What do you gain by talking and exchanging ideas and questions with other people? How can you deepen your understanding of a topic with the use of multimodal texts alongside interactions? Our lives complement each other in many ways, to the point that we depend on interactions with others to exchange ideas—something we accomplish through different forms of communication and situations. The role of interaction is of great importance in schools, where bi/multilingual learners exchange ideas and contribute to a community of learners that includes a wealth of knowledge from families and communities.

**Interaction** is the exchange of ideas with others through different forms of communication and situations. It includes multimodal communications, which are expressed through various modalities such as writing, graphics, and images, among others.

**Interaction: One of the Big Ideas of the Marco DALE**

Consider a conversation among students about some type of academic content or a discussion of a learning process. What is the role of interaction in that exchange? For example, bi/multilingual learners might interact together in a science classroom to ask questions and attain knowledge about electric currents and magnetic forces. They might use physical objects such as batteries, a light bulb, and an electrical switch to experiment and see their learning in action. They might engage with videos, graphs, and in content-driven conversations. Together with the context, the process of interaction increases understanding and provides many other benefits.
Interaction as part of learning supports and builds linguistic and cultural practices (Paris & Alim, 2014) and amplifies the voice of the learner. El Marco de los estándares del desarrollo auténtico del lenguaje español de WIDA (Marco DALE), a standards framework that supports and informs Spanish language development of bi/multilingual learners in grades K–12, highlights the benefits of interaction. In fact, interaction is one of the six Big Ideas of the Marco DALE and it stands out in the three modes of communication (interpretive, expressive, and interactive) through examples in its Language Expectations.

**Big Ideas of the Marco DALE that Inform the Functional Approach to Language Development**

- **Equity of opportunity and access**
  Support the learning of bi/multilingual students who come from a wide array of linguistic, cultural, educational, and socioeconomic contexts.

- **Interaction with others**
  Exchange ideas with others through different forms of communication and situations.

- **Collaboration among members of the teaching community**
  Work collaboratively among teachers, administrators, families, and communities for the development of bi/multilingual students.

- **Integration of language and academic content**
  Provide language expectations for simultaneous language development and academic content learning.

- **Multiliteracies present in education**
  Analyze, interpret, and build meaning and identities through the use of multimodal artifacts in a diversity of contexts.

- **Transculturalism demonstrated by bi/multilingual individuals**
  Dynamic and fluid movement and navigation across communities, which includes the use of translanguaging.

The Big Ideas of the Marco DALE, which inform the functional approach to language development, recognize and strengthen the resources and potential of bi/multilingual learners. The Big Ideas are anchored in philosophies, theories, and practices for language development. The planning, teaching, and assessing of students through interaction allows the teacher to draw on multiliteracies and transculturalism. It further ensures equity of opportunity and access for bi/multilingual learners through the collaboration among members of the teaching community that is emphasized in the integration of language and academic content.

The following vignette illustrates an intentional application of interaction in a bilingual classroom, where the teacher and her bi/multilingual learners have decided to explore the historical roots of their families as they look to answer the question, *where do we come from?*

**Transculturalism** is the existing, moving, and navigating across communities and cultures in a dynamic and fluid way, while recognizing the coexistence of various cultures within an individual’s daily experiences and life. It refers to the phenomenon in which several cultures that come into contact influence each other and from which translanguaging practices originate.
Vignette: Where do we come from?

The 4th grade class at Kahlo School decided to explore their families’ historical roots to answer the question, *where do we come from?* Together with their teacher, the bi/multilingual learners decided to trace three generations of their families to learn about their linguistic practices, cultures, and histories. Using photographs and artifacts, students were able to create contexts that articulated key events. They also included the use of video to capture interviews and selected a couple of clips for the final project. Students used the chart below to collect the information.

