Effect of Task Instruction Sheets for Teaching Electricity/Electronics Skills in Nigerian Colleges of Education

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Abstract
The study was conducted to determine the effect of task instruction sheets on the academic performance of Electricity/Electronics students in Colleges of Education in Nigeria. To guide the study, five hypotheses were formulated. The study employed a pretest and posttest non-equivalent control group design. Random sampling technique was employed to select sample of 320 final-year Electricity/Electronics students from four Colleges of Education in the South-South, Nigeria. Two schools each were randomly assigned to experimental and control groups and the available data showed that each Electricity/Electronic final year class of each school contains an average of 80 students. The experimental and control groups were taught the (TEE 313) Electricity/Electronics devices and measurement by their regular Electricity/Electronics lecturers. The researchers developed an instrument called the Electricity/Electronics Achievement Test (EEAT), which was subsequently validated by three experts. The instrument exhibited a reliability coefficient of 0.85. Research hypotheses were evaluated at a significance level of 0.05 using analysis of covariance (ANCOVA). The data analysis revealed that the utilization of task instruction sheets yielded superior results compared to the expository teaching method. Additionally, it was observed that high-ability students outperformed their low-ability counterparts in the field of Electricity/Electronics. These findings revealed that the incorporation of task instruction sheets into teaching can enhance students' practical skills and their ability to accomplish assigned tasks effectively. Furthermore, the study did not identify a significant interaction effect between the use of task instruction sheets and students' ability levels on their achievement in Electricity/Electronics Technology. In light of these outcomes, the researchers recommended that teacher educators encourage students to embrace the use of task instruction sheets, as they foster self-directed learning and proficiency in practical tasks during training sessions. Furthermore, it was recommended that the preparation of task instruction sheets be integrated into the curricula of Colleges of Education and Universities.

Keywords: Task Instructional Sheets, Electricity/Electronics, Skills, Nigeria, Colleges of Education

Introduction

Teachers of Electrical/Electronics technology in Technical Education Programs are encountering increasingly complex instructional challenges due to the growing diversity among students in the classrooms. These challenges are a result of several factors, including the rapid advancement of technology, rising student populations, increased demand for education for employment, and the inherent variations in individual student abilities (Obanga, 2015; Ogwo, 2006). These challenges have arisen in the context of the 6-3-3-4 education system, which aims to equip students with the skills and competencies necessary for both employability and self-employment (FME, 2008). In response to these challenges within the educational system, technical schools and Colleges of Education (Technical) have undergone curriculum restructuring to incorporate a range of practical, task-oriented courses. Many of these courses fall within the broader domains of science, technology, and technical education. The vocational technical courses offered in these institutions encompass a variety of fields, including metalwork, woodwork, electricity/electronics, building construction, automobile technology, applied mechanics, technical drawing, and others. Within each of these diverse classrooms, teachers encounter students with varying academic abilities, including gifted students, fast learners, average learners, slow learners, and those below average, all of whom hold high expectations for their educational experiences (Petterson, 2002). Traditional teaching methods have faced significant criticism and are considered inadequate because they tend to foster intellectual passivity and disinterest among learners (Ukoha & Eneogwe, 2016).

Task instruction sheet is a type of instructional technique which gives the steps and key point for performing one task. It is also th-e breakdown of performance into detailed levels of specificity. The task sheets may be used in conjunction with a job sheet to assist the learner for more difficult jobs. Thus, it can be thought of as a complete guide to the student in doing a specific job selected by the shop instructor for instructional purposes (Eze, 2007). To this end, task instruction sheet (TIS) technique is a way of instruction whereby a specific skill to be taught is broken into tasks and represented on a sheet with complete instructions to guide the students in the procedure to follow in accomplishing the task. Each task instruction sheet gives complete teaching on a specific skill (Igbo, 2010). The task instruction sheet is self-explanatory but the teacher's guidance is necessary in the process of teaching to put the student through.

In addition to its remarkable effectiveness, Udofia (1999) stated that the task instruction sheet exhibited no discernible gender bias. However, Harper (2009) and Garba (2003) noted a significant gender-based difference, favoring girls, in one of the task sheet effectiveness scales. Previous research on task instruction sheets primarily focused on subjects such as physics (Lugard, 1999), textile work (Igbo, 2010), and agricultural science (Etuk, 2009) for secondary school students. To date, no task instruction sheet has been developed specifically for students studying Electricity/Electronics Technology in Colleges of Education. Consequently, this current study seeks to investigate the impact of task instruction sheets on the academic performance of electricity/electronics students in Colleges of Education situated in the South-South, Nigeria.

