

Implementation of Safety Practices for Enhancing Quality in Instructional Delivery in Electrical/Electronic Workshops in Rivers State Technical Colleges

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Abstract: In many electrical/electronic workshops in technical college in Rivers State today, the rate of accidents which causes damage to facilities and workshop users is alarming. As a means of reducing accidents occurrences, safety practices and procedures are observed. Hence, this study examines the implementation of safety practices for enhancing quality in instructional delivery in electrical/electronic trades in Rivers State technical colleges. A descriptive research survey design guided the study. The population of the study consists of 27 respondents (18 teachers and 9 instructors) of electrical/electronic trades. There was no sample and sampling technique due to small population size. Four research questions were answered. The instrument used for data collection was a structured questionnaire which was validated by two experts. The instrument for the study was partitioned into four sections. Sections A to D were patterned after Likert-5-point rating scale of agreement. A reliability coefficient of 0.85 was established for the instrument using Cronbach Alpha coefficient reliability method. Mean and Standard Deviation were used to answer the research questions. It was found that power tools not properly grounded and insulated, presence of fire and explosion hazards, working with high voltage without following necessary standards and the use of metal ladder while working on electrical installation are the causes of accident occurrences in electrical/electronic workshops while amputation of affected parts, suffering from psychological trauma, students withdrawal from programmes were some of the effects of accidents. Based on the findings, it was recommended among others that workshop users should be given proper orientation by school management and government on activities that causes accidents such as unsafe conditions and unsafe acts, workshop users should be inform by relevant authorities such as Nigerian Institute of Safety Professionals (NISIP) on the effect of accident occurrences in technical colleges, Safety experts should be employed in technical college to educate the users of the workshop especially on areas concerning accident preventive measures and so on.

Keywords: Electrical/Electronic, Safety Practice, Technical College and Workshop

1. Introduction

For effective and quality instructional delivery in technical colleges in Rivers State to be achieved, the workplace must be safe and free from accidents for teachers, students and other users of the environment. This is because accident in the school workshop has traumatic effect on students, teachers and material properties in the school system. Lar (2013) opined that consequence of accidents is related both to what is damaged and the magnitude of the damage. Accident in the workshop always maims kills and causes loss of valuable resources in general workshops and in specific electrical/electronic laboratories and workshops. Its effect may be death, injury or loss of valuable properties. Nichols (2005) reported that National Safety Council estimated that, more than 24,000 accidents were sustained by students in a year in United State of America. The author stated further that those figures represent only accidents which were reported, and caused property damage or resulted in the loss of at least one half day of the school by the students. United States Department of Health and Human Service in Nichols (2005) also reported that the actual accident figures for students in vocational/technical institutions would be much greater in number nowadays if all accidents were reported.

To reduce accidents and to make technical college safe for quality instructional delivery, safety must be adhering to. Without safety, lives and properties of the students and teachers will be threatened which will affects service delivery in the school. In technical colleges, expertness, dexterity and practice of skills are required for quality instructional delivery. In performing a skillful job, safety needs to be practiced. Safety

materials and safety trained individuals are usually required to enhance the growth of an organization and institutions involved. According to Ezeji and Onoh (2008) Safety could be defined as planned measures or precautions that should be taken to control situations and act in an endeavour to prevent injuries to the persons concerned, injuries to others who may be around the working place and damage to workshop equipment and materials.

Safety Practice is a fundamental requirement of any job in many establishments today. If good quality safety practice is properly applied and effectively implemented in different workplaces and technical college workshops, it would reduce incessant workplace accidents to workers and students. It will also prolong the service lives of machines, tools and equipment and drastically reduce wastage (Anaele, Adelakin & Olumoko 2014). Nigeria Institute of Safety Professional (NISP, 2012) defines accident as unwanted incidents caused by “unsafe conditions” resulting in injuries or damages. It has been established that in any accident that happens, people are involved because they either do not know how to do work correctly or could not perform the task assigned to them and sometimes do not bother to follow safety rules (NISP, 2012). In the views of Oranu, Nwoke and Ogwo (2002), safety is the ability to perform every task involved in a job without causing injury to oneself, tools, equipment or materials used in performing the task while safety according to Okon (2011) is the art and science of identification, evaluation and controlling work place hazards that may lead to accident. Accidents occurrences in workplaces or technical college workshop are caused by hazards.

