BASIC SAFETY PRACTICE SKILLS NEEDED BY ELECTRICAL/ELECTRONIC STUDENTS FOR EFFECTIVE OPERATION IN THE WORKSHOP

Owodunni, A. Samuel
Department of Industrial and Technology Education
Federal University of Technology, Minna, Nigeria
E-mail: owoscosam@yahoo.com
Phone No: +234-706-220-9015

Abstract
The study was carried out in Federal Capital Territory, Abuja and Niger State to identify basic safety practice skills that students of Electrical/electronic students required to enable them carry out effective operation in the workshop. To achieve this objective, 3 research questions were developed while 3 null hypotheses were formulated and tested a 55-item structured questionnaire was developed from the literature reviewed for the study and utilized in collecting data. Survey research design was adopted for the study. The sample for the study was 52 respondents made up of 27 Electrical/electronic Teachers and 25 College Administrators. The structured questionnaire was face validated by 3 experts knowledge in Electrical/electronic. The Cronbach alpha method was used to test reliability of the questionnaire items to obtain a coefficient of 0.87. The questionnaire was administered on 52 respondents. The weighted mean and standard deviation were used to answer the research questions while t-test statistic was used to test the hypotheses at 0.05 level of significance. The findings of the study revealed that 52 basic safety practice skills were required by Electrical/electronic students for effective operation in Electrical/electronic workshop. There was no significance difference in the mean response of college Administrators and Electrical/electronic teachers on the basic safety practice skills required by Electrical/electronic students for effective operation in the workshop. It was therefore recommended that the basic safety practice skills identified by this study should be made available to teachers and students of Electrical/electronic trade in Technical Colleges to acquit them with necessary basic safety practice skills that are needed in the workshop

Introduction

Electrical/electronic Trade is one of the sub-professional trades offered at the technical colleges, it is one of the vocational education courses which are only form of education whose primary purpose is to prepare and provides individual student with the skills, knowledge and an attitude necessary for employment in specific occupations (Okoro, 1999). According to Olaitan (1996), vocational education is the essential preparation that will enable the individual to meet his/her developmental needs and aspirations which for many will constitute an immediate entry into the world of work. It also has been noted that the extent of technological development and growth of any country is dependent on the quality and effectiveness of her technical and vocational education. Brennam and Little cited in Okon (2012) asserts that, as long as vocational education is an integral part of sustainable self employment, frequency of training to reflect the relevant skills should be encouraged by vocational educators and other agencies that provide such training skills. The emphasis is to allocate more time to practical skill over theory in each trade during training as this will enable the trainees to gain practical experience in their chosen vocation so as to be gainfully employed in the world of work as technical personnel.

The programme for Electrical/electronic trade in Nigeria technical colleges is designed to produce competent craftsmen in various Electrical/electronic trade. According to National Board for Technical Education (NBTE 2001), a graduate of Electrical/electronic is expected to operate equipment, machines and perform other Electrical/electronic skills like fault diagnose and repair of Radio, Television, Communication system and equipment for production purposes in private practices or in

the industries. These graduates may proceed to tertiary institutions for further studies in Technical Education. A National curriculum is adopted in all the technical colleges accredited by NBTE. The programmes in technical colleges are offered at levels leading to the award of National Technical Certificate (NTC) and Advanced National Technical Certificate (ANTC) for craftsmen and master craftsmen respectively (Federal Government of Nigeria, 2000). The Federal Government of Nigeria (FRN, 2004) pointed out that the main feature of the curricular activities for technical colleges shall be structured in foundation and trade modules, the curriculum for each trade shall consists of general education, theory and related courses, workshop practice industrial training components and small business management and entrepreneurial training. The trade theory and workshop practice involve the study of basic electricity, Battery Charging, Domestic Installation, Industrial Installation, Cable Jointing and Winding of Electrical Machines electronics device and circuit, radio communication, radio and audio frequency amplifier, satellite transmission and reception and television This curriculum if adequately implemented is expected to produce competent craftsmen in Electrical/electronic trade for industrial and technological development in Nigeria. Such Craftsmen can be employable or be self-reliant if he possesses adequate skills and is competent.

However, the increase in accident rate in the Electrical/electronic workshop during the various operations call for more advanced instruction on accidents prevention that requires increase emphasis on safety. Krause, John & Sternly (1990) stated that their discussion with laboratory and factory workers revealed that emphasis should be placed on safety education because of sophisticated machines and equipment which are becoming increasingly complicated and digitalized. They further stated that the need for industrial safety became necessary because of millions of industrial accidents occurring yearly which results in injuries, permanent or temporary disablement and sometimes in dead.

