachers and the instructors had a mean of 3.03 and 3.00 respectively which is greater than the cut-off point of 3.00 which indicates that all the above planning factors are accepted.

Research Question 2: *What are the organizing functions required by technical teachers for training students of mechanical technology trade in technical colleges in Rivers State?*

Data to provide answer to this research question were analysed and presented in Table 4.2.

Table 4.2: Mean Scores of Respondents on Organizing Functions Required by Technical Teachers for Training Students of Mechanical Technology Trade

S/No	Organizing Functions Required by Technical Teachers for Training Students of Mechanical Technology in Technical Colleges	Teachers			Instructors		
		\bar{X}	SD	RMK	\bar{X}	SD	RMK
10	Arranging the equipment to facilitate teaching and learning of mechanical technology	3.30	0.83	A	3.04	0.71	A
11	Equipment and tools should be organized based on uses and sizes for easy reference and accountability in mechanical workshop.	1.21	0.90	D	2.01	0.58	D
12	Proper keeping of records of all the workshop equipment, tools and materials	3.49	0.51	A	3.26	0.72	A
13	Tools and equipment should be organized in mechanical workshop so that supervisor can inspect and identify immediately worn out, broken and lost ones	3.19	0.78	A	3.69	0.88	A
14	Hazardous substances or materials must not only be stored securely but should be under control in mechanical workshop	3.52	1.11	A	3.99	0.64	A
15	Periodic checking of tools and materials to avoid loss due to pilfering or vandalism	3.92	0.83	A	3.18	0.62	A
16.	Tools and equipment in mechanical workshop should be used for activities they are main purpose	3.80	0.58	A	3.07	1.11	A
17.	Work areas in mechanical workshop should be designated and equipped for each skill area such as installation, maintenance, repairs, design and construction	2.48	1.01	D	1.98	0.95	D
Average Mean/SD		3.11	0.82	A	3.03	0.78	A

Source: *Researcher's Field Result, 2019*

Table 4.2 shows the organizing functions required by technical teachers for training students of mechanical technology trade in technical colleges in Rivers State. The result revealed that organizing functions required by technical teachers include arranging the equipment to facilitate teaching and learning of mechanical technology, proper keeping of records of all the workshop equipment, tools and materials, periodic checking of tools and materials to avoid loss due to pilfering or vandalism, tools and equipment in mechanical workshop should be used for activities they are main purpose among others. The result of the study shows that the teachers and the instructors had a mean of 3.11

and 3.03 which is greater than the cut-off point of 3.00. This means all the factors are accepted for good organizing functions.

Test of Hypotheses

The following null hypotheses were tested in the study at 0.05 level of significant.

1. There is no significant difference between the mean responses of Technical Teachers and Instructors on the planning functions required for training students of mechanical technology trade in technical colleges in Rivers State.

Table 4.5: t-Test on Technical Teachers' Planning Functions

Groups	N	\bar{X}	SD	Df	tcal	tcrit	Remark
Teachers	17	3.03	0.89	26	1.10	1.96	Accepted
Instructors	11	3.00	0.75				

Source: Researcher's Result, 2019.

The null hypothesis was accepted because the calculated value of t (tcal) which is equal to 1.10 is less than that of the critical value of t (tcrit) of 1.96 at 0.05 level of significant. This means that there is no significant difference between the mean responses of Technical Teachers and Instructors on the planning functions required for training of students of mechanical technology trade in technical colleges in Rivers State.

2. There is no significant difference between the mean responses of Technical Teachers and Instructors on the organising functions required for training of students of mechanical technology trade in technical colleges in Rivers State.

Table 4.6: t-Test on Technical Teachers' Organizing Functions

Groups	N	\bar{X}	SD	Df	tcal	tcrit	Remark
Teachers	17	3.11	0.82	26	0.29	1.96	Accepted
Instructors	11	3.03	0.75				

Source: Researcher's Result, 2019

The null hypothesis was accepted because the calculated value of t (tcal) which is equal to 0.29 is less than that of the critical value of t (tcrit) of 1.96 at 0.05 level of significant. This means that there is no significant difference between the mean responses of Technical Teachers and Instructors on the organizing functions required for training of students of mechanical technology trade in technical colleges in Rivers State.

DISCUSSION

The result from Table 4.1 revealed that planning is a function required by technical teachers for training students of mechanical technology trade in technical colleges in Rivers State. The findings from the study showed that planning functions such as improvisation of workshop facilities based on current students' enrollment for mechanical technology, planning the workshop to take care of students practical work in areas of construction of mechanical devices, examining tools and materials necessary for the activities to be done in mechanical workshop and listing explicitly the roles expected to be performed by the mechanical technology teachers were some of the planning functions used by technical teachers and instructors for the training of mechanical technology trade students in technical colleges in Rivers State. The finding of this study is in line with Anaele (2013) that good planning of workshop instructions is less expensive than that of unplanned ones, and also it contributes effectively in driving the lessons home to the learners. Since the teacher is able to apply appropriate teaching functions, tools and materials in the workshop for teaching-learning process.

The result from Table 4.2 revealed that organizing is a function required by technical teachers for training students of mechanical technology trade in technical colleges in Rivers State. The findings from the study found that organizing functions such as proper keeping of records of all the workshop equipment, tools and materials, periodic checking of tools and materials to avoid loss due to pilfering or vandalism and tools and equipment should be organized in mechanical workshop so that supervisor can inspect and identify immediately worn out, broken and lost ones. The finding of this study is in line with Okparaeke (2010) that found that organizing functions for workshop management activities include; arrangement of the productive resources available for effective use; grouping students to execute specific practical or work shop projects; procuring tools and materials for the school practice or workshop; preparation of workshop timetable for varying practical or workshop events/projects; assigning specific tasks/project to students.

CONCLUSION

Conclusively, training of students of mechanical technology trade in technical colleges in Rivers State depends on the management functions used by technical teachers and instructors. Management functions such as planning and organizing, are some of the functions adopted in workshop management especially in mechanical trade training. It was found out from the study that planning functions adopted in mechanical workshop by technical teachers and instructors include improvisation of workshop facilities based on current students' enrolment for mechanical technology, planning the workshop to take care of students' practical work in areas of construction of mechanical devices. It was observed in the study that proper keeping of records of all the workshop equipment, tools and materials and periodic checking of tools and materials to avoid loss due to pilfering or vandalism were some of the organizing functions that are used by technical teachers and instructors for workshop management of mechanical trade in technical colleges in Rivers State.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations are made:

1. Technical teachers and instructors should ensure the adoption of planning as workshop management functions in technical colleges in Rivers State. This will enhance effective training of the student in mechanical trade.
2. Technical teachers and instructors should ensure the adoption of organizing as workshop management functions in technical colleges in Rivers State. This will enhance effective training of the student in mechanical trade.

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