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**COMPETENCY IMPROVEMENT NEEDS OF AUTO-MECHANICS TEACHERS FOR  
EFFECTIVE MANAGEMENT OF SCHOOL WORKSHOPS IN LAGOS STATE  
TECHNICAL COLLEGES**

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## COMPETENCY IMPROVEMENT NEEDS OF AUTO-MECHANICS TEACHERS FOR EFFECTIVE MANAGEMENT OF SCHOOL WORKSHOPS IN LAGOS STATE TECHNICAL COLLEGES

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### **Abstract**

The main goal of motor vehicle mechanics trade in the technical colleges is to produce competent vehicle mechanics and technicians for all types of vehicles. The graduates of the technical college programme should be equipped with the modern skills that will enable them to secure employment in the industries or set up their own business. The students of Auto Mechanic in Lagos state technical colleges have high hope of being employed by the industries due to the industrial nature of the State. However, contrary to this high expectation and hope by the students, majority of the students have been completing the programme with inadequate skills. This is due to lack of necessary competency needed to run or manage a workshop, and this thus could not earn them paid employment or self-employment. A study was carried out on the mechanical trades' teachers including motor vehicle mechanic work teachers to determine their competencies in managing the workshops. It was established through the study that some teachers lacked the basic competencies needed for the management of the school workshops. Necessary management competencies are required to be acquired so that the teachers should be able to effectively plan what to teach with the available materials, tools and equipment. Regular training and retraining should be planned and organized for auto mechanic teachers in the technical colleges.

### **Introduction**

Auto Mechanics are responsible for diagnosing, repairing and maintaining automobile problems, as well as tuning up an automobile engine to improve its overall performance (Denton & Pells, 2022). The auto-mechanic can be defined as one who inspects, maintains and repairs

automobiles and light trucks with petrol and diesel engines such as pickups and delivery vans. The auto-mechanics perform such tasks as routine automobile servicing, intake and lubricating engines and other components. The auto mechanics also repair and replace parts before they cause breakdown. In addition, the auto-mechanics also carry out such task as major engine overhauls, tune-ups, relining and adjusting brakes, wheel aligning, transmission and differential replacement and repair, electrical replacement and repair, minor body repair, operate and maintain automotive shop equipment, and estimate the cost of repairs.

Stoner et al (2000) defined management as the organization and mobilization of all human and material resources in a particular system for the achievement of identified objectives. Management was described by Drucker (2005) as a process of planning, organizing, supervising/co-coordinating, evaluating, personnel administration and budgeting and accounting inputs. The inputs are manpower, materials and money while the outputs are the goods and services. Management in all business and organizational activities is the act of getting people together to accomplish desired goals and objectives using available resources efficiently and effectively (Agrawal, 2011). Management comprises planning, organizing, supervising and personnel administration. Management in technical college workshops entails managing students, tools and equipment for skill acquisition.

Planning, according to Osuala (2005), entails deciding what work is to be done and plans to accomplish it. Planning is one of the logical steps in acuity management. According to Dror (2004), planning is the process of preparing set decisions for action in the future, directed at achieving goals by optimal means. It therefore implies that before anything good comes out of any endeavour, it must be planned. Planning is a well-articulated conceptualization of the educational philosophy, goals, objectives, and specification for short- and long-term objectives including implementation of the planned curricula (van den Akker, 2013). Ezeji, (2004) asserts that vocational laboratories are designed to reflect the curriculum and the desired level of education, and that true planning must identify the programme philosophy, specific objective, teacher and pupil activities, enrollments to be served, financial resources, course content, and laboratory equipment.

In analyzing the guidelines for planning workshop facilities, Okoro, (2006) noted that many workshops in Nigeria have no provision for washing facilities within the workshop itself.