<table>
<thead>
<tr>
<th>What are their names and where were they born?</th>
<th>What languages do they speak regularly?</th>
<th>What is a tradition or history that they celebrate? What is it about?</th>
<th>What impact do my family’s roots have on my language and culture?</th>
</tr>
</thead>
<tbody>
<tr>
<td>My great-grandparents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My grandparents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My parents</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
After having collected the information, the students decided how to present it to their class. Their options included making a video, a poster, a diagram, or a photo album. During class, students split into pairs so they could share what they found about their families and decide how they would showcase their findings. Let’s listen in on a conversation between two students, Sofí and Lalo, during their initial exchange.

S: Where does your family come from? What languages do they speak?

L: Mine comes from Oaxaca, México. Mientras todos hablamos español, mis bisabuelos todavía viven en México y hablan zapoteco.

S: ¿Zapotecó?

L: It is an Indigenous language of the region. I was born in Chicago and speak English and Spanish. Where does your family come from?

S: Mine comes from Caguas, Puerto Rico, from Texas, and also from New Jersey. Todos somos bilingües. ¿Y qué vas a hacer para tu project?

L: Pues, a mí me encanta tomar fotos and since we live together, I’m going to make an album of my family. ¿Y tú?

S: Well, I haven’t decided yet. Do you want to help me?

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**Keep the Conversation Going!**

- Which of the Big Ideas of the Marco DALE do you see in the vignette and dialogue above?
- Based on this vignette, what impact does interaction have on the formation of bi/multilingual learners’ identities?
- What role does interaction play in the learning of bi/multilingual learners and what might happen if their interaction is limited?
Interaction in Multiliteracies

Interactions exist through dialogues and the confluence of other media in technology and multimodal texts. In the case of technology, for example, artificial intelligence gives us the opportunity to interview important and historical figures. Opportunities like these represent new ways of interacting and redefine the concept of what an interaction is—from only an exchange between people, to one that happens between people and technology.

Given the fast pace in which new technologies are being created and applied in the classroom, it is important to consider opportunities for bi/multilingual learners to use those new tools to build their critical thinking skills through their academic content. Artificial intelligence is a good example of this, as it is rapidly expanding into classrooms. Therefore, just as one needs to know how to search for information on the internet, it is also essential to know what questions to ask these platforms to obtain the desired results. The critical ability to reason and define appropriate questions requires conversations and support between teachers and peers. The confluence of these skills and ways of interpreting and shaping information can be considered the foundation for multiliteracies.

The Marco DALE defines multiliteracies present in teaching as analyzing, interpreting, and building meanings and identities using multimodal artifacts in a diversity of contexts. Artificial intelligence is representative of multimodal artifacts. Its use for interactions provides unique experiences for students, as demonstrated in the following vignette.
Vignette: Interviewing Rigoberta Menchú Tum

As part of the social studies class at Fernández School, the teacher asked her bi/multilingual 7th grade students to conduct interviews with key figures in recent social movements. Collaboratively, the class compiled a list of important historical figures and developed research questions about them.

Through the use of artificial intelligence, written texts, videos, and conversations, the students created an interview that captured key ideas that could be adopted to a diversity of contexts. For example, a group of students used information from the following hypothetical interview produced by an artificial intelligence program to create a poster and a biographical YouTube Short of Rigoberta Menchú Tum. Through the use of technological tools like these, and dynamic conversations that reflect the translanguaging practices of bi/multilingual learners, it is possible to exchange ideas and knowledge across various sources.

The following excerpt is an English translation of a question posed to ChatGPT and the response generated by the program (OpenAI, 2023). The original question and response were in Spanish.

How would Rigoberta Menchú Tum answer the following question?: How do you think that education and our common conscience can improve in regards to the history and struggles of Indigenous peoples in modern societies?

Rigoberta Menchú Tum might respond to this question in the following way:

The improvement of education and common conscience in regard to the history and struggles of Indigenous peoples in modern societies is fundamental to build a more fair and equitable world. First off, it is essential that education systems include an intercultural and diverse perspective that recognizes and respects the richness of Indigenous cultures and their contributions to humanity.

