

# Literary Review: The Role of Language Assessment in the Call Centers Industry

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Abstract: The following work attempts to outline the importance of the using of artificial intelligence in the call centers in Honduras. Recently, it is a great deal during the COVID-19 outbreak, as the demand for such services risen dramatically. With demand increase the quality seems to drop. Hence forth, it is the main task of companies to increase the quality of the agents to sustain their businesses. The work outlines use of artificial intelligence to understand how correctly each letter, word and sentences are utilised during calls by agents. Some data collection techniques and analysing algorithms can be used to indicate where agents make mistakes in their speech. Therefore, the techniques also will be discussed in this work.

## 1 INTRODUCTION

Call centers are English-speaking companies since 2008, they have expanded their growth in Honduras, with a significant contribution to 6,489 job in 2016 (La Tribuna, 2017). There are different areas, most of them hire agents who are dedicated to areas such as product sales, customer retention, accounts receivable, customer recovery. These agents are hired by recruiters and must undergo multiple exams to obtain a position in the various companies. The exams that are carried out to be able to work in a call center are: time it takes to type a certain number of words on the computer, oral, written, comprehension exams. These exams are name assessments, an assessment involve gathering and interpreting data for a variety of reasons being a challenge process that usually use questionnaires and structures interviews.

After being selected for hiring, people undergo training in which they must know the products of the company for which they applied and the processes they must carry out. This training usually takes a month, where the future agent must study a manual during the first two weeks and work is done in pairs. In the third week they begin to conduct test calls with real clients, where they are given extensive feedback on strengths and opportunities for improvement. In the last week they must continue to make real calls

and put into practice everything they have learned. It is extensive training and some of the agents do not make it to the end. One limiting factor is the lack of data with detailed annotations for language assessment experiments (Shi, 2013).

People who works in call center should present themselves as neutralized near native speakers of some standard English (Forey, 2010). As a result of the covid pandemic and a neutralized speaking, the demands of consumers around the world have increased and, therefore, the services offered by call centers have become crucial to the new normal (La Prensa, 2020).

However, some of the biggest problems it has had is the constant complaints from users about the agents' accents. And that is where many of the call center companies have begun to use artificial intelligence to measure the English level of their employees. In these applications, a logarithm is used in which it indicates at what level the pronunciation of the words is, which letters are being pronounced incorrectly and which is being pronounced correctly. In this way, what is intended is to raise the level of English of the agents. In Honduras there are more than 450,000 unemployed people, according to the Ministry of Labor, so a better business climate is urgently needed to attract investment, say authorities from the Honduran Council of Private Enterprise (El Heraldo, 2021).

The ubiquity of technology has also affected language assessment and engendered the field of computer-assisted language testing (CALT), dedicated to exploring how computers and technology can be utilized for evaluating different language skills of non-native speakers (Suvorov, 2013).

## 2 THEORETICAL FRAMEWORK

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### 2.1 Cognitive Translation Studies and Computer Aided Language Learning

For AI-based language assessment, several techniques can be found in the literature. Some of these techniques facilitate the development of different programming algorithms to improve user evaluations. It is necessary to apply cognitive translation studies (CTS). This CTS consist in the understanding of how the human brain learns and achieve more knowledge will develop the mind the ability to make translations and interpretations in a more gradually shape (Xiao, 2020). The way people achieve more information (vocabulary) is biggest problem learning a new language. A computer aided language learning (CALL) can help students to learn in a way that does not feel too aggressive the environment that permits to have more experiences to develop more skills before to start in a difficult scenario (Garrett, 2009).

### 2.2 Cognitive Translation Model and Machine Translation

Two important algorithms are often used to develop software's solutions, the cognitive translation model (CTM) and the machine translation (MT). The CTM

is a cognitive translation model it is an algorithm to help develop a better recognition, identification that will help to replicate the human cognitive-linguistic skills. And the MT is other tool to help to achieve great results of a cognition to replicate the tree of human thinking, and in this way to perform a better communicative skill of the student (Gorbis, 2019).

## 3 THEORETICAL FRAMEWORK

When carrying out a literary review of the call center industry, it was observed that the most important language for this industry is English one author show interest in studies of multilingual call centers (Woydack). All the investigations showed that the assessments are carried out through some computer system, only one talks about the disadvantage of using this systems (Douglas, 2007).

Dr. J. Lockwood is the author who appears most in topics related to call center and language assessment (Lockwood, 2012; Lockwood, 2015). The countries that study this topic the most are the Philippines with 38% followed by China with 25%, as shown in figure 1. On the other hand, no research was found on Honduras, even though artificial intelligence applications are carried out in other sectors such as agribusiness (Caballero, 2020; Fernandez, 2021), healthcare (Sorto, 2020) and logistics (Avila, 2020).

Some papers show interesting results about using computer base assessments for example the demonstration of s a viable alternative to using features based on content models trained on large sets of pre-scored responses (Evanini, 2013). The qualitative analysis of communication problems that impact call centers quality and universal language functions (Xu, 2010; Frigal, 2008).

