Medical Spanish Initiative Toolkit

Learning Engagement Project

Daniela Henriquez Salman | Methods of Learning and Design | Fall 2024

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Background Information

About the Medical Spanish Initiative (MSI)

The Medical Spanish Initiative (MSI) at Georgetown University was established in 2019 by a group of medical students who recognized the significant gap in access to medical services for the Latino community in the United States, particularly regarding communication in their primary language, Spanish. The mission of the MSI is to equip Georgetown medical students with the skills to effectively communicate with Latino patients and parents of patients, as well as educate the School of Medicine community about the specific health needs of the Latino population.

About the MSI Curriculum & Format

The curriculum for the MSI program is developed collaboratively by MSI leadership and faculty advisors. It is designed to align with the topics first-year students are studying during specific semester blocks. Each MSI module focuses on one or two medical subjects, encompassing areas such as history, Latino cultural competency, and Spanish-language grammar. The MSI is a year-long academic program that includes approximately 7-8 classes throughout the academic year, and around 3-4 classes each semester. The format of the modules varies, with some sessions conducted in person and others offered online via Zoom.

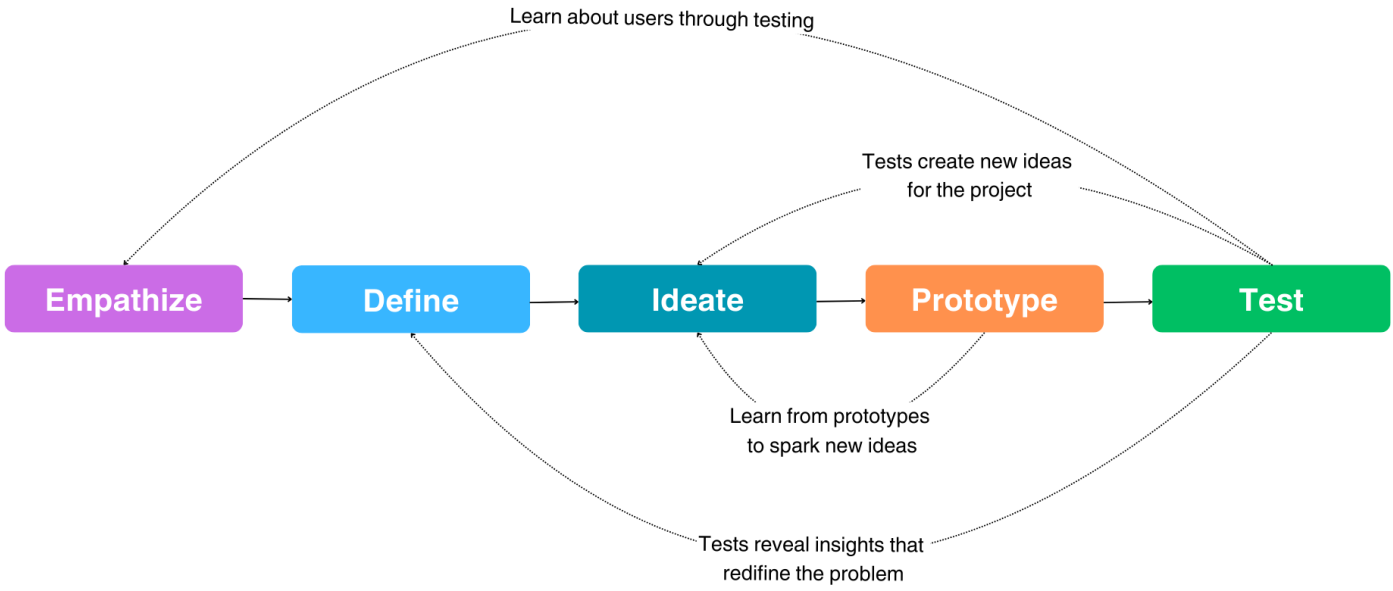
Problem

Problem Overview

The MSI faculty advisors (facilitators) have recognized a disconnect between the students' prior knowledge and the content of the MSI modules. It is essential to modify the modules and provide facilitation skills to better align with the students' proficiency in Spanish and their understanding of medical terminology. Currently, the sessions appear to be more advanced than the students' abilities and levels. Additionally, the modules are heavily lecture-based, raising concerns that an excessive focus on advanced medical terminology could lead to decreased student motivation and higher dropout rates. The MSI faculty advisors aim to make the sessions more dynamic, engaging, and effective in fostering active learning.