Mannuela (1993) defined safety as the art and science of identifying, evaluating and controlling work place hazards; they further emphasized that safety is the state of being certain that adverse effect will not be caused by some agents under defined condition. Safety according to the opinion of Olaitan, Nwachukwu, Igbo, Onyemechi and Ekong (1999) is an art of inculcating the necessity of taking precautions for the avoidance of personal injuries or reducing accidents in order to protect people and property. Lutze (1978) stated that real safety means safeguarding against damage to machines tools and materials as well as preventing personal injuries. These experts agreed that every step toward skills acquisitions must first address the subject matter of industrial accident and safety.

Krejice (1992) provided vocational educational theory which supports that effective skills acquisition in vocational education can only be secured when the teacher has successful experience in the application of skills and knowledge of safety practice to the operations and processes he undertakes to teach. In the context of this study, safety is any method, technique or process which can minimize or prevent accident in industries and workshops of technical colleges.

According to the National Safety Council (1998) accident is occurrence in an industry or establishment causing bodily injuries to a person which make him unfit to resume his duties in the next 48 hours. It further poised that accident is an unwanted, unexpected event which cannot be anticipated in advance. Occurrence of accidents in the workshop are always increased by improper dressing, ignorance, over confidence, carelessness, non-provision of required safety guards to revolving parts of machines filthiness, insensitivity, distraction, influence of alcoholic and abuse of tools. These call for Electrical/electronic students at the technical college who are being trained for employment in an occupation that required laboratory activities to be conversant with safety practice skills right from the school. This will reduce the high rate of accidents in workshop as well as industries.

Safety practices according to the School Board Safety Policies (1998) are those activities that seek either to minimize or to eliminate hazardous conditions that can cause bodily injuries. Safety practice in the context of this study is the effort directed at preventing or eliminating accidents in the workshop by the teachers, students and school administrators. Safety practices is a team activities which requires that everyone in the workshop should think and act responsibly at all times and in every activities. The electrical/electronic teacher who is a link between the students and the materials being taught should have the skills of manipulating tools and machines safely without fear of being involved in accident.

Skills in the opinion of Osinem and Nwoji (2005), is the ability to be able to perform activity expertly. They further explained that skill is a well established habit of doing things and involves acquisition of performance capabilities through repetitive of an operation. Ede (2001) also defined skill as expertness or dexterity or practice ability of facilitating or doing something. In the context of this study skill is the demonstration of dexterity or the ability of manipulating step by step processes of Electrical/electronic operations such as charging, soldering, laying of cables, cable jointing, domestic and industrial installation and measuring in the technical college electrical/electronic workshop or laboratories with little or no wastage of necessary resources.

Olaitan (1996) observed that technical college graduates do not possess adequate skills necessary for self-employment or employment in industries and for effective operation in workshop or laboratories. And coupled with the facts that there is wider scale of accidents that takes place in technical colleges' laboratories due to carelessness or lack of safety practices skills by students and teachers. This study was therefore designed to identify those safety practice skills that electrical/electronic students need for effective and efficient operation in the workshop.

Statement of the problem

In Electrical/electronic workshop, both in technical colleges and industries, teachers and students are prone to accidents as a result of the nature of operations involved. For any operation to be carried out effectively, teachers and students must possess basic safety practices skill in order to prevent or totally eliminate occurrences of accidents which may result in human and material resources wastage.

Accidents may also occur in the workshop due to non-observance of simple workshop rules and regulations. Students are often exposed to hazard without the necessary safety instructions to guide them during practical exercises. Teachers often fail to inculcate safety practices skills into the students due to the fact that instructional resources such as posters, bulletin boards and films are not provided by the authority concerned. Where they are available the teachers may lack the knowledge and skills to apply and administer the safety tools and equipment.

In workshop or laboratory some activities or operations sometimes inflict serious injuries to students such as deep cut, fire burnt, electric shock and even serious explosion and these has caused serious damage to the workshop building, equipment and amputation of the student hand. The development of students for industry to use equipment, electricity and other hazardous material requires early safety practice education and good safety training can eliminate or reduced most of the carelessness and protect teacher, students and industrial workers from work related accidents. Hence the study is designed to identify the safety practice skills required by Electrical/electronic students of technical colleges for effective operation in the workshop.