Call Centers Countries

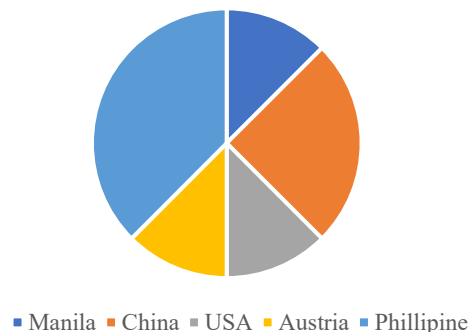


Figure 1: Call Centers Countries.

## 4 CONCLUSIONS

Call centers industry is growing up in Honduras it is important to develop more technical assessments to improve and prepare more people for these jobs. Although there are some artificial intelligence applications in the country, there is no research for strengthen the learning of other languages. As future research, the development of an algorithm that evaluates the level of English and the influence of accents is proposed to better prepare students for the call center technician career.

## REFERENCES

- La Tribuna, 2017. Call Centers un servicio en continuo crecimiento.
- Shi, Q., Li, K., Zhang, S., Chu, S. M., Xiao, J., Ou, Z., 2013. *Spoken English Assessment System for Non-Native Speakers Using Acoustic and Prosodic Features*. p. 4.
- Forey, G., Lockwood, J., 2010. *Globalization, Communication and the Workplace: Talking Across The World*.
- La Prensa, 2020. *Pandemia hace aumentar servicios de 'call centers*.
- El Heraldo, 2021. *La otra cara de la cuarentena: los hondureños que no tienen ingresos durante la emergencia*.  
<https://www.elheraldo.hn/especiales/coronavirus/la-otra-cara-de-la-cuarentena-los-hondurenos-que-no-tienen-ingresos-PAEH1371349>.
- Suvorov, R., Hegelheimer, V., 2013. Computer-Assisted Language Testing. The Companion to Language Assessment. pp. 594-613.
- Xiao, K., Martín, R. M., 2020. Cognitive Translation Studies: Models and methods at the cutting edge. *Linguística Antverpiensia, New Series – Themes in Translation Studies*. 19.
- Garrett, N., 2009. Computer-Assisted Language Learning Trends and Issues Revisited: Integrating Innovation. *The Modern Language Journal*. 93. s1. pp. 719-740.
- Gorbis, B., Hills, B., 2019. *Cognitive Machine Translation Model: POVs and Musketeer Classes as Algorithms of Shared Reality*. p. 8.
- Woydack, J. Language management and language work in a multilingual call center: An ethnographic case study. *Revista Internacional de Organizaciones*. 23.
- Douglas, D., Hegelheimer, V., 2007. ASSESSING LANGUAGE USING COMPUTER TECHNOLOGY. *Annual Review of Applied Linguistics*. 27. pp. 115-132.
- Lockwood, J., 2012. Are We Getting the Right People for the Job? A Study of English Language Recruitment Assessment Practices in the Business Processing Outsourcing Sector: India and the Philippines. *The Journal of Business Communication (1973)*. 49. 2. pp. 107-127.
- Lockwood, J., 2015. What does the Business Processing Outsourcing industry want from English language assessment? *Prospect*. 23. 2. pp. 60-75.
- Caballero, E. M. T., Duke, A. M. R., 2020. Implementation of Artificial Neural Networks Using NVIDIA Digits and OpenCV for Coffee Rust Detection. *5th International Conference on Control and Robotics Engineering (ICCRE)*. pp. 246-251.
- Fernandez, O. A., Ordóñez-Avila, J. L., Magomedov, I. A., 2021. Evaluation of parameters in a neural network for detection of red ring pest in oil palm. *AIP Conference Proceedings*. 2442. 1. p. 030015.
- Sorto, A., Marquez, T., Carrasco, A., and Ordoñez, J., 2020. Face Recognition and Temperature Data Acquisition for COVID-19 Patients in Honduras. *J. Phys.: Conf. Ser.* 1710. 1. p. 012009.
- Avila, J. L. O., 2020. Study Case: Teleoperated Voice Picking Robots prototype as a logistic solution in Honduras, *5th International Conference on Control and Robotics Engineering (ICCRE)*. pp. 19-24.
- Evanini, K., Xie, S., Zechner, K., 2013. Prompt-based Content Scoring for Automated Spoken Language Assessment. *Proceedings of the Eighth Workshop on Innovative Use of NLP for Building Educational Applications*. pp. 157-162.
- Xu, X., Wang, Y., Forey, G., Li, L., 2010. Analyzing the Genre Structure of Chinese Call-Center Communication. *Journal of Business and Technical Communication*. 24. 4. pp. 445-475.
- Friginal, E., 2008. Threats to the sustainability of the outsourced call center industry in the Philippines: implications for language policy. *Lang Policy*. 8. 1. p. 51.