Learning Design Approach

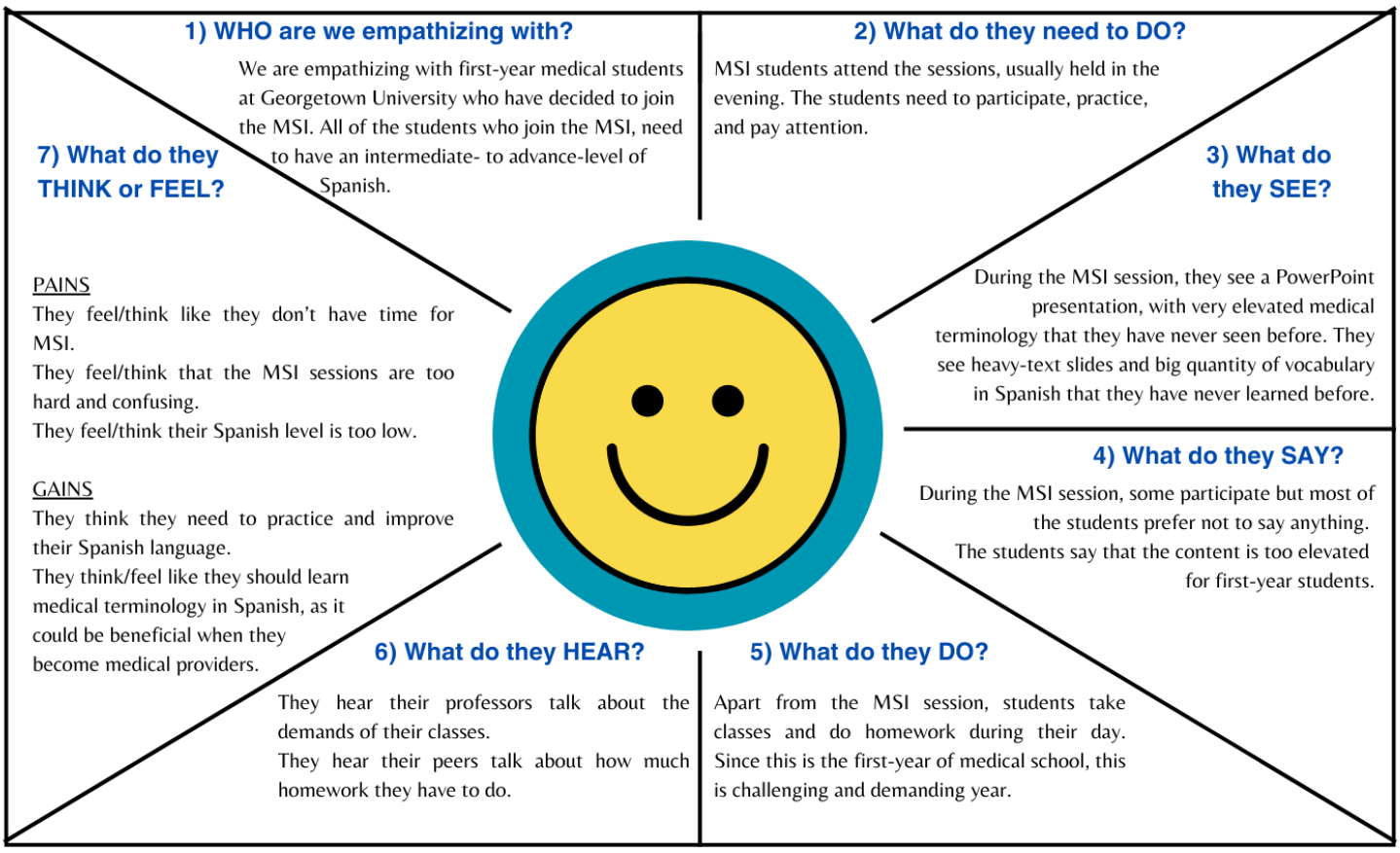
Design Thinking Process



Adapted from Interaction Design Foundation

Empathize

The first step in the design thinking is to learn about the learners. In this case, the target audience are first-year medical students at Georgetown University who have an intermediate- to advanced-proficiency in Spanish. These are students that are interested in learning Spanish in the medical setting. Students join the Medical Spanish Initiative (MSI) voluntarily and can stop attending the sessions anytime. For this part, I have developed an Empathy Map. I have learned about the learners through observation of a couple MSI sessions, conversations with MSI student leaders and MSI faculty advisors.



Define

For students to learn effectively, faculty/facilitators need the tools to create learning environments and pass on the knowledge in interactive and accessible ways. Therefore, I will design a user-friendly, UDL-based toolkit that helps them develop and adapt the MSI sessions to better meet the need of the students.

The Medical Spanish workshop is meant to equip Georgetown medical student with cultural and language competencies, as a well as interpersonal skills that will allow them to succeed in bilingual environments. Students will be able to communicate effectively with Spanish-speaking patients, particularly in high-stakes medical settings.

This toolkit will meet the following goals:

- **MSI Students**: will learn and apply essential medical Spanish terms and cultural sayings in real-life contexts, specifically with patients who have limited to no English proficiency.
- **MSI Facilitators**: have adaptable materials and tools that can be integrated into the MSI curriculum, in order to create better modules and in class learning environments.

Ideate

To meet the objective of the learning engagement, I will develop the toolkit which includes Facilitation Skills Guide, module on Pediatrics, and other activities that MSI leads could adapt to the sessions for next semester and following years. I have adapted the materials and content provided by MSI faculty advisors to better match the UDL process and included active learning activities to promote engagement and participation. The toolkit and, specifically, the Pediatrics module will serve as a sample session for MSI advisors that they will be able to use or adapt in the future.

Brainstorming ideas to include in the MSI sample module on Pediatrics:

- **Interactive Scenarios**: Real-life scenarios in which students can practice conversations with patients and parents.
- **Cultural Competency**: Guidance on understanding cultural differences in communication, including non-verbal cues, greetings, and language formality/preferred language.
- **Role-Playing**: Simulation-based modules where students practice medical dialogues with patients (can be done through case studies or even AI). The role plays can be drafted in advance by the facilitators or let the students come up with a case study during class.
- **Design the presentation for medical students' audience:** Include images and graphics and keep the presentations short and clear. State objectives.
- **Technology:** provide students with materials they can use to practice during their own time (AI companions, video examples from MSI leaders). The materials and resources can be provided in advance to help students get familiar with them before the session.

Prototype

- **Printed Materials:** create and provide student with printed materials of case studies and vocabulary.
- **Digital Materials:**
    - A first draft of the presentation was created using Canva but moved to PowerPoint to be easily accessible for the facilitators to make changes and save multiple copies.
    - The review of last class was created using Menti.com, competition mode. However, other alternatives can be Kahoot and Qualtrics.

- This toolkit was created using Microsoft Word for easy formatting and editing.

Test

- **Pilot test:** During the last session of the semester for the Medical Spanish Initiative, some active learning activities were implemented like creating mini case studies for students to think about specific questions to ask during a medical visit. More testing will be done as new ideas and activities are introduced in the Spring semester.

Learning Theories

The Medical Spanish Initiative's Pediatric module is structured around the principles of Cognitivism, Constructivism, and Connectivism in learning theory.

Cognitivism

Cognitivism focuses on the interplay between language and various cognitive skills, including memory, attention, and problem-solving. As highlighted by Ertmer and Newby, this approach places significant emphasis on knowledge acquisition, as well as the internal coding and structuring of knowledge, positioning the learner as an active participant in their educational journey. Cognitivism acknowledges that "learners' thoughts, beliefs, attitudes, and values are also considered to be influential in the learning process (Winne, 1985). The real focus of the cognitive approach is on changing the learner by encouraging him/her to use appropriate learning strategies." (Ertmer and Newby, 2013) The Pediatrics module incorporates numerous strategies deemed essential within cognitivism, such as memorization, instructional explanations, demonstrations, and illustrative examples. It places a strong emphasis on "practice with corrective feedback," (Ertmer and Newby, 2013) enabling students to refine their ability to formulate questions for patients and address the diverse needs of individuals during medical consultations. Additionally, the module prioritizes "active learner involvement in the educational process," covering aspects like learner control and metacognitive training (Ertmer and Newby, 2013). It also fosters the creation of learning environments that promote connections to previously acquired knowledge, utilizing recall of prerequisite skills (Spanish-language knowledge) and relevant examples or analogies. (Ertmer and Newby, 2013)

Constructivism

The pediatrics module is also grounded in the constructivist learning approach, which emphasizes the context in which learners acquire knowledge. "Knowledge emerges in contexts within which it is relevant. Therefore, in order to understand the learning

which has taken place within an individual, the actual experience must be examined." (Ertmer and Newby, 2013) This module specifically considers the medical context of the United States, focusing on the experiences aspects of cultural language, and the struggles of the Latino population in the American healthcare system.

Connectivism

Additionally, the module incorporates the connectivism learning theory, particularly regarding the intersection of technology and human learning. While the module is designed primarily for in-person participation, it also integrates elements of technology. The Connectivism approach emphasizes this blend of learning environments, employing the "use of technology and connection making as learning activities." (Siemens, 2024). During the module, the students will use technology like Menti.com, Quizlet, and PowerPoint presentation.

