

Article Type: Original Article

LANGUAGE LAB: A VIRTUAL PRACTICAL SPACE FOR ENHANCING ENGINEERING STUDENTS' ENGLISH PROFICIENCY

Attrait Dovin Fedrick S^{1*}, Dr. M. Richard Robert Raa², Dr. B. S. Gomathi³

¹*PhD Research Scholar of English, Sri Krishna Arts and Science College, Kuniyathur, Coimbatore, Tamil Nadu, India

²Associate Professor of English, School of Liberal Arts, Department of English, Nehru Arts and Science College (Autonomous), Coimbatore Tamil Nadu, India,

³Associate Professor of English, Velalar College of Engineering and Technology, Thindal, Erode, Tamil Nadu, India

ARTICLE INFO	ABSTRACT
Received: 02/ 01/ 2025 Accepted: 20/01/2025	English is one of the prominent academic languages in India. The majority of higher education institutions are using English as the medium of academic communication; particularly engineering institutions. As learners in India, the students acquire English as a second language after their mother tongue. In the Indian Constitution, the English language holds the status of one of the official languages of India. Particularly, English serves as the language of choice for higher education, business, administration and professional sectors in the country. However, in higher education, English remains a direct instructional tool to receive receptive and productive skills. In the engineering curriculum, practical-oriented learning is emphasised rather than theoretical and takes place at various laboratories inside the institution. Therefore, to learn and practice English the institution is essential to have an English language laboratory (Lab). In this study, the perceptions of English language teachers toward the English language laboratory (Lab) and the problems faced by engineering students in acquiring reading and writing skills are reviewed, with the help of questionnaires collected from 150 English language teachers in Erode district, Tamil Nadu. Eventually, the article concludes by addressing the question, Is an English language laboratory (Lab) a necessity in higher educational institutions, particularly in engineering colleges?
Keywords	
Corresponding Author Name: Attrait Dovin Fedrick S Email: attraitdovinfedrick333@gmail.com	

INTRODUCTION

Kirkpatrick (2007) classified the English language teaching and learning realm as English

as a Native Language (ENL), English as a Second Language (ESL) and English as a Foreign Language (EFL). ESL is used in countries where English is important and has official recognition but is not the primary language. These countries are often former colonies of the United Kingdom or the United States (Kirkpatrick, 2007). India, Malaysia, Nigeria and the Philippines are examples where English is considered a second language.

Weber and Bali (2010) highlighted that after India gained independence, English has remained crucial for social advancement, despite the country's diverse languages. According to the Indian Constitution, it holds the status of one of the official languages. Particularly, English serves as the language of choice for higher education, business administration, and professional sectors in the country. English is available at all levels of education in India, either as a standalone language course or additionally, as a medium through which other subjects are taught and mastered (Thiyagarajan, 2008). In higher education, English remains the primary Medium of Instruction (MoI) for numerous fields including Engineering, Medicine, Law, Management, and Computer Sciences (Borooah & Sabharwal, 2021).

In India, students usually learn English after their native language. However, in higher education, English is often used directly to teach and develop language skills. As ESL learners, they encounter challenges while learning the language. Santos (1988) distinguished that professors often consider lexical errors to be the most serious issue when evaluating writings from non-native English-speaking students. The size of a learner's vocabulary is evident in how effectively they use the language, especially in writing and reading (Laufer & Nation, 1995). Understanding sentence structure (syntax) and the words employed (vocabulary) are essential elements within linguistic resources (Zhou, 2009). Derwing et al. (1999) revealed that teachers are overloaded with work and often do not have time to provide additional individual assistance.

One of the objectives of the National Mission on Education Through ICT (CEP, IIT-Kharagpur, n.d.) highlighted "The development of knowledge modules having the right content to take care of the aspirations and to address to the personalised needs of the learners". BVR Mohan Reddy, chairman and member of the AICTE committee for preparing Short & Medium-Term Perspective Plan for Technical Education suggested technology should be utilised to create personalised learning paths for each student, which aligns with the concept of Education 4.0 (Reddy, n.d.).

