Ni máquina, ni humano, ni disponible: Do College Admissions Offices Use Chatbots and Can They Speak Spanish?
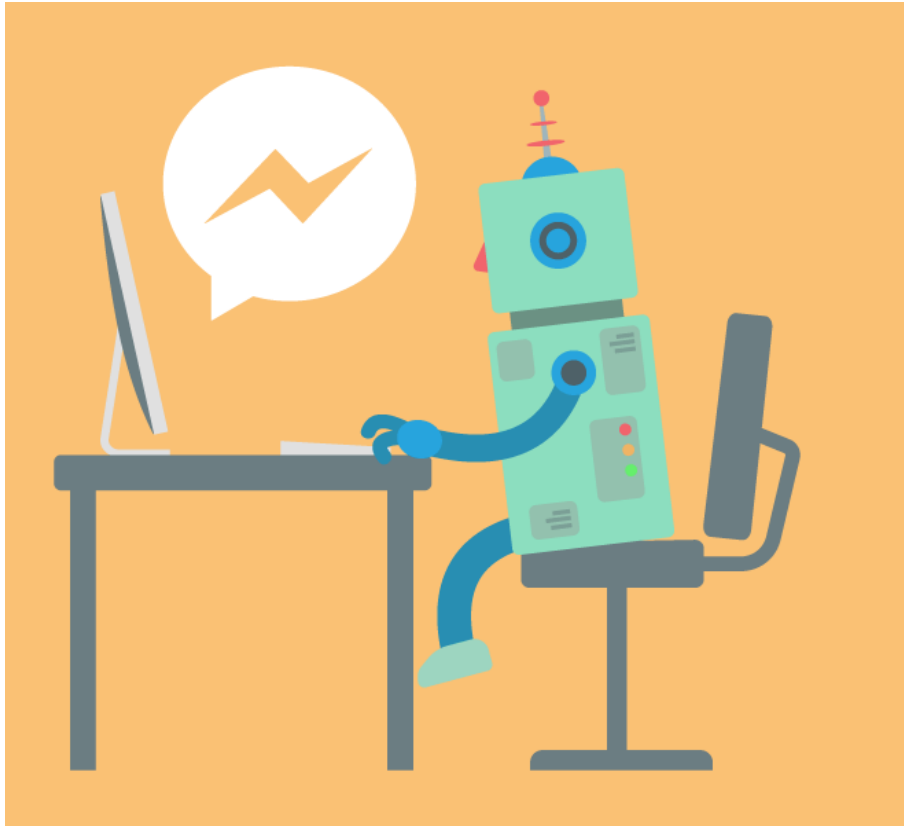
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Dr. Zach Taylor, The University of Southern Mississippi

Linda Eguiluz, Austin Community College

Paige-Erin Wheeler, The University of Texas at Austin

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Land and Labor Acknowledgement:
The University of Southern Mississippi and Institutions of Higher Learning in Mississippi

- We must acknowledge and honor the land and labor of those who came before us, which allows us to learn as a Southern Miss community. We respectfully acknowledge the **Mississippi Band of the Choctaw Nation**, who once occupied the land now considered Mississippi. We aspire to honor and respect the Indigenous peoples who European colonizers forcibly removed from this territory. Yet, the Choctaw Nation remains connected to this land and continues to thrive nearby. We also own our part in the Choctaw Nation's continued displacement by incorporating Indigenous knowledge in our work and working to establish meaningful connections with Indigenous peoples and communities.

- Further, we want to respectfully acknowledge the enslaved peoples, primarily of **African descent**, who provided exploited labor to build and maintain many higher education institutions with little-to-no recognition. We are indebted to their labor and the labor of many who continue to work in the shadows for our collective benefit. As higher education scholars and practitioners, we implore ourselves to remember and honor those whose land we occupy and whose labor we benefit.

Land and Labor Acknowledgement:
The University of Texas at Austin

- We would like to acknowledge that we are meeting on the Indigenous lands of Turtle Island, the ancestral name for what now is called North America.

- Moreover, (I) We would like to acknowledge the **Alabama-Coushatta, Caddo, Carrizo/Comecrudo, Coahuiltecan, Comanche, Kickapoo, Lipan Apache, Tonkawa and Ysleta Del Sur Pueblo**, and all the American Indian and Indigenous Peoples and communities who have been or have become a part of these lands and territories in Texas.

What the Research Tells Us

- United States (U.S.) higher education has struggled with facilitating access to higher education for non-English speakers (Astin, 1982; Auerbach, 2004; Ceja, 2001; Collatos et al., 2004; Cook et al., 2012; Flores & Drake, 2014; Núñez & Oliva, 2009; Núñez et al., 2016), including those who are native, L1 speakers of Spanish (Collatos et al., 2004; Cook et al., 2012; Gonzalez et al., 2015; Martinez et al., 2013; Núñez & Oliva, 2009; Núñez et al., 2016).

