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Availability and Utilization of Unprinted Education Resources for Teacher Job Performance in Rural and Urban Technical Colleges in Anambra State, Nigeria

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CONTENT

ABSTRACT

Background: This study explores the availability and utilization of unprinted (non-textual) educational resources and their impact on teacher job performance in rural and urban technical colleges in Anambra State, Nigeria. Non-printed resources are vital for enhancing teaching effectiveness, particularly in technical education. However, the availability and use of these resources remain challenging, especially in rural schools. **Method:** A descriptive survey design was employed, with data collected from 343 randomly selected teachers across 15 technical colleges. A structured observational scale assessed the availability (≥50%) and utilization (4-point scale) of non-printed resources. Reliability was tested via a pilot study, and data were analyzed using descriptive and inferential statistics. **Result:** The study found that urban colleges had higher resource availability (42%) than rural ones (29.6%), but both were below NCCE standards. Utilization of these resources was low in both areas, with mean scores of 1.54 for rural and 2.07 for urban schools. **Conclusion:** The study concludes that inadequate resource availability and utilization, particularly in rural areas, hinder teaching effectiveness, emphasizing the need for better resource distribution. **Contribution:** This research highlights the resource disparities between rural and urban technical colleges, offering insights that can inform policies to improve resource allocation and enhance educational outcomes.

KEYWORDS

Availability; Utilization; Unprinted Education Resources; Teacher Job Performance; Rural and Urban

1. INTRODUCTION

Education as an investment constitutes the largest enterprise in Nigeria. It is the principal instrument for academic progress, social mobilization, political survival and effective national development of any country. Investment in education is necessary for promoting economic growth and national development (Pandey & Tiwari, 2014). Educational institutions, including schools, are established and managed essentially to achieve specific stated goals and objectives (Ferrer-Estévez & Chalmeta, 2021). There is no way the goal and objectives of an educational insti-

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tution can be achieved without putting in place specific mechanisms to ensure the success of such institutions. In the school system, part of the integral pre-requisites to be put in place towards the actualization of the educational goal and objectives requires the adequate provision of resources, maximum utilization and appropriate management of education resources to avoid wastages and improve the quality of the teaching-learning process in the academic environment.

The quality of every society is predicated mainly on the quality of its educational system. Given the apparent constraints on educational resources, their efficient utilization for maximum results needs not be overemphasized. Resource plays a vital role in the teaching-learning process (González-González & Jiménez-Zarco, 2015). In education, resource means any device, object or machine used by a teacher to clarify or enliven a subject. It can also be viewed as material and equipment used in the teaching-learning process. There are so many aspects of the word "resource". In some places, it is a source of supply and support or aid that can be readily drawn upon. This word also refers to a capability or determination to persevere. In classrooms, resources are physical demonstration aids, learners' contextual understandings, teacher subject expertise, and structured organization of materials, ideas and activities.

Teachers use Education resources to assist learners in meeting the expectations for learning defined by the curriculum. We can also define these resources as materials a teacher uses to supplement classroom instruction or stimulate learners' interest. Teaching learning resources aid to retain more concepts permanently. Education resources are tools that classroom teachers use to help their learners learn quickly and thoroughly. A teaching aid can be as simple as a chalkboard or as complex as a computer program. Xie (2018) states education resources are material the teacher uses to facilitate the learning, understanding and acquisition of knowledge, concepts, principles or skills by his learners. Baraibar Diez et al. (2024) stated that education resources assist in and support learner learning. It helps learners understand and enjoy the lesson the teacher teaches them. It helps learners understand the object of the lesson the teacher is conveying.

Additionally, education resources help the teacher to test whether the learners have improved their understanding of the subject. Hanaysha (2023) emphasized the need for these resources in the classroom. These education resources are significant for effective learning because they stimulate learning and foster development at desirable changes in a learner's behaviour. The basic purpose of teaching is to enable learning. The most effective teaching is that which results in the most effective learning.

Teachers use Education resources to explain or evaluate content to students so that they can fully comprehend such content (National Teachers Institute NTI, 2007). Education resources are teaching facilities which facilitate teaching and learning. Whether they are named instructional media, curriculum resources, teaching aids and the like, education resources represent message carriers' teachers use to attain instructional objectives in teaching and learning situations. Education resources are meant for teaching to elicit desired change in learners. In the same vein, teachers use educational resources to supplement their teachings. Education resources help to facilitate effective teaching and learning for better results, which invariably improve teachers' job performance (Sulaiman, 2019; Alzoraiki et al., 2018; Ali & Anwar, 2021). Education resources are the written and published textbooks and related core resources (including those specific resources the teachers shall use for classroom instruction) (Ndomondo, 2024). Education resources facilitate transmitting, understanding and appreciating concepts, skills, values and attitudes. The reason is that using such resources tasks the various sense organs of the students and encourages their active participation in the instructional process. Also, the more senses contribute to the lesson through educational resources, the more reality is stimulated.