Hazard is an inherent property of a substance, agent, and source of energy or situation having the potential of causing undesirable consequences (accidents) or effects (Work Cover Corporation, 2014). Occupational Safety and Health Organization, OSHA, (2003) stated that hazards exist in every workshop in many different forms: sharp edges, falling objects, flying sparks, chemicals, noise and myriad of other potentially dangerous situations. Hazards in electrical/electronic workshops include: faulty equipment or machines, improper organization of the workshops and laboratories, unjust and unsafe abandonment of naked live wires or cables, working with live and high current without putting on necessary protective equipments, using defective tools or equipment, unjust placement of very hot soldering iron on object with low melting point and so on. United State Department of Labor (2012) submitted that most electrical accidents result from the following three factors: unsafe equipment or installation, unsafe environment and unsafe work practice.

An unsafe practice has been defined by Nigerian Institute of Safety Professionals (2012) as a conduct that necessarily increases the likelihood of injury, violates established safety rules, or contrary to expected conduct while unsafe act is an observed unsafe condition. This implies that unsafe act is therefore an action taken by an individual who has knowledge and control of an existing unsafe condition or action but chosen to perform the action or ignore the condition.

The Nigeria Institute of Safety Professionals (NISP, 2012) also buttressed that unsafe condition and unsafe act contributes about 96% of accidents that occur in the industries where the high percentage being as a result of workers’ negligence to observe and apply safety rules. At this point, the question to be asked is “Are these workers adequately trained on safety and its application in their workplace?” To reduce the rate of accident in any workplace and in technical workshops and also for effective quality instructional delivery in technical colleges in Rivers State, the technical instructors/teachers, workshop attendants and students must be trained to ensure that effective implementation of safety practice in technical college workshop and its premises are adequately observed.

Technical Colleges in Nigeria are established to produce craftsmen at the craft level and master craftsmen at the advance craft level (Federal Ministry of Education, 2013). Abdulrauf (2012) defined technical colleges as institutions where specific knowledge and practical skills required for specific trade, employment or professional craftsmen, technicians, or similar level in business and industry are imparted or taught. According to Yekinni (2016), technical colleges aim to provide functional vocational, technological and scientific skills, knowledge and attitudes which individuals need to gain entry to and progress in a selected occupation. United Nations Educational, Scientific and Cultural Organization (UNESCO) and National Board for Technical Education, (NBTE), (2011) reported that the aim of technical colleges’ curriculum is to give training and impart the necessary skills leading to the production of craftsmen, technicians and other personnel who will be enterprising and self-reliant. Technical colleges enroll students who must not be less than 14 years of age and should have successfully completed three years of junior secondary education or its equivalent (UNESCO & NBTE, 2011). The courses offered at the technical colleges lead to the award of National Technical Certificate (NTC) and Advance National Technical Certificate (ANTC). The curriculum programmes of technical colleges according to Federal Government of Nigeria (2013) are grouped into related trades. These include; the computer trades, electrical/electronic trades, building trades, wood trades, mechanical trades and electrical/electronic trades.

The electrical/electronic trades cover electricity/electronics subjects. Federal Republic of Nigeria (FRN, 2013) highlighted three subjects that are subsumed into electrical engineering trade: Electrical installation

and maintenance work; radio, television and electronics work; and appliances repairs. Electricity, according to Grob cited in James (2009), is an invisible force that can produce heat, light and motion, and many other physical effects. Electricity implies a form of energy generated, transmitted, and converted into heat, light, motion, and other forms of energy through natural processes such as lightning, as well as by devices built by people such as generators and alternators while Anaemena as cited in Yekinni (2016) opined that electronics is a physical science that deals with the study of the properties and behavior of electrons under all conditions, especially with reference to technical and industrial application.

In electrical/electronic trades, workplace hazards also include machines related hazards since electricity is used to power most of the machines and equipment. Workers or operators sustain injuries from shock burns, electrocution, fires and explosions. These conditions make instructional processes more challenging to both the facilitator (teacher, instructors) and the learner (learner) within and outside the college workshops. The term instructional quality refers to good teaching of instruction that leads to effective learning which in turn improves thorough and lasting acquisition of the knowledge, skills, and values the facilitator or the college has set out to impart. It also refers to how facilitators relates with students on how they cope with or accomplish different tasks given to them by their individual teachers. In technical college where emphases are anchored on acquisition of practical skills, there is need for the workshops to be conducive and free from hazards capable of creating distractions and causing accidents. From the above juxtaposition, it is of necessity that electrical/electronic workshops in technical colleges in Rivers State should embark on high level of safety practice implementation in order to prolong the service live of technical instructors, teachers, students and workshop equipment. This will also enhances effectiveness in instructional quality in electrical/electronic trades in technical colleges in Rivers State.

