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Assessment of Digital Language Laboratory Resources for Teaching and Learning Spoken English in Universities in Ekiti State

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Abstract

The general purpose of this study was to assess DLL resources for the teaching and learning of spoken English in universities in Ekiti State, Nigeria. Specifically, the study determined availability, accessibility and utilization of DLL resources as well as skills possessed by instructional personnel in guiding students' use of the resources; problems affecting their effective utilization; and strategies for improving utilization. A descriptive survey research design was adopted. The study was conducted in three public universities offering English Language programmes in Ekiti State. Population comprised 837 respondents (769 students and 68 instructional personnel). Two sets of questionnaires were used for data collection. Data was analysed using mean, standard deviation t-test at 0.05 level of significance. Findings show that more of the DLL resources were slightly available ($\overline{X}_g$ =2.49) and generally had low accessibility ($\overline{X}_g$ =2.41). Although students used the available resources to a high extent, usage was mainly limited to guided instructional activities. Instructional personnel demonstrated high skills ($\overline{X}_g$ =3.07) in DLL-based instruction. Major constraints included unstable electricity, poor internet connectivity, inadequate funding, poor maintenance, insufficient staff training, and weak institutional support. Respondents supported increased funding, improved infrastructure, regular maintenance, staff development, enhanced access, and supportive institutional policies to improve DLL utilization.

Keywords: Digital, Language, Laboratory, Spoken, English, Availability, Accessibility, Utilization, Skills, Problems, Strategies

Introduction

Effective spoken English instruction is central to English language education because it equips students with the oral communication skills required for academic achievement, professional practice, and meaningful participation in society. In Nigerian universities, spoken English is taught through programmes in English, English Education, and General Studies, where lecturers and language laboratory instructors help students develop skills in pronunciation, intonation, fluency, listening, and communicative competence. As English remains the official medium of instruction in tertiary institutions (Federal Republic of Nigeria [FRN], 2013), proficiency in spoken English is essential for effective learning. Consequently, contemporary

language instruction increasingly emphasizes learner-centred approaches that promote interaction, collaboration, and active participation through educational technologies (Ojo et al., 2025; Shruthi et al., 2025). The growing emphasis on interactive and learner-centred instruction has increased the relevance of digital technologies in supporting spoken English development.

Digital technologies have consequently transformed language education by extending learning beyond traditional lecture methods. Technology-enhanced learning environments, supported by Computer-Assisted Language Learning (CALL), Artificial Intelligence-Assisted Language Learning (AIALL), multimedia applications, and virtual learning platforms, provide learners with greater opportunities for interaction, independent practice, and immediate feedback. Studies have shown that these technologies improve speaking proficiency, pronunciation, confidence, and communicative competence by promoting active participation and personalized learning (Bahari et al., 2025; Dai & Wu, 2025; Liu, 2025; Zhao, 2025; Lai, 2026).

One technological innovation designed to enhance interactive listening and speaking instruction through digital technology is the Digital Language Laboratory (DLL). A DLL is a technology-supported learning environment equipped with computers, language learning software, digital audio systems, multimedia applications, headsets, microphones, projectors, and internet facilities that support the development of listening and speaking skills. Unlike conventional classrooms, DLLs enable pronunciation drills, speech recording, listening comprehension, dialogue practice, oral presentations, and self-paced learning with immediate feedback. These interactive features have consistently been associated with improved learner engagement and oral communication skills (Asri et al., 2016; Basu, 2021; Dey & Dey, 2021; Krishna, 2021; Li & Lan, 2022; Ajoko et al., 2023).

Despite these benefits, the effectiveness of Digital Language Laboratories depends not only on their presence but also on the availability, accessibility, and utilization of the resources they contain. These resources include computers, multimedia software, audio systems, projectors, internet connectivity, and other digital tools that support language instruction. While availability provides the foundation for technology-based learning, meaningful outcomes depend on users having adequate access and making effective use of these facilities. Research indicates that technology-supported language instruction produces better learning outcomes when digital resources are functional, accessible, and well-integrated into teaching and learning activities (Li & Lan, 2022; Bahari et al., 2025; Liu, 2025).