Consequently, if students will wash after shop practice, it must be done somewhere else. Okoro regrets that neither of these conditions is desirable. According to Mohammed (2006), it is a common knowledge that workshop facilities utilization has been witnessing perpetual increases in the number of its users as a result of higher demands for education by the ever-growing population of the citizenry without a commensurate increase in the number of facilities. In separate studies, Aluede, et al (2012), Esomonu (2002); and Olufayo, & Falola, (2020), agreed that the astronomical increase in students' enrolment is challenging the effective realization of the goals of vocational technical education especially in Nigeria. This is because laboratories workshops that were built to serve a small school population are presently put to use by greater than double the initially planned population. Onele, (2014) contended that the same logic for space consideration is applicable to the number and sizes of equipment, tools and materials. It is, therefore, expedient and in fact necessary that educational enrolments, which in recent times, have exploded massively should be analyzed and adequate facilities provided to match the needs of the pupils (Olaitan, et al (1999). The present bite of unemployment is the result of obsolete facilities in our school workshops, where they exist at all. In planning for tool management, Olaitan et al (2001) noted that equipment and tools have to be organized in sequence like uses, size, and colour for ease of reference and accountability. Proximity to use should be of high priority. This will afford free access to them; lost or damaged tools should be replaced for continuity of programmes; tools should be organized and arranged so that supervisors can inspect and identify immediately worn out, broken and lost ones; hazardous substances or materials subject to abuses must not only be stored securely but should also be under control; careless loss of tools and materials due to pilfering or vandalism must be constantly checked; waste must be minimized.

Organizing refers to the identification and classification of required activities necessary to attain set objectives. Furthermore, organizing includes assigning each group to a manager with authority necessary to manage or supervises the assigned group with condition and recourses necessary to execute the laid down plan. Directing involves the motivation of employees to perform up to the expectation while controlling refers to setting standards and taking corrective action as needed. It also implies exercising power or authority over something.

Auto mechanics laboratories in the school setting have to be made similar to occupational standards and actual industrial settings and condition this which should be a replica of work

environment in which the student actually will find himself after graduation. This can only be achieved through conscientious efforts. Ogbuanya (1999) pointed out that good organization of facilities gives the impetus for effective learning. She further gave some hints on effective organization of workshop facilities viz: grouping arrangement for learners to ensure effective laboratory work; allocation of materials and equipment to groups or individuals; available supportive personnel to assist learners by providing their specific needs; a conducive environment for workshop activities.

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 Onele, (2016), the activities involved in workshop management include; arrangement of the productive resources available for effective use; grouping students to execute specific shop projects; procuring tools and materials for the school shop; preparation of workshop timetable for varying shop event/projects; assigning specific tasks/projects to students. The traffic flow and class supervision are predicated on how equipment in the workshop are organized. Intelligent and efficient organization of the workshop will yield greater possibilities of effective supervision and free movement of both staff and students. Ezeji (2004) warned that the equipment and its placement should meet state, 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, automobile mechanics work starts from fault diagnosing to point of repair and change/ repair of faulty parts. Spaces/ clearance between vehicles parked should be wide enough so that traffic flow does not interfere with operations. A large assembly area should be left clear in case of danger. Usman, (2016) pointed out that 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 Auto mechanics teachers, the laboratory attendant, cleaner, storekeeper as well as 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 the Auto mechanics workshop, Nwachukwu (2006) referred to this group as knowledgeable 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 (2006) pointed out 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 the materials.

The workshop activities should be well coordinated, in systematic and sequential manner in order to evoke logical thinking from both staff and students. Ogbuanya (1999) emphasized that a well organized workshop will encourage students to think for themselves, work independently, and be able to solve problems arising from their experimental procedures. In order to facilitate progress in Auto mechanics work, due consideration has to be given to the sale of the skill which has to do with customer relation.

Personnel administration as a management function is aimed at measuring and correcting the activities as well as performance of subordinates to ensure efficiency in the achievement of organizational plans and goals. Nwachukwu (2006) described personnel administration in terms of control. This, he pointed out will make it possible for every staff, student, equipment, tool, material and activity to be directed towards goals achievement. Olaitan (1999) stated that, the control of the laboratory environment is a responsibility that should be shared by all the users of the laboratory facilities; equipment, tools and materials. Confirming the collective nature of control, Mohammed (2006) accepted that control of workers and use of facilities in the workshop is a supervisory role of all the technical staff. He stressed that unless decisions in the shop are interpreted and translated into concrete realities which involve directing, guiding and control of workers, shop activities might be a meaningless effort. It is of an utmost importance; therefore, that competency is improved upon in the Automechanics workshop in Lagos State Technical colleges. The supervisory roles of technical teachers will foster a more directional articulation of activities towards skill acquisition in technical colleges.