According to Ahmed et al. (2020) stated that education resources include all the resources teachers could use during the lesson to aid and facilitate learning and retention. In order to meet individual differences in the classroom, the teachers must employ various aids and appeal to different senses. Psychologists say that using educational resources in teaching is the most important aspect because students permanently maintain the position of what they hear; they forget what they see and remember, but what they do and understand. Education resources are the devices which facilitate learning. It is a genetic term referring to communication, experience, equipment and resources used to communicate instruction in which more than one sense is used in learning. Xu et al. (2022) stated that education resources are all the tools teachers can use to help and encourage students' learning activities. Such resources unite man and resources systematically to solve educational problems effectively. Education resources are very vital in the teaching-learning process. When teaching with educational resources, much learning takes place, and there is a better chance of success in achieving the objectives of instructional delivery.

Education resources are in different forms. The characterized education resources are as follows: appeal to sense, attract and hold attention simplicity, flexibility, colourful, visible, timeliness, acceptability and relevancy.

Sulaiman (2019) classified education resources into three forms: audio, visual, and audio-visual aids. The audio deals with sound only. The visual deals with sight, while an audio-visual is a combination of audio and visual, i.e., sound and vision. He stated that audio education resources include radio, record players, cassettes, gramophone, etc., which aid teaching through the sense of hearing. For teachers to be effective and efficient in their teaching job, printed education resources consisting of maps, film strips, specimens, still pictures, charts, boards, and posters are paramount. These printed education resources would facilitate and improve students' participation and teachers' job performance in the classrooms. This category appeals to the students through the sense of sight and hearing. Sulaiman (2019) explained further that teachers use audio-visual resources, including both audio and visual resources. They are, therefore, things like television, films and projectors. The use of these aids learning greatly. Another grouping of education resources included human resources and non-human resources.

Human resources consist of individuals who provide various services in teaching and learning situations. They include professionals and non-professionals. Non-human resources, including physical facilities and instructional materials, are tools and devices for effective teaching and learning (Ofoegbu, 2018). Printed education resources are also referred to as reading resources. Individuals go through them to gather information about people, places, processes and events. They can be used in general class discussions to raise issues for in-depth class analysis. Therefore, teachers must expose students to printed education resources such as encyclopedias, newspapers, magazines, pamphlets, poems, and supplementary readers. Charts are usual educational resources that carry instructional messages on a subject matter. Teachers can easily prepare them through locally available resources and sample tools. They could be diagrammatic representations that combine pictorial, graphic, and written resources to give a clear and vivid summary of a vital process, concept, or set of relationships. There are also cheap, commercially produced charts that can be procured and used to meet the needs of teachers and students. Charts could be flow charts, organizational charts, timelines or flip charts. Electrically operated education resources are films and slides containing motion pictures with episodes about people, places and events. They present information in sequence and create lasting impressions and experiences in social science classes. They are modern resources that allow students to learn through more than one of their sense organs.

Non-printed resources are those durable materials that include real objects, hardware, equipment and high-technology/digital materials that provide educational information and act as excellent tools for instructional delivery. These resources may equally appeal to all the five senses of sight, hearing, touching, tasting and smelling. Apart from the real objects, many non-printed machineries operate with electricity or batteries (Nzeneri, 2010). In addition, the number of material resources found within the school environment determines teachers' attitude or behaviour, level of work, competency, commitment, dedication, effort, self-efficacy and productivity, which are important components of teacher job performance. The view that extent of availability and utilization of material resources could improve the quality of learning in and out of the school through teacher job performance has been reinforced by Mukwa, Wendt and Hills, cited in Andambi & Kariuki (2013). These scholars observe that if material resources are adequately and extensively available, selected and carefully utilized, learning retention is longer; learning becomes more interesting, compelling and meaningful. This means that for any subject taught in technical colleges, relevant learning resources (materials) are necessary for teaching in order to achieve the instructional objectives as indicated by the Federal Ministry of Education (2000).