Universal Design for Learning (UDL)

Universal Design for Learning (UDL) is a learning framework meant to guide the design of learning environments and experiences to optimize teaching and learning for all people. UDL is a philosophy-of-practice that has the objective of helping make education inclusive and accessible. (Georgetown University, CNDLS) For the Pediatrics module, UDL has been incorporated in the following ways:

Multiple Means of Engagement

The module provides dynamic opportunities for building and sustaining participant interest, involvement, and motivation. For example, this module will offer connections to content relevancy, provide multiple avenues for active learning, and align learning modalities to participant interests and needs.

Multiple Means of Representation

The module presents content in flexible ways for students to receive it. For example, this module will offer content via facilitator-led discussions, visual presentations, peer to peer knowledge sharing, experiential engagement and practice. The modules also allow for the integration of culturally diverse and relevant examples.

Multiple Means of Expression

The module allows for innovative options for participant demonstration of skills and knowledge. For example, this module will offer opportunities for personal reflection, small group discussions and role plays.

Facilitation Skills Guide

This facilitation skills guide is a tool for the MSI facilitators when designing the MSI modules and assessment. It also serves as a guide for effective facilitation of the MSI modules.

Facilitation Tips

- Be prepared with stories and examples to support concepts and activities.
- Know your students by their names. This will create a safe environment inducive for learning.
- Embody the notion that flexibility and adaptability are key to successful instruction within a UDL designed course. As the facilitators of MSI, you can reorganize content, add energizers or breaks, modify timing and expectations. Participant engagement and learning should be the central priority.

Accommodation Notes

- Throughout the module sample, the facilitator will find yellow boxes titled “ACCOMMODATION NOTES” that indicate where the facilitator can modify an activity to create greater degrees of accessibility for students.
- In MSI, it is the facilitator(s) responsibility to adapt and modify the activity to meet the needs of all participants.

Facilitation Notes

- Throughout the module sample, the facilitator will find green boxes highlighting facilitation tips called “FACILITATORS NOTE”. These notes are background information or additional information that the facilitator my share with the students.

Facilitation Format

First-year medical students will join the class if they are interested in learning Medical Spanish. Each session will be a different module, led through Zoom or in-person (decided and notified in advance by the facilitator), and will equip students with the skills and tools to address patients in Spanish effectively and ask relevant questions in a medical consultation setting.

Technology Integration

Integrating technology into MSI modules can significantly enhance the learning experience by providing a more interactive, engaging, and efficient way to practice and apply language skills in a medical context.

Technology can be integrated through:

- Videos
- Practice sets: Quizlet, Google Doc
- Competition games: Menti, Kahoot
- Artificial Intelligence (AI)

Assessment

Since this is a selective class for students, meaning it doesn't count for credit, assessment can be incorporated in the following ways:

Observation and Tracking

During the session, the facilitator will be actively tracking and observing the energy in the room – which words and concepts land and which doesn't, what concepts need more explanation, etc. This will allow the facilitator to notice which concepts need more or less time and which activities are or aren't effective. The facilitator should also be checking for understanding when getting answers from students. Some techniques for observation and tracking include:

- Circulating around the classroom during seatwork and engaging in one-to-one contact with students about their work.
- Ask students to expand on their answers or explain their reasoning.

Reviews

At the beginning of the session, the facilitators will lead a short review of previous class. This review can take the form of a series of questions given to students using technology or guided through conversation. The review is meant for students to think about some concepts and words learnt last class, that they can also use during this session. This will also allow the facilitator to measure how well the concepts landed

last session for improvement of the sessions and will help answer which objectives from the last class were not achieved.

Debrief Questions

Debriefing at the end of the session will help determine if the objectives of the session were met and inform facilitators if they need to review some concepts next session. The debriefing questions will also allow student to share their perspective on what they need to succeed and talk about comfortability levels around the activities. The debrief questions should be open-ended questions that encourage multiple possible responses. Facilitators should structure these questions in advance and make sure they align with the objectives of the module.

Gather Student Feedback

Following the principles of UDL and active learning, facilitators will gather student feedback on the MSI sessions and activities through short surveys, debrief questions, short reflections, one-on-one conversations with students, etc. This feedback will allow facilitators to adapt future modules and come up with activities that will provide students with the tools they need to succeed. Frequent collection of feedback is essential to keep informing the progress of student learning and the effectiveness of the class sessions.

Sample Module: Pediatrics

Mode

In-Person

Duration

90 minutes

Required Prerequisites for Students

- Intermediate level of Spanish
- Georgetown first-year Medical Student

Module Overview

In this module, we will cover common questions used in a pediatric consultation. We will be discovering the differences and practicing the use of “tú” and “usted” when asking questions and addressing parents, children, and youth. This module will provide participants an opportunity to dig deeper into medical Spanish language and cultural competencies related to pediatric consultations.

Module Objectives

Upon completion of module, the student should be able to:

- Learn how to properly address the pediatric patient and the patient's parents.
- Conduct appropriate doctor/patient introductions and ask fundamental patient-related questions in Spanish.

Materials

- PowerPoint Presentation
- Link to Menti: https://www.menti.com/bl848tqsrqb6
- Link to the Quizlet: https://quizlet.com/user/dmh3027/folders/pediatria?i=684ome&x=1xqt
    - Facilitators can share the links in advance of the module.

Room Set-Up

- Ensure the room environment is set up for engagement and group activities, moving tables together for group work.
- Ensure the technology in the room works and you can connect to the internet.

Alternative Activities

There are many ways to conduct active learning activities. Here are some examples of active learning activities that can be adapted to each module.

Performing Case Studies

Students will work in pairs or in a small group to create and act out a role plays of a medical interview, following the topic of that day's class. Students will create their own scenario based on the topic discussed in class. Students will have time to write a short script (5-7 minutes) and then they will perform it in front of the class.

As they work on the script, remember that it is important not only to speak clearly, but also to use gestures and facial expressions to make the situation more realistic. After each presentation, the class will have the opportunity to give feedback on what they did well and what they could improve.

The goal of this activity is to help students practice their Spanish communication skills, vocabulary, formulating questions and dialogue, and work in teams by creating and performing short scenarios that involve real-life medical consultations. This exercise will allow students to engage in role-play, develop empathy, and improve their ability to express themselves clearly in medical contexts.

Round of Interviews

Students will do a fun activity to practice medical interviews in Spanish. The facilitator will divide the class into two groups: one group will be "doctors" and the other will be "patients." The patients will find a space around the room, and each will receive a card with information about their illness, including symptoms and the illness name. Patients, you cannot share the name of the illness—only the symptoms!

Doctors will have 5 minutes with each patient to ask questions and try to diagnose the illness based on the symptoms described. You'll need to use your Spanish communication skills to conduct a short medical consultation. After 5 minutes, the doctors will rotate and meet a new patient. The doctors should keep the questions focused on symptoms and try to guess what illness the patient has!

This activity will be a great chance for students to practice asking questions and diagnosing in a real-world context. Students will actively use medical vocabulary and phrases related to symptoms, diagnosis, and treatment. The role-play format encourages students to practice asking and answering questions in Spanish. This helps them become more comfortable with medical terminology in a conversational setting, mimicking the interactions they might have in real-world clinical environments.