Early reports indicate that the University of Grenoble had the first language lab. From the 1950s to the 1990s, tape-based systems using reels or cassettes were used, but now, multimedia computers have taken their place. These language labs were made to teach English skills (Krishna,

2021, p. 101). In a language lab, the way people learn is different from a regular classroom. Students get involved in exercises and training specifically for learning languages. They do practical sessions in the language lab to learn better (Krishna, 2021, p. 102). According to the research by Suherdi (2019), language labs provide unique, goal-oriented skills that enhance learning English. This progress has led to fresh challenges and requirements in present-day education (Gleason, 2018).

Major Changes in the Anna University

In 1978, Anna University was founded in Tamil Nadu as a unitary state university. With its affiliation, it provides specialised Engineering, MBA, and MCA courses across more than 571 colleges (Kumar, 2020). To address challenges faced by ESL students, the university restructured the English curriculum, placing a focus on language labs. These labs offer language support through activities such as quizzes, debates and interview preparation, aimed at improving English proficiency and confidence for future endeavors.

These represent the significant changes made in the English curriculum at Anna University in recent years (Anna University, n.d.).

- In the 1950s, English was offered as a course within the initial two years of the five-year B.E. and B.Tech. degree programs and in the year 1978, Anna University gave recognition and status to the English Department.
- By 1989, the Language Laboratory was established by the English Department.
- In August 2007, the Communications Laboratory was established and equipped with multimedia facilities and it was made mandatory for the affiliated colleges to implement the Communication Skills Laboratory in Semesters III & IV for the third years.
- After ten years, In the year 2017 Anna University implemented Professional Communication (HS8581) and Interpersonal Skills/Listening & Speaking (HS8381) as credit subjects in the syllabus.

MATERIAL AND METHODS

Questionnaires serve as the primary method for gathering quantitative primary data (Roopa & Rani, 2012). The study exercised a questionnaire-based method. The target demographic was English language teachers at engineering institutes in Erode district, Tamil Nadu. 150 questionnaires were circulated to the English language teaching teachers from Autonomous, Self-Finance Colleges and State/ Deemed Universities. Statistical Package for Social Sciences (SPSS) software was used for analysing data. The distribution of the respondents according to their gender, institution category and teaching experience is revealed in Table 1.

Table 1. Socio-demographic profile

S. No	Socio-Demographic Profile	No. of Respondents (N=150)			
1.	Respondents' gender	Male		Female	
		64		86	
2.	Respondents' teaching experience	Up to 9 Years	10-13 Years	14-17 Years	Above 17 Years
		38	48	34	30
3.	Respondents' institution category	Autonomous College	Self-Finance Colleges	State University / Deemed University	
		106	38	6	

The questionnaire was designed to consolidate the comprehensive perspectives of language teachers on the significance of English Language Laboratories in nurturing English language skills among engineering students. Furthermore, the framed questions sought to discern the perspectives and experiences of language teachers on the difficulties encountered by engineering students in acquiring writing and reading skills. The questionnaire focused on the teachers' perception towards the need for LSRW skills in engineering students and then narrowed down to the difficulties encountered by the same students in acquiring writing and reading skills.

ANALYSIS AND DISCUSSION

Teachers' Perception Towards Difficulty in LSRW Skills

Table 2. Difficulty in LSRW skills

S.No	Skills	Grades					
		Always	%	Sometimes	%	Never	%
1	Listening skills	30	20.0	96	64.0	24	16.0
2	Speaking Skills	74	49.3	72	48.0	4	2.7
3	Writing Skills	40	26.7	102	68.0	8	5.3
4	Reading Skills	32	21.3	104	69.3	14	9.3

The four main components of communication are Listening, Speaking, Reading and Writing. All four of these abilities must be developed to communicate effectively (John, 2022). Table 2 illustrates the difficulty in LSRW skills among engineering students from the perspective of language teachers. Among 150 respondents, 20% of the respondents sensed engineering students are having listening skill difficulties, 49.3% of the respondents observed engineering students are having speaking skill difficulties, 26.7 % of the

respondents sighted engineering students are having writing skill difficulties, and finally, 21.3% of the respondents detected engineering students having reading skill difficulties.