Statement of the Problem

Safety practice implementation in electrical/electronic workshops in technical college by instructors, students and other users against workshop and environmental hazards cannot be overemphasized. This is because the high rates of injury and damage sustain cause by accident is public issue. In electrical/electronic workshops in technical college, teachers and students are prone to accidents as a result of the nature of operations involved. The operations include electrical installation, coiling and recoiling, radio and television services, soldering, repairs and maintenance, electrical drafting and fittings, instrumentation etc. These operations also involved working with hot metals, sharp objects, working with infra-red light, consumable materials and substances, hazardous tools, materials and equipment. For these operations to be carried out effectively, electrical/electronic teachers and students must possess safety practice skills in order to prevent or totally eliminate occurrences of accidents which will result in human and material resources wastage.

In technical college, Yakubu as cited in Okon (2011) revealed that some students in the workshop often sustain injuries, damage tools and render machines non-functional during practical work. Most often, many students absent themselves from practical session in the workshop. This may be as a result of accident often observed in the workshop and also damage to materials of which some of them are expensive to repair or replace. There is no provision of safety equipment, tools and machines such as fire extinguishers, first aid boxes and dispensaries environments in electrical/electronic workshops. Also, teachers often fail to inculcate safety practice skills into the students due to the fact that safety instructional aids such as posters, bulletin boards and films are not provided by the relevant authorities and where they are available, the teachers may lack knowledge and skills to apply and administer the safety tools and equipment (Okon, 2011).

These irregularities in workshops sometimes inflict serious injuries to students such as deep cut, arc burns, electric shocks and explosion during welding with electricity. It also causes serious damage to the workshop facilities and even amputation of teachers and students affected parts. If safety practice skills are identified and implemented in the training of students, there are possibilities of reducing accidents that causes damage to tools/machines/equipment, wastage of materials in electrical/electronic workshops and even leads to death of students and teachers in technical colleges in Rivers State. It is against these abnormalities that the researchers seek to examine how the implementation of safety practice enhances effective instructional quality delivery in electrical/electronic trades in technical colleges in Rivers State.

Propose of the Study

The general purpose of this study is to determine the level of implementation of safety practices for enhancing instructional quality delivery in electrical/electronic workshops in Rivers State technical colleges. Specifically; this study tends to:

- i. examine unsafe conditions that results to accidents in electrical/electronic workshops in technical college in Rivers State.

- ii. identify unsafe acts that are capable of causing accidents in electrical/electronic workshops in technical college in Rivers State.
- iii. Describe the effect of accidents on students of electrical/electronic in technical colleges in Rivers State.
- iv. Suggest strategies of reducing accidents occurrence in electrical/electronic workshops in technical colleges in Rivers State.

Research Questions

The following research questions guided the study;

- i. What are those unsafe conditions that results to accidents in electrical/electronic workshops in technical colleges in Rivers State?
- ii. What are those unsafe acts capable of causing accidents in electrical/electronic workshops in technical colleges in Rivers State.?
- iii. What are the effects of accidents occurrence on electrical/electronic students in technical colleges in Rivers State?
- iv. What are the strategies to be adopted in reducing accidents occurrences in electrical/electronic workshops in technical colleges in Rivers State?

2. Methodology

Descriptive research survey design was adopted for this study. The design was considered adequate since the study obtain information from technical college teachers in Rivers State. This study was carried out in all the four technical colleges in Rivers State which include: Government Technical College, Port Harcourt, Government Technical College, Eleogu, Government Technical College, Tombia and Government Technical College; Ahoada. The population of the study was 27 respondents which comprised of 18 teachers and 9 instructors of electrical/electronic trades (Source: National Board for Technical Education Unit, Rivers State Ministry of Education, 2018). Due to the small population size which was considered manageable, there was no sample and no sampling technique was adopted in the study.