Medical Visit Observations

Students will observe two videos featuring interactions between a doctor and a patient. They should pay close attention to the patient in each video.

After the first video, ask the students: "Was this video an example of good or poor listening skills during the doctor-patient interaction?" The expected answer is "poor listening skills." Encourage students to reflect on the effectiveness of the communication and identify areas for improvement.

Next, tell students that they will watch a second video and remind them to focus closely on the patient again.

After the second video, ask the students: "What did you observe from the patient this time?" Encourage students to reflect on the effectiveness of the communication and identify areas for improvement.

The purpose of the observations is not to evaluate the outcome of the conversation, but rather to assess the listening skills demonstrated or lacking during the interactions. In both videos, the outcome remains the same, but the listening skills and attitude of the doctor should influence how the conversations unfold. By incorporating these observational activities, facilitators can provide students with valuable real-world insights, enhance their cultural awareness, and deepen their understanding of the complexities of medical Spanish communication in healthcare settings.

The videos can be recorded by MSI student leaders or sourced from YouTube. Here is an example of the type of videos that facilitators can use:

Video 1: https://youtu.be/QlBR2o2kf1M?feature=shared

Video 2: https://youtu.be/gpWmbBHetzg?feature=shared

Virtual Patient Simulations using AI

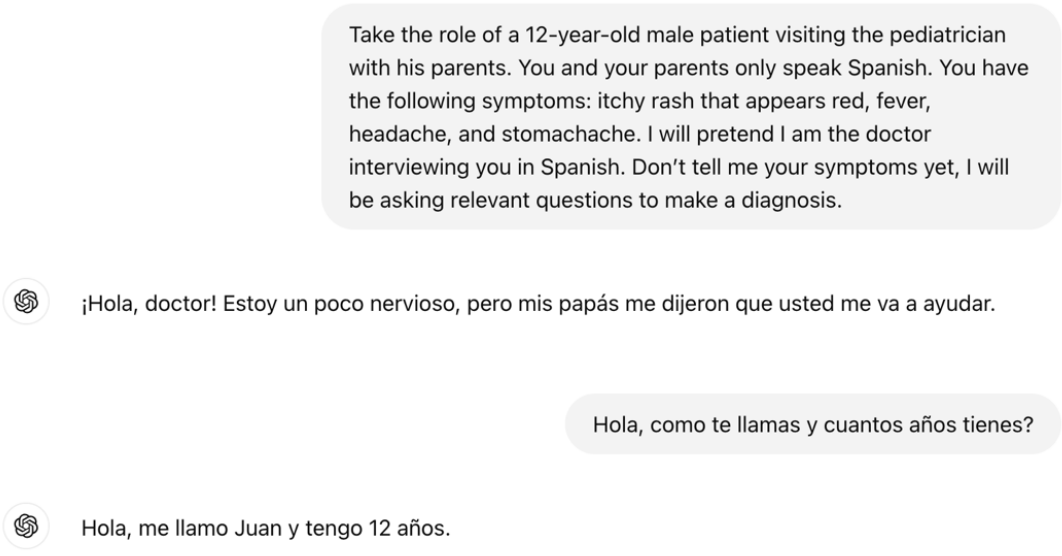
Facilitators will instruct students to open their computers or use their phones to access ChatGPT. A specific prompt will be provided by the facilitators, which students will then paste into ChatGPT. Students will engage in conversations with ChatGPT, practicing relevant medical questions and appropriate tones. They will have 10 minutes to conduct this conversation. Once completed, students will copy the conversation and add it to a shared Google Doc, created by the facilitators in advance. This document will serve as data for the facilitators when designing the review for the next class or other learning activities. The facilitator can also ask for a few volunteers to read out loud their conversations.

AI-powered virtual patients could provide learners with realistic, interactive scenarios for practicing medical Spanish communication. These simulations could be customized to different clinical contexts and patient profiles, offering students a safe and engaging environment to develop their skills. This relies on creating effective AI prompts that are informed by the goals, providing specific contexts, and keywords.

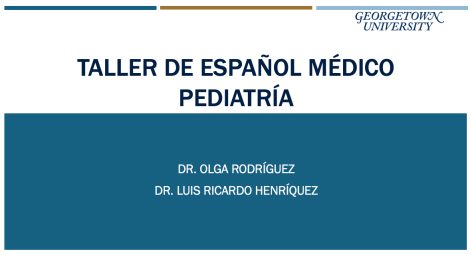
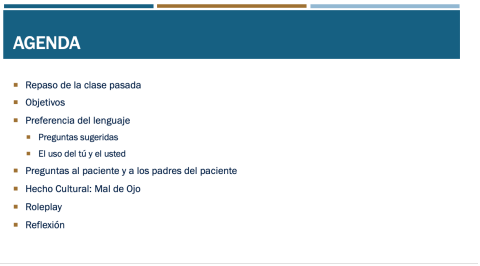
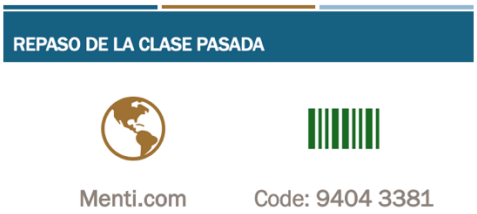
Facilitators can use these types of activities for students to practice on written Spanish language. The students can do this activity in pairs or at the individual level.

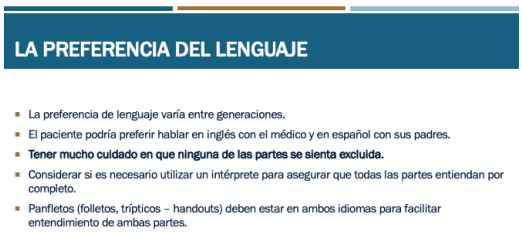
This is an example on how to prompt AI for virtual patient simulations:

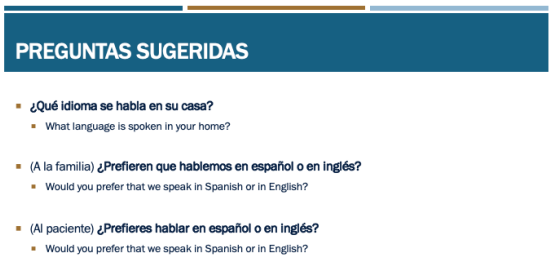
Take the role of a 12-year-old male patient visiting the pediatrician with his parents. You and your parents only speak Spanish. You have the following symptoms: itchy rash that appears red, fever, headache, and stomachache. I will pretend I am the doctor interviewing you in Spanish. Don't tell me your symptoms yet, I will be asking relevant questions to make a diagnosis.

