

CASE STUDY

Using Speechace speaking test for spoken language assessment at University of Costa Rica (UCR)



Author's note

This case study is jointly written by School of Modern Languages, University of Costa Rica and Speechace LLC. For further inquiries please contact below emails.

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Introduction

In recent years, technology has been increasingly utilized in education for assessment purposes. One particular technology that has gained popularity for language assessment purposes is speech recognition (Chapelle & Voss, 2017).

In this case study, we explore how a large-scale university implemented Speechace's speech recognition technology for assessing spoken English proficiency.

Background

The University of Costa Rica (UCR) through the School of Modern Languages and its Foreign Language Assessment Program (Pelex) is the official public institution of Higher Education in Costa Rica to assess foreign languages, and it is the translator and interpreter testing center for the Ministry of Foreign Affairs. Pelex is mainly devoted to measurement and research on foreign languages through standardized testing.

The School of Modern Languages, at the University of Costa Rica, is a premier foreign language institution that conducts an annual country-wide assessment of English skills for high school students for the Ministry of Education. As part of this annual assessment, 75,000 high school students are evaluated on reading and listening skills. The outcomes of the annual assessment are then used for diagnostic purposes and for developing the nation's educational policy to address the English language training needs of students (Araya Garita, Elizondo González, & González Ramírez, 2022.)

UCR realized that while reading and listening skills are important, spoken English skills are invaluable in determining a student's career success and thereby the nation's economic development. Therefore, assessing the spoken English skills and providing adequate training programs for spoken English were deemed vitally important. However, since spoken language assessments can be very time-consuming and the assessment results are often subjective, UCR wanted an automatic solution that would enable them to assess students' spoken English proficiency with repeatable accuracy and in near real-time.



Solution

UCR decided to try out Speechace's speaking test solution over a period of 6 months to assess the students' speaking proficiency. The solution included the use of Speechace's avatar based spontaneous spoken English assessment that presents 3 open-ended questions with cue cards and accepts a student's spoken response via microphone or webcam. Speechace's technology then utilizes state-of-the-art artificial intelligence algorithms to assess the students' pronunciation, fluency, grammar, and vocabulary and provides a comprehensive score that is readily translated into a variety of standardized rubrics such as CEFR, IELTS,

PTE, TOEFL, and TOEIC. Additionally, Speechace's solution allowed the students to take the speaking assessment online at their convenience from any device, thereby freeing up the need to reserve computer labs for conducting the assessment

**Comprehensive score translatable
to standardized rubrics**



Furthermore, the Speechace speaking assessment comes with a high-quality test management interface that allows UCR examiners to create custom tests, review student performance and export results for validation.

“ At the University of Costa Rica (UCR), We have been using the Speechace Speaking test for almost a year. It is a **highly reliable and accurate language tool for assessing the English language** proficiency of our EFL students in Costa Rica and other countries in the area such as Panama, and Colombia in South America.”

“ From all language tests available in the market, the Speechace AI-driven English Speaking test has been the **most adaptable and user-friendly platform for creating and administering localized English language tests** for ESL/EFL learners from diverse locations.”



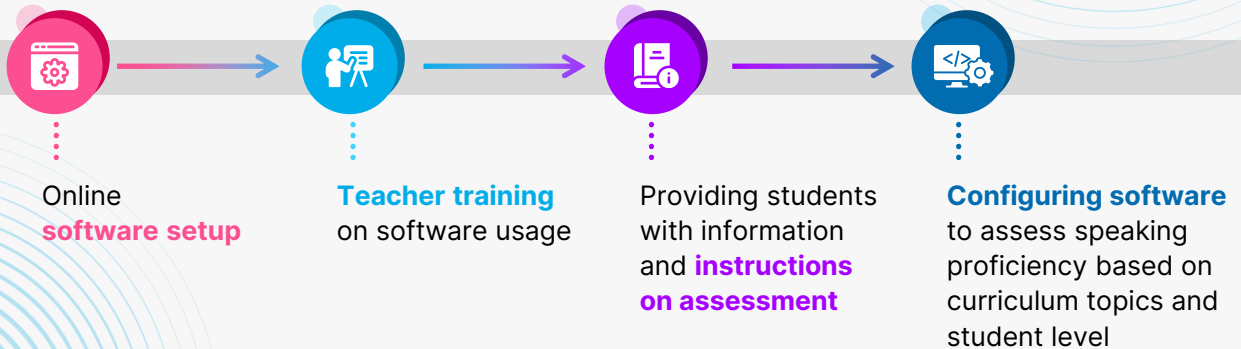
Dr. Allen Quesada-Pacheco

Director School of Modern Languages
University of Costa Rica

Active users		Invited users			
10 active users					
NAME	SPEECHACE	COMPLETED	DURATION	DATE (UTC)	
Franf	6.6	1	0s	2 Dec '22, 05:34 PM	...
Mishel Valenzuela	6.7	1	0s	2 Dec '22, 05:05 PM	...
Mariana Ullompart	6.9	1	0s	2 Dec '22, 04:39 PM	...
Toscano	6.3	1	0s	2 Dec '22, 04:21 PM	...
Isbel Chirinos	6.7	1	0s	2 Dec '22, 04:02 PM	...
Maria Sol Viaut	4.1	1	0s	2 Dec '22, 03:31 PM	...
Abhishek Gupta	1.3	1	0s	1 Dec '22, 09:21 AM	...
Fran	6.5	1	0s	2 Dec '22, 01:58 PM	...