The instrument used for data gathering was a close-ended self structured questionnaire tagged “Implementation of Safety Practice in Electrical/Electronic Workshops Questionnaire (ISPEEWQ)”. The instrument was designed in accordance with the research questions having four sections A-D. Section A was used to obtain data on unsafe condition that causes accidents in workshops. Section B was structured to obtain information on unsafe acts that causes accidents in electrical/electronic workshops in technical college while section C elicited information on effects of accident on electrical/electronic students and section D was used to obtain data on the strategies needed to reduce accident occurrence in technical college workshops in Rivers State. The instrument contain 42 items with response option of Strong Agree (SA), Agree (A), Undecided (UD), Disagree (D) and Strongly Disagree (SD) which was designed in the patterned of Likert-5 point rating scale of agreement with numerical values of 5, 4, 3, 2 and 1 respectively. A total of 27 copies was retrieved which represent 100% return rate. The instrument was face validated by two experts from Department Vocational and Technology Education, Rivers State University, Port Harcourt. The questionnaire was tried out on 11 electrical/electronic teachers in technical colleges in Akwa-Ibom State. A reliability of coefficient of 0.85 was established using Cronach Alpha. The data was collected by administering the instrument directly on the respondent by the researchers. The data collected from the respondents for the study were analysed using mean with standard deviation for answering the research questions. Any item with a mean value of 3.00 and above was accepted while mean value below 3.00 were rejected. The data was analyse with Statistical Package for Social Sciences (SPSS) version 13.0^{KM}.

Results

The results of the study are presented below

Research Question 1: What are those unsafe conditions that results to accidents in electrical/electronic workshops in technical colleges in Rivers State?

Table 1: Mean Response of Teachers on Unsafe Conditions that Causes Accident in Electrical/Electronic Workshops in Technical College Workshops

S/N	Item Statement	X	SD	Remark
1.	Inadequate principles on tools/equipment operation	3.89	0.69	Accepted
2.	Working in a restricted environment	3.77	1.28	Accepted
3.	Presence of protruding object	4.10	0.64	Accepted
4.	Close clearance and congestion in workplace	3.72	1.11	Accepted

5.	Poor housekeeping	3.51	0.73	Accepted
6.	Power tools not properly grounded and insulated	4.49	1.03	Accepted
7.	Poor ventilation	4.39	0.69	Accepted
8.	Presence of fire and explosion hazards	3.35	1.01	Accepted
9.	Walkway being narrow	3.71	0.55	Accepted
10	Poor illumination in the workshop	4.01	0.69	Accepted
Average Mean/SD		3.89	0.84	Accepted

Source: *Researchers' Field Result, 2018*

The result in Table 4.1 above revealed that the respondents agreed that all the items listed in the table as unsafe conditions that causes accident occurrence in electrical/electronic workshops in technical colleges in Rivers State. Item with standard deviation of less than 1 ($SD < 1$) indicated that the respondents were not far from each other in their responses while a standard deviation value greater 1 ($SD > 1$) shows that the respondents were far from each other in the responses.

Research Question 2: What are those unsafe acts capable of causing accidents in electrical/electronic workshops in technical college in Rivers State?

Table 2: Mean Response of Teachers on Unsafe Acts that Causes Accident in Electrical/Electronic Workshops in Technical College Workshops

S/N	Item Statement	X	SD	Remark
1.	Removing or bypassing safety devices and rules	4.05	1.04	Accepted
2.	Operating devices without authorization	3.58	0.55	Accepted
3.	Use of tools for other than their intended purpose	4.67	1.02	Accepted
4.	Horseplay in the workshop	3.43	0.77	Accepted
5.	Working with high voltage without following necessary standards	4.50	0.82	Accepted
6.	Use of metal ladder while working on electrical installation	3.33	1.21	Accepted
7.	Working with defective tools and equipment	4.67	0.92	Accepted
8.	Operating tools/equipment without principle	3.28	0.78	Accepted
9	Failure to label and identified all hazardous sources	4.58	1.03	Accepted
10	Failure to de-energize the electrical energy source before beginning maintenance or repair activities.	3.42	0.51	Accepted
Average Mean/SD		3.95	0.87	Accepted

Source: *Researchers' Field Result, 2018*

The result in Table 4.2 above revealed that the respondents agreed that all the items listed in the table as sources of unsafe acts that causes accident occurrence in electrical/electronic workshops in technical colleges in Rivers State. Item with standard deviation of less than 1 ($SD < 1$) indicated that the respondents were not far from each other in their responses while a standard deviation value greater 1 ($SD > 1$) shows that the respondents were far from each other in the responses.

Research Question 3: What are the effects of accidents occurrence on electrical/electronic students in technical colleges in Rivers State?