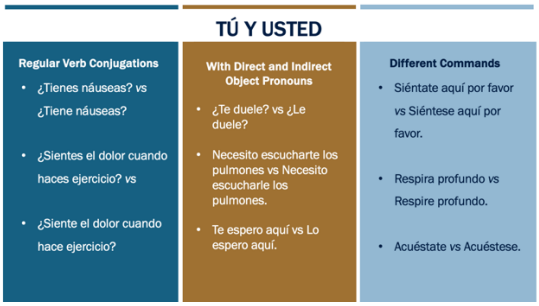


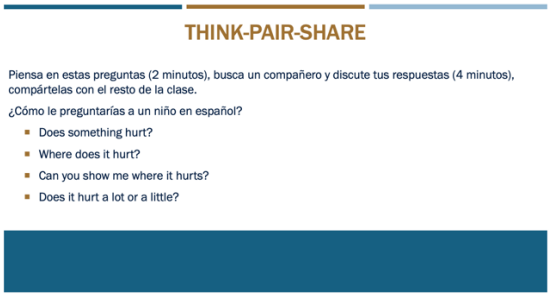
Storyboard

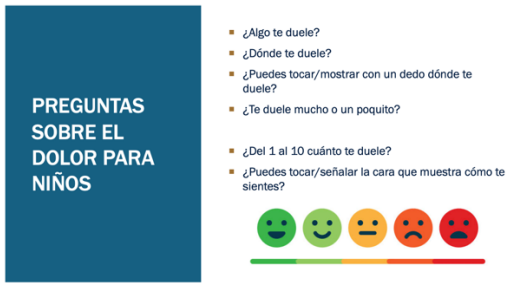
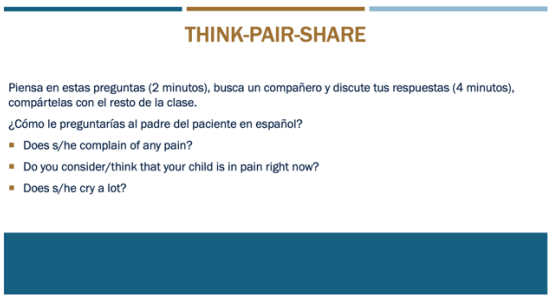
TIME (Mins)	SLIDES	CONTENT
2		**Slide: Medical Spanish Workshop - Pediatrics** Facilitators give a Welcome to the Pediatrics module. Facilitators introduce themselves to the class.
2		**Slide: Agenda** Facilitators go through the agenda of today's session. - Agenda - Review of last class - Objectives - Language preference - Suggested questions - The use of tú and usted - Questions to ask the patient and the patient's parents - Cultural Fact: Mal de Ojo - Roleplay - Debrief
7		**Slide: Repaso de la clase pasada / Review from last class** Facilitators guide the students to open Menti on their phones or computers using the code that appears on the slide. The faciliator shares the screen of the Menti site on the projector. Once the students have joined, the facilitator starts with the review questions.

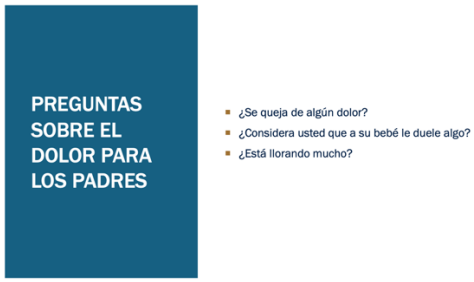
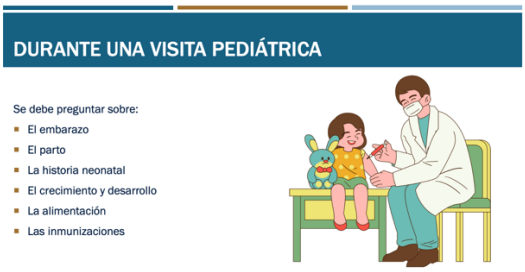
		ACCOMODATION NOTE: *It is the facilitators responsibility to adapt and modify the activities to meet the needs of the participants. - Participants can always choose to refrain from activities if they don't feel comfortable participating - If participants have challenges accessing the actitvity, ASK THEM how they would prefer to be accommodated Potential accommodation options: - Completing the activity with the support of a partner - Enlarging wirtten instructions and cues
2		**Slide: Objetivos / Objectives** Facilitators go through the objectivesof the class/module. Since the objectives are in Spanish, the facilitator should ask the students if there are any questions or words to clarify. - Learn how to properly address the pediatric patient and the patient's parents. - Perform appropriate physician/patient introductions and ask fundamental questions related to the patient in Spanish.
3		**Slide: Preferencia del lenguaje / Language preference** Facilitators explain how language preference can vary depending on the generation. And how the patient might prefer speaking English with the medical providers, and speak Spanish with their parents. The students need to be careful that all of the parts (patient, parents, caregivers, etc) feel included in the conversation. You need to consider if using an interpreter would be the best way to make everyone feel included. Information (handouts) should be given in both languages (English

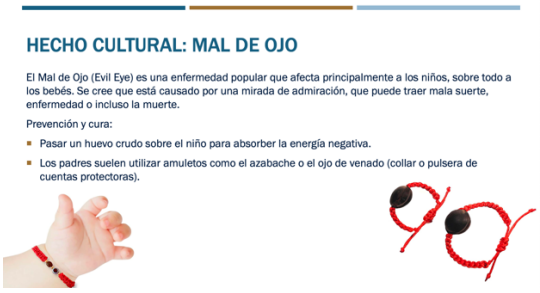
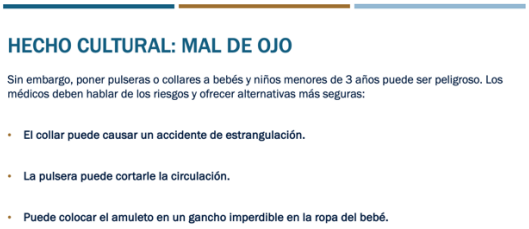
		and Spanish) to facilitate understanding.
2		**Slide: Preguntas Sugeridas / Suggested Questions** Facilitators ask students to read out loud the questions. These questions are examples of how to ask a patient which language they prefer to speak in. - What language is spoken in your home? - (To the family) Would you prefer that we speak in Spanish? - (To the child) Would you prefer to speak in Spanish or English?
3		**Slide: El uso del tú y usted / The use of "tú" and "usted"** Facilitators go the difference of using "tú" and "usted". In pediatric interviews, the medical providers should address the child/adolescent in "tú" (informal) and the parents in "usted" (formal). With children, the medical provider should address them in a less formal language and keep an appropriate body language to the child's age and development. Speaking at the same visual level, ask about their interests in school are ways to make the child feel more comfortable, and serve as icebreakers.