The primary goal of supervision is to improve morale and job satisfaction. Workers are seen as facing a variety of job-related stresses which, unless they have help to deal with, could seriously affect their work and lead to a less than satisfactory service to clients. For the worker there is ultimately the problem of 'burnout'. The other two forms of supervision focus on instrumental needs, whereas supportive supervision is concerned with expressive needs. The supervisor seeks to prevent the development of potentially stressful situations, removes the worker from stress, reduces stress impinging on the worker, and helps her adjust to stress. The supervisor is available

and approachable, communicates confidence in the worker, provides perspective, excuses failure when appropriate, sanctions and shares responsibility for different decisions, provides opportunities for independent functioning and for probable success in task achievement. Drucker (2005) stated the functions of supervision as administrative, educational and supportive, Drucker emphasized further that supervision is synonymous with experience.

Experience as a general concept comprises knowledge of or skill of something or some event gained through involvement in or exposure to that thing or event. Work experience can be in organization, experience in the coordination and preparation of events. The word experience is referred to as ambiguous both to mentally unprocessed immediately perceived events as well as to the purported wisdom gained in subsequent reflection on those events or interpretation of them. Some experience accumulates over a period of time, though one can also experience a single specific momentary event. One may also differentiate between physical, mental, emotional, spiritual, vicarious and virtual experience(s). Experiences of automobile technical teachers come into play in the bid to improve the competency improvements needs of auto mechanics teacher for effective management of school workshop.

A technical college is an institution where students are trained to acquire relevant knowledge and skills in different occupation for employment in the world of work. It is the segment of technical and vocational education designed to produce craftsmen in technical and business studies at the middle level manpower (Okoro, 2006). Auto mechanics according to Toby (2000), is an occupational skill development trade with a broad range of both light and heavy repair work. National Board for Technical Education, NBTE (1985) states that objectives of motor vehicle mechanics work trade in Nigerian technical colleges is to produce competent vehicle mechanics and technicians with sound theoretical and practical knowledge, which should be able to diagnose and carry out repairs and maintenance on all types of diesel and petrol motor vehicles. Thus, the programme for motor vehicle mechanic work in technical colleges is designed to produce competent maintenance craftsmen for all types of motor vehicles. The students on completion of the programme in the technical colleges according to Federal Ministry of Education (2007) shall have three options; secure employment either at the end of the course; set up their own business and become self-employed and is able to employ others and pursue further education in the chosen field.

The auto mechanic workshops in technical colleges require to be updated to meet the attending challenges from the influx of imported used vehicles. It is believed that the findings of this study would identify the skill improvement needs of the Auto mechanic teachers in Lagos State Technical Colleges and how to meet these needs. These would also help to turn out Auto mechanics that would be able to cope with the 21<sup>st</sup> century challenges in the automotive industry.

### **Statement of the Problem**

The goal of motor vehicle mechanics trade in the technical colleges is to produce competent vehicle mechanics and technicians for all types of vehicles. The graduates of the technical college programme have the prospect of furthering their studies, being employed in the industries or setting-up their own business and become self-employed. The students of Auto Mechanic in Lagos state technical colleges have high hope of being employed by the industries due to the industrial nature of the State.

However, contrary to this high expectation and hope by the students, majority of the students have been completing the programme with inadequate skills. This is due to lack of necessary competency needed to run or manage a workshop, and this thus could not earn them paid employment or self-employment. According to Ogwo (2003), this has resulted into employers not willing to employ them but rather preferring to establish their own independent training programme. These companies decide to run their training school to retrain the products of the technical colleges due to the poor management of technical colleges. The efficiency of a service station or motor vehicle workshop depends on the quality of service it renders to the customers. It has been observed that the auto mechanic workshops in Lagos are not fully organized to cope with these challenges. Even some of the workshops that are available are not well managed. There has been an unprecedented influx of used cars in the country and Lagos in particular since the inception of the democratic government. This has placed a heavy demand on the quality of service expected and rendered by the craftsmen to their customers. The quality of service that is expected in Lagos seems to fall short of the expectation of most customers. Most customers carried their vehicles after repair in worse state than when they brought them to the mechanics.

Some of the teachers in Lagos state technical colleges that manage the workshops lack basic competencies for workshop management. Technical teachers should acquire adequate technical versatility and competence to effectively teach their students technical areas of the subject and



manage the school workshops (Ogbuanya 1999). The problem of this study therefore is what are the competency improvement needs of auto-mechanic teachers for effective management of school workshop in Lagos state technical colleges.

### **Research Questions**

The following are the research questions for the study:

1. What are the planning competencies needed by auto mechanics teachers in Lagos State technical colleges?
2. What are the organizing competencies needed by the auto mechanics teachers in Lagos State technical colleges?
3. What are the supervising competencies needed by the auto mechanics teachers in Lagos State technical colleges?
4. What are the personnel administration competencies needed by the auto mechanics teachers in Lagos State technical colleges?