Table 3: Mean Response of Teachers on Effects of Accidents on Electrical/Electronic Students

S/N	Effect of Accidents on Students	X	SD	Remark
1.	Accidents affect the student's thinking ability (Cognitive)	3.49	1.11	Accepted
2.	Accidents occurrences affects the student's writing or hand skills (Psychomotor)	3.54	1.02	Accepted
3.	Accidents can leads to psychological trauma	4.02	0.78	Accepted
4.	It results to students' withdrawal from the programme	3.09	0.97	Accepted
5.	Accidents occurrence discourages the student	4.67	0.61	Accepted
6.	It affects the students' reasoning ability (Affective).	3.14	0.84	Accepted
7	It causes facial damage	3.76	1.12	Accepted
Average Mean/SD		3.67	0.92	Accepted

Source: *Researchers' Field Result, 2018*

The result in Table 4.3 above revealed that the respondents agreed that all the items listed in the table as effects of accidents occurrence on students academics in technical colleges in Rivers State. Item with standard deviation of less than 1 ($SD < 1$) indicated that the respondents were not far from each other in their responses while a standard deviation value greater 1 ($SD > 1$) shows that the respondents were far from each other in the responses.

Research Question 4: What are the strategies to be adopted in reducing accidents occurrences in electrical/electronic workshops in technical colleges in Rivers State?

Table 4: Mean Response of Teachers on Strategies in Reducing Accident in Electrical/Electronic Workshops in Technical College Workshops

S/N	Strategies in Reducing Accidents in Workshops	X	SD	Remark
1.	Wearing of Personal Protective Equipment (PPE)	4.64	0.58	Accepted
2.	Never take a job for which you have not been train for	3.51	1.02	Accepted
3.	Always follow safety of the workplace	3.64	0.82	Accepted
4.	Always check your tools before using them to work	4.07	1.07	Accepted
5.	Always work according to instructors' directives	3.57	0.66	Accepted
6.	Always use proper tools for each job at hand	4.01	0.56	Accepted
7.	Always read manufacturers instruction before usage	4.19	1.03	Accepted
8.	Keeping the walk way free from obstacles/scarves	3.39	0.74	Accepted
9.	The use of Caution Board: Men at work	3.45	0.82	Accepted
10.	The use of Safe Handling of Chemicals (SHOC)	3.42	1.12	Accepted
11.	Observe the principle of Log-out Tag-out (LOTO)	4.06	0.58	Accepted
12.	The Use of Material safety Data sheet (MSDS)	3.58	0.51	Accepted
13.	Use of Communication Board such as (Silence: Lecture in progress)	3.5	1.22	Accepted
14.	Use of Communication Board such as (Danger: High voltage point/equipment)	3.25	0.52	Accepted
15.	Removal of all loose cables from the floor	3.33	0.92	Accepted
	Average Mean/SD	3.71	0.81	Accepted

Source: *Researchers' Field Result, 2018*

The result in Table 4.4 above revealed that the respondents agreed that all the items listed in the table as strategies in reducing accident occurrence in electrical/electronic workshops in technical colleges in Rivers State. Item with standard deviation of less than 1 ($SD < 1$) indicated that the respondents were not far from each other in their responses while a standard deviation value greater 1 ($SD > 1$) shows that the respondents were far from each other in the responses.

Discussion of Findings

The findings of the study in Table 1 indicated 10 items addressing causes of accidents in electrical/electronic workshop in technical colleges in Rivers State due to unsafe conditions. These causes of accidents according to the technical college teachers include: working in a restricted environment, power tools not properly grounded and insulated, defective tools and equipment; poor housekeeping; poor ventilation; walkway being narrow, poor illumination in the workshop, Close clearance and congestion in workplace, inadequate principles on tools/equipment operation, Presence of protruding object and so on.

This finding is in agreement with Olagbegi, Kwasi and Ugbi (2013) who found that inadequate of fire extinguisher in the laboratory; poor ventilation including hot shop and machine shop, faulty and old door locks, especially in the thermo fluid laboratory; little or no use of personal protective equipment, no working fire alarm, uncovered electrical panels and fuse boxes are related to causes of accidents in thermo fluid laboratory. Also, these findings corroborates with that of Atsumbe, Ohize, Abutu and Amine as cited in Yekinni (2016) who submitted that defective conditions of equipment; lack of signals and barricades; improper use of mechanical aid; power tools not properly grounded and insulated; floors, aisles and inside passageway not kept clean; protective clothing such as gloves and protective shoes amongst others not used; incompetent personnel operating industrial equipment; poor handling of industrial equipment; poor illumination in the factories, and poor safety awareness, education and safety training are the potential sources of industrial accidents in workshops/laboratories of manufacturing industries. Thus, the findings of the authors cited above authenticate the results of this study.

