Finding Agency: Supporting Teachers and Students through TrUDL

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Table of Contents

Chapter 1

Introduction:

The guiding questions for this thesis are:

- How can I integrate TrUDL in a curriculum based on the science of reading, specifically in a Spanish-English dual-language Kindergarten classroom?
- How can I support emergent bi-/multilingual students in a curriculum grounded in the science of reading?
- What role does teacher and student agency play in the teaching and learning of a curriculum grounded in the science of reading?

For the purpose of my project, I will not be arguing about the best approach to teaching literacy; rather I argue that incorporating TrUDL into all subjects, including with scripted literacy curricula, will help support emergent bilingual students and meet all students' needs through a culturally and linguistically relevant, and disability justice lens. I aim to use TrUDL to bring to light the negative effects that the science of reading movement has on teacher and student agency in the classroom. The development of my unit will acknowledge the realities of teaching a curriculum grounded in the science of reading. However, I hope to showcase how the implementation of TrUDL in a curriculum grounded in the science of reading can provide teachers with more flexibility in what they're teaching and still align with legislated curricular demands.

Throughout my thesis, I will be using the term emergent bi/multilingual students, since all students in a dual-language classroom are engaging in language learning. However, when I ask “How can I support emergent bi/multilingual students in a curriculum grounded in the science of reading?” I am referring to students who have been historically linguistically

marginalized. Students who are white and whose L1 is English will benefit from the support that students of color whose L1 is not English receive. I am aware of the systems of oppression that affect students of color and their language practices. For that reason, I will also differentiate between emergent bi/multilingual students and English language learners (ELLs).

Testimonio:

My interest in writing this thesis stems from my experiences as a student teacher placed in a Spanish-English dual-language classroom. I was inspired by the work of several scholars (Lara et al., 2024, Freire & Carmona, 2023) to create my own testimonio for this thesis since it closely relates to what I've experienced as a student teacher, and will experience as I continue with my teaching journey. Testimonios are more than life-stories, but are inherently political with the purpose of "visualizing the experiences of [Black, Indigenous, and] people of color" (Campo, 2021). In education, testimonios are necessary for building critical consciousness and addressing the institutional issues that affect teachers and students' lives in their communities and at school. Testimonios have also been used as a pedagogical tool through testimonio pedagogy, where lessons are designed to help students think critically about the world in order to realize, understand, and address injustices in their own education. Testimonios facilitate the process of reflexivity (Carmona & Luciano, 2014) which is a skill that educators need to practice in order to empathize and be in solidarity with students and their stories. Specifically, testimonios are being used by teachers and students to address curriculum standardization, and how it is "connected to the structure of schooling and to curricular and pedagogical processes" (Freire & Carmona, 2023). Today, curricula grounded in the science of reading often work as a form of curriculum standardization and are increasingly being sold as scripted curriculum to districts and schools.

Teaching practices grounded in the science of reading often do not represent and meet the needs of students culturally and linguistically and in turn, affects teacher and student agency.

I conducted my student teaching in a public-school in Philadelphia, where I worked in a kindergarten Spanish-English dual-language classroom with a 90/10 model, meaning most instruction was taught in Spanish. I have experience teaching several components in the science of reading in Spanish, which includes teaching a scripted curriculum. Additionally, I am pursuing English as a second language certification (ESL). As a pre-service teacher, my education program did not center or offer training in dual-language or bilingual education programs. However, I did receive training from very supportive teacher educators who understand the factors and inequalities in bilingual education. For this reason, I am grateful to the teacher educators who have taught me effective instructional strategies and theoretical frameworks to teach emergent bilingual students, which have informed my own language ideologies and perceptions of bilingual education.

I identify as a Mexican-American woman who comes from an immigrant household, where Spanish is the main language I use to communicate with my family. I saw little support for emergent bilingual students throughout my K-12 education, and was unaware of the existence of dual-language programs until I came to college. It wasn't until I took education courses where my views of language learning transformed from centering the standardization of named languages to believing in the fluidity of language use.

