

Research Paper

# An Impact Study on the Oral Proficiency of Students from Tamil Medium Schools Tutored in Digital Language Laboratory

K. Thangaraj<sup>1</sup> and S Anandhi<sup>2\*</sup>

<sup>1</sup>Professor (English), Centre for Students Welfare, Tamil Nadu Agricultural University, Coimbatore, India

<sup>2</sup>Asst. Professor (Mathematics), Anbil Dharmalingam Agricultural College and Research Institute, Tiruchirappalli, India

\*Corresponding author: anandhi.s@tnau.ac.in (ORCID ID: 0000-0001-6603-2599)

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## ABSTRACT

This research study examines the oral expressions of students from Tamil medium schools before and after a targeted educational intervention using the Digital Language Laboratory (DLL). The focus was on enhancing key areas of oral skills such as pronunciation and accent, fluency, vocabulary, syntax and grammar, and the confidence level of students. This study involved 64 students (45 girls and 19 boys) from Anbil Dharmalingam Agricultural College and Research Institute (ADAC&RI), and Horticultural College and Research Institute for Women (HC&RI W), in Tiruchirappalli, India. After a diagnostic test, the selected students received systematic training in DLL, established under the Indian Council for Agricultural Research – National Agricultural Higher Education Plan – Institutional Development Plan (ICAR – NAHEP- IDP) at ADAC&RI in Tiruchirappalli. The oral performance of the students was categorised into four levels: Needs Improvement, Fair, Good, and Excellent. The calculated t-value of oral skills is very large, indicating a substantial difference between the pre-evaluation and post-evaluation scores. The p-value is extremely small ( $<0.001$ ), far less than the typical significance level of 0.05. This indicates that the observed difference in means is highly statistically significant.

## HIGHLIGHTS

- ① The intervention in Digital Language Laboratory (DLL) resulted in a remarkable enhancement in the overall performance on the oral skills of students from Tamil medium schools.
- ② The intervention in DLL led to significant improvements across all five key areas of oral skills: pronunciation and accent, fluency, vocabulary, syntax, and grammar.
- ③ However, no student reached the “Excellent” level in any category, suggesting the need for sustained, long-term intervention.
- ④ On a positive note, no student is in the “Needs Improvement” category indicating that the intervention has made a positive impact on the confidence level of students.

**Keywords:** Oral Skills, Expressive Skills, Tamil Medium School, Digital Language Laboratory, Impact Study, Tamil Medium Schools

Oral communication skills are vital for agricultural students as they greatly influence their personal and career development. Students studying agriculture need to be able to advocate for agricultural practices among farmers, business professionals, and policymakers,

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as well as effectively explain complex agricultural concepts, research findings, and technical advancements to various stakeholders. Strong oral communication skills empower students to articulate complex ideas clearly and excel in group discussions, interviews, and presentations.

Students from Tamil medium schools often encounter challenges in developing oral communication skills due to limited exposure to speaking English. While they may have a solid understanding of technical aspects related to agriculture, expressing themselves fluently in languages other than their mother tongue can be difficult, which affects their academic performance, restricts their career opportunities, and creates barriers to sharing knowledge. Therefore, this study was conducted to assess the oral skills of agricultural students from Tamil medium schools using various methods. Subsequently, the students underwent language training in a language laboratory for approximately six months. The effectiveness of the intervention was evaluated, and significant areas for improvement in oral communication skills of students are highlighted in this study.

## MATERIALS AND METHODS

Assessing oral proficiency is crucial as it is influenced by various factors, including the accuracy of the appropriate score for the assessment. Speaking assessments designate comprehensibility in pronunciation, accuracy in spoken grammar, and using proper vocabulary for the occasion. Pronunciation is often considered crucial to determine if a speaker is native or not (Luoma, 2004). However, it can be difficult to select a specific standard for an assessment due to differences in standards valued in various places and for different reasons. As a result, only a small percentage of students can reach a native-like standard in every aspect.

The quality of speech stream is influenced by pronunciation of individual phonemes, variation of pitch, rate of speech, application of pausing, usage of stress, and intonation, all of which are social and psychological factors. The challenge lies in whether a single rating can address all of these elements.

Oral expression consists of numerous features that people experience through language sounds. Put differently, language sounds allow people to meaningfully and interactively communicate with each other, regardless of where they were born or raised. Thus, spoken language can be organised according to micro and macro skills (Luoma, 2004). Micro skills denote “producing the smaller chunks of language such as phonemes, morphemes, words, collocations, and phrasal units” (Brown, 2004). On the other hand, macro skills are linked to more salient components of oral skills, including “linguistic and non-linguistic characteristics” (Brown, 2004) and “speech stream, fluency, discourse, style, register, pitch, pronunciation, tone, etc”. (Luoma, 2004). Though filler words were noticed in micro skills they were ignored as they can be easily overcome with proper guidance and feedback.