The result in Table 2 revealed 10 unsafe acts that can cause accidents in technical colleges in Rivers State as observed by teachers and instructors in the college. These unsafe acts include: operating devices without authorization, use of tools for other than their intended purpose, Students not listening to supervisors' advice, working with defective tools and equipment, operating tools/equipment without principle, failure to de-energize the electrical energy source before beginning maintenance or repair activities, use of metal ladder while working on electrical installation, working with high voltage without following necessary standards and so on. This finding is in consonance with Yekinni (2016) who found that failure to follow laid down procedures, failure to verify that electrical energy source is de-energized before starting work, failure to identify or label all hazardous energy sources and so on are causes of accidents in electrical/electronic workshops in technical colleges in south western part of Nigeria.

The result in Table 4 revealed 15 strategies that can reduce accidents occurrences in technical colleges in Rivers State as observed by teachers and instructors in the college. These strategies include: the use of proper tools for each job at hand, working according to instructors' directives, the use of Caution Board: Men at Work, use of Communication Board such as (Silence: Lecture in progress), use of Communication Board such as (Danger: High voltage point/equipment), observing the principle of Log-out Tag-out (LOTO), keeping the walk way free from obstacles/scarves, maintenance of workshop tools and equipment regularly, good housekeeping, de-energizing electric equipment prior to maintenance work; keeping electric tools properly; always use insulated tools and equipment; covered all potentially dangerous electric conductors with protective panel; label dangerous or damaged equipment with brief phrase and use clean, permanent and legible markings and so on.

This finding is in consonance with Yekinni (2016) who found that failure to follow laid down procedures, failure to verify that electrical energy source is de-energized before starting work, failure to identify or label all hazardous energy sources, ensure proper ventilation and lock out or tag out electrical/electronic energy source during electrical/electronic maintenance activities and so on are causes of accidents in electrical/electronic workshops in technical colleges in South western part of Nigeria. The result is in consonance with the opinion of Nichols (2005) that the prescriptions for litigation immunity in schools include: be present in the classroom at all times when a class is in session; maintain a neat, orderly and safe classroom environment, instigate a comprehensive and continuing safety program; correct all known hazards and defective conditions; review safety policies and procedures on a regular schedule; provide a good personal example, particularly when demonstrating power equipment; equip and maintain all machines with guards; insist that guards be in position and used whenever a machine is in operation; be particularly alert and in a close proximity to power machines when students use them.

Also, Osang, Obi and Ewona (2013) discovery was in consonance with the present finding that to avoid or minimize accidents in the laboratory or workshop, these workshop safety and precision need to be observed: read carefully and understand all the rules before using the workshop; do not run in the workshop; wear strong shoes plus thick soles; get first aid immediately for any injury; be sure you have sufficient light to see clearly; don't wear ring, watches, bracelets or other jewelry that could get caught in moving machinery; keep the floor free of oil, grease or any other liquid and always clear up the workshop among others. The findings of authors cited above verify the validity of the result of this study.

Conclusion

In order to eliminate or reduce and minimize the rate of accidents occurrences in electrical/electronic workshops in technical colleges in Rivers State, the researchers concluded that there is urgent need for students and facilitators of electrical/electronic in the college to be introduced to safety practice as regard electrical/electronic and general workshop safety. This exposition will help the students and workshop users to be able to identified activities that are both unsafe conditions and unsafe acts that are capable of causing accidents that may result to loss of lives and damage to properties and possibly its effects on their academic performance while in the college. Possible strategies to minimize accidents occurrences include labeling all dangerous points and faulty equipment with the use of communication hazard board in and outside the workshop premises.

Recommendations

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

1. Workshop users should be given proper orientation by school management and government on activities that causes accidents such as unsafe conditions and unsafe acts. These will reduce accidents occurrences in the workshops and its environment as its users will be conscious of activities to be carried out.
2. Workshop users should be informed by relevant authorities such as Nigerian Institute of Safety Professionals (NISP) on the effect of accident occurrences in technical colleges. This will enhance

- carefulness and alertness in the workshop and its environment for quality instructional delivery in technical colleges.
3. Safety experts should be employed in technical college to educate the users of the workshop especially on areas concerning accident preventive measures. This will ensure durability of facilities and improves quality in instructional delivery in the college

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