

Does Science Communication Style Impact Engagement with Hispanic and Latinx Adults?

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Scientific content is limited for Spanish-language speakers in the U.S.

(Medina Luna et al. 2019)

When creating Spanish-language science videos, **cultural communication styles must also be translated**



Creating science content that is culturally appropriate and engaging for adult Hispanic and Latinx audiences can:

- Improve scientific literacy** of a population vulnerable to climate change and extreme weather (e.g., Trujillo et al. 2021)
- Increase knowledge** of Earth science careers, **empower parents to encourage** kids to pursue STEM careers (e.g., Milner-Bolotin & Marotto 2018)
- Build trust** in scientists, **save lives**, and **increase the sense of belonging** in the Earth sciences

An online survey with open and closed Qs was used to test two video styles

Shared message: *Forecasting weather near mountains is challenging because mountains influence local weather*

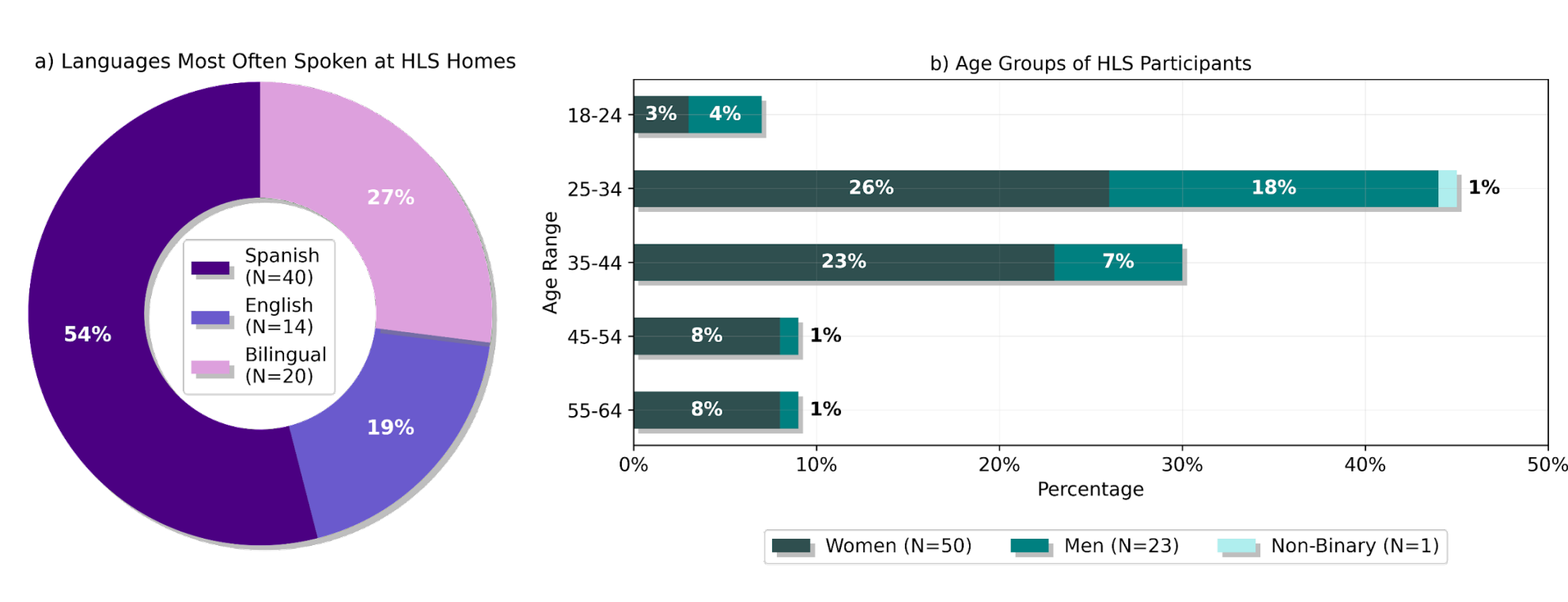
Traditional Video

Formal, documentary style, expert shares information, many on-screen visuals/animations

Conversational Video

Informal, conversation during an outdoor picnic, fewer on-screen visuals/animations

Data analysis performed on surveys from **74 participants** identifying as being of Hispanic, Latino, or Spanish (HLS) origin



Hispanic and Latinx adults prefer the formal communication style, but the informal conversational style was more relatable and increased Earth science career awareness for Spanish-language speakers.