In my student teaching placement, half of the students I taught were Latine. This meant I needed to take into account all students' unique backgrounds, because Latines are not a monolith, in order to promote culture and language diversity in the classroom. Although I was supporting L1 Spanish speakers, I was also supporting non-Spanish speakers who were mostly white in

acquiring the language. This also made me wary of raciolinguistic factors, and making sure my pedagogical strategies did not center the language practices of my white students.

Teaching at the kindergarten level meant I worked with students who were at the beginning stages of developing their literacy skills in formal education. So, although I taught literacy using a curriculum, I also had flexibility to include and incorporate songs, mnemonics, visuals, games, and movement in my lessons. This flexibility allowed me to adjust lessons based on student needs, progress, and motivation. I am grateful for the agency that I had over my lessons, which was positively reflected in my students' work.

As a student teacher I also became aware of the lack of support for dual language teachers, where most professional development (PDs), and professional learning committees (PLCs) did not include strategies for dual language teachers or did not mention language support strategies for all teachers. For this reason, I created a unit that is intended for dual-language teachers and includes a variety of pedagogical strategies in tandem with theoretical frameworks. This thesis is intended for teachers, especially pre-service or first-year teachers, including myself, as a guide for finding flexibility and agency when teaching a curriculum grounded in the science of reading. In essence, I am using this thesis to guide my own thinking in how I want to approach future literacy lessons, and inform my own practice.

The following sections provide an overview of the literature that informs my research questions. I begin by giving an overview of what a dual-language program consists of. Then, I will discuss the implications of teaching a curriculum based in the science of reading for emergent bilingual students, and what that means for teaching it in a dual-language classroom. Then, I will define TrUDL. I will review literature on translanguaging and UDL separately since TrUDL is a fairly new concept. I will provide instructional strategies for both frameworks, and

how they can be used to support emergent bilingual students when teaching. Lastly, I will provide a rationale for why TrUDL is a valuable framework to use to make the science of reading accessible to all students.

Chapter 2

Dual Language Programs:

Dual-Language programs are an educational approach that intends to promote biliteracy and bilingualism through instruction in two languages. Some programs are implemented within the whole school, while other programs function as a strand of the school (i.e., one classroom per grade level uses this approach). There is a subset of dual-language models, which are listed below:

- **One-way and Two-way Immersion:** One-way immersion programs serve students who share a common home language. These programs are designed to develop proficiency in both the partner language and English, while primarily serving a linguistically homogeneous group. In contrast, two-way immersion programs enroll a balance of native speakers with different home languages.
- **90/10, 50/50, 80/20:** This model refers to language allocation, which is the percentage of instructional time dedicated to each language. In a 90/10 model, students are taught in one target language 90% of the time (i.e., 90% Spanish, 10% English). An 80/20 model follows a similar structure, with 80% of instruction in the partner language and 20% in English. In a 50/50 model, instruction is taught in both languages 50% of the time.
- **Self-contained or collaborative teaching:** Some dual-language programs have one instructor who teaches in both languages. Other programs have two teachers who

collaborate. One teaches in Spanish and the other in English, often in separate classrooms.

Although these models differ in how they function within a school, Soltero (2023) discusses that dual-language programs have "three universal goals … (1) bi/multilingual and bi/multiliterate proficiencies; (2) academic achievement; (3) cross-cultural competencies" (p. 119). When I discuss dual-language programs in my thesis, I will keep in mind that these are the universal goals, however I am also cognizant that these goals are only effective in ideal environments. This means they can change due to district or school policies, unqualified teachers, lack of bilingual materials, and a focus on getting students to pass English-only assessments. Hence, some programs are bilingual in name only (BINO) (Hinton, 2015; Wright & Choi, 2023).