Parallel Developments

- Since the advent and teeming widespread use of the Internet in the early 1990s, institutions of higher education have adopted Internet technologies such as **websites** (Taylor, 2018, 2019; Venegas, 2007), **social media** (Peruta & Shields, 2017), **video platforms** (Burdett, 2013; Taylor, 2018; Jones, 2008), and now **virtual reality experiences** (De La Cruz, 2020) to share postsecondary information with both prospective and current students, as well as other stakeholders (De La Cruz, 2020; Jones, 2008; Peruta & Shields, 2017; Taylor, 2018; Venegas, 2007).
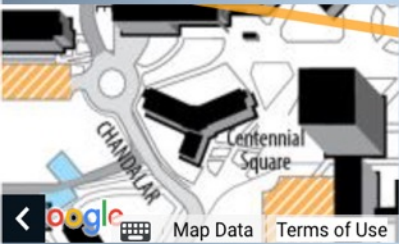
Register Now

Schedule Visit

Apply Online

Welcome

College of Natural ...

College of Natural Science and Mathematics (Murie building)

Centennial Square

CHANDALAR

Map Data   Terms of Use

Next: Continue to College of Natural Science and Mathematics (Murie building)

+1

Language

English

Chinese

Spanish

Privacy Preferences

EN

Research Questions

- R1: Do undergraduate admissions websites embed chatbots to facilitate prospective and current students' access to information?

- R2: If so, are these chatbots assigned human agents or have they been built to provide artificial intelligence (AI)?

- R3: Are chatbots (human agents or AI) programmed to speak Spanish?

Population and Sampling

- Thousands of Title IV participating institutions of higher education in the US and Puerto Rico.
- Random sampling of 331 institutions after a power analysis set to 95% confidence level and 10 confidence ratio.
- 114 public, 175 private nonprofit, and 42 private for-profit.
- Sample appropriately represented the population of Title IV institutions in the U.S.:
  - 34% public institutions (30% of all four-year Title IV institutions are public),
  - 53% private non-profit (58% of all four-year Title IV institutions are private non-profit), and
  - 13% private for-profit (12% of all four-year Title IV institutions in the U.S. are private non-profit).

Data Collection

- Locate admissions instructions on all .edu websites
- Code for presence of chatbot (0=no, 1=yes)
- Interact with the chatbot in English and ask 1.) to speak with a human being and 2.) for more admissions information in English
- Interact with the chatbot in Spanish and ask 1.) to speak with a human being and 2.) for more admissions information in Spanish
- Code for access to presence of English information, presence of Spanish information, English chatbot, Spanish chatbot, English human agent, Spanish human agent, and access to English information and Spanish information

Table 1

Results from content analysis of undergraduate admissions webpages (N=331)

Findings

Institution type	Provided Translated Admissions Content	Embedded Chatbot into Admissions Website
Public	9 of 114 (7.9%)	33 of 114 (2.9%)
Private non-profit	8 of 175 (4.6%)	29 of 175 (16.6%)
Private for-profit	0 of 42 (0%)	9 of 42 (21.4%)
Total	17 of 331 (5.1%)	71 of 331 (21.5%)

Findings

Table 2

Results from quantitative chatbot analysis (N=71)

Institution type	Chatbots		Live Chat		
	Bot-only	Spanish fluency	Live person only	Spanish fluency	No response or representative unavailable
Public (n=33)	17 (23.9%)	14 (19.7%)	11 (15.5%)	3 (4.2%)	5 (7.0%)
Private non-profit (n=29)	6 (8.5%)	5 (7.0%)	12 (12.9%)	1 (1.4%)	10 (14.1%)
Private for-profit (n=9)	1 (1.4%)	0 (0.0%)	6 (8.5%)	1 (1.4%)	2 (2.8%)
Total	24 (33.8%)	19 (26.8%)	29 (40.8%)	5 (7.0%)	18 (25.3%)

Findings

- R3: Are chatbots (human agents or AI) programmed to speak Spanish?
  - Of 21.5% (71) institutions providing chatbots:
    - Only 7.0% (5) connect with human agents are Spanish speakers.
    - When comparing PWIs to HSIs = HSIs were not more likely to provide Spanish-language admissions information, a Spanish chatbot, or a Spanish human agent
    - **Takeaway: Bilingual chatbots are rare, and HSIs do not facilitate Spanish-language admissions information any better than PWIs.**

Discussion/Implications

- AdmitHub and Ocelot rule the chatbot space in higher education.
- **These companies and others do not create technology that is linguistically inclusive.**
  - (STEM fields have minoritized ELLs for years)

  - When we think of HSIs, do we think of technology?
  - Is the technology Hispanic-serving?
  - Is the website Hispanic-serving?
  - Is the chatbot Hispanic-serving?
  - Are the companies that build the chatbots aware of Hispanic serving-ness?
  - Are the HSIs aware that the companies (apparently) are not aware?

Questions and Contact

- Questions and collaborations:
  - Z.W.Taylor@usm.edu
  - pewheeler@utexas.edu

- Paper is here ➔