Based on primary language spoken, the conversational style had a positive impacts on:

- SP**
 - Feeling like they are being taught a scientific concept
 - Being able to relate information to their own life
 - Learning something new about weather and forecasting
 - Increasing awareness of career options in the Earth sciences
- EN**
 - Creating a feeling of inclusion while learning something new
 - Connecting with people in the video
 - Feeling comfortable asking questions
 - Sparking curiosity in Earth science or weather forecasting
- BIL**
 - Feeling they share a similar dialect with those in the video

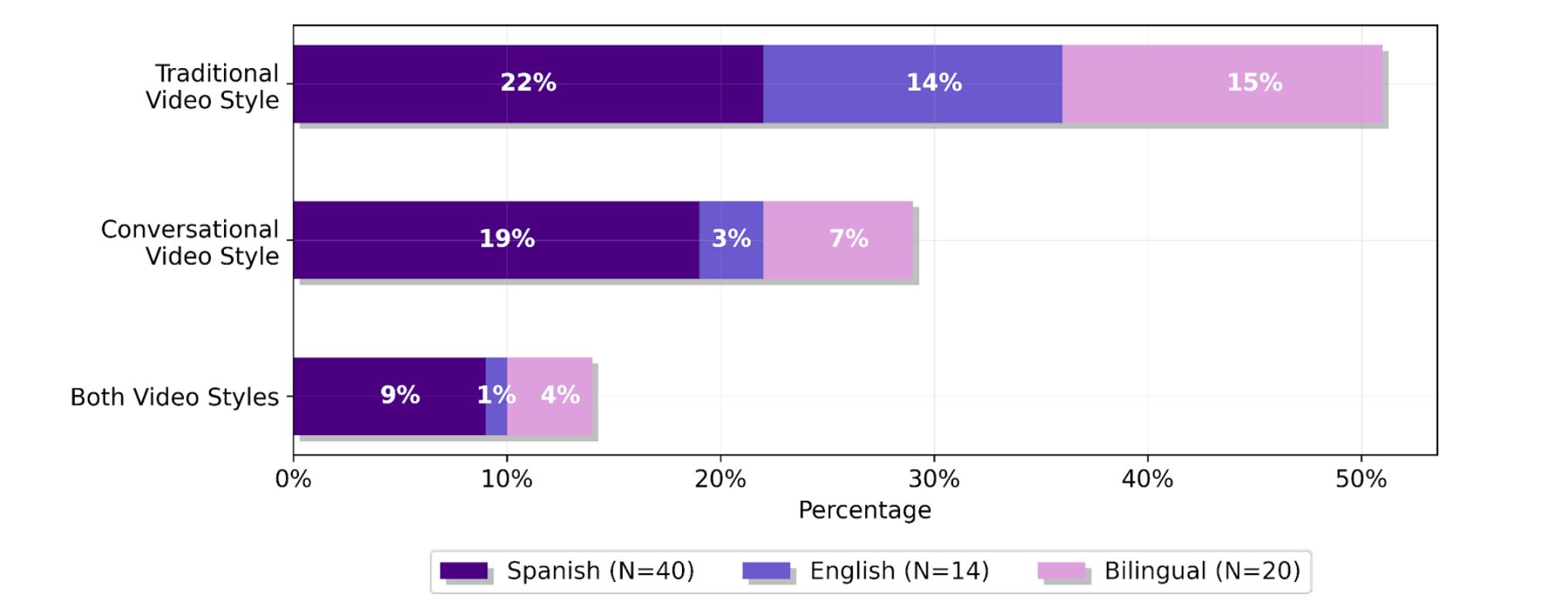
“Me gusto como enseñan las personas trabajando en las computadoras...”