Purpose of the Study

The major purpose of this study is to identify the safety practice skills required by Electrical/electronic students of technical colleges for effective operation in the Electrical/electronic workshop. Specifically, the study will identify:

(i) General safety practice skills required by Electrical/electronic students for effective operation in the Electrical/electronic workshop
(ii) Safety practice skills required by Electrical/electronic students for effective operation in Electrical workshop
(iii) Safety practice skills required by Electrical/electronic students for effective operation in Electronics workshop

Research Questions

The following are the research questions for this study;

(i) What are the General safety practice skills required by Electrical/electronic students for effective operation in workshop?
(ii) What are the safety practice skills required by Electrical/electronic students for effective operation in Electrical workshop?
(iii) What are the safety practice skills required by Electrical/electronic students for effective operation in Electronics workshop?

Hypotheses

The following null hypotheses which were tested at 0.05 level of significance guided this study:

HO_1: There is no significant difference between the mean rating of the responses of Electrical /electronic teachers and College Administrators on the General safety practice skills required by Electrical/electronic students for effective operation in workshop

HO_2: There is no significant difference between the mean rating of the responses of Electrical/electronic teachers and College Administrators on the safety practice skills required by Electrical/electronic students for effective operation in Electrical workshop

HO_3: There is no significant difference between the mean rating of the responses of Electrical/electronic teachers and College Administrators on the safety practice skills required by Electrical/electronic students for effective operation in Electronics workshop

Methodology

Three research questions were developed and answered by the study while 3 null hypotheses were formulated and tested at 0.05 level of significance. Survey research design was adopted for the study. A 55 items structured questionnaire was developed from the literature review for the study and utilized in collecting data. The scale for the questionnaire were Highly Required (HR), Required(R), Moderately Required (MR) and not Required (NR) with values 4, 3 2 and 1 respectively.

The population for the study was 52 made up of 25 college administrators (Principals, Vice Principals and HODs) and 27 Electrical/electronic teachers. The entire population was used for the study due to their manageable size. The questionnaire items were validated by three experts in Electrical/electronic who are knowledgeable in workshop safety practices. Cronbach alpha technique was used to determine the reliability of the instrument (questionnaire) and co-efficient of 0.87 was obtained. The questionnaire was administered on 52 respondents. All the 52 copies were retrieved and used for analysis.

The weighted mean and standard deviation were used to answer the research questions while t-test statistics was used to test the hypotheses at 0.05 level of significance. The arithmetic mean of the scale of the items is 2.50. Any item with a weighted mean at 2.50 and above was regarded as important basic safety practice skill required for effective operation in Electrical/electronic workshop,

while any item with a weighted mean value below 2.50 was not regarded as an important basic safety practice skill for effective operation in Electrical/electronic workshop.

The standard deviation was used to determine the closeness or otherwise of the responses of the respondents from the mean. Any item with a standard deviation at 1.96 and below show that the respondents were close to the mean, indicating that the mean values of the items were valid. Any item with a standard deviation above 1.96 indicated that the respondents were not close to the mean and therefore the mean values of the items were less valid. The null hypothesis was accepted for any item whose t-calculated value was less than the t-table value and rejected if on the contrary.

Results

Research questions 1

What are the general basic safety practice skills required by electrical/electronic students for effective operation in the workshop?

Table 1: Mean ratings of the responses of college administrators and electrical /electronic teachers on the general basic safety practice required by electrical/electronic students for effective operation in the electrical /electronic workshop

S/N	Items statement	$\bar{X}$	SD	Remarks
	Ability to			
1	Turn off and unplug equipment (instead of relying on interlocks that can fail) before removing the protective cover to clear a jam, replace a part, adjust or troubleshoot.	2.74	0.83	Required
2	Not use an electrical outlet or switch if the protective cover is ajar, cracked or missing.	3.33	0.50	Required
3	Use dry hands and tools and stand on a dry surface when using electrical equipment, plugging in an electric cord, etc.	3.49	0.51	Required
4	Never put conductive metal objects into energized equipment.	3.40	0.46	Required
5	Always pick up and carry portable equipment by the handle and/or base. Instead of carrying equipment by the cord.	3.48	0.96	Required
6	Unplug cords from electrical outlets by pulling on the plug instead of pulling on the cord.	3.11	0.88	Required
7	Use extension cords temporarily and the cord should be appropriately rated for the job.	2.96	0.93	Required
8	Use extension cords with 3 prong plugs to ensure that equipment is grounded.	2.56	0.83	Required
9	Never remove the grounding post from a 3 prong plug so that you can plug it into a 2 prong, wall outlet or extension cord.	2.54	0.72	Required
10	Re-route electrical cords or extension cords so they aren't run across the floor, under rugs or through doorways, etc.	2.45	0.89	Required
11	Not to overload extension cords, multi-outlet strips and wall outlets.	2.66	0.89	Required
12	Heed the warning signs, barricades and/or guards that	3.13	0.66	Required