The effective use of these resources also depends on the complementary roles of lecturers, language laboratory instructors, and students. Lecturers integrate digital technologies into instruction, design appropriate learning activities, and assess learning outcomes, while laboratory instructors provide technical support, supervise practical sessions, and maintain laboratory facilities. Students, in turn, are expected to participate actively in laboratory activities and engage in repeated practice to strengthen their oral communication

skills. Such collaborative, learner-centred approaches have been shown to improve student engagement and learning outcomes in English language education (Ojo et al., 2025; Shruthi et al., 2025).

Although many Nigerian universities have established Digital Language Laboratories to strengthen spoken English instruction, several challenges continue to affect their effective use. These include inadequate facilities, poor maintenance, unstable electricity supply, weak internet connectivity, insufficient funding, limited technical support, and inadequate professional development for instructional personnel (Mohammed, 2017; Adamu & Umar, 2018; Basu, 2021; Ajoko et al., 2023). Such constraints reduce opportunities for practical language learning and limit the benefits expected from technology-supported instruction.

These concerns are particularly important given the growing adoption of technology-enhanced learning across Nigerian educational institutions. Ojo et al. (2020) reported that technology-supported learning enhanced instructional continuity, student engagement, and learning experiences during periods of educational disruption. Although conducted in technical colleges, the findings demonstrate the broader value of digital technologies for improving teaching and learning, including spoken English instruction in higher education.

Against this backdrop, universities in Ekiti State have invested in Digital Language Laboratories to strengthen spoken English teaching. However, the extent to which these facilities are available, accessible, and effectively utilized, the competence of instructional personnel, and the challenges affecting their operation remain unclear. Although previous studies have examined technology-enhanced language learning, CALL, AI-supported language instruction, and Digital Language Laboratories (Li & Lan, 2022; Bahari et al., 2025; Zhao, 2025; Lai, 2026), most focused on learning outcomes, technology adoption, or contexts outside Ekiti State. Consequently, empirical evidence on the status of DLL resources in universities within the State remains limited, hence the need for this study.

Purpose of the Study

The general purpose of this study was to assess Digital Language Laboratory (DLL) resources for teaching and learning of spoken English in universities in Ekiti State, Nigeria. Specifically, the study determined:

1. extent of availability of DLL resources for students in universities in Ekiti State
2. extent of accessibility of DLL resources to students in universities in Ekiti State
3. extent of utilization of DLL resources by students in universities in Ekiti State
4. skills possessed by language instructional personnel in guiding students in the use of DLL resources.
5. problems militating against the effective utilization of DLL resources
6. strategies for mitigating problems affecting the effective utilization of DLL resources.

Hypotheses (HOs)

The following null hypotheses were tested at 0.05 level of significance. There is no significant difference between the mean responses of students and instructional personnel on:

1. extent of availability of DLL resources for students in universities in Ekiti State

2. extent of accessibility of DLL resources to students in universities in Ekiti State
3. problems militating against the effective utilization of DLL resources
4. strategies for mitigating problems affecting the effective utilization of DLL resources.

Methodology

***Research Design*:** This study employed a descriptive survey research design.

Area of the Study: The study was conducted in Ekiti State, Nigeria, located in the South-West geopolitical zone. The study covered three public universities offering English Language programmes in the state: the Ekiti State University, Bamidele Olumilua University of Education, Science and Technology, and Federal University Oye-Ekiti.

***Population for the Study*:** Population comprised 837 respondents, consisting of 769 300-level English Language students and 68 instructional personnel (lecturers and language laboratory instructors) involved in the teaching and learning of spoken English across the three universities. Population figures were obtained from the respective Departments of English and university records for the 2023/2024 academic session.