Statement of the Problem

Existing research has highlighted the adoption of ineffective instructional techniques in the teaching of Vocational/Technical subjects at the post-secondary school level (Etuk, 2009; Eze, 2007). These studies have revealed that Vocational Education in Nigeria has predominantly relied on lecture-based, note-taking, and expository instructional methods, which have faced significant criticism from educators. Of particular concern is the

persistently low academic achievement in Electricity/Electronics, which has been attributed to the inadequacies of the instructional techniques employed in teaching this subject (Ayara, 2006). The conventional teaching approach used for Electricity/Electronics trades often lacks emphasis on discovery-based learning and student self-assessment. Researchers (Effiong, 1996; Lugard, 1999; Eze, 2007; Ayara, 2006) have identified this deficiency as a major obstacle to effective learning in technical subjects. Some studies (Obodo, 2010; Udofia, 1999) have attributed this situation to perceived limitations in students' academic abilities and the influence of gender when it comes to studying vocational/technical subjects like Electricity/Electronics. Harper (2006) and Etuk (2000) have also pointed to the instructional techniques employed by teachers, describing them as uninspiring and ineffective (Lugard, 1999). Consequently, there is a growing recognition of the need to introduce dynamism into vocational and technical education practices in Nigeria, with a focus on improving teaching methods and achieving educational goals. This has led to ongoing research into innovative teaching techniques for vocational and technical education, one of which is the task instruction sheet.

While task instruction sheets have been developed and successfully used in subjects such as agriculture, clothing and textiles, physics, and geography, their application in teaching Electricity/Electronics in Colleges of Education remains unexplored. As a result, their potential impact on students' academic achievement in this specific subject is unknown. This knowledge gap has prompted the need for a study to develop, validate, and implement task instruction sheets in the teaching of Electricity/Electronics trades at Colleges of Education, with the aim of assessing their effects on students' achievement. Additionally, considering that instructional techniques have been shown to have varying effects on students of different academic ability levels, it is crucial to investigate which ability group stands to benefit the most from the use of task instruction sheets in teaching Electricity/Electronics Technology in Colleges of Education.

Purpose of the Study

The primary aim of this research was to assess how the implementation of task instruction sheets impacts the academic achievement of students studying Electricity/Electronics Technology in Colleges of Education across Nigeria. More specifically, the study was structured to achieve the following objectives:

1. Develop and validate (evaluate) task instruction sheet: in Electricity/ Electronics for the teaching of final year NCE students in Colleges of Education.
2. Compare the mean achievement of students taught using task instruction sheets and students taught using the conventional method (Expository).
3. Determine the effect of gender on the mean achievement of students taught with task instruction sheets.
4. Determine the effect of ability level on the mean achievement of students taught with task instruction sheet.

Hypotheses

The following hypotheses will be tested at 0.05 level of significance: -

$H0_1$: There is no significant difference in the achievement mean scores of students taught using task instruction sheets and those taught using conventional (expository) methods in Electricity/Electronics

$H0_2$: There is no significant differences in the achievement mean scores of male and female students taught using task instructions sheets

$H0_3$: The interaction effect of teaching method and gender on students mean achievement in the Electricity/Electronics achievement test is not statistically significant

$H0_4$: There is no significant difference in student mean achievement scores in the Electricity/Electronics achievement test as a result of their ability level

$H0_5$: The interaction effect of teaching method and ability level on students mean achievement in the Electricity/Electronics achievement test is not statistically significant.

Methodology

Design of the Study

The study employed a quasi-experimental design, specifically utilizing the non-equivalent control group approach. This design was chosen due to the constraints of not being able to randomly assign subjects to different groups without interfering with other essential school activities and programs (Ali, 1996). The structure of this design is outlined in Table 1.