Implementation

The process:

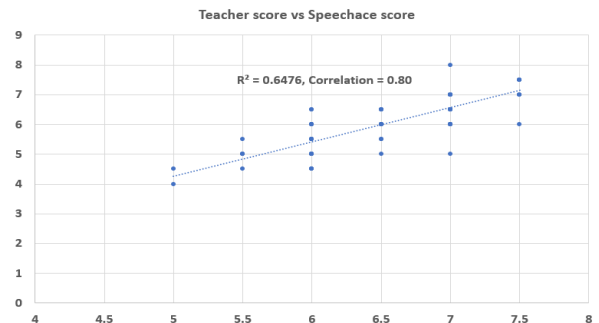


Results

The implementation of speech recognition technology for speaking proficiency assessment yielded highly positive results. The AI-driven tool enabled UCR to assess students' speaking abilities more accurately and objectively than ever before. The assessments were consistent and objective, and the students' progress could be tracked more efficiently via CSV reports. UCR reported that the automated speaking software saved the teachers' time and reduced the workload associated with manual assessments. Furthermore, the students found the online speaking assessment process enjoyable, engaging and convenient to use.

Additionally, UCR conducted an evaluation of the quality of test results by having an ACTFL-certified faculty member conduct manual grading of a random selection of 100 student test attempts. UCR faculty found that the Speechace speaking test scored within ± 0.5 IELTS points of the grade awarded by the faculty member with a correlation of 0.8 on manual grades.

Based on the positive results, UCR purchased an initial license for 3,000 tests for 2023 and is in the process of deploying the test for 75,000 students nationwide in 2024 and beyond.



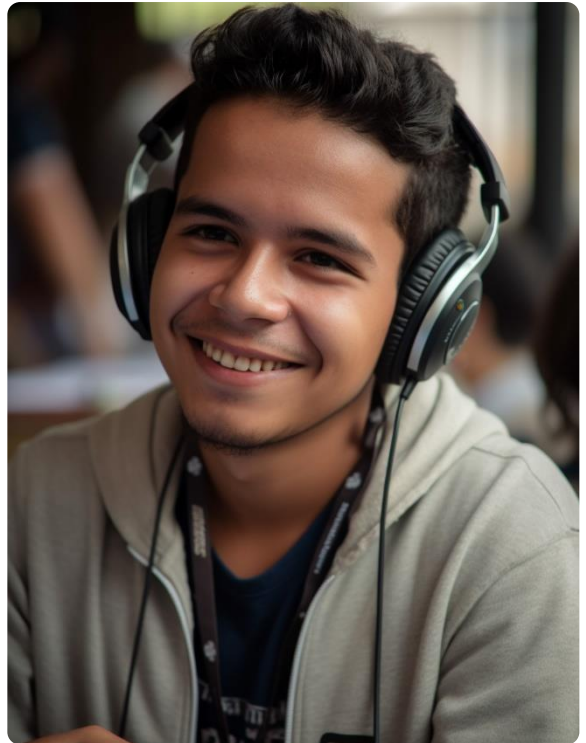
Scores within
 ± 0.5 IELTS
points of
human grader



0.8
Correlation with
human grader

Conclusion

The implementation of Speechace's AI-powered speaking test for English speaking proficiency assessment proved to be a successful solution for the University of Costa Rica (UCR). The automated assessment tool enabled the UCR faculty to evaluate students' speaking abilities more accurately, objectively, and efficiently. The students found the online assessment process convenient and easy to use, which resulted in a better overall localized experience. Speechace's speaking test proved to be a valuable trustworthy tool for spontaneous spoken assessment and is now becoming an integral part of UCR's endeavor to test the English language proficiency for the country's 75,000 high schoolers every year.



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References

- Chapelle, C. A. & Voss, E. (2017). Utilizing technology in language assessment. In E. Shohamy & Or, I. G., & May, S. (Eds.). *Encyclopedia of language and education*, 3rd Edition, Volume 7: language testing and assessment.
- Araya Garita, W., Elizondo González, J. F., & González Ramírez, A. C. (2022). Getting stakeholders acquainted with the rationale behind the construct of the English language proficiency test. *Estudios de Lingüística Aplicada*, 40(75), 119-143. doi: 10.22201/enallt.01852647p. 2022.75.1013.