### **Methodology**

This study adopted a survey research design. A survey research design according to Uzoagulu (1998) is one in which the entire population or representative sample is studied by collecting and analyzing data from a group. The design is considered suitable since this study will solicit information from technical teachers on Competency Improvement Needs of Auto Mechanics Teachers for Effective Management of School Workshop in Lagos State Technical Colleges using a structured questionnaire.

The population for the study comprised all the Mechanical trade teachers teaching in all the technical colleges in Lagos State. Information collected from the technical colleges revealed that there are 54 Mechanical trade teachers including 14 Motor Vehicle Mechanics Work (MVM) teachers in all the technical colleges in Lagos state. There was no sampling due to the relatively small size of the population which is manageable.

The instrument for data collection for this study was a structured questionnaire which consisted of 80 items developed through literature review based on the research questions. The instrument was subjected to face validation by three experts. They were requested to check the items for appropriateness and relevance of the items to the topic under study. Based on their corrections

and suggestions, amendments were made on the instrument before a final copy was produced for this study. The instrument was trial tested on 20 auto mechanics teachers in Ogun state. Ogun state shares the same boundary with Lagos state and has the same characteristics with Lagos state. The responses of these 20 teachers were analyzed using Cronbach Alpha formula to establish the internal consistencies of the instrument. Cronbach Alpha was deemed appropriate since the responses were not dichotomously scored. The coefficient of the reliability was 0.85. The questionnaire was administered personally by the researcher and with the help of three research assistants. The research assistants were briefed by the researcher on the administration of the instrument so as to ensure safe handling and appreciable return. The administered questionnaires were collected back within two weeks.

The data generated from the questionnaire was analyzed using mean to answer each of the four research questions. The computation of the data collected was done with SPSS package. Any item with a Mean of 3.50 and above was considered needed competency. While any item with a Mean of less than 3.50 was not considered as needed competency.

## Result

**Research Question 1 :** What are the planning competencies needed by auto mechanics teachers in Lagos State technical colleges?

**Table 1: Mean responses on planning competencies needed by auto mechanics teachers in Lagos State technical colleges.**

S/N	Item Statement	SA	A	UD	D	SD	X	SD	Decision
1.	Ensuring the availability of equipment to be used for instruction	39	12	-	-	-	4.76	0.428	Accepted
2.	Ensuring the availability of tools to be used for instruction	38	13	-	-	-	4.75	0.440	Accepted
3.	Ensuring the availability of materials to be used for instruction	40	7	4	-	-	4.71	0.610	Accepted
4.	Identification of practical lesson objectives	32	9	10	-	-	4.43	0.806	Accepted
5.	Consideration of duration for the workshop lesson	31	12	8	-	-	4.45	0.757	Accepted
6.	Grouping of the lesson based on available workstations	20	21	10	-	-	4.20	0.749	Accepted
7.	Ensure availability of supportive personnel to assist learners	39	12	-	-	-	4.76	0.428	Accepted
8.	Listing clearly the roles expected to be performed by	26	25	-	-	-	4.51	0.505	Accepted

	the teachers									
9.	Clearly stating the roles to be performed by the students	33	18	-	-	-	4.65	0.483	Accepted	
10.	Trying out work lesson before actual execution	30	17	-	4	-	4.43	0.855	Accepted	
11.	Drawing up step-by-step procedure to be used in carrying out each task	30	21	-	-	-	4.59	0.497	Accepted	
12.	Preparation of lesson sequence to be adopted	43	8	-	-	-	4.84	0.367	Accepted	
13.	Listing and arranging the learning activities to be done	18	12	-	21	-	3.53	1.347	Accepted	
14.	Examining the tools and materials necessary for the activities to be performed	25	26	-	-	-	4.49	0.505	Accepted	
15.	Arranging of workshop facilities based on current students' enrolment	24	27	-	-	-	4.47	0.504	Accepted	
16.	Ensuring that the workshop facilities will be able to handle the projected enrolment	35	16	-	-	-	4.69	0.469	Accepted	
17.	Ensuring the workshop layout with adequate gangways and work areas	18	14	1	8	10	3.43	1.578	Rejected	
18.	Provision of suitable water within the workshop	15	16	2	13	5	3.45	1.404	Rejected	
19.	Provision of adequate number of staff offices	32	9	-	5	5	4.14	1.386	Accepted	
20.	Provision of adequate number of toilet and bathrooms	20	22	9	-	-	4.22	0.730	Accepted	
21.	Provision for adequate demonstration area for workshop lesson in the shop	26	13	6	3	3	4.10	1.188	Accepted	
22.	Providing workshop with adequate ventilation and illumination	41	10	-	-	-	4.80	0.401	Accepted	
23.	Ensuring that the location of machines switches and socket outlets are at convenience and safety	36	15	-	-	-	4.71	0.460	Accepted	
24.	Locating the machines and equipment appropriately on the workshop	29	11	11	-	-	4.35	0.820	Accepted	
25.	Ensuring the students have easy access to materials, tools and equipment	20	31	-	-	-	4.39	0.493	Accepted	