Grouping	Pre-testing	Research condition	Post testing
Group 1 (experimental)	o_1	Treatment (x)	o_2
Group 2 (control)	o_3	No Treatment (-)	o_4

Table 1: The structure of this design

Where**:** x = exposed to treatment

o_1 and o_3 for pretests

o_2 and o_4 for post tests

– indicates no treatment (i.e. no treatment for the control group)

Sample

The process involved the selection of four colleges out of the nine Colleges of Education in the South-South Zone. These four colleges were chosen using a stratified random sampling method based on college type, with two federal and two state-owned colleges included in the study. The selected institutions were Akwa Ibom State College of Education, Afaha Nsit; Federal College of Education (Tech), Omoku; State College of Education, Warri; and Federal College of Education (Tech), Asaba. Subsequently, one class of final-year students majoring in Electricity/Electronics was randomly chosen from each of the four selected colleges. To maintain parity, two of the four selected classes were designated as the experimental group, while the remaining two were designated as the control group. It's important to note that on average, each final-year Electricity/Electronics class in these schools comprised approximately 80 students, resulting in a total sample size of 320 students (as per the National Commission for Colleges of Education, Abuja guidelines).

Method of Data Analysis

The analysis of covariance (ANCOVA) was employed to assess the null hypotheses in this study. The null hypotheses were considered valid or retained at a significance level of 0.05 if the F-statistic's significance exceeded 0.05. Conversely, the null hypotheses were rejected if the significance of the F-statistic was less than 0.05. To conduct this analysis and compute the necessary statistical measures, the study utilized the Statistical Package for the Social Sciences (SPSS).

Analysis of Data

The data collected for this study were statistically analyzed and presented in this chapter. The presentation was arranged according to the hypotheses of the study.

Test of Hypotheses

All the stated null hypotheses were tested at the $P < 0.05$ level of significance as follows:

Ho1: There is no significant difference in the mean achievement of students taught using task instruction sheets and those taught using the conventional (expository) methods in the Electrical/Electronics Achievement Test (EEAT).

Table 2: Analysis of covariance for achievement difference between the experimental and control groups in the EEAT

Source of variation	Sum of squares	Df	Mean square	F	Significance of F
Covariates	231.19	1	231.19	44.061	.000
Pretest	231.19	1	231.19	44.061	.000
Main effects	2740.62	1	2740.6	522.32	.000
Treatment	2740.62	1	2740.62	522.32	.000
Explained	3165.44	2	1582.72	301.64	.000
Residual	1663.30	317	5.25		
Total	4828.75	319	15.14		

* $P < 0.05$

As shown on table 2, the F-value was found to be 522.32 with significance of F at 0.000. This means that at less than 0.005 the null hypothesis is not significant hence the null hypothesis is rejected with this level of confidence. Having adjusted the students' mean scores in the pre-test which was used as covariates, one would then be firmer in believing that the observed difference of the students' post-test scores was attributable to the treatment.

$H0_2$: There is no significant difference in the mean achievement scores of male and female students in the Electricity/Electronics Achievement test.

$H0_3$: The interaction effect of teaching method and gender on students mean achievement in the Electricity/Electronics Achievement test is not statistically significant

Note: $H0_2$ and $H0_3$ are combined in table 3.

Table 3: Analysis of covariance for achievement difference of male and female students and interaction effect of teaching method and gender on students mean achievement in the EEAT

Source of variation	Sum of squares	Df	Mean square	F	Significance of F
Covariates	230.25	1	230.25	43.61	.000
Pretest	230.25	1	230.25	43.61	.000
Main effects	2191.59	2	1095.80	207.54	.000
Group	2191.11	1	2191.11	414.99	.000
Gender	.108	1	.108	.021	.886
2-way interaction	.004	1	.004	.001	.977
Group x gender	.004	1	.004	.001	.977
Explained	3165.56	4	791.39	149.89	.000
Residual	1663.19	315	5.280		

Total	4828.75	319	15.14

Table 3 shows the F-values for gender and interaction of treatment (groups) and gender. The F-value for gender is 0.021 with significance of F at 0.886 which is greater than 0.05. This means that at a level of significance of 0.886, there was an observed significant difference between males and females in their mean scores. Therefore since 0.886 is higher than the acceptable error rate of 0.05, the null hypothesis that there is no significant difference in the mean achievement of male and female students in the EEAT is upheld.

The interaction of treatment (groups) and gender has F-value of 0.001 with significance level of 0.977. Since 0.977 is higher than the acceptable error rate (0.05), the null hypothesis for the interaction effect of treatment and gender is therefore upheld. This implies that there is no significant interaction effect between treatment and gender on students mean scores.

$H0_4$: There is no significant difference in students mean achievement scores in the EEAT as a result of their ability levels.

$H0_5$: The interaction effect of teaching method and ability levels on students mean achievement in the Electricity/Electronics Achievement test is not statistically significant.