A survey form was prepared to gather information via a Google Form to learn on the background information of the students, including the region of study, educational background of their parents, whether the student was a first graduate, marks in their higher secondary, familiarity with journals and magazines, frequency of library visits, frequency of reading non-literary texts like newspapers and magazines, listening to news in English, and the utilisation of online resources for language learning.

There are two methods for assessing oral performance: analytical and holistic, each with some advantages and disadvantages. By combining an examinee’s overall assessment of their abilities into a single score, holistic scoring emphasises that the total exceeds the sum of its components. The experience of the examiners allows for accurate and quick scoring. Analytical scales, according to Omaggio (1986), provide specific components of each communicative competence, such as features meant to be covered in speaking evaluations or fluency and pronunciation. He further adds that analytical scales offer particular elements of each communicative competence component, such as traits that are meant to be included in oral assessments, pronunciation, or proficiency. Though this kind of scale is highly accurate in evaluating the language proficiency of the students and focuses on crucial skill characteristics, some authors

like Pan and Pan, Jones, and Hughes claim that all the band descriptors are adequate to measure language proficiency.

In conclusion, deciding between holistic and analytical scales will be influenced by a number of factors, including the objective of the test, the size of the class, the scoring requirements, and institutional constraints. Consequently, teachers are expected to decide based on these considerations. Teachers will therefore have to choose one or the other in the light of these factors.

As a norm, “English language learners are tested considering their spoken performance, from simple structures to more complex speeches. However, in speech, students perform short stretches of oral language depending on their levels” (Brown, 2004). Thus, according to Luoma (2004), “oral idea units developed in language performance have to be elaborated and considered much simpler than writing; therefore, grammar in speaking is understood in terms of short phrases and clauses connected with coordinating conjunctions and pauses.” As a result, an assessment to evaluate the oral proficiency of students was conducted using a rubric with a five-point scale by including fluency, pronunciation and accent, vocabulary, syntax and grammar, and the confidence level of the speaker.

In the digital language laboratory students were guided, monitored and practiced speaking tasks such as listening and repeating, listening comprehension and question answering, listening and paraphrasing, group narrative, Chinese whisper, and other group activities. In addition, they were also given certain tasks for practising such as listening to native English speakers, especially the elementary level exercises prescribed for TOEFL and IELTS tests.

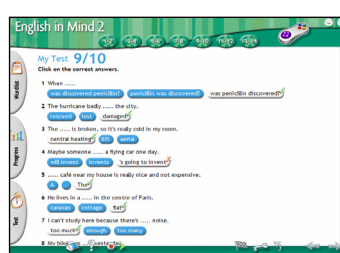
The following skills in oral competency were the main focus on the practice students in the language laboratory:

1. Application of Stress and intonation in speaking
2. Speech rate
3. Basic grammar
4. Vocabulary skills
5. Sentence structure
6. Pronunciation and accent

The following were the software recommended for practicing:

Sl. No.	Skills Assessed	Software Used
1	Vocabulary	English in Mind 2 &3
2	Pronunciation	Business Vocabulary in Use Learn to Speak English – Lessons & Workshops
3	Word Stress & Sentence Stress	English in Mind
4	Grammar	Cambridge English Pronunciation – Elementary Cambridge English Pronunciation – Intermediate Cambridge English Pronunciation – Advanced
5	Fluency	Speech Rate Meter

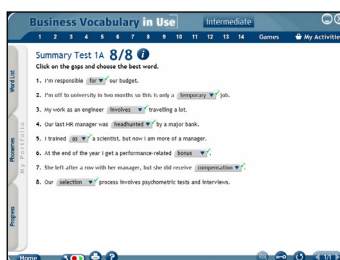
### Screenshots of the Software Used for Intervention



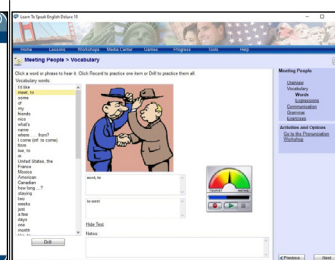
English in Mind 2



English in Mind 3



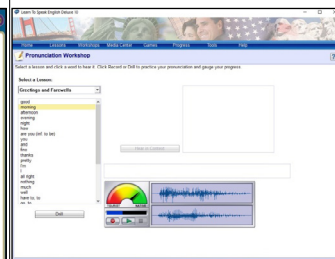
Business Vocabulary in Use



Speech Rate Meter



Cambridge English pronunciation – Intermediate



Learn to Speak English – Lessons & Workshops

### Scoring procedure

To determine the significance of the changes observed before and after the intervention, a paired t-test was administered to evaluate the effectiveness of the remedial exercises. This statistical method allowed the researcher to compare the mean scores from the pre- and post-intervention assessments and to evaluate whether there was a statistically significant improvement in the oral skills of students as a result of the intervention in language laboratory.