“Presenta una conversación que puede ocurrir en cualquier momento de la cotidianidad nuestra.”

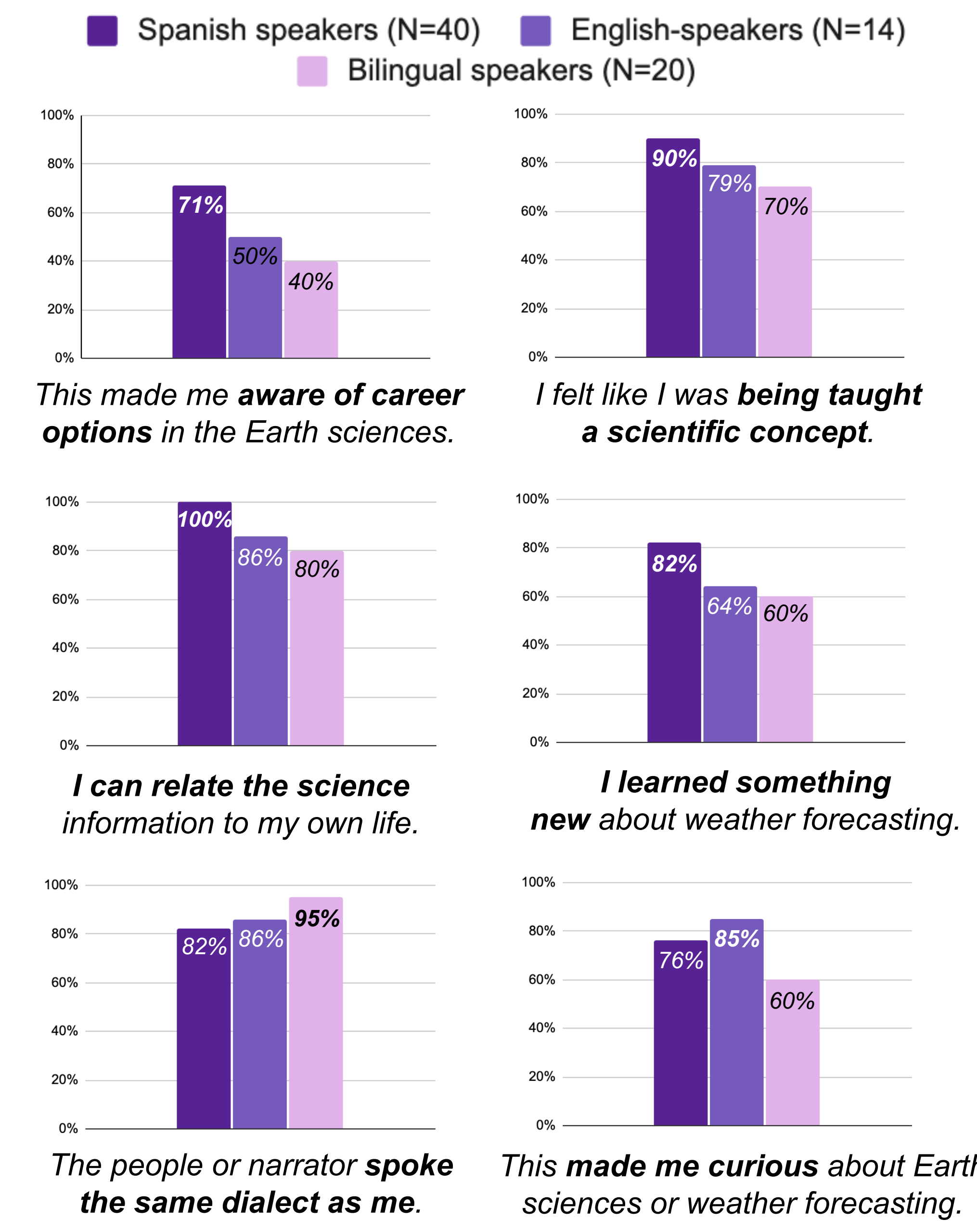
“I appreciate that I had an intro [the conversational video] that was welcoming and then a more scientific approach [the traditional video] that was also very easily digestible.”