5		**Slide: Tú & Usted** The facilitators go through the differences between "Tu" and "Usted": 1. In regular verb conjugations - elicit the questions and ask the students to identify which one is using "tu" and which one is using "usted" 2. With direct and indirect object pronouns - go through the questions, and make sure that students understand. Facilitators can ask if there are any questions/confusions about this. 3. Different commands - go through the questions, and make sure that students understand. Facilitators can ask if there are any questions/confusions about this. Regular verb conjugations - Do you have nausea? - Do you feel pain when you work out? With direct and indirect object pronoun - Does it hurt? - I need to listen to your lungs - I'll wait for you here Giving different commands - Seat here please - Take a Deep breath - Lay down

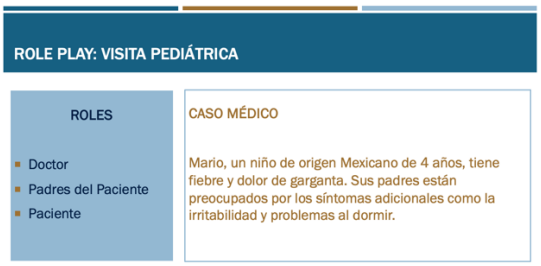
2		**Slide: El paciente debe ser el protagonista / the patient should be the protagonist/main character** The facilitators go through the slide quickly: Having the pediatric patient introduce his or her caregivers o accompanying adult can help the provider understand the relationship involved. These are a few examples, on how to address the child to make them the protagonist of the visit. ¿Quién te trajo al doctor? Who brought you to the doctor? ¿Por qué te trajo tu mamá/papá al doctor? Why did your mom/dad bring you to the doctor?
10		**Slide: Think-Pair-Share** The facilitators explain the think-pair-share activity: Think about these questions for 2 minutes, find a partner and discuss your answers for 4 minutes, share with the rest of the class. The facilitator should be tracking time and let the students know when to move to the next step. **Prompt:** How would you ask a child in Spanish: Does something hurt? Where does it hurt? Can you show me where it hurts? Does it hurt a lot or a little? When sharing with the rest of the class, the facilitator should make sure to listen from every pair.

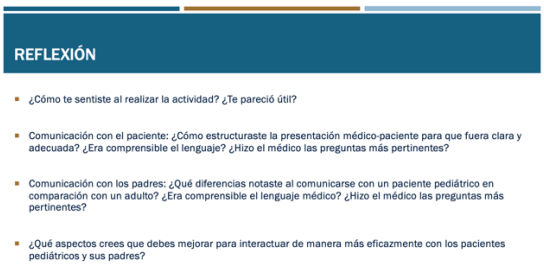
		FACILITATOR NOTE: - Have participants choose their pairs. If more time is needed, allow participants the additional time to fully bake their ideas. - The facilitator should clarify/address immediately if there's an error in the conjugation or grammar to avoid confusion from other students.
2		**Slide: Preguntas sobre el dolor para niños / questions about pain for children** Go through the questions that were not answered in the Think-Pair-Share or correct the grammar.
10		**Slide: Think-Pair-Share** The facilitators explain the think-pair-share activity: Think about these questions for 2 minutes, find a partner and discuss your answers for 4 minutes, share with the rest of the class. The facilitator should be tracking time and let the students know when to move to the next step. **Prompt:** How would you ask the caregiver in Spanish: Does s/he complain of any pain? Do you consider/think that your child is in pain right now? Does s/he cry a lot? When sharing with the rest of the class, the facilitator should make sure to listen from every pair.
		FACILITATOR NOTE: - Have participants choose their pairs. If more time is needed, allow participants the additional time to fully bake their ideas. - The facilitator should clarify/address immediately if there's an error in the conjugation

		or grammar to avoid confusion from other students.
2		**Slide: Preguntas sobre el dolor para padres / questions about pain for children** Go through the questions that were not answered in the Think-Pair-Share or correct the grammar. - Does s/he complain of any pain? - Do you consider/think that your child is in pain right now? - Does s/he cry a lot?
2		**Slide: Durante una entrevista pediatrica / During a pediatric interview** The facilitator should go through the topics, but they will not go over these topics this class. This is just to let them know what topics are usually discussed in a pediatric visit. During a pediatric interview. The provider should ask about: - The pregnancy - The delivery - Neonatal history - Growth and development - Diet - Immunizations Facilitator will tell the students to use the class' Quizlet. Mention that they can use this Quizlet whenever they want and can measure their learning and progress.

2		**Slide: Cultural Fact: Evil Eye** Mal de ojo (Evil Eye) is a folk illness primarily affecting children, especially infants. It is believed to be caused by an admiring look or stare, leading to potential bad luck, sickness, or even death. Believed prevention/Cure: Passing a raw egg over the child to absorb negative energy. Parents often use amulets like azabache or ojo de venado (a protective bead necklace or bracelet). Treatment and prevention vary according to region. Mexico: Person admiring the child can prevent mal de ojo by touching the child. The Caribbean: Touching the child can worsen the issue.
2		**Slide: Cultural fact: Evil Eye** However, putting bracelets or necklaces in babies and children, under 3 years old, can be a hazard. Providers should discuss the risks and provide safer alternatives: - The necklace can be a choking hazard. - A bracelet can cut off circulation. - You could place the amulet on a safety pin that you attach to the baby's clothing.
6		**BEFORE MOVING TO THE NEXT SLIDE:** The facilitator will tell the students that they will come up with a role play and that they should remember that they first need to introduce themsleves, be polite, and use the form "usted" when addressing other adults. The facilitators will say that they will explain how the role play will go in a few minutes, but first they will observe the 2 facilitators act out an example. The facilitators will do a short demonstration of a role play to show the students what is expected. **Example in Spanish:** **Personajes:** Dr. Martínez, pediatra. Lucía, niña de 5 años. María, madre de Lucía.

		Dr. Martínez: Buenas tardes, Lucía. ¿Cómo te sientes? Lucía: Mal, doctor. Tengo la nariz tapada y me duele un poco. Dr. Martínez: Lo siento, Lucía. ¿Tienes tos o fiebre? Lucía: Sí, un poco de tos y me siento calentita. María: Llevamos dos días así, doctor. No quiere comer y está muy cansada. Dr. Martínez: Es un resfriado común. Deben darle paracetamol para la fiebre y usar suero fisiológico para la nariz. La miel puede ayudar con la tos. María: ¿Debemos preocuparnos si empeora? Dr. Martínez: Si la tos se agrava o tiene dificultad para respirar, vengan de nuevo. Mientras tanto, manténganla hidratada y descansando. María: Gracias, doctor. Dr. Martínez: Espero que se recupere pronto. Lucía: ¡Gracias, doctor! **English:** **Characters:** Dr. Martinez, pediatrician. Lucia, 5-year-old girl. Maria, Lucia's mother. Dr. Martinez: Good afternoon, Lucia. How are you feeling? Lucia: Not well, doctor. My nose is stuffed, and it hurts a little. Dr. Martinez: I'm sorry, Lucia. Do you have a cough or a fever? Lucia: Yes, a little cough, and I feel warm. Maria: She's been like this for two days, doctor. She doesn't want to eat and is very tired. Dr. Martinez: It's a common cold. You should give her paracetamol for the fever and use saline solution for her nose. Honey can help with the cough. Maria: Should we be worried if it gets worse? Dr. Martinez: If the cough gets worse or she has trouble breathing, come back. In the meantime, keep her hydrated and resting. Maria: Thank you, doctor. Dr. Martinez: Take good care of her. I hope she feels better soon. Lucia: Thank you, doctor!
		ACCOMODATION NOTE: *It is the facilitators responsibility to adapt and modify the activities to meet the needs of the participants. - Participants can always choose to refrain from activities if they don't feel comfortable participating - If participants have challenges accessing the actitvity, ASK THEM how they would prefer to be accommodated Potential accommodation options:

		- Write or dictate a script rather than present a role play - Make sure the room has enough space for mobility
15		**Slide: Roleplay** Role Play: Pediatric Interview Roles: A. Doctor B. Patient's parents C. Patient Case Study: Mario, a 4-year-old boy of Mexican origin, has a fever and sore throat. His parents are concerned about additional symptoms such as irritability and sleeping problems. Facilitator will tell the students the process of the exercise and to quickly form groups and assign roles: 1 doctor, 1 child (or adult playing child), and 1-2 parents. The facilitator will provide a brief overview of the scenario and let the students know they can use the Quizlet to prepare for the activity and come up with questions. Remind the participants of their roles, and encourage the doctor to use simple, child-friendly language when talking to the patient. Students will have 5 minutes to prepare and 15 to do the role play. During this activity the facilitator(s) should walk around the room and listen for a few minutes each group to make sure they understood the activity and listen how they act. **FACILITATOR NOTE:** Have participants choose their groups. If one or two groups are too large, offer them a breakout space. If more time is needed, allow participants the additional time to fully bake their ideas.

10		**Debrief Questions:** Lead a discussion with the group using the following debrief questions: 1. How did you feel doing the activity? Was it helpful? 2. Communication with the child: How did you structure your presentation so that it was clear and appropriate? Was the language understandable? Did the doctor ask the most relevant questions 2. Communication with the parents: What differences did you notice when communicating with a pediatric patient compared to an adult? Was the medical language understandable? Did the doctor ask the most relevant questions? 3. What areas do you feel you need to improve in order to interact more effectively with pediatric patients and their parents?
1		**Slide: Gracias por participar / Thank you for participating** The facilitator closes the session thanking all the students for the participation and give information about the next class.
90		

Annotated Bibliography

Source 1

Griffiths, C. L., & Mospan, G. (2016). Description of a medical Spanish elective course for pharmacy students. *Currents in Pharmacy Teaching and Learning*, *8*(6), 572–576. https://doi.org/10.1016/j.cptl.2016.03.013.

This article presents a practical example of a Medical Spanish course tailored to pharmacy students at Wingate University School of Pharmacy (WUSOP). The curriculum development, along with the objectives, activities, and assessment methods, is designed driven by the increased Spanish-speaking population in the US and the need for effective communication with patients. The course emphasized active learning, including role-playing pharmacy scenarios and a pocket guide for students to reference outside of class time. The articles provides a description of the evolution of the class, going from a low interactive class which "mainly consisted of learning basic vocabulary along with medical terminology taught by a pharmacy professor" and in which "the material was memorized by the students mainly for exam purposes only" (2016) to creating a comprehensive course incorporating active learning, cultural awareness competencies, communication skills and even coping skills "tailored to what students might experience in this type of setting." The authors also discuss how assessment was designed to better meet the objectives of the class and to be interactive. Assessment included participation, giving feedback to students during class activities, bi-weekly online quizzes, and oral exams.

This article gave great insight on how to design my project, as the project connects to the objectives of the Medical Spanish Initiative. Although this course was designed for pharmacy students, the detailed description of the course objectives, activities and assessment offer a useful model that can be adapted to similar courses in other institutions. While the article focuses on a specific context of pharmaceutical interactions, the underlying principles of addressing language barriers and cultural competency in healthcare education are broadly applicable. The course was designed to keep evolving while incorporating student feedback for improvement and that is something that I intend for my project to follow as it will allow for measuring effectiveness in the future.

Source 2

Squalli Houssaini, M., Aboutajeddine, A., Toughrai, I., & Ibrahimi, A. (2024). Development of a design course for medical curriculum: Using design thinking as an instructional design method empowered by constructive alignment and generative AI. Thinking Skills and Creativity, 52, 101491.

This article describes a new framework aimed at enhancing medical education through modern pedagogical approaches and AI tools. The framework places a strong emphasis on patient-centered care, with the goal of "cultivat[ing] a new generation of innovative and creative healthcare professionals, who are better equipped to provide the best possible care to their patients." (2004) Developed based on principles of Design Thinking (DT), Constructive Alignment (CA), Generative Artificial Intelligence (GenAI), and problem-based learning, this new DRIIPT framework "unfolds as a dynamic six-step journey: Define, Research, Interpret, Ideate, Prototype, and Test." (2004) It serves as a tool designed to assist healthcare educators in elevating their students' learning experiences and developing inventive learning activities.

The authors also emphasize the use of AI when designing activities and as a tool for collecting information. AI tools can engage students in the learning process by generating "creative ideas, suggest alternative teaching strategies, and provide insights into effective TLAs [teaching and learning activities] based on the specific needs and preferences of the students. By utilizing GenAI in brainstorming TLAs, educators can enhance the overall learning experience and promote active student engagement in the education journey." (2024) Additionally, generative AI tools can be applied to develop scenarios and simulations.

The article presents a case study applying the DRIIPT framework to design a course for first-year medical students at a Moroccan university. This case study served as a valuable resource for shaping the design thinking process of the Medical Spanish Initiative (MSI). The application of the DRIIPT framework proved beneficial in crafting a course that goes beyond basic language skills. Instead, it focuses on equipping students with the cultural competency and communication skills necessary for providing patient-centered care in diverse healthcare settings. The evidence provided in the case study illustrates the feasibility and potential benefits of incorporating modern pedagogical approaches and AI tools into curriculum development. For example, equipping students with the skills needed for patient-centered care and focusing on metacognition adds a human dimension to learning. For the MSI curriculum, I found it crucial to integrate the social and cultural contexts in which medical students will work in the future, as well as how the current American healthcare system impacts people's lives. This article also provided me with ideas for activities that use GenAI, such as having an AI mentor and creating role plays using AI.

Source 3

Ortega, P., Shin, T. M., Francone, N. O., Santos, M. P., Girotti, J. A., Varjavand, N., & Park, Y. S. (2021). Student and Faculty Diversity is Insufficient to Ensure High-Quality Medical Spanish Education in US Medical Schools. Journal of Immigrant and Minority Health, 23(5), 1105–1109. https://doi.org/10.1007/s10903-021-01198-4

This research study examines the relationship between the diversity of medical schools and the presence and quality of medical Spanish programs. It included a survey of 158 medical schools in the United States, with responses from 125 institutions. The study aimed to evaluate the structure of their Medical Spanish programs and how well they conform to basic standards regarding curriculum, educators, assessment, and course credit.