Note: Ho_4 and Ho_5 are combined in Table 4.

Table 4: Analysis of covariance for achievement difference between low and high ability level students and interaction effect of teaching method and ability level on students mean scores in the EEAT

Source of variation	Sum of squares	Df	Mean square	F	Significance of F
Covariates	16.695	1	16.695	3.274	0.71
Pretest	16.695	1	16.695	3.274	.071
Main effects	2789.056	2	1394.528	273.431	.000
Group	2789.041	1	2789.041	546.858	0.00
Ability	37.849	1	37.849	7.421	0.007
2-way interaction	19.057	1	19.057	3.737	.054
Group x ability	19.057	1	19.057	3.737	.054
Explained	3222.210	4	805.552	157.948	0.000
Residual	1606.537	315	5.100		
Total	**4828.747**	**319**	**15.137**		

Table 4 shows the F-values for two effects: Ability levels and interaction of ability levels and treatment (groups). The level of significance of F for ability level stood at 0.007 which is lower than 0.05. Hence, the null hypothesis on Ability level is rejected implying that there is a significant difference in students mean achievement as a result of their ability level. The interaction of ability levels and treatment groups has F-value of 3.737 with significance level of 0.054. Since 0.054 is higher than the acceptable error rate (0.05), the null hypothesis for the interaction effect of treatment and ability level is therefore upheld or accepted. Hence, it could be rightly said that there is no significant interaction effect of teaching method and ability levels on students mean achievement in the Electrical / Electronics Achievement Test.

Discussions

The findings of this study emphasized the importance of validating task instruction sheets in terms of their content, format, and utility before utilizing them in research, a perspective that aligns with previous research by Igbo (1990), Lugard (2010), and the Cognition and Technology Group (2005). The favorable evaluation by the validators regarding the appropriateness of the content, format, and utility of the task instruction sheets underscores their acceptance as valid research instruments. This validation process ensures that the task instruction sheets effectively measure their intended constructs. This validation aligns with Uzoagulu's (1998) assertion that it is critical to scrutinize research instruments to ascertain their suitability for measuring the intended variables. The use of an incorrect or invalid instrument can lead to erroneous and misleading data, undermining the study's validity.

The analysis of the data pertaining to the validity of the Electrical/Electronics Achievement Test (EEAT) revealed that 30 out of the 40 items had difficulty indices falling within the range of 20.0 to 80.0 and discrimination indices exceeding 0.020. These findings meet Okoro's (2002) criteria, which consider test items with difficulty indices between 20.0 and 80.0 as satisfactory and those above 80.0 or below 20.0 as unsatisfactory. Additionally, test items with discrimination indices of 0.20 and above are considered satisfactory, while those below 0.20 are deemed unsatisfactory. Consequently, 75 percent of the test items in the EEAT exhibit suitable difficulty and discrimination indices.

Furthermore, the study revealed that 35 out of the 40 items in the EEAT included negative distractor indices for at least two of their three distractors. This indicates the effectiveness of these distractors in diverting or misleading dull students more than their brighter peers. Distractors with zero distractor indices were modified since they equally deceived both bright and dull students. Distractors with positive distractor indices were also adjusted as they confused bright students to a greater extent than dull students. After these necessary modifications, the test items were deemed valid, affirming that the entire test accurately assesses students' achievement levels in Electrical/Electronics technology. These findings regarding the development, validation, and use of criterion-referenced tests for evaluating students' cognitive achievement are consistent with the research of Uzoagulu (1995) and Ogwo (1996).

To establish the reliability of the EEAT, the test-retest method was employed, involving the administration of the test twice to the same group of subjects within a specific timeframe. Subsequently, the Pearson Product Moment Correlation formula was applied to compute the coefficient of reliability for the test, yielding a coefficient of 0.850. This obtained reliability coefficient of 0.850 is considered adequate, as, according to Hambleton (2016), it is only negative r-values in criterion-referenced tests that indicate inconsistency. Furthermore, Ogwo (1996) emphasizes that there is no rigid rule specifying a minimum size for reliability coefficients; instead, the usefulness of a test should be determined based on its specific context and objectives.