Table 1 shows that most of the respondents agreed that planning competencies needed by auto mechanics teachers involves ensuring availability of equipment, tools, materials, and supportive personnel, most of the respondents also agreed that planning involves identification of practical lesson objectives, considering duration for the workshop lesson, grouping of lesson based on available work stations, listing clearly the role expected to be performed by the teacher, clearly stating the roles to be performed by the students, trying out work lesson before actual execution, drawing up step-by-step procedure to be used in carrying out each task, preparation of learning sequence to be adopted, listing and arranging the learning activities to be down, examining the tools and materials necessary for the activities to be performed, arranging the workshop facilities based on current students' enrolment, ensuring that the workshop facilities will be able to handle the projected enrolment, provision of adequate number of staff offices, toilet and bathrooms, adequate demonstration area for workshop lesson in the workshop, provision for adequate

ventilation and illumination, ensuring that the location of machines, switches and socket outlets are at convenient and safety, locating the machines and equipment appropriately on the workshop and ensuring that students have easy access to materials, tools and equipment. Item 9 – 16 and 19 – 25 were accepted based on the decision that their mean ratings were greater than  $X = 3.50$  cut off point.

## Research Question 2

What are the organizing competitions needed by the auto mechanic teachers in Lagos State technical colleges?

Items for answering the research questions are presented below:

**Table 2: Mean responses on organizing competencies needed by the auto mechanic teachers.**

S/N	Item Statement	SA	A	UD	D	SD	X	SD	Decision
26.	Arrangement of tools and materials before and after use	33	13	5	-	-	4.55	0.623	Accepted
27.	Arranging the equipment to enhance movement of workshop	39	12	-	-	-	4.76	0.428	Accepted
28.	Laying out the equipment to ease their cleaning maintenance	21	22	8	-	-	4.25	0.717	Accepted
29.	Laying out of equipment to promote safety	35	16	-	-	-	4.69	0.469	Accepted
30.	Locating of equipment for efficient materials from storage to finished products	25	26	-	-	-	4.49	0.505	Accepted
31.	Ensuring that facilities are based on personal preference	11	23	5	12	-	3.65	1.074	Accepted
32.	Installation of equipment based on the original plan	20	19	8	4	-	4.08	0.935	Accepted
33.	Proper arrangement of general cabinet in the workshop to enhance learning activities	16	35	-	-	-	4.31	0.469	Accepted
34.	Identification and selection of equipment and materials based on projected learning activities for students	43	8	-	-	-	4.84	0.367	Accepted
35.	Delivering workshop lesson with relevant and useful materials for the specific class for students	39	4	-	8	-	4.45	1.101	Accepted
36.	Selection of project should be done to match students aspiration	34	9	-	8	-	4.35	1.092	Accepted
37.	Procedures have to be arranged in accordance with sequence of operation by the teacher	39	4	-	8	-	4.45	1.101	Accepted
38.	Adequate and relevant materials, tools and equipment should be for instructions	25	26	-	-	-	4.49	0.505	Accepted

39.	Materials should be arranged according to their use	11	40	-	-	-	4.22	0.415	Accepted
40.	Equipment and tools should be arranged in sequence like size, uses, colour, for ease of reference and accountability	9	14	13	6	9	3.16	1.347	Accepted
41.	Proximity to tools for use should be of high priority	26	4	-	13	8	3.53	1.666	Accepted
42.	Tools should be organized and arranged so that adequate supervision is enhanced	30	21	-	-	-	4.59	0.497	Rejected
43.	Ensuring that all safety provisions to be used for the lesson are put on place	39	12	-	-	-	4.76	0.428	Rejected
44.	Waste must be minimized	35	16	-	-	-	4.69	0.469	Accepted
45.	Deliberate decisions should be taken on the suitable time for workshop lessons	20	31	-	-	-	4.39	0.493	Accepted
46.	Instructional aids to be used for a particular practice should be properly identified	30	21	-	-	-	4.59	0.497	Accepted
47.	The instructional media have to be designated	20	31	-	-	-	4.39	0.493	Accepted
48.	Selection of practical project within the ability	25	16	10	-	-	4.29	0.782	Accepted