***Sample for the Study*:** A sample of 331 respondents (263 students and 68 personnel) was used for the study, using Yamane's (1967) formula at a 5 percent level of precision. All 68 instructional personnel were involved. A multistage sampling procedure was adopted for the students, involving purposive selection of the three universities based on the availability of Digital Language Laboratory facilities, proportionate stratified random sampling to allocate the sample across the universities, and simple random sampling (balloting without replacement) to select the required respondents from each institution.

***Instrument for Data Collection*:** Data was collected using two structured questionnaires. The instruments were developed from the review of relevant literatures on digital language laboratories and spoken English instruction. One questionnaire was administered to students and the other to instructional personnel (lecturers and language laboratory instructors). Each questionnaire comprised 55 items arranged into five clusters of 11 items each. The students' questionnaire covered the availability, accessibility and utilization of DLL resources, problems militating against their effective utilization, and strategies for mitigating the identified problems. The instructional personnel questionnaire covered the availability and accessibility of DLL resources, skills possessed in guiding students in the use of DLL resources, problems militating against effective DLL utilization, and strategies for mitigating the identified problems. Both instruments consisted of two sections. Section A obtained respondents' demographic information, while Section B contained the questionnaire items. Items on availability, accessibility, utilization and skills possessed were rated on a four-point extent scale of Very High Extent/Skill (4), High Extent/Skill (3), Low Extent/Skill (2) and Very Low Extent/Skill (1), whereas items on problems and strategies were rated on a four-point agreement scale of Strongly Agree (4), Agree (3), Disagree (2) and Strongly Disagree (1). Instruments were face validated by three university experts in English. Reliability of the two instruments was established through a pilot study conducted outside

the study area using respondents with characteristics similar to those of the study participants. Data were analysed using Cronbach's alpha to determine internal consistency. The reliability coefficients were 0.84 for availability, 0.82 for accessibility, 0.86 for utilization, 0.88 for instructional personnel skills, 0.85 for utilization problems, and 0.87 for mitigation strategies. The overall coefficient was 0.85, indicating satisfactory reliability.

***Method of Data Collection*:** A total of 331 copies of the questionnaires were administered by hand to the respondents (263 to students and 68 to the personnel) during the 2024/2025 academic session. A total of 327 copies were correctly completed and retrieved, comprising 260 copies from students and 67 copies from instructional personnel, representing a response rate of 98.8%. The retrieved copies were used for data analysis.

***Method of Data Analysis*:** Mean, standard deviation and t-test were used for data analysis. Mean ratings were interpreted using the real limits of numbers as follows: 3.50–4.00 = Very High Extent/Very High Skill/Strongly Agree; 2.50–3.49 = High Extent/High Skill/Agree; 1.50–2.49 = Low Extent/Low Skill/Disagree; and 1.00–1.49 = Very Low Extent/Very Low Skill/Strongly Disagree. A null hypothesis was rejected where the associated probability value was less than or equal to 0.05 and retained where the probability value was greater than 0.05.

Results

Table 1: Mean Responses, Standard Deviations, and t-test Results of Students and Instructional Personnel on the Availability of DLL Resources