A way of accomplishing this is to include in lesson plans content that reflects the history, traditions, ancestral knowledge, and struggles of Indigenous peoples. This will enable new generations to understand the importance of the perspectives of Indigenous cultures and their interaction with a global society.

Response generated by the ChatGPT artificial intelligence program (OpenAI, 2023)
Keep the Conversation Going!

- Which of the Big Ideas of the Marco DALE do you see in the vignette on the previous page?
- How are multiliteracies present in this vignette about artificial intelligence?
- Based on this vignette, what impact does interaction have on the formation of bi/multilingual learners’ identities?

Interaction in the Modes of Communication of the Marco DALE

The Marco DALE is unique in highlighting interaction within the Big Ideas and its three modes of communication. The creation, transformation, and exchange of ideas and knowledge occurs through three modes of communication—interpretive, expressive, and interactive. The interpretive mode represents the perceiving of information through listening, reading, and seeing, among other senses. Likewise, the expressive mode reflects the representation of information through writing, speaking, and the use of communicative symbols, among other forms of expression. The interactive mode consists of authentic and dynamic exchanges of information, ideas, concepts, and emotions that a bi/multilingual learner engages with when navigating between the varieties of the interpretive and expressive modes.

In the Marco DALE, the interactive mode complements and works in conjunction with the interpretive and expressive modes. All three modes demonstrate communication in and through various languages and their varieties, inclusive of translanguaging practices.

Modes of Communication of the Marco DALE
By observing how the three modes of communication co-exist within the lived realities of bi/multilingual learners, we establish teaching that reflects and celebrates the strengths of our students. To support teachers in documenting their students’ interactions, this Focus Bulletin provides a tool that reflects the three modes of communication of the Marco DALE. This tool invites teachers to document how bi/multilingual learners interact with each other. For example, linking this tool to the vignette on Rigoberta Menchú Tum, a teacher can observe a conversation between students where they answer the same question they researched in the interview: How do you think that education and our common conscience can improve in regard to the history and struggle of Indigenous peoples in modern societies?

In this observation, the teacher notes the following:

- Bi/multilingual learners’ use of multiple languages when interacting with their peers while discussing Rigoberta Menchú Tum and the response from AI.
- Bi/multilingual learners’ use of multimodal representations (e.g., video, audio, and graphics) to enhance their conversations.

These observations might prompt the teacher to:

- Incorporate multimodal texts in Spanish and English in the co-construction process and thus take advantage of all available resources.
- Invite students to incorporate recent trends of expression, such as storytimes, short videos, and memes—among others—into their assignments.

The purpose of this tool is to support the teacher’s reflection on and interpretation of those observations to inform instruction and assessment.
# Interaction Between Bi/Multilingual Learners

## Students’ names:

____________________________________________________________________________________

____________________________________________________________________________________

## Languages used during interaction:

__________________________________________________________________

_____________________________________________________________________________________________________

## Theme or project:

_______________________________________

Date: ______________________________________

---

### Bi/multilingual learners...

<table>
<thead>
<tr>
<th>Initiate or participate in conversations about academic content.</th>
<th>As a teacher, what do you notice when bi/multilingual learners interact with each other? (In this column, check the interactions you notice between your students.)</th>
<th>What impact do the interactions of your bi/multilingual learners have on the teaching and assessing of the topic or project? (In this column, indicate how you will modify your teaching and assessment practices because of the observations in the previous column.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offer and listen to diverse perspectives.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use multiple languages when interacting with their peers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rely on their personal experiences to advance the conversation or exchange of ideas.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Make personal cultural references.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interact while taking into account their learning objectives.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Add multimodal representations (e.g., video, audio, or graphics) to their conversations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bi/multilingual learners...</td>
<td>As a teacher, what do you notice when bi/multilingual learners interact with each other? (In this column, check the interactions you notice between your students.)</td>
<td>What impact do the interactions of your bi/multilingual learners have on the teaching and assessing of the topic or project? (In this column, indicate how you will modify your teaching and assessment practices because of the observations in the previous column.)</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Show mutual respect while exchanging ideas and thoughts.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are aware of the situation and the audience when participating in conversations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integrate the Marco DALE Key Language Uses (Narrate, Inform, Explain, and Argue) when they exchange ideas.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exchange ideas with each other when they are planning activities or projects.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ask and answer questions of each other when completing tasks or projects.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share, receive, and exchange examples of criteria for success.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Act based on feedback from peers or teachers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share evidence with each other that demonstrates their learning.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Interaction in the Marco DALE Language Expectations