Speaking is one of the productive skills and students primarily need assistance to acquire it systematically. The stable 49.3% of the respondents' poll highlighted its reputation. However, writing and reading skills will be given preference in the academic way of learning a second language. Similarly, the table positioned the reputation of writing and reading skills in second and third spots with 26.7 % and 21.3 % polls of respondents. Despite this, the students are not allowed to guarantee extensive writing and reading in English apart from academic credits. It creates an environment of rote self-based learning and they are not offered chances to understand the lexical and grammatical connotations and purposes in second language acquisition.

Challenges Faced by Students in Writing

Table 3. Challenges faced by students in writing

S. No	Skills	Grades					
		Always	%	Sometimes	%	Never	%
	Writing						
1	Inaccurate Grammar	62	41.3	86	57.3	2	1.3
2	Inadequate Vocabulary	50	33.3	92	61.3	8	5.3
3	Poor Organisation (Coherence and Cohesion)	48	32.0	96	64.0	6	4.0
4	Poor Mechanics (Spelling, Punctuation and Capitalisation)	48	32.0	98	65.3	4	2.7

Creating a written work comprises numerous fundamentals that English Language Learners (ELLs) must navigate to establish themselves as proficient writers (Rao, 2017). Primary among these is a focus on enhancing vocabulary and mastering grammar. When ELLs possess a strong grasp of essential grammar rules and a diverse vocabulary, the students gain confidence in enhancing their English writing skills.

Table 3 illustrates the faculties' perception of students facing problems in writing English. Inaccurate grammar and inadequate vocabulary skills got higher responses with 41.3 percent and

33.3 percent. In addition, it indicates that the students needed much assistance in that range. Moreover, the grammar rules are taught in the classrooms theoretically rather than explained practically within the stipulated limit of teaching hours. Learning vocabulary in a second language is essential to discipline with practical application understanding. It is hard for a language teacher to help students to master the vocabulary, within constructed teaching hours. To enhance grammar and vocabulary skills, the students need a language laboratory to practice and exercise regularly. According to each student's level, they can choose their class model as beginner, intermediate and advanced to meet their language needs.

Challenges Faced by Students in Reading

Table 4. Students facing problems in reading

S.No	Skills	Grades					
		Always	%	Sometimes	%	Never	%
1	Understanding relations between parts of a text through lexical cohesion devices.	44	29.3	84	56.0	22	14.7
2	Understanding cohesion between parts of a text through grammatical cohesion devices.	42	28.0	92	61.3	16	10.7
3	Distinguishing the main idea from supporting details.	38	25.3	94	62.7	18	12.0
4	Extracting salient points to summarise	42	28.0	88	58.7	20	13.3
5	Selective extraction of relevant points from a text.	44	29.3	84	56.0	22	14.7

In the year 1985, a report released by Anderson, Hiebert, Scott, and Wilkinson, titled as, "Becoming a Nation of Readers: The Report of the Commission on Reading", outlined the definition of reading and also suggested five key principles for effective reading: (1) reading involves active construction, (2) fluency is essential in reading, (3) strategic approaches are necessary for reading, (4) motivation plays a crucial role in reading and (5) reading is an evolving skill that develops over time. In academics, reading almost relies on core textbooks and students are not encouraged for extensive reading. Pigada & Schmitt (2006) stated extensive reading in second language acquisition primarily boosted spelling proficiency.

Table 4 illustrates the faculties' perception of students facing problems in reading English. Proficient reading encompasses the retention of the central concept of a text. However, in the absence of lexical and grammatical knowledge, it remains difficult to understand the context primarily and continued with not being able to recollect the context secondarily. In the limited teaching hours, the language instructors strive to cover the theoretical concepts of a second language. However, language skills are acquired with practical application and individual assistance. Language Laboratory (Lab) shall provide these options, so the students do not need to always rely on a language teacher. They shall develop their language needs with practical experience.

Perception toward Language Laboratory

Table 5. Perception toward language laboratory

S.No	Opinion about language lab	Grades					
		Average	%	Good	%	Excellent	%
1	Using technology for learning English will increase the interest/motivation levels among students	2	1.3	34	22.7	114	76.0
2	English Language Lab builds self-confidence	6	4.0	54	36.0	90	60.0
3	English Language Lab is to improve the communication skills among students	2	1.3	36	24	112	74.7
4	Students are more attentive in the English Language Lab than in the theory class.	6	4.0	54	36.0	90	60.0
5	It helps the students and teachers to have an English environment on the campus.	4	2.7	38	25.3	108	72.0
6	The overall level of language laboratory	8	5.3	44	29.3	98	65.3

A teaching environment that integrates technology tends to be more effective than traditional lecture-based classes (Ahmadi, 2018). Table 5 correspondingly indicates that 114 (76.0%) respondents sensed that using technology for learning English will increase the interest/motivation levels among students.