S/N	Available DLL Resources	$\bar{X}_1$	SD_1	$\bar{X}_2$	SD_2	$\bar{X}g$	R	t	p	Dec.
1	Computers	2.43	0.91	2.56	0.84	2.50	MA	-1.18	0.240	NS
2	Individual student booths/listening stations	2.31	0.95	2.48	0.88	2.40	SA	-1.32	0.188	NS
3	Audio clips and listening materials	2.76	0.86	2.84	0.82	2.80	MA	-0.69	0.491	NS
4	Video clips and multimedia resources	2.38	0.90	2.52	0.85	2.45	SA	-1.09	0.277	NS
5	Language learning software	2.49	0.87	2.63	0.80	2.56	MA	-1.11	0.268	NS
6	Projectors, screens and teacher consoles	2.36	0.93	2.51	0.89	2.44	SA	-1.15	0.251	NS
7	Stable electricity supply for laboratory activities.	2.18	0.99	2.34	0.91	2.26	SA	-1.23	0.220	NS
8	Laboratory environment conducive for spoken English instruction.	2.44	0.88	2.59	0.83	2.52	MA	-1.17	0.243	NS
9	Technical personnel	2.27	0.96	2.41	0.89	2.34	SA	-1.06	0.290	NS
10	Internet facilities	2.29	0.98	2.46	0.92	2.38	SA	-1.28	0.202	NS
11	Phonetic dictionaries	2.71	0.84	2.82	0.79	2.77	MA	-0.88	0.381	NS
	Cluster Mean	**2.42**	**0.37**	**2.56**	**0.35**	**2.49**	**SA**	**-1.14**	**0.255**	**NS**

Keys: *$\bar{X}_1$ = Mean of Students; SD_1 = Standard Deviation of Students; $\bar{X}_2$ = Mean of Instructional Personnel; SD_2 = Standard Deviation of Instructional Personnel; $\bar{X}g$ = Grand Mean; t = t-value, p = p-value R = Remark; MA = Moderately Available; SA = Slightly Available; NS = Not Significant.*

Table 1 shows that the availability of Digital Language Laboratory (DLL) resources for the teaching and learning of spoken English in universities in Ekiti State is generally slight ($\bar{X}g = 2.49$). Audio clips, language learning software, conducive laboratory environments and phonetic dictionaries were rated as moderately available, whereas most facilities, including computers, listening booths, projectors, electricity supply, technical support and internet facilities, were only slightly available. The item-by-item t-test results revealed no significant differences between the mean ratings of students and instructional personnel ($p > 0.05$), indicating similar perceptions of the availability of DLL resources.

Table 2: Mean Responses, Standard Deviations, and t-test Results of Students and Instructional Personnel on the Accessibility of DLL Resources

S/N	Accessible of DLL Resources Students have access to;	$\bar{X}_1$	SD_1	$\bar{X}_2$	SD_2	$\bar{X}_g$	R	t	p	Dec.
1	Language laboratory during scheduled practical sessions.	2.38	0.94	2.51	0.87	2.45	LAC	-1.07	0.286	NS
2	Individual booths during practical sessions.	2.26	0.97	2.41	0.91	2.34	LAC	-1.16	0.247	NS
3	Audio clips and listening materials.	2.69	0.82	2.78	0.78	2.74	HAC	-0.81	0.419	NS
4	Video clips and multimedia resources.	2.31	0.95	2.46	0.88	2.39	LAC	-1.14	0.256	NS
5	Language learning software.	2.42	0.91	2.58	0.84	2.50	HAC	-1.20	0.232	NS
6	Projectors and other instructional facilities during laboratory sessions.	2.29	0.96	2.44	0.90	2.37	LAC	-1.11	0.268	NS
7	Electricity during laboratory activities.	2.14	1.01	2.29	0.94	2.22	LAC	-1.19	0.236	NS
8	Technical assistance whenever difficulties arise during laboratory practice.	2.34	0.93	2.49	0.86	2.42	LAC	-1.15	0.251	NS
9	Internet facilities during spoken English practice.	2.18	0.98	2.33	0.92	2.26	LAC	-1.17	0.244	NS
10	Phonetic dictionaries and pronunciation guides.	2.63	0.85	2.74	0.80	2.69	HAC	-0.92	0.358	NS
11	Language laboratory outside lecture periods.	2.12	0.99	2.28	0.93	2.20	LAC	-1.25	0.212	NS
	Cluster Mean	**2.34**	**0.36**	**2.48**	**0.33**	**2.41**	**LAC**	**-1.13**	**0.260**	**NS**