The racial, linguistic, and cultural demographics within a dual-language classroom varies. For example, in a two-way Spanish-English classroom, speakers of English may also be speakers of other languages such as Mandarin or Arabic. In addition, speakers of Spanish may also be multilingual and speak other languages including indigenous languages such as K'iche, a language spoken in Guatemala (Wright & Choi, 2023; Bernstein et al., 2020). This means, students may come into the program as emergent bi-/multilingual students, and not necessarily monolingual. It's important to understand the languages every student speaks, and honor those languages in the classroom as well. On the other hand, language allocation and prioritization are a challenge in some dual language programs. The universal goals mentioned earlier (Soltero, 2023) won't be met because English and English-dominant students are often prioritized, which excludes language-minoritized students (García & Lang, 2023). This means that the language practices of Latine, Black, Asian, and Native students are not valued, and are intended to mirror

the language practices of white students. This is why critical race theory (CRT) should be considered in understanding the role that dual-language programs play in upholding hegemonic ideologies, especially when teaching Black and Indigenous Children (Frieson, 2022). Additionally, within a dual-language program, teachers should consider the importance of place in relation to students' language and history (Johnson & García, 2022). A dual-language program situated in a public school in a big city will differ from a dual language program in a more suburban setting.

Overall, although dual-language programs have a set of universal goals, the way they operate will differ considering factors such as state and district policies, resources, and racial and linguistic diversity and appreciation in the classroom, among others. In my Thesis, I will reference dual-language programs keeping these factors in mind, and hope to address how the educational frameworks of the science of reading, translanguaging, and UDL can further support emergent bilingual students within a dual-language setting.

The Science of Reading:

The science of reading (SoR) is a term used to describe research that demonstrates *how* people learn to read and acquire literacy skills. In recent years, the term science of reading has been taken up within national legislative efforts as a remedy to what has been referred to as a reading crisis. As a result, current academic literature has begun to differentiate between the legislative movement of the "science of reading" and what has traditionally been considered the scientific evidence behind teaching literacy. The latter is now being referred to as "Comprehensive Research-Informed Literacy Instruction" by some scholars (Auckerman, 2024). There is a current push for the science of reading to be incorporated in schools, however critics claim that the science of reading movement focuses on a subsection of research on literacy, and

doesn’t account for the needs of emergent bilingual students. For students, this means that they are being taught a “one-size fits all" curriculum that doesn’t consider their “literate identities as a whole”(Aukerman & Chambers Schuldt, 2021). For this reason, comprehensive literacy would be a holistic approach towards literacy development because it takes into account more than just students' language skills. It includes factors such as social, emotional, and accessibility needs that can make or break students' literacy development.

Within this realm, some scholars have also emphasized the difference between the science of reading and the science of *teaching* reading. Most science of reading discourse discusses *wha*t and *how* components of the science of reading should be taught. When referring to the science of *teaching* reading, structured literacy is a *teaching* approach that was developed by the International Dyslexia Association and roots itself in the SoR (IDA, n.d). This teaching approach is commonly used in classrooms. However, there are key differences between a structured literacy and comprehensive literacy approach (see Table 1).

Table 1

Structured Literacy	Comprehensive Research Informed Literacy
What? Emphasizes teaching language structure in phonology, syntax, morphology, orthography, and semantics (Lexia, 2024). This also includes the foundational skills of phonemic awareness, phonics, fluency, vocabulary, and comprehension.	**What?** Foundational skills (phonemic awareness, phonics, fluency, vocabulary, and comprehension); writing comprehension, and a focus on oral language development.
How? Explicit, sequential, systematic, diagnostic and multimodal instruction. Uses the Orton-Gillingham approach for multisensory pedagogy (IDA, n.d). It’s assessment driven, and utilizes decodable texts for code-emphasis (IMSE, 2021).	**How?** Developmentally appropriate, incorporates play (Rand & Morrow, 2021), centers student interactions, acknowledges students' culture/background, and supports student self-efficacy (Auckerman, 2024).