One of the significant problems teachers face is the utilization of education resources. According to Sulaiman (2019), educational resources facilitate learning for better results. It is not just the use of tools of technology alone but a systematic, integrated organization of machines (hard wares and soft wares) and teachers, etc., to proffer solutions to problems in the teaching and learning process. The teacher must be thoroughly acquainted with the teaching resources and services available. The components of education resources available to teachers and students are in large numbers and also vary according to their functions and qualities, such as pictures, graphics, maps and radio recordings; the equipment used to get some of these utilized can be regarded as visual, audio-visual aids, or instruction aids. Teachers' job performance is how teachers deliberately carry out their official school duties wholeheartedly. According to Fagbulu (2016), the tasks being performed by teachers towards job performance include teaching students effective performance with adequate use of instructional materials, handling files and keeping various records such as attendance, registering, scheme of work, carrying out tasks delegated to him or her by the college head, keeping records of discipline and punishment book, striving to help solve the problem of children, administrative control of classrooms, ensuring good sanitation of the college compound, conducting and invigilating of examinations, ensuring students do their assignments and marking their scripts (Adepoju, 2017)

Teachers' job performance and attitudes are fundamental to effective teaching (Eggen & Kauchak, 2015). A teacher must be interesting; that is, the teacher must work his students into such a state of interest that every object

of attention is banished from their minds. The teacher should also satisfy the students' curiosity to know the next steps in connection with the subject. They identified several teachers' attitudes that will facilitate a caring and supportive classroom environment. They are enthusiasm, caring, firmness, democratic practices to promote students' responsibility, effective use of lesson time, have established efficient routines, interact freely with students and provide motivation for them to promote learning in and outside the classroom. No one can teach something to someone without doing it in some particular way, and that way of teaching has significant effects on the entire teaching and learning situation. Teaching is a process of continuous personal development and professional self-discovery.

Education resources that the learners may use to facilitate acquiring and evaluating knowledge and skills become imperative. Ekpo (2017) and Ema & Ajayi (2018) declared that education resources must be relevant for the realization of the intentions of the curriculum. However, education resources cannot address all the education problems. However, they can go a long way in solving them as they are additional apparatus that can influence the reality of teaching and learning activities. Education resources have undergone several evolutionary stages ranging from simple aids, instructional technology, and media to communication and educational technology. Thus, education resources are not just objects or equipment used during the teaching-learning process; they are those objects improvised by the teacher to make conceptual abstraction more concrete and practical to the learners. Ikerionwu & Edgar (2019). referred to education resources as objects or devices that help the teacher make learning meaningful.

Education resources promote the efficiency of education by improving the quality of teaching and learning and teachers' job performance, which supports and reinforces effective teaching. In Nigeria, it was observed that a lack of educational resources constitutes part of the problem of the effective dissemination of knowledge to learners in most schools. Some teachers also deliberately neglect using education resources during classroom interaction and instructional delivery. The unavailability of education resources might be why teachers cannot utilize the appropriate education resources needed to teach. Using educational resources in the classroom can help the teachers explain new concepts clearly, resulting in better students understanding of the concepts being taught. Baylor & Ritchie (2016) stated that using educational resources in the classroom impacts students' content acquisition and class performance compared with the traditional methods of teaching that focus primarily on imparting skills and knowledge. Every student in the classroom needs to become a creative problem-solver, able to analyze a wealth of information and draw valid conclusions. Learning of this kind is more likely to take root when various material resources are used during instructions. The growth of technical colleges in the State has revealed that the majority of teachers' job performances and work still exhibit signs of flaws. Students' performance in both internal and external exams appears to suffer due to this. Against this background, this study examined the availability and utilization of unprinted education resources for teacher job performance in rural and urban technical colleges in Anambra State.

This study poses two research questions: first, what non-textual educational resources are available for teacher performance in vocational schools in rural and urban areas in Anambra State? Second, to what extent are the available non-textual resources utilized for teacher performance in both regions? Two hypotheses are tested: H01, there is no significant difference in the availability of non-textual resources for teacher performance between vocational schools in rural and urban areas; and H02, there is no significant difference in teachers' average assessment of the level of utilization of available non-textual resources for teacher performance in both regions.

This study examines the availability and utilization of non-text educational resources and their impact on teacher performance in vocational schools in rural and urban areas in Anambra State, Nigeria. The main objective of this study is to evaluate the extent to which non-text educational resources are available and utilized in both regions, as well as to understand their impact on teacher performance. This study offers new insights into disparities in access to educational resources, particularly in rural areas. It highlights the need for a more equitable distribution of resources to enhance teaching effectiveness.

2. METHOD

2.1 Research Design

The study employed a descriptive survey research design and was conducted in Anambra State, Nigeria. It aimed to investigate the availability and utilization of non-printed educational resources and their impact on teacher job performance in rural and urban technical colleges.

2.2 Research Object

The population consisted of 647 teachers across fifteen (15) technical colleges in Anambra State, nine in rural and six in urban areas, totalling 329 rural and 318 urban teachers. Using a random sampling technique, a sample of 343 teachers was selected, comprising 108 rural and 235 urban teachers.

2.3 Data Collection

Data were collected using a structured questionnaire designed as an observational rating scale by the researcher. The instrument had two sections: Section A gathered demographic data, while Section B comprised 34 items related to the availability and utilization of non-printed educational resources. The instrument was validated by three experts from Nwafor Orizu College of Education, Nsugbe, and trial-tested on 20 teachers in Enugu State. Reliability was confirmed using the Cronbach Alpha coefficient.