When learning takes place in a different environment, learners acquire new experiences and perspectives (Rao, 2019). 90 (60.0%) of respondents supported that the English Language Lab builds self-confidence among students. In the language Lab the students get privacy, which aids them in learning from their mistakes. With computer assistance, the growth of the learners will be recorded and monitored.

Consequently, 112 (74.7 %) respondents reinforced that language labs help the students to improve their English communication skills without any learning break. Real-world practice and experience are essential and cannot be replaced by anything else (Tanner, 2006). In the language classroom, all the students in the class will not get an equal opportunity to practice theoretical learning skills. 90 (60.0 %) respondents reinforced that the language lab will give a practical environment to practice language skills.

In addition, 108 (72.0%) respondents accepted that the language lab provides the students and teachers with an English environment inside the campus. Here language learning skills of ESL learners are equipped in a better way by offering equal opportunities to learn along with students who will get a practical situation to apply and experience the theoretical knowledge, which they acquire from the language classes.

CONCLUSION

In India Information and Communication Technology (ICT) has significantly transformed education. However, we have not yet reached the intended level of IT integration in higher education within the country (Mahajan, 2002). Bhattacharya (2008) stated that in the realm of engineering education in India, there is a need to leverage Information and Communication Technology (ICT) to expand the reach of high-quality education. This is necessary to fulfil the growing demand for such education within the country. Using technology for learning and teaching English is still not fully explored. Both learners and teachers can gain a lot by using it and can also contribute to it (Drigas & Charami, 2014). Table 5 illustrates that the majority of the English language faculty had a virtuous perception of the language lab in developing the English proficiency of the students. 98 (65.3%) responded emphasising the need for a language laboratory inside the campus.

Limitations and further scope

This study aims to discover the key skills that engineering students need to learn English as a Second Language in higher education. It also looks into the main problems they face when improving their reading and writing abilities. Finally, it presents the opinions of English language

teachers in engineering colleges about the importance of language labs for practical learning in these institutions.

In further studies, how well language labs effectively help learners in improve speaking, listening, reading, and writing in a second language. Understanding the problems learners face in these labs while acquiring language skills. Enhancing language labs with modern technology, interactive tools, and adaptable material.

Acknowledgements

We thank all the English teachers (participants) who participated and generously shared their valuable experiences for this research.

REFERENCES

1. Ahmadi, D. M. R. (2018). The use of technology in English language learning: A literature review. *International journal of research in English education*, 3(2), 115-125.
2. Anderson, R. C., Hiebert, E. H., Scott, J. A., & Wilkinson, I. A. G. (1985). *Becoming a nation of readers: The report of the commission on reading*. Washington, DC: National Academy of Education, National Institute of Education, & Center for the Study of Reading.
3. Anna University: Department of English. (n.d.). <https://www.annauniv.edu/>
4. Bhattacharya, B. (2008). Engineering education in India – the role of ICT. *Innovations in Education and Teaching International*, 45(2), 93–101. <https://doi.org/10.1080/14703290801948934>
5. Borooah, Vani and Sabharwal, Nidhi (2021): *English as a Medium of Instruction in Indian Education: Inequality of Access to Educational Opportunities*. Published in: *Reclaiming Development Studies: Essays for Ashwani Saith* No. Anthem Press (2021): pp. 197-226.
6. CEP, IIT-Kharagpur. (n.d.). <http://www.cep.iitkgp.ac.in/cep/?pid=3WSH4M2X&rmid=0&mpos=t>
7. Derwing, T. M., DeCorby, E., Ichikawa, J., & Jamieson, K. (1999). Some factors that affect the success of ESL high school students. *Canadian Modern Language Review-revue Canadienne Des Langues Vivantes*, 55(4), 532–547. <https://doi.org/10.3138/cmlr.55.4.532>
8. Drigas, A., & Charami, F. (2014). ICTs in English learning and teaching. *International Journal of Recent Contributions From Engineering, Science & IT*, 2(4), 4. <https://doi.org/10.3991/ijes.v2i4.4016>