### RESULTS AND DISCUSSION

To assess the significance of the changes observed before and after the intervention in the language laboratory, a paired t-test was conducted to determine the effectiveness of the exercises. This statistical method enabled to compare the mean scores from the pre- and post-intervention assessments and ascertain whether there was a statistically significant improvement in the speaking skills of the students due to the intervention in the language laboratory.

The study aimed to improve the oral skills of the students focusing on pronunciation and accent, fluency, vocabulary, syntax and grammar, and confidence. Speaking skills were evaluated on four levels: Needs Improvement, Fair, Good, and Excellent. The goal was to assess the impact of the intervention and identify areas for improvement in students' oral communication. The summarized data is presented in the table below.

Pre-evaluation Skills	Needs improvement	Fair	Good	Excellent
Pronunciation and Accent	35	65	0	0
Fluency	63	37	0	0
Vocabulary	55	45	0	0
Syntax and Grammar	69	31	0	0
Confidence	48	52	0	0

In the initial pre-evaluation process, a significant number of students are in the "Needs Improvement" category. Specifically, 69% and 63% of students are in need of improvement in syntax and grammar, and

fluency, respectively. Vocabulary (55%), pronunciation and accent (35%), and confidence (48%) also show notable percentages of students requiring improvement. Conversely, a larger group of students are at the "Fair" level across all skill areas, with 65% in pronunciation and accent, and 52% in confidence having the highest percentages at this level. However, no students reached the "Good" or "Excellent" levels in any of the evaluated areas, indicating the need for focused interventions to enhance the performance of students beyond the "Fair" level.

Post Evaluation skills	Needs improvement	Fair	Good	Excellent
Pronunciation & Accent	6	82	12	0
Fluency	19	72	9	0
Vocabulary	17	74	9	0
Syntax & Grammar	14	66	20	0
Confidence	0	69	31	0

The results of the post-evaluation performance of Tamil medium school students in five areas of oral skills indicate a significant decrease in the number of students who are in need of improvement. Particularly, there was a notable enhancement in pronunciation and accent, with the percentage of students in need of improvement dropping from 35% to 6%. Moreover, 12% of students achieved a "Good" rating.

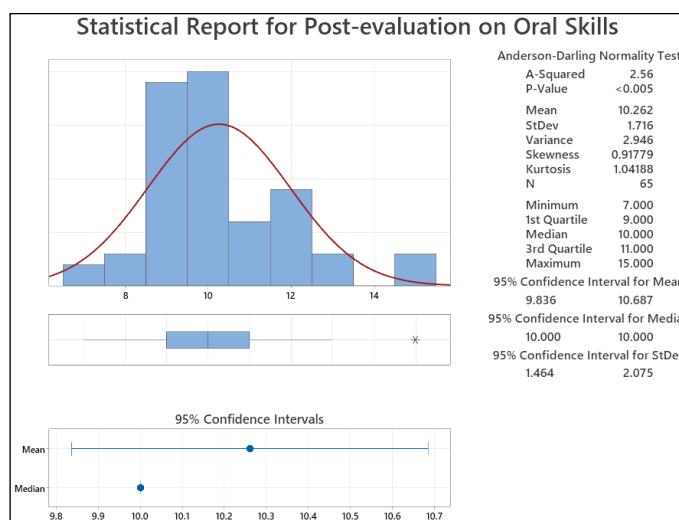
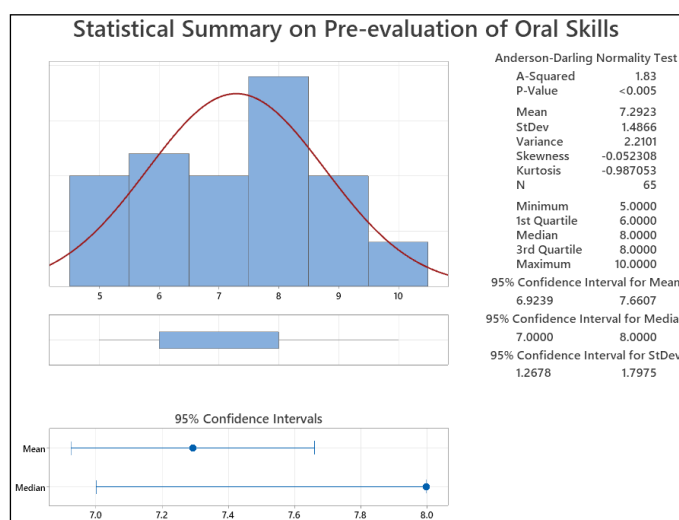
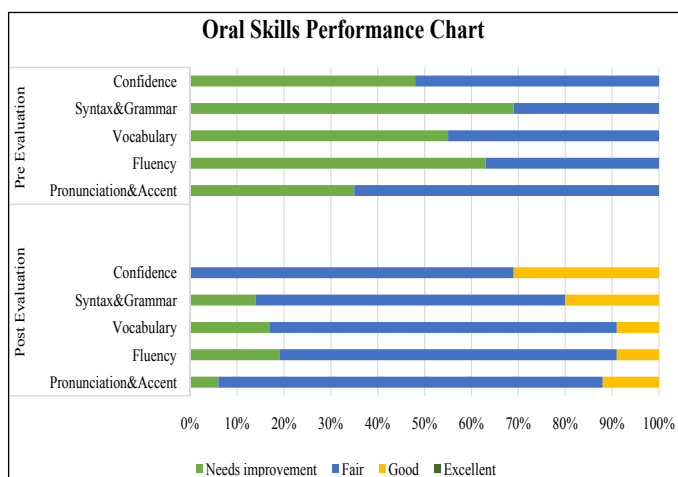
In terms of fluency, there was a considerable decrease in the number of students in the "Needs Improvement" category, from 63% to 19%, with 72% of students moving to the "Fair" category. Similarly, in the vocabulary category, there was a drop in the "Needs Improvement" level from 55% to 17%, with an increase of 75% of students in the "Fair" level and 9% of students reaching the "Good" level. The performance of students in the area of syntax and grammar showed noticeable progress, reducing the "Needs Improvement" category from 69% to 14%, along with a modest increase in students rated as "Good." Confidence levels also improved, with 69% of students in the "Fair" level and a significant 31% reaching the "Good" level. Notably, no student is in the "Needs Improvement" level, indicating