	are posted when equipment or wiring is being repaired or installed or if electrical components are exposed.			
13	Equip Instructional Laboratories with Ground Fault Current Interrupt (GFCI) circuit breakers and check for leakage paths to ground when breakers trip repeatedly and the problem are not due to an overload.	3.35	0.54	Required
14	Equip any equipment used in the laboratories with a standard three-prong AC plug or a two-pronged polarized plug.	2.96	0.83	Required

Key: × = Mean; SD = Standard Deviation

The data presented in table 1 shows that 13 out of 14 in table 1 had their mean values ranged from 2.54 – 3.48. This implies that the means were above the cutoff point of 2.50 indicating that the respondents agreed to the 13 items as general basic safety practice skills required in Electrical/electronic workshop. However, item 10 had mean value of 2.45 which is below 2.50. This showed that the respondents disagreed that the item was an important basic safety practice skill required for effective operation Electrical/electronic workshop.

The table also revealed that the standard deviation (SD) of the item ranged from 0.50-0.93 which was below 2.00. This indicated that the respondents were not far from the mean and from one another in their responses. This indicated that the items were valid.

Research Question 2
What are the basic safety practice skills required by electrical/electronic students for effective operation in Electrical workshop.

Hypothesis 2
There is no significant difference in the mean ratings of the response of college administration and Electrical/electronic Teachers on the basic safety practice skills required by electrical/electronic students for effective operation in Electrical workshop.

Table 2: **Mean ratings and t-test analysis of college administrators and Electrical /electronic teachers on the basic safety practice skills required electrical /electronic students for effective operation in electrical workshop**

S/N	Item Statement	×	SD	Remarks
	Ability to:			
1	Understand that all exposed non-carrying metal parts of fixed and portable equipment that may accidentally become energized should be grounded.	2.65	0.23	Required
2	Understand that all electrical equipment or apparatus that may require frequent maintenance must be capable of being completely disconnected from the power source.	2.70	0.23	Required
3	Never work alone on energized or equipment over 50 volts peak Know that making contact with the conductor(s) of a supposedly dead power system should be done with the back of one hand, so that if a shock should occur, the muscle reaction will pull the fingers away from the conductor.	3.01	0.35	Required
4	Always verify that a circuit has been secured in a Zero Energy State with test equipment after locking it out.	2.52	0.88	Required
5	Place personal padlock or combination lock on that will serve as lock out/tag out on every energy disconnect device relevant to the task on the system.	2.58	0.33	Required
6	Temporary connect grounding or shorting wires to a load being serviced for extra protection to personnel working on that load.	3.32	0.38	Required
7	Disconnect switch devices in a properly designed electrical system to allow for convenient readiness of a Zero Energy State.	3.20	0.78	Required
8	Never hurry, work deliberately and carefully.	2.99	0.81	Required
9	Always connect to the power last.	3.01	0.77	Required
10	Turn the main power switch off before you begin work on the circuits and wait a few seconds for power supply capacitors to discharge in order to prevent damage to circuits.	3.48	0.63	Required
11	Turn the power switch of the external supply off before you begin work on the circuits if connected to external power supply.	3.24	0.71	Required
12	Check circuit power supply voltages for proper value and for type (DC, AC, frequency) before energizing the circuit.	3.34	0.51	Required
13	Know that wires are not run over moving or rotating equipment, or on the floor, or string them across walkways from bench – to – bench.	3.31	0.31	Required
14	Know that conductive watch bands or chains, finger rings, wrist watches, etc. must be removed, and do not use metallic pencils, metal edge rulers, etc. when working with exposed circuits.	2.86	0.61	Required
15	Know that when breaking an inductive circuit open the switch with your left hand and turn your face away to avoid danger from any arc switch may occur across the switch terminals.	2.91	0.58	Required
16	Know that when using large electrolytic capacitors be sure	3.35	0.65	Required

	to wait long enough (approximately five time constants)			
17	for the capacitors to discharge before working on the circuit.	3.13	0.75	Required
18	Understand that all conducting surfaces intended to be at ground potential should be connected together.	2.79	0.36	Required

Key: X = Mean; SD= Standard Deviation

The data presented in table 2 revealed that all the items had their mean values ranged from 2.52 – 3.34. This show that the means were above the cut-off point of 2.50 point indicating that the respondents agreed to the items as basic safety practice skills required for effective operation in electrical workshop. The table also revealed that the standard deviation (SD) of the items ranged from 0.23 – 081 which was below 2.00. This indicated that the respondents were not too far from the mean and from one another in their responses. This indicated that the mean values of the items were valid.