The distinction between these teaching approaches highlights a common misconception: that the science of reading is a specific program teachers must follow. In reality, the science of reading is not an instructional method. However, the SoR movement has sometimes led educators to believe otherwise. For instance, there is a tendency to assume that teaching the structures of language (e.g., phonology, morphology) as outlined in structured literacy is the only pathway to literacy proficiency. In contrast, an effective science of reading-aligned curriculum requires teacher agency, and the ability to scaffold, differentiate, and select instructional strategies and programs that best meet the needs of students.

The research behind the science of reading is interdisciplinary and takes evidence-based practices informed by education, neuroscience, psychology, linguistics, and cognitive science (Jiban, 2024). Some *theoretical* frameworks within the science of reading include **the Simple View of Reading, Scarborough's Reading Rope, and the Five Pillars of Reading** (Lexia, 2024). All of these frameworks are interconnected and explain the components necessary for literacy acquisition. In Table 1, I compare structured literacy and comprehensive literacy. Structured literacy is a *teaching approach* that roots itself in the science of reading. However, the simple view of reading, Scarborough's reading rope, and the five pillars of reading are *theory based*, which explains how students acquire proficiency in reading. I compared structured literacy and comprehensive literacy because both are broader approaches to *teaching* literacy. Below I explain the theoretical frameworks.

The science of reading grounds its work in the simple view of reading (Gough & Tumner, 1986) which posits that reading comprehension (RC) is obtained when word recognition (WR) is combined with language comprehension (LC). The equation WR x LC = RC is used to explain that word recognition and language comprehension go hand in hand. If a student has developed

the skills for word recognition (decoding) but not language comprehension, then reading comprehension can't be achieved and vice versa.

Scarborough's reading rope further breaks down these categories by detailing the skills necessary for each of them (Lexia, 2024). Under word recognition, students need to develop phonological awareness, decoding, and sight recognition. Under Language comprehension, students need to learn background knowledge, vocabulary, language structure, verbal reasoning, and literacy knowledge in order to build reading fluency. Overall, word recognition is about building students skills in identifying word sound systems through phonology, orthography, and morphology; while language comprehension is about building students skills in language structure through syntax, semantics, and pragmatics.

The five pillars of reading are five components that many curricula use to categorize skills necessary for literacy development. These components are: phonemic awareness, phonics, fluency, vocabulary, and comprehension (Cassidy et al., 2010). Phonemic awareness is the ability to break down and manipulate word sounds (phonemes). Phonics is the ability to associate letters (graphemes) with the sound (phonemes) in order to decode text. Fluency is the ability to read text accurately. Vocabulary are the words a student needs to know in order to understand text. Lastly, comprehension is the ability to make meaning from a text using the other four components.

The SoR in a Dual Language Classroom:

Within a dual language classroom, teachers need to account for teaching literacy skills in two languages. However, with current emphasis on building foundational skills, schools have adopted reductionist curriculums that eliminate or decrease time spent on subjects like science or social studies in order to teach a curriculum based on the SoR. In one report by the National

Committee for Effective Literacy, teachers expressed that they get 20 minutes of writing instruction, but 40 minutes for phonics (Escamilla & Strong, 2024). This reductionist curriculum also means that dual language classrooms are shifting towards a curriculum that doesn't promote holistic biliteracy. Instead, some programs are aiming to teach Spanish as a way to acquire English. For example, Varghese and Park (2010) wrote that bilingual education brings about "advantages for the global economy" (p. 74) which helps with the "cultural homogenization" (p. 77) of linguistically minoritized students. They also point out that these programs are being used to promote the "language of the global" (p.74), which refers to English. This supports the idea that not all dual-language programs function with the goal of biliteracy for *all* students. Instead, adherence to dual language instructional goals are shifting to support the language practices of monolingual students (Li et al., 2016).