2.4 Data Analysis

Descriptive statistics were used to answer research questions, including percentage, mean, and standard deviation. The interpretation of responses was based on real limit numbers, and the mean values were categorized into four extent levels. Inferential statistics, including the Chi-Square and z-test, were applied to test the research hypotheses. This rigorous analysis helped determine the differential availability and use of non-printed educational resources across rural and urban technical colleges and their influence on teachers' job performance.

3. RESULT AND DISCUSSION

3.1 Result

Research Question One: What are the non-printed education resources available for teacher job performance in rural and urban technical colleges in Anambra state?

Table 1. Percentage scores on the non-printed education resources available for teacher job performance in rural and urban technical colleges in Anambra state.

S/N	Items	Rural				Urban			
		No. Available		No. Unavailable		No. Available		No. Unavailable	
		F	%	F	%	F	%	F	%
1	Laboratory tools and kits for teaching physics Practical	15	13.88	93	86.11	145	61.7	90	38.3
2	Laboratory tools and kits for teaching chemistry Practical	41	24.80	67	75.20	170	72.3	65	27.7
3	Laboratory tools and kits for teaching biology Practical	35	32.40	73	67.59	201	85.5	34	14.5
4	Workshop equipment for teaching home economics practical	16	14.8	92	85.18	63	26.8	172	73.2
5	Workshop technical tools and kits provided forteaching basic technology practical	50	46.2	68	53.8	85	36.2	150	63.8
6	Computers for practical and research	9	8.33	99	91.66	200	85.1	35	14.9
7	Television set for teaching in different subjects	0	0	108	100	54	23	181	77
8	Radio set with tape recorder for teaching in different subject	41	37.96	67	62	25	10.6	210	89.4
9	Public address system in the classroom for presentations	14	12.96	94	87.0	51	21.7	184	78.3
10	Chalkboard/whiteboard installed on the wall in all the classrooms	22	20.37	86	79.62	77	32.8	158	67.2
11	Flannel boards installed on the side wall of each classroom	39	36.11	69	63.8	75	31.9	160	68.01

S/N	Items	Rural				Urban			
		No. Available		No. Unavailable		No. Available		No. Unavailable	
12	Internet facilities installed in the school forbrowsing and surfing of information from different websites	18	16.6	90	83	88	37.4	147	62.6
13	Projectors for teaching in different subjects	34	31.48	74	68.5	100	42.50	135	57.40
14	Models/dioramas for display in teaching various subjects in the classrooms	91	84.25	17	15.7	186	79.1	49	20.9
15	Functional printers and scanners to print documents in the administrative office	85	78.7	23	21.3	56	23.8	179	76.2
16	Functional photocopiers for producing and duplicating materials in large quantities	6	5.55	102	94.4	65	27.7	170	72.3
17	Athletic facilities and sports equipment providedfor physical and health education	42	38.8	66	61.11	37	15.7	198	84.3
	Cluster mean	29.60	70.40	42.00	58.00				

Analysis of the result in Table 1, as shown from the percentage score on the available non-printed education resources for teacher job performance in the rural technical colleges, indicated that 29.60% of the non-printed education resources were available in the rural technical colleges for teacher job performance. In comparison, 70.40% of the non-printed resources were unavailable for teacher job performance. This result showed that items 14 and 15, considered under available non-printed resources in the rural areas, were rated above 50 per cent, showing that Models/dioramas and functional printers and scanners were sufficient and available for teacher job performance. Items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 16 and 17, considered unavailable resources, were rated above 50 per cent, showing that these non-printed resources were unavailable in the rural technical colleges. The result further showed that laboratory tools and kits for physics, chemistry and biology practicals, workshop equipment, technical tools, computers, television sets, radio sets, public address systems, flannel boards, internet facilities, projectors, functional photocopiers and athletic facilities and sports equipment were not available for teacher job performance in the rural technical colleges.

In the urban technical colleges, an analysis of the result indicated that 42% of the non-printed resources were available for teacher job performance in the technical colleges. In comparison, 58% of the non-printed resources for teacher job performance were unavailable in urban secondary schools. This result showed that items 1, 2, 3, 6 and 14, considered under available non-printed resources, were rated above 50 per cent, showing that laboratory tools and kits for physics, chemistry and biology practical, computers and models/dioramas were sufficient and available for teacher job performance. Items 4, 5, 7, 8, 9, 10, 11, 12, 13, 15, 16, and 17, considered under unavailable non-printed resources were rated above 50 per cent, showing that these non-printed resources were insufficient and unavailable in the urban secondary schools. The result further showed that workshop equipment, technical tools and kits, television sets, radio sets, public address systems, chalkboards/whiteboards, flannel boards, internet facilities, projectors, functional printers and scanners, functional photocopiers, athletic facilities, and sports equipment were considered unavailable. The analysis of the results in Table 1 showed that more non-printed education resources were available in the technical colleges in the urban areas than those in the rural areas in Anambra state. However, the result further indicated that rural and urban technical colleges did not meet the NCE minimum requirements for non-printed education resources provision. The availability of non-printed education resources for teacher job performance was low in the rural and urban technical colleges in Anambra state.