51% of Hispanic and Latinx participants preferred traditional video



After watching the conversational video, Hispanic and Latinx participants agreed:

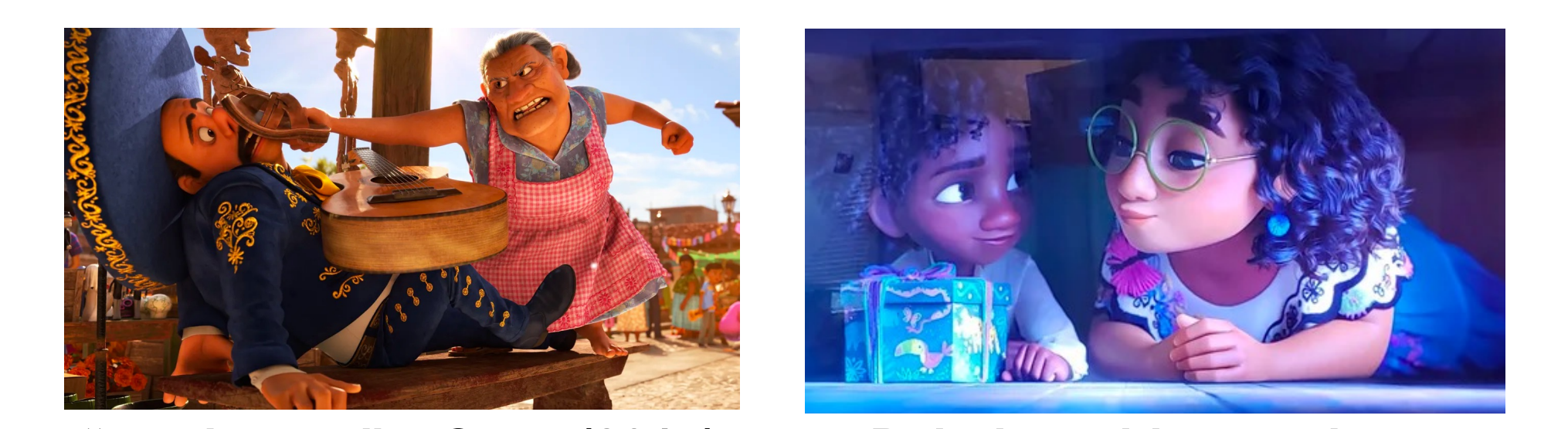


DISCUSSION

- Hispanic and Latinx culture values formality and deference to authority (Albert and Ha 2004)
 - The formality of the traditional video may provide more credibility to the information being communicated
 - Although telenovelas are a popular form of entertainment in Latin America, negative aspects such as being inauthentic, dramatic, or inferior may have been associated with the conversational video
- Educational background, income inequality, age, or trust in authority figures may also play a role in learning and engagement (e.g., Plutzer 2013; Barton et al. 2014)

RECOMMENDATIONS

- Use of both video styles could improve feelings of inclusion and engagement for Hispanic and Latinx adults
- Presenting relatable science information, demonstrating atmospheric scientist is a viable career to Hispanic and Latinx adults may help encourage more Hispanic and Latinx students into STEM careers (Milner-Bolotin & Marotto 2018)
- Future science videos are encouraged to be co-designed by, for, and with Hispanic and Latinx communities to emphasize cultural values while avoiding stereotyping and cultural-appropriation (see below)



“La chancleta” – Coco (2017) Pointing with your lips – Encanto (2021)