Table 2 above shows that most of the respondents agreed that arrangement of tools and materials should be done before and after use, arranging the equipment to enhance movement in the workshop, laying out the equipment to ease their cleaning and maintenance, layout of equipment to promote safety, locating of equipment for efficient flow of materials from storage to finished products, ensuring that facilities are based on personal preference, installation of equipment based on original plan and projected learning activities for students, proper arrangement of general cabinets in the workshop to enhance learning activities, materials for the specific class of students, selection of projects should be done to match the students aspiration and that the procedure for getting the project done should be arranged in accordance with sequence of operation by the teacher. Most of the respondents also agreed that adequate and relevant materials, tools and equipments should be supplied for the instruction, materials should be arranged according to their uses, proximity to tools for use should be of high priority and that they are to be organized and arranged so that adequate supervision is enhanced, ensuring that all safety provisions to be used for the lesson are put on place, deliberate decisions should be taken on the suitable time for workshop lesson, instructional aids to be used for a particular practice should be properly identified to minimized waste, and that selection of practical projects within the ability of the students and that the instructional media should be designated. Item 26-39, 41-

48 were accepted based on the decision that their mean ratings were greater than the cut off point  $X = 3.50$

### Research Question 3

What are the supervising competencies needed by the auto mechanics teachers in Lagos state technical colleges?

Items for answering research question 3 are presented below:

**Table 3: Mean responses in supervising competencies needed by the auto mechanics teachers in Lagos state technical colleges**

S/N	Item Statement	SA	A	UD	D	SD	X	SD	Decision
49.	The teacher checks for correction of the practical work carried out by the students	39	12	-	-	-	4.76	0.428	Accepted
50.	The timetable should be strictly followed	29	22	-	-	-	4.57	0.500	Accepted
51.	The teacher should ensure that best workshop practices are adapted	38	13	-	-	-	4.75	0.440	Accepted
52.	Programme of school workshop activities must be strictly adhere to	39	12	-	-	-	4.76	0.428	Accepted
53.	The teacher guides and attends to questions from students as work progress	34	17	-	-	-	4.67	0.476	Accepted
54.	Supervision of students work in the workshop, individuals and group	39	12	-	-	-	4.76	0.428	Accepted
55.	The teacher should demonstrate the work to expose the procedures and safety precautions to students	38	13	-	-	-	4.75	0.440	Accepted
56.	The teacher should motivate work experience by prompt and careful explanation of the workshop lesson objectives to the students	26	25	-	-	-	4.51	0.505	Accepted
57.	Students should be given adequate explanation on how to use the information gathered	34	17	-	-	-	4.67	0.476	Accepted
58.	The teacher should play the role of a consultant as soon as students begin their work, offering suggestions, checking on safety and answering questions that may arise	28	23	-	-	-	4.55	0.503	Accepted
59.	Grouping students to execute specific project in the workshop	16	11	-	2	22	2.74	1.816	Accepted
60.	Available workshop facilities should be arranged for different use in the workshop	25	18	8	-	-	4.33	0.739	Accepted
61.	Materials and tools should be allocated to student group or individuals for different uses	35	16	-	-	-	4.69	0.469	Accepted

62.	Making sure that different tools and equipment are used harmoniously in workshop operations	26	25	-	-	-	4.51	0.505	Accepted
63.	Professionals should be selected, especially to serve as resource person	39	12	-	-	-	4.76	0.428	Accepted
64.	There should be sharing of specific roles in the management of workshop instruction	25	26	-	-	-	4.49	0.505	Accepted

Table 3 above shows that most of the respondents agreed that the teacher checks for correction of the practical work carried out by the students, timetable should be strictly followed, the teacher should ensure that best workshop practices are adapted, programme of school workshop activities must be strictly adhered to, the teacher guides and attends to questions from students as works progress, supervision of students' work in the workshop, individuals and group, the teacher should demonstrate the work to expose the procedures and safety precautions of students, the teacher should motivate work experience by prompt and careful explanation of the workshop lesson objectives to the students, students should be given adequate explanation on how to use the information gathered, the teacher should play the role of a consultant as soon as students begin their work, offering suggestions, checking on safety and answering questions that may arise, available workshop facilities should be arranged for different use in the workshop, materials and tools should be allocated to student group or individuals for different uses, making sure that different tools and equipment are used harmoniously in workshop operations, professionals should be selected especially to serve as resource persons and that there should be sharing of specific roles in the management of workshop instruction. Items 49-58, and 60-64 were all accepted based on the decision that their mean ratings were greater than  $X = 3.50$  cut off point.