Research Question Two: To what extent are non-printed education resources available for teacher job performance in rural and urban technical colleges in Anambra state?

Table 2. Mean scores and standard deviation of the respondent's ratings on the extent of available non-printed resources are utilized for teacher job performance in rural and urban technical colleges in Anambra state

S/N	Items	Rural		Decision	Urban		Decision
		X	SD		X	SD	
1	Laboratory tools and kits are utilized by teachers in teaching physics practical	1.98	1.05	LE	2.38	1.12	LE

S/N	Items	Rural		Decision	Urban		Decision
		X	SD		X	SD	
2	Laboratory tools and kits are utilized by teachers in teaching chemistry practical	1.92	0.98	LE	2.25	1.09	LE
3	Laboratory tools and kits are utilized by teachers in teaching biology practical	1.79	0.94	LE	2.29	1.03	LE
4	Workshop equipment are utilized byteachers in teaching home economics practical	1.78	0.94	LE	2.21	1.06	LE
5	Workshop technical tools and kits are utilized by teachers in teaching basictechnology practical	1.88	1.03	LE	2.07	1.03	LE
6	Computers are used by teachers for teaching practical and sustain studentsparticipation in the classroom	1.40	0.77	LE	2.22	1.06	LE
7	Television set are used by teachers for teaching in different subjects to engagestudents in discussion	1.29	0.61	LE	1.73	0.81	LE
8	Teachers utilize the radio set with tape recorder to support their teaching indifferent subject areas	1.58	0.80	LE	1.86	1.01	LE
9	Public address system are used for presentation especially for large class inthe classroom	1.33	0.60	LE	1.91	0.90	LE
10	Chalkboard/whiteboard installed on thewalls in all the classrooms are utilized by teachers to encourage copying of note forstudents learning and to aid teaching	2.28	1.00	LE	3.16	0.82	HE
11	Flannel boards installed on the wall side of each classroom are used by teachers to display sketches, drawings and maps	1.35	0.67	LE	1.92	0.88	LE
12	Internet facilities installed in the school are used by teachers as search engines for browsing and surfing of information from different websites to encourage students' learning	1.10	0.43	LE	1.57	0.81	LE
13	Projectors are utilized in the classroom to aid different teaching methodologies in different subject areas	1.35	0.67	LE	1.88	1.02	LE
14	Models/dioramas are displayed and utilized by teachers for every presentation in the classroom in order to expose reality of teaching in various subject areas	1.10	0.43	LE	1.87	0.91	LE
15	Functional printers and scanners used by teachers to print documents to complete their teaching task	1.32	0.70	LE	1.99	1.04	LE
16	Functional photocopiers are utilized by teachers for producing and duplicating materials in large quantities that will support their teaching	1.29	0.64	LE	2.17	1.02	LE
17	Athletic facilities and sports equipment are utilized by teachers to aid practical exercises in physicaland health education	1.45	0.75	LE	1.92	0.97	LE
	Cluster Mean	1.54	0.77	LE	2.07	0.97	LE

Analysis of the result presented in Table 2, as shown from the mean ratings of the respondents (teachers) in the rural technical colleges, indicated that none of the items were rated above the acceptable mean score of 2.50, which agrees with the statements. All other items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, and 17 were rated below 2.50 in disagreement with the statements. The results revealed that laboratory tools and kits available for teaching physics, chemistry and biology practicals, workshop equipment available for teaching home economics practicals and workshop technical tools and kits provided for teaching basic technology practicals were all utilized to a low extent. Computers available for practicals and television sets for teaching different subjects were utilized to a low

extent. Radio sets with tape recorders available for teaching different subjects were utilized to a low extent. Public address systems available in the classroom for presentations were utilized to a low extent. Chalkboard/whiteboard was installed on the wall in all the classrooms, and Flannel boards were installed on the side wall of each classroom, which were utilized to a low extent. Other non-printed resources such as Internet facilities installed in the school for browsing and surfing information from different websites, projectors available for teaching in different subjects, models/dioramas available for display in teaching various subjects in the classrooms, functional printers and scanners available to print documents in the administrative office, functional photocopiers available for producing and duplicating materials in large quantities, athletic facilities and sports equipment are utilized by teachers to aid practical exercises in physical and health education, were all utilized to a low extent by teachers in the rural technical colleges. The mean means of rural technical colleges of 1.54 showed that respondents reacted negatively to most items. The standard deviation of the rural technical colleges ranged from 0.43 to 1.05, showing a huge deviation in the scores.