Keys: *$\bar{X}_1$ = Mean of Students; SD_1 = Standard Deviation of Students; $\bar{X}_2$ = Mean of Instructional Personnel; SD_2 = Standard Deviation of Instructional Personnel; $\bar{X}_g$ = Grand Mean; t = t-value, p = p-value R = Remark; HAC = High accessibility; LAC = Low Accessibility; NS = Not Significant.*

Table 2 indicates that students' accessibility to DLL resources is generally low ($\bar{X}_g$ = 2.41). Access to audio clips, language learning software and phonetic dictionaries was rated high ($\bar{X}_g$ = 2.78), whereas access to listening booths, multimedia resources and other, was rated low ($\bar{X}_g \leq 2.78$). t-test results showed no significant differences between the responses of students and instructional personnel ($p > 0.05$), indicating that both groups held similar views on the accessibility of DLL resources.

Table 3: Mean Responses and Standard Deviations of Students on the Extent of Utilization of DLL Resources

S/N	DLL Resources Utilization Indicators	$\bar{X}$	SD	Dec.
1	I regularly use the Digital Language Laboratory to practise English pronunciation.	2.63	0.91	HE
2	I use the individual listening booths during spoken English practical sessions.	2.28	0.98	LE
3	I follow the guidance provided by language instructional personnel during laboratory activities.	2.81	0.83	HE
4	I use audio clips to improve my listening comprehension and pronunciation.	2.74	0.87	HE
5	I use video clips and multimedia resources to improve my spoken English.	2.36	0.95	LE
6	I use language learning software for pronunciation drills and oral practice.	2.42	0.92	LE
7	I make use of multimedia resources to improve my oral communication skills.	2.39	0.90	LE
8	I participate in dialogue and conversation practice using DLL resources.	2.47	0.89	LE
9	I record and replay my voice for pronunciation self-assessment.	2.68	0.88	HE
10	I participate actively in interactive language laboratory exercises.	2.52	0.91	HE
11	I use DLL resources to prepare for oral presentations and class assignments.	2.41	0.94	LE
	Cluster Mean	2.52	0.34	HE

Key: $\bar{X}$*= Mean; SD = Standard Deviation; HE = High Extent; LE = Low Extent; Dec. = Decision*

Table 3 show that students utilize DLL resources for the teaching and learning of spoken English to a high extent ($\bar{X}$ = 2.52). High utilization was reported for pronunciation practice, adherence to instructional guidance, use of audio clips, voice recording for self-assessment and participation in laboratory exercises. However, the use of listening booths, multimedia resources, language learning software, dialogue practice and preparation for oral presentations was low. This suggests that students utilize DLL resources more during guided instructional activities than for independent learning.

Table 4: Mean Responses and Standard Deviations of Instructional Personnel on the Skills Possessed for Guiding Students in the Use of DLL Resources

S/N	Skills Possessed by Instructional Personnel	$\bar{X}$	SD	Dec.
	Ability to:			
1	operate computer hardware and language laboratory software effectively.	3.12	0.78	HS
2	operate projectors, teacher consoles and other multimedia equipment during instruction.	3.06	0.81	HS
3	guide students in pronunciation, stress and intonation using DLL resources.	3.18	0.74	HS
4	assist students in developing listening and speaking skills through laboratory activities.	3.11	0.76	HS
5	troubleshoot minor technical faults encountered during laboratory sessions.	2.74	0.88	HS
6	organise and supervise practical language laboratory sessions effectively.	3.09	0.79	HS
7	assess students' spoken English performance using DLL resources.	3.02	0.83	HS
8	provide immediate feedback to students during laboratory activities.	3.15	0.77	HS
9	integrate multimedia resources into spoken English instruction.	3.08	0.80	HS
10	encourage active student participation during laboratory sessions.	3.20	0.73	HS
11	maintain and manage Digital Language Laboratory facilities for effective instruction.	2.91	0.85	HS
12	align Digital Language Laboratory activities with classroom instruction.	3.14	0.76	HS
	Cluster Mean	**3.07**	**0.42**	**HS**

Key: $\bar{X}$*= Mean; SD = Standard Deviation; HE = High Extent; LE = Low Extent; Dec. = Decision*

Table 4 shows that instructional personnel possess a high level of skill ($\bar{X}$ = 3.07) in guiding students in the use of DLL resources. They indicated competence in operating laboratory facilities, facilitating pronunciation and listening activities, integrating multimedia resources, supervising practical sessions, and so on.