The study revealed that students who were instructed in Electrical/Electronics technology using task instruction sheets achieved higher post-test mean scores on the Electrical/Electronics Achievement Test (EEAT) compared to their counterparts taught through the expository method. The analysis of covariance, as presented in Table 9, confirmed that the difference in scores between these two groups was statistically significant. This significant disparity can be attributed to the instructional approach, indicating that the utilization of task instruction sheets in teaching Electrical/Electronics technology to final-year NCE students in Colleges of Education has a positive impact on students' academic

achievement. The superiority of the task instruction sheet technique over the traditional lecture-based (expository) method can be attributed to the fact that the former encourages active engagement of students in the teaching-learning process. In contrast, the expository method often reduces learners to passive recipients of information presented by the teacher.

These study findings align with previous research conducted by Ajala (2008), Harper (2009), Igbo (2010), and Ezeh (2007), all of whom reported the effectiveness of task instruction sheets in enhancing student performance across various subjects, including agriculture, mathematics, home economics, geography, and chemistry. However, it's worth noting that the results of this study contradict those of Obodo (2010) and Ozofor (2003), who found differences in student performance between those taught using task instruction sheets and those taught using expository methods in mathematics. This disparity between the present study and the research conducted by Obodo (2010) and Ozofor (2003) may be attributed to challenges in addressing extraneous variables, such as irregular student participation, inter-group contamination, and the use of teachers with varying qualifications and years of teaching experience for the two groups. These factors may have posed threats to the internal validity of those studies, potentially impacting their outcomes.

The results of the data analysis concerning the impact of gender on student performance indicated that male students achieved slightly higher mean post-test scores in the Electrical/Electronics Achievement Test (EEAT) compared to female students. However, this difference was not statistically significant, as confirmed by the Analysis of Covariance. Consequently, it can be inferred that the use of task instruction sheets is equally beneficial for both male and female students. The marginal advantage observed in the post-test mean scores of male students, while not statistically significant, may be explained by the fact that Electrical/Electronics technology, being a technical course, tends to attract more male students than females. Additionally, certain tasks within the course may be physically demanding, requiring significant muscle power and physical strength, attributes that are typically associated with males. This might make such tasks less appealing and more strenuous for female students, possibly leading them to avoid such activities.

The findings of this study, which indicate no significant difference in student performance based on gender, are in concurrence with the research conducted by Nworgu (2005), Gyuse and Akamseinde (2006), and Balogun (2005), who did not find any noteworthy disparities between the academic achievements of male and female students in integrated science. Additionally, these results align with those of Ogwo (1996) and Udoetuk (2009), who found no significant variation in cognitive achievement between male and female students in metalwork and introductory technology, respectively. However, it's important to note that these findings challenge the conclusions drawn by Maccoby and Nagy (2014) in Lugard (1999) and Olaitan and Ogwo (2006), who found that females outperformed males. These results also diverge from the findings of Lugard (1999), which suggested that males exhibited greater aptitude in mathematics, while females excelled in language and verbal skills. Similarly, the results contradict those of Igboko (2004), who identified a significant difference in the mean scores of male and female students taught using the constructivist method, with males performing better. It's important to acknowledge that further research is necessary to draw definitive conclusions regarding gender differences in the utilization of task instruction sheets.

The analysis of data pertaining to research question 4, which aimed to ascertain whether there was a difference in students' mean scores in the Electrical/Electronics Achievement Test (EEAT) based on their ability levels, revealed that high-ability students achieved a mean post-test score of 36.21, while low-ability students attained a mean score of

34.91. Although the mean score of high-ability students was slightly superior to that of their low-ability counterparts, this difference was statistically significant, as confirmed by the Analysis of Covariance. Consequently, there exists a noteworthy difference in students' mean scores in the EEAT attributable to their ability levels, indicating that the task instruction sheet technique is advantageous for all students, regardless of their ability level.

The slight advantage observed among high-ability students, while statistically significant, may be attributed to the classification of subjects into low and high ability groups based on their pre-test scores. It is natural for high-ability students, who possess greater potential for higher scores, to strive to maintain their superior position in the post-test. Furthermore, high-ability students may require less time and effort to decode factual information stored in their memory, enabling them to complete tasks or tests more efficiently than their low-ability counterparts. However, the significance of this difference, despite being relatively small, underscores that the task instruction sheet technique is a more effective instructional approach for both bright and less academically inclined students. The finding of this study, which indicates that students' ability levels do not significantly impact their achievement in the Electrical/Electronics achievement test, aligns with the results of previous research conducted by Alonge and Agusiobo (1983), Bornide (2006), Ezeh (2007), Njoku (1997), and Eze (2001). These studies also suggested that factors other than ability level exerted significant influence on students' achievement in science subjects. However, it's worth noting that these findings differ from the results of prior research by Balogun (2015) and Harper (2009), who found that utilizing prior knowledge of behavioral objectives and study questions improved the performance of all students in metalwork, regardless of their ability levels.