Analysis of the result is still under Table 2, as shown from the mean ratings of the respondents (teachers) in the urban technical colleges, which indicated that only item 10, rated above 2.50, agreed with the statements. The result revealed that only the chalkboard/whiteboard installed on the wall in all the classrooms was utilized by teachers to a great extent in the urban technical colleges. All other items 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, and 17 were rated below 2.50 in disagreement with the statements. This result shared the same thing as those of the rural colleges, indicating that laboratory tools and kits, workshop equipment, technical tools and kits, computers, television sets, radio sets, public address systems, flannel boards, Internet facilities, projectors, models/dioramas, functional printers and scanners, functional photocopiers, athletic facilities and sports equipment were all utilized by teachers to a low extent in the urban technical colleges. The mean means of urban technical colleges of 2.07 showed that respondents reacted negatively to most items. The standard deviation of the rural technical colleges ranged from 0.81 to 1.12, showing a huge deviation in the scores. Both results from teachers in rural and urban technical colleges revealed that the available non-printed education resources for teacher job performance in technical colleges were utilized to a low extent in Anambra state.

$H0_1$: There is no significant difference in the availability of non-printed education resources for teacher job performance in rural and urban technical colleges in Anambra state

Table 3: Chi-Square test of no significant difference in the availability of non-printed education resources for teacher job performance between rural and urban technical colleges in Anambra state

	Value	Df	P
Pearson Chi-Square	9.282E2	1	.000
Continuity Correction	927.640	1	.000
Likelihood Ratio	938.492	1	.000
Fisher's Exact Test			
Linear-by-Linear Association	928.141	1	.000
N of Valid Cases	74155		

a. 0 cells (0%) have expected count less than 5. The minimum expected count is 396.59.

b. Computed only for a 2 x2 table

The result in Table 3 indicates that the calculated Chi-square value is 9.282 and a p-value of .000 with a degree of freedom (df) 1 at a 5% (.05) significance level. Since the p-value .000 is less than the alpha level ($P \leq .05$), the tested null hypothesis, which states "there is no significant difference in the availability of non-printed education resources for teacher job performance between rural and urban technical colleges in Anambra state ", is rejected. In contrast, the alternative hypothesis of significant difference is accepted. Thus, there is a significant difference in the available educational resources and the availability of non-printed education resources for teacher job performance in rural and urban technical colleges in Anambra state. This shows that teacher job performance in rural and urban technical colleges in Anambra state significantly depends on the availability of non-printed education resources.

H04: There is no significant difference in the mean ratings of teachers on the extent of utilization of the available non-printed education resources for teacher job performance in rural and urban technical colleges in Anambra state.

Table 4. Z-test comparison of no significant difference in the mean ratings of teachers on the extent of utilization of the available non-printed education resources for teacher job performance in rural and urban technical colleges in Anambra state

Group	Sample Size	Mean	Standard Deviation	z-cal	Degree of Freedom	Std Error	p-value	Decision
Rural	108	26.52	12.39	-9.782	341	.89686	.000	Significant Difference
Urban	235	35.29	15.78					

The result in Table 4 indicates that the calculated z-test value is -9.782 and a p-value of .000 with degree of freedom (df) 341 at 5% (0.05) level of significance. Since the p-value .000 is less than the alpha level ($P < 0.05$), the tested null hypothesis is therefore, rejected. Hence, there is a significant difference in the mean ratings of teachers on the extent of utilization of available non-printed education resources for teacher job performance in rural and urban technical colleges in Anambra state.

3.2. Discussion

The findings revealed that non-printed education resources for teacher job performance were low in Anambra state's rural and urban technical colleges. The finding indicated that non-printed education resources were less available in the rural technical colleges for teacher job performance. In contrast, the unavailable non-printed resources were high for teacher job performance. The finding showed that in the rural technical colleges, only non-printed education resources such as Models/dioramas and functional printers and scanners were sufficient and therefore considered available for teacher job performance. Other non-printed resources were insufficient and, therefore, available in the rural technical colleges. The findings further showed that laboratory tools and kits for physics, chemistry and biology practicals, workshop equipment, technical tools, computers, television sets, radio sets, public address systems, flannel boards, internet facilities, projectors, functional photocopiers and athletic facilities and sports equipment were largely insufficient and therefore not available for teacher job performance in the rural technical colleges. This situation could negatively impact teachers' job performance, causing difficulties in realizing the goals and objectives of education.