Table 5: Mean Responses, Standard Deviations, and t-test Results of Students and Instructional Personnel on the Problems Militating against the Effective Utilization of DLL Resources

S/N	Problems to DLL resources	$\bar{X}_1$	SD_1	$\bar{X}_2$	SD_2	$\bar{X}_g$	R	t	p	Dec.
1	Insufficient functional computers	3.21	0.81	3.29	0.76	3.25	A	-0.76	0.448	NS
2	Insufficient listening booths	3.23	0.80	3.39	0.74	3.31	A	−0.82	0.414	NS
3	Irregular electricity supply	3.48	0.72	3.55	0.69	3.52	A	-0.69	0.491	NS
4	Poor internet connectivity	3.33	0.77	3.40	0.74	3.37	A	-0.65	0.516	NS
5	Students have limited access to DLL	3.26	0.80	3.35	0.75	3.31	A	-0.81	0.419	NS
6	Large class sizes for limited access to DLL	3.29	0.78	3.37	0.73	3.33	A	-0.72	0.472	NS

Table 5 Continues

7	Inadequate funding	3.41	0.73	3.50	0.68	3.46	A	-0.88	0.380	NS
8	Insufficient training opportunities for instructional personnel	3.15	0.84	3.23	0.79	3.19	A	-0.71	0.478	NS
9	Poor maintenance culture for DLL resources	3.36	0.76	3.45	0.71	3.41	A	-0.84	0.402	NS
10	Frequent equipment breakdown	3.25	0.82	3.39	0.76	3.32	A	−0.80	0.425	NS
11	Limited institutional support for management of DLL	3.27	0.79	3.36	0.74	3.32	A	-0.79	0.431	NS
12	Inadequate instructional time	3.11	0.86	3.18	0.82	3.15	A	-0.60	0.550	NS
13	Students' irregular use of DLL facilities	3.18	0.82	3.27	0.77	3.23	A	-0.78	0.437	NS
	Cluster Mean	**3.28**	**0.38**	**3.36**	**0.35**	**3.32**	**A**	**-0.75**	**0.454**	**NS**

Keys: *$\bar{X}_1$= Mean of Students; SD_1 = Standard Deviation of Students; $\bar{X}_2$ = Mean of Instructional Personnel; SD_2 = Standard Deviation of Instructional Personnel; $\bar{X}_g$= Grand Mean; t = t-value, p = p-value R = Remark; A = Agree; NS = Not Significant.*

Table 5 indicates that both students and instructional personnel agreed that several factors hinder the effective utilization of DLL resources (Xg = 3.32). The identified challenges include inadequate equipment, unstable electricity supply, poor internet connectivity, limited laboratory access, large class sizes, inadequate funding, insufficient staff training, poor maintenance culture, weak institutional support, limited instructional time and irregular student participation. The item-by-item t-test results showed no significant differences between the responses of the two groups ($p > 0.05$), indicating a shared perception of these challenges.