In the Marco DALE, interaction shows up as a Big Idea, as one of the modes of communication, and as part of the Language Expectations. The Language Expectations for K-12 presented in the Marco DALE highlight the role of interaction for learning and collaborative work, which contributes to instructional planning.

The following excerpt from the Marco DALE shows interaction in the Language Expectations of *Estándar 4 del Marco DALE: El lenguaje para las ciencias naturales, DALE-CN* (Standard 4: The language for science) within the Key Language Use of *Informar* (Inform). You will see that the middle column presents the Language Expectations for the interactive mode, which includes *intercambiar criterios de diseño y procesos a través de múltiples modalidades* and *el compartir datos científicos a través de diversas actividades* (the exchange of design criteria and analytical processes across multiple modalities and the sharing of scientific data across various activities).
4º y 5º GRADO

**Estándar 4 del Marco DALE**
El lenguaje para las ciencias naturales (DALE-CN)

Las expectativas del lenguaje para **informar**: Por medio de su repertorio lingüístico y utilizando artefactos multimodales, los estudiantes bi/multilingües podrán...

<table>
<thead>
<tr>
<th>DALE-CN.4-5.informar. interpretativo</th>
<th>DALE-CN.4-5.informar. interactivo</th>
<th>DALE-CN.4-5.informar. expresivo</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interpretar información para...</strong></td>
<td><strong>Interactuar con otros</strong> (personas y medios) sobre información para...</td>
<td><strong>Expresar información para...</strong></td>
</tr>
<tr>
<td>• visualizar observaciones y fenómenos</td>
<td>• analizar observaciones y fenómenos</td>
<td>• describir observaciones y fenómenos</td>
</tr>
<tr>
<td>• adquirir el conocimiento, habilidades y valores científicos incluidos en textos multimodales</td>
<td>• aplicar el conocimiento, habilidades y valores científicos</td>
<td>• comunicar el conocimiento, habilidades y valores científicos</td>
</tr>
<tr>
<td>• reconocer posturas neutrales u objetivas en textos</td>
<td>• practicar posturas neutrales u objetivas</td>
<td>• establecer posturas neutrales u objetivas al comunicar información</td>
</tr>
<tr>
<td>• entender procesos, conceptos o teorías</td>
<td>• proponer definiciones de procesos, conceptos o teorías</td>
<td>• definir procesos, conceptos o teorías</td>
</tr>
<tr>
<td>• comprender criterios de diseño y procesos analíticos expresados a través de múltiples modalidades</td>
<td>• intercambiar criterios de diseño y procesos analíticos a través de múltiples modalidades</td>
<td>• comunicar criterios de diseño y procesos analíticos a través de múltiples modalidades</td>
</tr>
<tr>
<td>• obtener datos científicos de diferentes fuentes y actividades</td>
<td>• compartir datos científicos a través de diversas actividades</td>
<td>• presentar datos científicos a través de diferentes fuentes y actividades</td>
</tr>
</tbody>
</table>
Vignette: Language Expectations that Leverage Interaction

The following vignette illustrates the role of two interactive features of the Marco DALE Language Expectations in a lesson plan. We also use the reference code of the Language Expectations of the Marco DALE to indicate:

- **DALE-CN** – Standard 4 of the Marco DALE: The language for science
- **4-5** – The grade-level cluster: 4th and 5th grade
- **Informar** – The Key Language Use: Inform
- **Interactivo** – The mode of communication: Interactive