9. Frankel, K. K., Becker, B. L. C., Rowe, M. W., & Pearson, P. D. (2016). From “What is Reading?” to What is Literacy? *Journal of Education*, 196(3), 7-17.
<https://doi.org/10.1177/002205741619600303>
10. Gleason, N. W. (2018). Higher education in the era of the Fourth Industrial Revolution. In Springer eBooks. <https://doi.org/10.1007/978-981-13-0194-0>
11. John, R. D. (2022). LSRW Skills: A Way to Enhance Communication. *International Journal of English Literature and Social Sciences (IJELS)*, 7(1).
12. Kirkpatrick, A. (2007). *World Englishes Hardback with Audio CD: Implications for International Communication and English Language Teaching*. Cambridge University Press, 27.
13. Krishna, D. (2021). Importance of language laboratory in developing language skills. *Arbitrer: Scientific Journal of Linguistics Society of Indonesia*, 8(1), 101.
<https://doi.org/10.25077/ar.8.1.101-106.2021>
14. Kumar, S. (2020, July 15). List of colleges affiliated to Anna University. CollegeDekho.com.
<https://www.collegedekho.com/articles/list-of-colleges-affiliated-to-anna-university/#:~:text=Some%20of%20these%20colleges%20are,more%20than%20571%20affiliated%20colleges.>
15. Laufer, B., & Nation, P. (1995). Vocabulary Size and use: Lexical richness in L2 written production. *Applied Linguistics*, 16(3), 307–322. <https://doi.org/10.1093/applin/16.3.307>
16. Mahajan, S. L. (2002). Information communication technology in distance education in India: A challenge. *Indian Journal of open learning*, 11(2), 269-278.
17. Pigada, M., & Schmitt, N. (2006). Vocabulary acquisition from extensive reading: A case study. *Reading in a foreign language*, 18(1), 1-28.
18. Rao, P. S. (2017). The significance of writing skills in ell environment. *ACADEMICIA: An International Multidisciplinary Research Journal*, 9(3), 5-17.
19. Rao, P. S. (2019). The importance of teaching language skills to the second or foreign language learners of english: A comprehensive study. *Academica: An International Multidisciplinary Research Journal*, 9(4), 6. <https://doi.org/10.5958/2249-7137.2019.00061.2>
20. Reddy, B. M. (n.d.). ENGINEERING EDUCATION IN INDIA – SHORT & MEDIUM TERM PERSPECTIVES. <https://www.aicte-india.org/>. <https://www.aicte-india.org/sites/default/files/Short%20Term%20and%20Medium%20Term%20Report%20%281%29.pdf>
21. Roopa, S., & Rani, R. R. R. (2012). Questionnaire designing for a survey. *Journal of Indian Orthodontic Society*, 46, 273–277. <https://doi.org/10.5005/jp-journals-10021-1104>

22. Santos, T. (1988). Professors' reactions to the academic writing of Nonnative-Speaking students. *TESOL Quarterly*, 22(1), 69. <https://doi.org/10.2307/3587062>
23. Suherdi, D. (2019). Teaching English in the industry 4.0 and disruption era: Early lessons from the implementation of SMELT I 4.0 DE in a senior high lab school class. *Indonesian Journal of Applied Linguistics*, 9(1). <https://doi.org/10.17509/ijal.v9i1.16418>
24. Tanner, C. A. (2006). The next transformation: clinical education. *The Journal of nursing education*, 45(4), 99-100.
25. Thiagarajan, K. (2008). Higher education and practice of English in India. *Language in India*, 8(8), 2-6.
26. Weber, F., & Bali, K. (2010). Enhancing ESL education in India with a reading tutor that listens. *Proceedings of the First ACM Symposium on Computing for Development*, 1–9. <https://doi.org/10.1145/1926180.1926205>
27. Zhou, A. (2009). What adult ESL learners say about improving grammar and vocabulary in their writing for academic purposes. *Language Awareness*, 18(1), 31–46. <https://doi.org/10.1080/09658410802307923>