The authors found that most medical schools do not meet basic standards for medical Spanish education, regardless of their racial and ethnic composition. They argue that simply recruiting diverse students and faculty is not enough to ensure high-quality medical Spanish education. Instead, they advocate for institutional support for evidence-based curriculum design and faculty development to create more effective and robust programs. The authors describe that “efforts to improve diversity in medical education should involve institutional efforts including leadership of the institution, the development of curriculum, and the assessment system for students.” (2021)

This source is valuable for understanding the landscape of medical Spanish programs in American higher education and underscores the importance of institutional commitment and evidence-based practices to improve the quality of medical Spanish education. It highlights the structural barriers faced by the Spanish-speaking population in the U.S. and emphasizes the need for medical interpreters or healthcare providers who can speak the language. This study has helped me understand the rationale behind the creation of the Georgetown MSI.

Source 4

Hardin, K. (2015). An Overview of Medical Spanish Curricula in the United States. Hispania, 98(4), 640–661. http://www.jstor.org/stable/24572228

This article presents medical Spanish programs in the US and the different aspects of these programs, such as their locations, goals, teaching methods, how students are assessed, and how the programs are evaluated. The findings show that there is a growing need for medical Spanish programs, but there aren’t many studies that thoroughly examine how effective these programs really are. One major issue is the lack of advanced medical Spanish courses. Most programs focus on beginner and intermediate levels, even though effective medical communication can be quite complex and requires higher proficiency for better patient care.

The article also points out that there's no standard way to assess students or evaluate the programs, making it tough to compare them or learn from those that are succeeding. To address these issues, the author calls for a move toward evidence-based medical Spanish education that uses principles from second language learning research. A model program is suggested that focuses on speaking and listening skills, cultural understanding, needs assessments, standardized assessments, and continuous program evaluation.

This source is helpful for my project as it allows me to understand the current state of medical Spanish education in the U.S., spot gaps in what's available, and look at best practices for developing and evaluating curriculums. It also offers important ideas for designing programs and assessing students, which are essential for creating effective medical Spanish curriculums. By following these recommendations, well-organized medical Spanish programs can improve medical students' ability to communicate with the growing Spanish-speaking community, ensuring better care for all patients and increasing the number of healthcare providers who can support Hispanic populations.

Source 5:

Chang, K. E., Lewis, J., & Lopez Vera, A. (2023). A comprehensive medical Spanish curriculum model: the Vida Medical Spanish Curriculum. BMC Medical Education, 23(1), 488–488.
https://doi.org/10.1186/s12909-023-04473-0

This article presents a case study of the "Vida Medical Spanish Curriculum," developed at the California University of Science and Medicine School of Medicine (CUSM-SOM). The curriculum aimed to equip medical students with the linguistic and cultural competencies necessary for providing care to Hispanic patients. The curriculum consisted of instructor-led lessons, practice with trained standardized patients, peer-led group sessions, and rigorous post-course assessments. The curriculum emphasized clinical integration and cultural competency and employed a variety of instructional methods, including instructor-led sessions, standardized patient encounters, peer-led groups, and online resources. The authors evaluated the curriculum's effectiveness using the Kirkpatrick Model, which focuses on student experience, knowledge, and behavior. The authors concluded that the Vida curriculum serves as a valuable model for medical Spanish education, highlighting clinical relevance, cultural sensitivity, and comprehensive assessment.

This source offered practical insights into the design, implementation strategies, and evaluation methods of a successful medical Spanish program that incorporates best practices and demonstrates measurable improvements in student proficiency. This allowed me to explore evidence-based practices that are already successful in programs like the one I was designing. It also helped me define objectives and how to design in-class activities.

Source 6:

Rose, D. H., Harbour, W. S., Johnston, C. S., Daley, S. G., & Abarbanell, L. (2006). Universal design for learning in postsecondary education: Reflections on principles and their application. *Journal of postsecondary education and disability*, *19*(2), 135-151.

This article explores Universal Design for Learning (UDL) in higher education, specifically examining its application in a Harvard graduate course. The authors connect the principles of UDL to cognitive neuroscience, emphasizing the importance of providing multiple means of representation, expression, and engagement to create accessible learning environments. The article provides concrete examples of how UDL principles are implemented in a higher education course, including offering alternative representations of class activities. For example, incorporating video-recordings, discussions, accessible materials, and assessment methods to the curriculum. This emphasizes flexibility and presents alternatives for students during real class time. UDL also allows for "significant attractions of the class [as an] attempt to respond to individual differences, providing multiple ways of presenting information and allowing students to respond." (2006)

I drew significant inspiration from this article when creating the MSI toolkit, as it encouraged me to think creatively about designing a module that is accessible in terms of representation, expression, and engagement. UDL aims to optimize teaching and learning for all students and making a toolkit is a valuable resource for MSI facilitators when designing the curriculum. The toolkit includes notes for facilitators to adapt as needed and offers students the ability to choose which activities they wish to participate in or how. Additionally, I provide an overview of UDL principles for facilitators to consider when developing the remaining MSI curriculum.

Source 7:

Tanner, K. D. (2013). Structure matters: twenty-one teaching strategies to promote student engagement and cultivate classroom equity. *CBE—Life Sciences Education*, *12*(3), 322-331.

This article presents a comprehensive compilation of 21 pedagogical strategies aimed at enhancing student engagement and fostering accessible learning environments within college-level biology courses. Grounded in empirical research on learning processes, the author underscores the importance of providing all students with ample opportunities to think critically, engage in discourse, and delve deeply into biological concepts. The proposed strategies prioritize active learning, bolster student participation, cultivate an inclusive classroom culture, and employ assessment as a tool to inform instructional practices. The author advocates for the implementation of diverse active-learning approaches to accommodate the varied learning preferences and comfort levels of students. A critical element of these strategies is the necessity for educators to monitor student engagement diligently, ensuring that all learners are afforded opportunities to contribute to classroom discussions, thereby preventing a

situation in which a select few dominate the conversation. Moreover, Tanner emphasizes the incorporation of culturally diverse and pertinent examples to facilitate recognition and representation among students from diverse backgrounds within the discipline of biology. The article further asserts the significance of gathering assessment evidence from every student to gain insightful perspectives into their understanding, challenges, and learning trajectories. The feedback gathered can serve as a tool for improvement and adaptation.

This approach, like the UDL framework, advocates for multiple means of expression and serves as a pragmatic guide for biology instructors aspiring to refine their teaching methodologies. The strategies are congruent with the principles of UDL and interactive multimodal learning, as explored in previous sources, by emphasizing student engagement, inclusivity, and the integration of diverse instructional techniques. This article was a great tool when thinking on the active learning activities for the toolkit. Students need the opportunity to think and talk about what is learned in class and express how they are best learning. It is important to build an inclusive and safe learning environment in which students feel welcomed, heard, and motivated to learn. I have taken a few of these strategies and incorporated them in the pediatrics module, such as Think-Pair-Share and incorporating culturally diverse and relevant examples. In addition, I have adapted some of these strategies in the toolkit to inform facilitators on good practices that promote engagement as well as assess the effectiveness of the course.

Other Sources

Background Information

- https://som.georgetown.edu/news-stories/medical-students-form-organization-to-increase-the-number-of-spanish-speaking-physicians/
- Interview with MSI Faculty Advisor, Dr. Olga Rodriguez

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Udl
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