Table 6: Mean Responses, Standard Deviations, and t-test Results of Students and Instructional Personnel on Strategies for Mitigating the Problems Affecting the Effective Utilization of DLL Resources

S/N	Strategies	$\bar{X}_1$	SD_1	$\bar{X}_2$	SD_2	$\bar{X}_g$	R	t	p	Dec
1	Provide funding for DLL facilities.	3.56	0.69	3.63	0.65	3.60	A	-0.78	0.436	NS
2	Provide regular training on DLL use.	3.48	0.73	3.57	0.68	3.53	A	-0.92	0.358	NS
3	Increase functional computers in the language laboratory.	3.61	0.67	3.69	0.62	3.65	A	-0.81	0.418	NS
4	Maintain DLL equipment regularly.	3.58	0.68	3.66	0.64	3.62	A	-0.84	0.401	NS
5	Provide stable electricity for laboratory activities.	3.65	0.64	3.73	0.60	3.69	A	-0.89	0.375	NS
6	Improve internet connectivity for digital language learning.	3.52	0.70	3.60	0.66	3.56	A	-0.83	0.407	NS
7	Improve student access to the language laboratory.	3.43	0.75	3.50	0.71	3.47	A	-0.71	0.478	NS
8	Integrate DLL activities into spoken English instruction.	3.47	0.74	3.55	0.69	3.51	A	-0.79	0.430	NS

Table 6 Continues

9	Employ additional instructional personnel for laboratory instruction.	3.34	0.79	3.42	0.75	3.38	A	-0.73	0.466	NS
10	Monitor DLL utilisation regularly.	3.46	0.73	3.54	0.69	3.50	A	-0.80	0.425	NS
11	Develop policies for effective DLL utilisation.	3.49	0.72	3.58	0.67	3.54	A	-0.91	0.364	NS
	Cluster Mean	**3.51**	**0.33**	**3.59**	**0.30**	**3.55**	**A**	**-0.82**	**0.413**	**NS**

Keys: *$\bar{X}_1$= Mean of Students; SD_1 = Standard Deviation of Students; $\bar{X}_2$ = Mean of Instructional Personnel; SD_2 = Standard Deviation of Instructional Personnel; $\bar{X}_g$= Grand Mean; t = t-value, p = p-value R = Remark; A = Agree; NS = Not Significant.*

Table 6 shows that both students and instructional personnel agreed on 11 required to improve the effective utilization of DLL resources (Xg = 3.55). These strategies include increased funding, regular maintenance of laboratory facilities, continuous professional development for instructional personnel, and others. The t-test results revealed no significant differences between the responses of both groups ($p > 0.05$), indicating consensus on the proposed improvement strategies.

Discussion of Findings

The study found that DLL resources for teaching and learning spoken English in universities in Ekiti State were generally only slightly available. While audio clips, language learning software, phonetic dictionaries, and conducive laboratory environments were moderately available, key facilities such as computers, listening booths, projectors, electricity, internet services, and technical support were only slightly available. The absence of significant differences between the responses of students and instructional personnel indicates a shared perception of the inadequacy of these resources. This finding agrees with Basu (2021), who reported that inadequate infrastructure, unstable electricity, and insufficient technological facilities limit the effectiveness of digital language laboratories. It also supports the findings of Adamu and Umar (2018) and Ajoko et al. (2023), who identified inadequate laboratory facilities as a major challenge to effective oral English instruction in Nigerian institutions. The finding is further consistent with the Federal Republic of Nigeria (2013), which emphasizes the provision of adequate instructional facilities for quality education.

The findings also showed that students' accessibility to DLL resources was generally low. Although access to audio clips, language learning software, and phonetic dictionaries was relatively high, access to listening booths, multimedia resources, projectors, electricity, internet facilities, technical support, and laboratory use outside scheduled classes remained limited. Students and instructional personnel expressed similar views on this issue. This finding supports Aulia (2016), who argued that the availability of language laboratory facilities does not necessarily guarantee access, as effective management and scheduling determine students' opportunities to use them. It also agrees with Basu (2021) and Dey and Dey (2021), who emphasized that regular

access to digital language laboratories is essential for maximizing their instructional value.