Research Question 3

What are the basic safety practice skills required by Electrical/electronic students for effective operation in Electronics workshop.

Table 3: Mean ratings of response of college administrators and electrical/ electronic teachers on the basic safety practice skills required for effective operation electronics workshop

S/N	Item Statement	X	SD	Remarks
	Ability to:			
1	Always wear your safety glasses	3.29	0.61	Required
2	Keep soldering irons in their protective stand when not in use	3.48	0.25	Required
3	Always read the msds (material safety and data sheet) for all chemicals prior	3.31	0.56	Required
4	Always observe polarity when connecting components into a circuit, especially with electrolytic capacitors to their use	3.39	0.88	Required
5	Apply heat from a soldering pencil for not more than a couple of seconds to avoid heat damage.	3.14	0.57	Required
6	Keep the intensity on oscilloscope as low as possible when in use and all the down when not in use to avoid burning out the screen	2.94	0.61	Required
7	Make sure test instruments are set for proper function and range prior to taking a measurement	2.41	0.74	N/required
8	Measure uncertain qualities, start with the range switch on the highest setting	2.84	0.61	Required
9	Always replace shields that were removed during service to avoid signal radiation	3.29	0.41	Required
10	Cut with an x-acto knife, avoid cutting towards yourself.	3.20	1.01	Required
11	Always cut wire leads so that the clipped wire falls on the table top and not toward others.	3.19	0.56	Required
12	Know that we do not touch the tip end of a soldering iron to check for heat	2.99	0.60	Required
13	Avoid skin contact with chemicals	3.39	0.44	Required

14	Replace of all screws, not just some.	3.09	0.49	Required
15	Use correct cleaning solvents for the job.	3.29	0.61	Required
16	Avoid pinching wires when putting equipment back together	3.39	0.45	Required
17	Use heat when soldering temperature-sensitive components.	3.00	0.45	Required
18	Know that a circuit that has the power applied is never solders.	3.40	0.44	Required
19	Double check circuits for proper connections and polarity prior to applying the power	3.03	0.24	Required
20	Observe polarities when connecting polarized components or test equipment into circuit.	3.19	0.77	Required
21	Avoid excess heat to one area of the component when soldering a multi-pin component, and do not go from pin to pin in a straight line.	2.62	0.81	Required
22	Avoid an earth ground when working with ac powered units. Only work with powered units when necessary for troubleshooting.	2.85	0.66	Required

Key: X = Mean; SD= Standard Deviation

The data presented in table 3 revealed that 21 out of the 22 items had their mean values ranged from 2.52 – 3.40. This showed that their mean values were above the cutoff point of 2.50, indicating that the respondents agreed to the items as basic safety practice skills required for effective operation in electronics workshop. However, item 7 had a mean value of 2.41 which is below 2.50. This showed that the respondents disregard that the item was not an important basic safety practice skills required for an effective operation in Electronics workshop. The table also revealed that the standard deviation (SD) of the items ranged from 0.25 – 0.88, which was below 1.96. This implied that the respondents were not far from the mean and from one another in their responses. This also indicated that the mean values of the items were valid.

Hypothesis 1

There is no significant difference in the mean ratings of the responses of electrical/electronic teachers and college administrators on the general basic safety practice skills required by the electrical/electronic students for effective operation in the electrical/electronic workshop.

Table 4: t-test analysis of the responses of college administrators and electrical/ electronic teachers on the basic safety practice required by electrical/ electronic students for effective operation in the electrical/electronic workshop

Group	N	$\bar{X}$	SD	df	t-cal	t-crit	P < 0.05
Teachers	27	3.01	0.75	50	0.569	2.00	Not significant
Administrators	25	2.89	0.71				

Key

$\bar{X}$ = Mean

SD = Stand Deviation

N = Number of respondent

df = Degree of freedom

The data presented in table 4 revealed that t-calculated value is 0.569 as against t-critical value which is 2.00. Therefore, the null hypothesis of no significant difference is upheld. There is no

significant difference between the mean the responses of college administrators and electrical/electronic teachers on the basic safety practice required by electrical/electronic students for effective operation in the electrical/electronic workshop.