**DALE-CN.4-5.informar.interactivo**

<table>
<thead>
<tr>
<th>As Published in the Marco DALE</th>
<th>English Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Por medio de su repertorio lingüístico y utilizando artefactos multimodales, los estudiantes bi/multilingües podrán interactuar con otros (personas y medios) sobre relatos para...</td>
<td>Through the use of their linguistic repertoire and using multimodal artifacts, bi/multilingual learners will be able to interact with others (people and media) about stories to...</td>
</tr>
<tr>
<td>• intercambiar criterios de diseño y procesos analíticos a través de múltiples modalidades</td>
<td>• exchange design criteria and analytical processes across multiple modalities</td>
</tr>
<tr>
<td>• compartir datos científicos a través de diversas actividades</td>
<td>• share scientific data across various activities</td>
</tr>
</tbody>
</table>

With these Language Expectations in mind, let’s look at how Fuentes School’s 5th grade science class investigated the universe—specifically, the moon and the stars’ patterns of movement.

To begin, the class was divided into two groups based on the interests of the bi/multilingual learners. For two weeks, half of the class made observations of the physical world; that is, every night, the students in the first group observed the sky and described or drew in their scientific notebooks what they saw. In addition, each student explored the changing positions of the constellations in texts and the internet to confirm their observations and to help them explain the natural phenomena that occurred.
The other half of the class was also made up of astronomers, although these were characterized as cultural astronomers. This second group studied articles on the internet and watched videos to determine the relationship between the stars and the moon through the perspective of the Aztec people who lived in Mesoamerica five centuries ago. The bi/multilingual learners took notes and made drawings in their scientific notebooks to demonstrate their understanding.

After two weeks, students formed groups of four (with two students representing each type of astronomer) and shared what they learned by answering the following questions:

- As astronomers, how do we describe the astronomical world?
- Based on my own astronomical perspective, how do I define the movement of the stars and the formation of constellations?
- What are the similarities and differences between the two types of astronomers?
- How does everyday life and/or beliefs and knowledge inform or affect the perspective through which we observe and represent what we see?

Once they exchanged ideas with their classmates, for their final project some students wrote a play that integrated the beliefs of the Aztec astronomers of the 16th century and those of astronomers from western civilizations of the 18th century. Others decided to make geoboards of the constellations and explained mythological animals to teach others about the stars.
The Presence of Interaction in the Marco DALE

Learning is a social activity. It is of the utmost importance for bi/multilingual learners to interact with their peers to have opportunities to optimize their language development. Interaction is a common thread through the Marco DALE that manifests itself in various ways. First, it is one of the six Big Ideas and it is weaved throughout the framework. Second, interaction is featured as a mode of communication that complements the interpretive and the expressive modes. Finally, we see interaction in the Language Expectations—one of the components of the framework—where we give examples of how the Key Language Uses (Narrate, Inform, Explain, and Argue) work within each mode.

Interaction not only occurs between people, but also between a person and texts and between a person and technology. For example, the use of audio and video or the use of artificial intelligence for educational purposes all feature interaction. When bi/multilingual learners can take advantage of these multimodalities, they are expanding their interpretive language to encompass multiliteracies. At the same time, language learning occurs within a sociocultural context. Noting all this, the Marco DALE was developed as a resource to describe in detail how the strengths of bi/multilingual learners can be intertwined with Spanish language development in bilingual education settings.

For more resources, articles, and professional learning opportunities on interaction, the other Big Ideas of the Marco DALE, and its components, visit the Marco DALE website.

References


National Academy of Education. (2020). *Reaping the rewards of the reading for understanding initiative*. [https://doi.org/10.31094/2020/2](https://doi.org/10.31094/2020/2)

OpenAI. (2023). *ChatGPT (August 25 version) [Respuesta en la voz de Rigoberta Menchú Tum]*.