In the urban technical colleges, the findings indicated that only a few of the non-printed education resources were available in the technical colleges for teacher job performance. In contrast, the non-printed education resources for teacher job performance were unavailable in urban technical colleges. This finding showed that only laboratory tools and kits for physics, chemistry, and biology practicals, as well as computers and models/dioramas, were sufficient and highly available for teacher job performance. Other non-printed education resources were insufficient and therefore considered not available. The finding further showed that workshop equipment, workshop technical tools and kits, television sets, radio sets, public address systems, chalkboard/whiteboards, flannel boards, internet facilities, projectors, functional printers and scanners, functional photocopiers and athletic facilities and sports equipment were considered insufficient and unavailable. This situation could negatively impact teacher job performance, creating difficulties in realizing the goals and objectives of education.

It was also found that more non-printed education resources were less available in the technical colleges in the urban areas than those in the rural areas in Anambra state. However, this finding further indicated that both the rural and urban technical colleges did not meet the NCE minimum requirements for non-printed education resources provision, which could, in turn, affect teacher job performance. The availability of non-printed education resources for teacher job performance was low in the rural and urban technical colleges in Anambra state. The hypothetical test indicated a significant difference in the availability of non-printed education resources for teacher job performance in rural and urban technical colleges in Anambra state. This finding aligns with Bizimana & Orodho (2014), who found that the availability of non-printed education resources in the technical colleges concerning their location was insufficient, compromising the effectiveness of classroom management and content delivery. There was a positive and significant correlation between most of the education resources and the level of classroom management and content delivery. Also, the findings of Ntui & Udah (2015) concurred with the present study regarding visual and audio-visual materials; these resources were inadequate and significantly influenced teachers' utilization. Whereby the non-printed education resources are less available in the rural and urban technical colleges in Anambra state, such a situation affects teacher utilization of these resources, which can negatively affect teacher job performance, making it difficult for teachers to execute their duties to achieve instructional objectives efficiently.

The Federal Republic of Nigeria (FRN, 2013) confirmed that educational support services provided through the availability of non-printed education resources in schools would improve and develop educational programs and

provide a conducive environment for teaching and learning, make learning experiences more meaningful and realistic to learners, as well as promote effective use of innovative materials in colleges. The level of success of educational programs like those of technical colleges is greatly dependent on the availability of up-to-date equipment and non-printed facilities, which form the hub around which such programs revolve (Ugwuanyi, 2013).

The study's findings discovered that teachers utilized non-printed education resources to a low extent. This low extent tends to affect teacher job performance. The finding discovered that in the rural technical colleges in Anambra state, laboratory tools and kits available for teaching physics, chemistry and biology practicals, workshop equipment available for teaching home economics practicals and workshop technical tools and kits provided for teaching basic technology practicals were all utilized to a low extent. Computers available for practical and research and television sets available for teaching different subjects were both utilized to a low extent. Radio sets with tape recorders available for teaching different subjects were utilized to a low extent. Public address systems available in the classroom for presentations were utilized to a low extent. Chalkboard/whiteboard was installed on the wall in all the classrooms, and Flannel boards were installed on the side wall of each classroom, which were utilized to a low extent. Other non-printed education resources such as Internet facilities installed in the school for browsing and surfing information from different websites, projectors available for teaching in different subjects, models/dioramas available for display in teaching various subjects in the classrooms, functional printers and scanners available to print documents in the administrative office, functional photocopiers available for producing and duplicating materials in large quantities, athletic facilities and sports equipment utilized by teachers to aid practical exercises in physical and health education, were all utilized to a low extent by teachers in the rural technical colleges.

In the urban technical colleges, it was found that teachers utilized chalkboards/whiteboards installed on the wall in all the classrooms to a great extent in the urban public technical colleges. It was further found in the urban public technical colleges that laboratory tools and kits, workshop equipment, technical tools and kits, computers, television sets, radio sets, public address systems, flannel boards, Internet facilities, projectors, models/dioramas, functional printers and scanners, functional photocopiers, athletic facilities and sports equipment were all utilized by teachers to a low extent in the urban technical colleges. The hypothetical test showed that a significant difference was found between the mean ratings of teachers on the extent of utilization of available non-printed resources for teacher job performance in rural and urban technical colleges in Anambra state.

This finding is in line with Kimeu et al. (2015), whose study reported that students' academic performance depended on using non-printed teaching and learning materials like the chalkboard, laboratory apparatus and chemicals. However, teachers were not making adequate use of them. Ntui & Udah (2015) found that teachers in technical colleges in Calabar, Cross Rivers State, Nigeria, did not use audio-visual materials in the schools. A significant difference was observed in the colleges concerning teachers' utilization of non-printed resources. Andambi &Kariuki (2013) also confirmed that radio was the most commonly available non-printed resource in colleges, but teachers were not using it for teaching and learning. If the non-printed resources are not effectively utilized by the teachers in the rural and urban technical colleges in Anambra state, this situation will continually affect teacher job performance. This situation has negative consequences on instructional goal accomplishment and stands to jeopardize students' academic achievements in school. Ugwuanyi (2013) reported that no meaningful learning or transfer of what has been learned will occur if such learning occurs in a situation devoid of relevant non-printed materials and activities and concrete experiences given through teacher job performance.