#### Research Question 4

What are the personnel administration competencies needed by the auto mechanics teachers in Lagos state technical colleges?

Items for ensuring the research question 4 were presented below:

**Table 4: Mean responses on personnel administration competencies needed by the auto mechanics teachers in Lagos state technical colleges**

S/N	Item Statement	SA	A	UD	D	SD	X	SD	Decision
65.	Involving both staff and students in workshop planning	2	17	21	5	6	3.08	1.036	Rejected
66.	Keeping workshop tools and equipment in constant use by staff and students to minimize waste	19	32	-	-	-	4.37	0.488	Accepted
67.	The security arrangement of the workshop is improved by checking of tools by both staff and students	16	31	4	-	-	4.24	0.586	Accepted
68.	Enrolment of students not exceeding availability of work spaces	28	12	1	4	6	4.02	1.407	Accepted
69.	Setting up of students personnel system and safety committee for the management of workshops	5	42	-	4	-	3.94	0.645	Accepted
70.	Maintaining an accurate inventory of materials in stock	28	23	-	-	-	4.55	0.503	Accepted
71.	Adopting tool-borrower-loss replacement system	16	21	10	4	-	3.96	0.916	Accepted
72.	Adopting tool-borrower-damage-repair system	17	12	8	14	-	3.63	1.216	Accepted
73.	Guiding students in the proper handling of tools and materials to prevent misuse of tools and wastage of materials	14	9	10	8	10	3.18	1.493	Rejected
74.	Coordinating commercial activities with academic training in workshop	5	39	7	-	-	3.96	0.488	Accepted
75.	Employing a competent store officer to be responsible for security of tools and equipment	19	16	11	5	-	3.96	0.999	Accepted
76.	Examining rules and routines in the laboratory in order to streamline them for effective workshop management	35	12	-	4	-	4.53	0.857	Accepted
77.	Educating staff through seminars and workshops on maintenance issues and principles of	26	5	10	4	6	3.80	1.442	Accepted



workshop management technique										
78.	Maintaining a cordial relationship between technology teachers and other members of staff in the school to work together for the realization of workshop objectives	21	4	7	5	14	3.25	1.707	Rejected	
79.	Encouraging students to work in group for projects and assignments	30	17	4	-	-	4.51	0.644	Accepted	
80.	Students should be encouraged to assist their colleagues during learning or carrying out of specific skill	19	11	12	7	2	3.75	1.214	Accepted	

Table 4 above shows that most of the respondents agreed that keeping workshop tools and equipment is most constant use by staff and students to minimize wastages, the security arrangement of the workshop is improved by checking of tools by both staff and students, enrolment of students should not exceeding available of work spaces, setting up of students/personnel system and safety committee for the management of workshops, maintaining accurate inventory of materials in the stock, adopting tool-borrower-damage-repair system, coordinating commercial activities with academic training in the workshop, employing a competent store officer to be responsible for security of tools and equipment, examining the rules and routines in the laboratory in order to streamline them for effective workshop management, educating staff through seminar and workshop on maintenance issues and principles of workshop management techniques, encouraging students to work in group for projects and assignment and that students should be encouraged to assist their colleagues during learning of carrying out of specific skill. Items 66-72, 74-77, their mean ratings were greater than  $X = 3.50$  cut off points.