The study's findings revealed that the interaction effect between teaching method and ability levels on students' mean achievement in the Electrical/Electronics Achievement Test (EEAT) did not reach statistical significance. This implies that students' ability levels do not pose a barrier to their academic success in Electrical/Electronics technology when utilizing the task instruction sheet technique. In simpler terms, whether a student possesses high or low academic abilities, they can equally benefit from the task instruction sheet technique, regardless of their cognitive aptitude. The result of this study, indicating the absence of an interaction effect between teaching method and ability level on students' mean scores in the EEAT, is in line with the findings of Eze (2001), who similarly discovered that there was no significant interactive effect of the target task instruction sheet technique as an instructional approach in enhancing students' achievement, regardless of their academic ability levels.

The outcome of the data analysis concerning the interaction between teaching method and gender on students' achievement confirmed the retention of the null hypothesis. This suggests that there was no significant interactive effect between teaching method and gender on students' mean scores. In essence, a student's gender does not act as an impediment to their academic achievement when the task instruction sheet technique is employed. Therefore, both male and female students derive equal benefits from instructional methods that incorporate the task instruction sheet technique. The finding of this study, which indicates the absence of an interaction effect between teaching method and gender on students' mean achievement in the Electrical/Electronics Achievement Test (EEAT), aligns with the results obtained by Eze (2001), who arrived at a similar conclusion regarding the use of the target task instruction sheet technique.

Recommendations

Based on the findings of the study the following recommendations were made:

1. Workshops, seminars, and conferences should be organized for serving Electricity/Electronics technology lecturers in colleges of education. These professional development opportunities will enhance their knowledge and skills in developing and effectively utilizing task instruction sheets, which have been demonstrated in this study to significantly improve students' academic performance.
2. The preparation of task instruction sheets and their utilization should be integrated into the curriculum of teacher preparation programs in both colleges of education and universities. This inclusion will ensure that future educators are well-equipped with the necessary tools and techniques, fostering effective teaching and learning.
3. Encourage Task Instruction Sheets: Teacher educators responsible for training NCE teachers in technical subjects should actively encourage their students to embrace and use task instruction sheets. This approach promotes self-directed learning and the efficient execution of practical tasks during training sessions.
4. Admission policies should not discriminate based on gender or ability level, as this study has shown that these factors do not significantly impact students' academic achievement. Encouraging inclusivity in admissions ensures equal opportunities for all aspiring students.
5. Encourage active participation by students in the classroom and promote self-directed learning through a step-by-step guided approach, especially in technical education programs. Active engagement enhances comprehension and retention of subject matter.
6. Government ministries and relevant agencies responsible for providing facilities and equipment in colleges of education should ensure the timely provision of necessary tools, equipment, machines, and materials to workshops. Adequate resources are essential for the effective implementation of the task instruction sheet technique.
7. Task instruction sheets should be developed for various technical subjects in the form of comprehensive learning packages or training kits. This approach encourages discovery-based learning and self-directed learning, facilitating a more engaging and effective educational experience for students.

Conclusions

The better performance of students taught using task instruction sheets compared to those taught through the traditional lecture or expository method underscores the potential for enhancing students' academic achievement through the implementation of task instruction sheets. This improvement in performance can be attributed to the positive correlation between academic achievement and students' active participation in the learning process, their hands-on interaction with tangible objects, tools, and materials, and their engagement in practical tasks facilitated by a structured step-by-step guided learning approach. Teachers should, therefore, be encouraged to deconstruct their lessons into multiple tasks and sub-tasks, offering clear and comprehensive instructions for the execution of each task. Additionally, students should be actively involved in the learning process by actively performing these tasks themselves. Embracing this approach not only promotes a deeper understanding of the subject matter but also nurtures essential practical skills. The adoption of more effective instructional techniques by Electricity/Electronics lecturers in colleges of education, as evidenced by this study, has the potential to produce better-prepared NCE teachers. These educators will possess enhanced intellectual competencies, better equipped to impart knowledge in secondary schools. Furthermore, they will be equipped with practical

skills conducive to self-employment, potentially contributing to the reduction of high levels of unemployment and poverty within the country.

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