The study further revealed that students utilized DLL resources to a high extent, particularly during lecturer-guided activities such as pronunciation practice, listening exercises, voice recording, and laboratory practical sessions. However, the use of listening booths, multimedia resources, language learning software, dialogue practice, and preparation for oral presentations remained low, suggesting limited independent use of the facilities. This finding is consistent with Asratie et al. (2023), who found that technology-supported instruction improves students' speaking performance when integrated into classroom activities. Similarly, Wang et al. (2023) and Jiang et al. (2023) reported that technology-assisted language learning enhances pronunciation, interaction, and oral communication, especially when supported by instructors. The finding also aligns with Li and Lan (2022), who emphasized that effective digital language learning depends on learners' active engagement with technology during instruction.

The study also found that lecturers and language laboratory instructors possessed a high level of skill in guiding students in the use of DLL resources. They demonstrated competence in operating laboratory equipment, facilitating pronunciation and listening activities, integrating multimedia resources, supervising practical sessions, providing feedback, and linking laboratory activities with classroom instruction. Although troubleshooting technical faults and equipment maintenance received comparatively lower ratings, they remained within the high-skill category. This finding supports Mohammed (2017), who emphasized the critical role of competent instructors in maximizing the instructional value of language laboratories. It also agrees with Krishna (2021), Dey and Dey (2021), and Bahari et al. (2025), who stressed that effective technology-enhanced language learning depends largely on instructors' technological and pedagogical competence.

The findings further showed that both students and instructional personnel agreed that inadequate equipment, unstable electricity, poor internet connectivity, limited laboratory access, large class sizes, inadequate funding, insufficient staff training, poor maintenance, weak institutional support, limited instructional time, and irregular student participation hinder the effective utilization of DLL resources. The absence of significant differences between the two groups indicates consensus on these challenges. This finding corroborates Basu (2021), Adamu and Umar (2018), Ajoko et al. (2023), and Dey and Dey (2021), all of whom identified inadequate infrastructure, funding, maintenance, and institutional support as major constraints to the effective implementation of digital language laboratories.

Finally, the study found that students and instructional personnel agreed on strategies for improving the effective utilization of DLL resources. These include increased funding, regular maintenance, continuous professional development, provision of additional equipment, improved electricity and internet services, greater student access, integration of laboratory activities into classroom instruction, recruitment of

additional instructional personnel, regular monitoring, and supportive institutional policies. The agreement between both groups suggests a common understanding of the measures needed to strengthen DLL utilization. This finding is consistent with Hasumi and Chiu (2024), who emphasized the importance of institutional investment, adequate infrastructure, and staff development in technology-enhanced language learning. It also supports Nurmala et al. (2023), Shruthi et al. (2025), and Liu (2025), who highlighted that sustained technological investment, continuous teacher training, and institutional support are essential for improving language learning outcomes.

Conclusion

This study assessed the availability, accessibility, utilization, skills possessed by instructional personnel, problems, and strategies relating to the use of Digital Language Laboratory (DLL) resources for teaching and learning spoken English in universities in Ekiti State. The findings revealed that although instructional personnel possessed adequate skills to facilitate DLL-based instruction, the availability and accessibility of DLL resources were generally inadequate. Students utilized the available resources mainly during guided instructional activities, while infrastructural challenges, inadequate funding, poor maintenance, unstable electricity supply, and weak institutional support limited effective utilization. The study also identified practical strategies for improving the effective use of DLL resources in universities.

Recommendations

Based on the findings, the study recommends that:

1. University management should provide adequate Digital Language Laboratory facilities and supporting infrastructure to improve resource availability.
2. Universities should enhance students' access to Digital Language Laboratory facilities through effective scheduling, maintenance, and technical support.
3. Lecturers should integrate Digital Language Laboratory activities more regularly into spoken English instruction and encourage independent student use.
4. Universities should provide continuous professional development for lecturers and language laboratory instructors to sustain effective Digital Language Laboratory instruction.
5. Government and university authorities should improve funding, maintenance, electricity supply, internet connectivity, and institutional support to address the constraints affecting DLL utilization.
6. Universities should implement regular monitoring and supportive policies to strengthen the effective utilization of Digital Language Laboratory resources.

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