### **Discussion of Findings**

The findings of this study revealed that planning competencies are of great importance to the auto mechanics teachers. The planning competencies, as found out by this study revealed available equipment, tools and materials are meant to be planned adequately for effective practical activities in the workshop through the identification and statement of lesson objectives with the support of available personnel to assist the students during actual workshop lesson. Ezeji (2004) findings agreed with these findings by adding that vocational laboratories are designed to reflect the curriculum and the desired level of education and that true planning must identify the programme specific objective, teachers' activities, students' activities, course

contents and equipment. Planning competencies of auto mechanics teachers also involve provision of staff offices for staff, adequate number of toilet and bathrooms are made available in the workshop, good ventilation and illumination are provided in the workshop, ensuring that machines switches and socket outlets are located at convenient and safe points and ensuring that students have easy access to materials, tools and equipment which must be based on their enrolment in the colleges. These findings are supported by Ogwo (2003) who confirmed that the provision of adequate quality light leads to less eye strain, greater accuracy of work, more rapid progress, better use of floor space, greater shop cleanliness, improved class interest and participation and drastic reduction in the number of workshop accidents on the side of both the staff and students.

Organizing competencies needed by the auto mechanic teachers focus on the arrangement of productive resources available for effective use and preparation of workshop for varying shop event/projects and assigning specific task/projects to students. The researcher found out the various organizing competencies needed by auto mechanics teachers, and these involve the arrangement of tools, materials equipment before and after use to promote safety, ease cleaning and maintenance and those facilities are ensured to be based on the original plan. Identification and selection of equipment and materials are based on learning activities for the students, and selection of projects which are done to match students' aspiration. Nilson, (2016) agreed with this finding by enumerating the roles of the technical teacher during laboratory activities which involves the teacher selecting the subject matter but matches the students' aspirations, order of performance, and selecting tools and materials for carrying out the work. The researcher also found out that safety provisions to be used for lesson should be put in place, relevant instructional aids to be used for a particular practice are properly identified and made available and that proximity to tools and materials in the course of workshop lesson should be of high priority. However, Gilakjani, et al (2013) lamented that most materials and equipment are underutilized because the teachers lack the necessary skills to operate and use them for effective instruction.

The researcher found out that competencies improvement need of Auto mechanics teachers in terms of supervising competencies cannot be underestimated. The necessary supervising competencies needed by auto mechanics teachers as found out by the researcher involve the teacher checking for correction of the practical work carried out by the students, religiously

following the given time table based on programme of the school workshop activities which must also be strictly adhered to. Most of the respondents agreed that the teacher should guide and attend to questions from the students as works progress, and proper demonstration of work to expose the procedures and safety precaution to the students and also motivate the work experience by prompt and careful explanation of the workshop lesson objectives to the students. The researcher also found out that specific role in management of workshop instruction should be shared. This is in agreement with Olaitan (1999) who stated that the control of the laboratory environment is a responsibility that should be shared by all the users of the facilities, equipment, tools and materials. This will make it possible for auto mechanics teachers to control and make it possible for every staff, students, equipment, tool, materials, and workshop activities to be directed towards goal achievement in the colleges.

The findings also revealed the needed personnel administration competencies needed by the auto mechanic teachers. The finding revealed that most of the respondents agreed that both teachers and students are to be involved in keeping the workshop tools, equipment and facilities in constant use to avoid wastage. The security arrangement of the workshop should be improved by checking of tools by both teachers and students, and adopting tool-borrower-loss-replacement system, tool-borrower-damage-repair system, employing a competent store officer so as to maintain accurate inventory of materials in stock which Asiabake (2008) added that it will provide facts not guess work to inform plans for maintaining and improving workshop facilities, establish a base line for measuring facility maintenance progress, allows in-depth analysis of product life cycles to occur on a routine basis. Most of the respondents agreed that one of the personnel administration competencies needed by the auto mechanic teachers in technical colleges is the setting up of students/personnel system and safety committee for the management of the workshop and examining rules and routines in the laboratory in order to streamline them for effective workshop management. This is in agreement with Ogwo & Oranu (2006) who opined that effective communication is vital to interacting process in the workshop. Further, the encouragement should be given to students to work in group for assignment and projects, assist their colleagues during learning and also staff should be educated through seminars and workshops on maintenance issues and workshop management.

## **Recommendations**

The following recommendations are made based on the findings of this study:

1. School administrators in Technical Colleges should endeavour to work collaboratively with the auto mechanics teachers to adequately manage the school workshop most especially when it comes to acquisition of materials and necessary tools which require funding.
2. Auto mechanics teachers should be trained on improvisation for hard-to-get materials in the workshop.
3. Professional affiliation and collaboration cannot be underestimated in acquiring more knowledge and necessary competencies in management of school workshop.

## **Conclusion**

The need to improve the competency level of auto mechanics teachers for effective management of school workshop in the technical colleges is of paramount importance. Good numbers of auto mechanics teachers are competent in their core field, however not as effective as required in management of school workshop.

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