Hypothesis 2
There is no significant difference in the mean ratings of the response of college administration and Electrical/electronic Teachers on the basic safety practice skills required by electrical/electronic students for effective operation in Electrical workshop.

Table 5: **t-test analysis of college administrators and Electrical/ electronic teachers onthe basic safety practice skills required electrical/electronic students for effective operation in electrical workshop**

Group	N	$\bar{X}$	SD	df	t-cal	t-crit	P < 0.05
Teachers	27	2.77	0.74	50	0.146	2.00	Not significant
Administrators	25	2.69	0.70				

Key
$\bar{X}$ = Mean
SD = Stand Deviation
N = Number of respondent
df = Degree of freedom

Table 5 showed that t-calculated value is 0.146 as against t-critical value which is 2.00. Therefore, the null hypothesis of no significant difference is upheld. There is no significant difference between the mean the responses of college administrators and electrical/electronic teachers on the basic safety practice required by electrical/electronic students for effective operation in the electrical workshop.

Hypothesis 3
There is significant difference in the mean ratings of the response of college administrators and Electrical/electronic Teachers on the basic safety practice skills required for effective operation Electronics workshop.

Table 6: **t-test analysis of response of college administrators and Electrical/ electronic teachers on the basic safety practice skills required for effective operation electronics workshop**

Group	N	$\bar{X}$	SD	df	t-cal	t-crit	P < 0.05
Teachers	27	2.89	0.51	50	0.388	2,00	Not significant
Administrators	25	2.97	0.59				

Key
$\bar{X}$ = Mean
SD = Stand Deviation
N = Number of respondent
df = Degree of freedom

The data presented in table 6 revealed that t-calculated value is 0.388 as against t-critical value which is 2.00. Therefore, the null hypothesis of no significant difference is upheld. There is no significant difference between the mean the responses of college administrators and

electrical/electronic teachers on the basic safety practice required by electrical/electronic students for effective operation in the electronics workshop

Discussion

The study found out that 13 general basic safety practice skills were required for effective operation in Electrical/electronic workshop. While the findings on research question 2 revealed that 22 items are required for effective operation in Electrical workshop. The findings on research question 3 revealed that all the items except one are required for effective operation in Electronics workshop. These findings were in agreement with the opinion of Anant and Jeffrey (2007) who advised that all electrical students should consider safety an important aspect of their training activities. In the same vein, Krause, John & Sternly (1990) asserted that their discussion with laboratory and factory workers revealed that emphasis should be placed on safety education because of sophisticated machines and equipment which are becoming increasingly complicated and digitalized. Anant and Jeffrey (2007) also identified wearing of safety glasses, keeping soldering irons in their protective stand when not in use, turn off and unplug equipment before removing the protective cover to clear a jam, replace a part, adjust or troubleshoot and among others as safety practice skills required for effective operation in electrical/electronic workshop. In the same vein Olateju (2012) pointed out that safety education, proper usage of tools and equipment, wearing protective devices and good maintenance of equipment and machines are necessary safety practices that prevents accident in the workshop. Essenberge (1998) also agreed that many accidents occur in the workshop because safety equipment are lacking or because the workshop and its machineries are poorly designed. On hypotheses, the study found out that there was no significant difference in the mean ratings of the responses of the college administrators and electrical/electronic teachers on the basic safety practice skills required by electrical/electronic students for effective in electrical/electronic workshop. The implication of the findings is that the technical teachers and administrators of the respondents did not significantly differ in their responses on the identified items.

Conclusions and Recommendations

Electrical/electronic students of technical colleges required relevant safety practice skills for effective operation in the workshop and industry. These students need the skills for self employment or job creation in Electrical/electronic industry. The students should be made to be safety conscious and pay adequate attention to safety rules and regulations in the workshop. The Electrical/electronic teachers should therefore ensure that the skills are imparted to the students while they are still on training at the various technical colleges. The basic safety practice skills indentified by this study should be made available to teachers and students of Electrical/electronic trade in Technical Colleges to acquitant them with necessary basic safety skills that are needed in the workshop and government through her curriculum planner and developers should ensure that relevant safety practice skills are included in technical colleges' curriculum.

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