that the intervention has had a positive impact on the confidence of students.

### Statistical Analysis of Paired t-Test

A paired t-test was used to analyse whether there was a significant difference in the overall performance on the oral skills of students from Tamil medium schools before and after the intervention at the language laboratory. The pre-evaluation scores represent the combined total for each category (pronunciation and accent, fluency, vocabulary, syntax and grammar, and confidence) of 65 students before the intervention. The post-evaluation scores represent the combined total for each category after the intervention.



### Statistical Data

Oral Skills	N	Range		Mean	Standard Deviation	Standard Error Mean
		Min	Max			
Pre evaluation	65	5	10	7.292	1.487	0.184
Post evaluation	65	7	14	10.262	1.716	0.213

### Estimation for Paired Difference

Mean	Standard Deviation	SE Mean	95% Confidence level for $\mu_{\text{difference}}$	t value
-2.969	1.489	0.185	(-3.338, -2.600)	-16.07

### Interpretation

The calculated t-value of oral skills is very large, indicating a substantial difference between the pre-evaluation and post-evaluation scores. The p-value is extremely small (<0.001), far less than the typical significance level of 0.05. This suggests that the observed difference in means is highly statistically significant. With a 95% confidence interval for the mean difference, the result confirms a significant difference in the performance of students before and after the intervention in oral skills.

The paired t-test results strongly indicate that the intervention in the language laboratory led to a

significant improvement in the overall performance of students in oral skills. The null hypothesis that there is no difference between the pre- and post-evaluation scores is rejected. The data provides compelling evidence that the language laboratory intervention had a positive and statistically significant impact on oral skills of the students.

## CONCLUSION

This study presents compelling evidence of significant improvement in the oral communication skills of students studied in Tamil medium schools. The comparative analysis between pre-evaluation and post-evaluation results shows significant improvements across all the five key areas of oral skills. There has been a marked decrease in the number of students requiring improvement in all oral skill categories, emphasizing the value of this educational resource. However, it is noteworthy that no student has reached the “Excellent” level in any category, suggesting that the intervention has been effective in elevating students to an intermediate level of proficiency. This research underscores the necessity for sustained, long-term practice in the Language Laboratory to advance students beyond the “Fair” category and into the “Good” and “Excellent” levels, particularly in areas such as pronunciation and accent, fluency, and vocabulary.

The successful utilization of the Language Laboratory indicates that with ongoing effort, these students can continue to enhance their English oral proficiency, which will prove advantageous for their academic and professional futures. Future research should delve into the long-term effects of these interventions and explore additional factors, such as regular practice and real-world application, to further augment their oral communication skills.

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