4. IMPLICATIONS AND CONTRIBUTIONS

4.1 Reseach Implication

This study has significant implications for managing educational resources in technical colleges, particularly for improving teacher performance. The results show that non-printed educational resources are more readily available in urban technical colleges than rural areas, but both remain below the minimum standards set by the NCE. The main implication of this finding is the importance of more equitable distribution of educational resources and improved access to non-printed resources in rural areas so that teachers can utilize these resources to enhance the quality of teaching. Additionally, the low utilization rate of available resources indicates the need for greater training and support for teachers in effectively using these educational tools. The government and educational institutions must address this access disparity by providing more appropriate and equitable resources and offering the necessary training to maximize the potential use of these resources in improving teacher performance in both areas.

4.2 Reseach Contribution

This research makes an important contribution to understanding the challenges faced by technical colleges in rural and urban areas regarding the availability and utilization of non-print educational resources. This research introduces a more in-depth approach to assessing differences in access to and use of educational resources and their impact on teacher performance. The finding that educational resources are more readily available in urban colleges than in rural areas provides insight into the disparities that must be addressed to improve the quality of education in both areas. This study also provides evidence that the utilization of existing resources remains low, indicating the need for improved teacher training and access support to ensure better utilization of educational resources. Recommendations for fairer resource distribution and improved access to non-print resources can enhance teacher performance, particularly in rural areas, and serve as a basis for more effective education policies.

5. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

5.1 Reseach Limitations

This study has several limitations that need to be considered before interpreting the results. First, the descriptive survey design only describes the current conditions without directly exploring the causal relationship between the availability and utilization of educational resources and teacher performance. Second, the instruments used were developed by the researchers themselves, and although their reliability has been tested, their external validity has not been thoroughly tested, so there may be a perception bias among respondents. Third, the geographical scope of the study is limited to one state (Anambra State), so the results may not be widely generalizable to other regions with different educational conditions. Additionally, the quantitative approach fails to capture qualitative factors such as teacher motivation, school management support, and local education policies that may influence resource utilization more complexly. These limitations open opportunities for further research using a mixed-methods approach and a broader geographical scope to achieve a more holistic understanding.

5.2 Recommendations for Future Research Directions

Further research is recommended to use a longitudinal or experimental research design to explore the causal relationship between the availability and utilization of educational resources and teacher performance. This can help identify factors that directly influence the use of educational resources and their impact on student learning outcomes.

6. CONCLUSION

Non-printed education resources are critical in enhancing teacher job performance effectiveness, particularly in technical colleges. These resources, which include visual aids, models, and multimedia tools, are essential for improving the delivery of lessons and fostering a more engaging learning environment. However, these resources are often scarce in Anambra State, with limited availability and low utilization by teachers. In rural and urban technical colleges, many of these non-printed educational tools remain unavailable, hindering teachers' ability to perform their jobs effectively. This lack of adequate resources leads to a less dynamic classroom experience, directly impacting the quality of education.

The failure of teachers in rural and urban technical colleges to fully utilize available non-printed resources has broader consequences for institutional development and student academic performance. Without the support of adequate teaching materials, teachers face difficulties in delivering lessons in ways that are meaningful and engaging. This shortcoming ultimately undermines students' academic progress, who may struggle to understand complex concepts or engage in hands-on learning, a key component of technical education. The adverse effects of this deficiency are particularly pronounced in technical disciplines, where practical, visual, and interactive learning is vital for skill development and mastery.

Despite these challenges, the study finds that non-printed education resources are more prevalent and accessible in urban technical colleges than rural ones. Urban colleges have more resources, providing a more effective teaching and learning environment. In contrast, rural colleges face significant shortages of these resources, limiting their ability to provide a conducive learning environment. The disparity between rural and urban areas regarding resource availability creates an imbalance that affects the overall educational experience, suggesting a need for strategic interventions to ensure equitable access to essential teaching materials across the state.

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Author Contribution Statement

The author declares that the entire research and writing process for this article was conducted independently. The author assumes full responsibility for all data associated with this research. No other individual contributed as a co-author or made any significant contribution to the content of this work.

Conflict of Interest Statement

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical Approval Statement

The authors declare that this study was conducted with due regard for research ethics, including obtaining approval from the institution. This includes respecting the autonomy of participants, maintaining confidentiality of data, and ensuring their safety and well-being, in accordance with applicable research ethics guidelines.

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