Additionally, some programs view English and Spanish literacy instruction as parallel to each other. This means that the implementation of the SoR can't be done successfully because it is assumed that teaching in Spanish is the same as teaching in English (Shwartz, 2022). Teaching in both languages requires the development of foundational literacy skills, such as in the five pillars of reading, but as Goldenberg (2020) points out, "what is comprehensible to [English learners] ELs is precisely the issue". The languages are different, which means they have different linguistic systems that should be accounted for. For example, Spanish has a more transparent orthography system. This means that letter-sound correspondence is more easily identifiable. On the other hand, English has a more opaque system, which can make teaching English orthography more complex for English learners if instruction is not explicit, contextualized, and teachers don't provide language supports.

In one case study, teachers who teach multilingual learners in a bilingual setting expressed that they understand the importance of the SoR, but point out how anglocentric it is. In addition, teachers emphasize that the curriculum they receive based on the SoR don't provide resources for cross-linguistic transfer. Instead, these materials are decontextualized, and work in isolation from other literacy practices (Zoeller & Castro, 2025). This sentiment highlights the need to provide teachers with resources that include instructional strategies that are effective for multilingual learners.

SoR Instructional Strategies for Emergent Bilingual Students:

For early elementary grades, effective instruction for a science of reading-aligned unit involves play-based lessons (Rand & Morrow, 2021). Incorporating adult-guided sociodramatic play helps with oral language development and reading comprehension. Teachers can guide students to reenact scenes from a text in order to comprehend the narrative and what is being discussed. This also helps students develop the vocabulary and language they need in order to discuss the text they are reading. If students are not at the stage where they are able to read yet, they can still engage in play by acting out words that have the beginning sound they are learning, such as /a/.

Some have suggested that the five pillars of reading need to be extended in order to include background knowledge and oral language development, which is being referred to as the "huge seven" (Villegas, 2024). The addition of these two components are crucial for English language learners since the SoR can be anglocentric, which sustains English as a dominant language. The inclusion of oral-language development and background knowledge as foundational skills specifically helps English language learners understand English SoR instruction by contextualizing the materials. These skills work in conjunction with the other

skills and should not be taught in isolation. For example, if students are asked “what is the beginning sound in the word “cat”? Students are expected to know the sound. However, if a student is a Spanish L1 speaker, they aren’t only exposed to a new sound in English, but to a new word. Unlike English L1 speakers, Spanish L1 students need support to understand the meaning of the word cat. Hence, they are also learning vocabulary (Shwartz, 2022; Vaughn et al., 2006). This means, students should be engaging in meaning-making when learning letter sounds, even if the focus is not on vocabulary or another foundational skill. One study (Geva et al., 2000) suggested that English as a second language (ESL) and English as a first language (EFL) students will learn how to read if they are proficient in phonological awareness and rapid naming. They also suggest that vocabulary and general intelligence didn’t affect how well both groups learned how to read. However, this study only observed word-recognition skills. Spanish L1 students need to engage in meaning-making so that they can comprehend and critically engage with vocabulary and texts. For this reason, teachers should be referencing the seven pillars of reading, and remember to not always teach them in isolation. In a similar sense, teachers should be wary of methods that claim they can be used with monolingual and emergent bilingual students, with just a few modifications. Spanish and English have two different linguistic systems, and universality isn’t the goal (Escamilla, 2009). Teachers should be looking at studies, and materials with emergent bilingual students at the center, who are not subjugated to the label “at risk” (Noguerón-Liu, 2020).

It’s important to have explicit instruction where emergent bilingual students can access their background knowledge. This way students are able to engage with their funds of knowledge and engage in metalinguistic awareness and cross-linguistic transfer (Cavazos, 2021). Specifically, this can include providing students with pre-activities, where they engage with the

context of the text or objective; or giving students cognates where they relate words or sounds that are similar in English as they are in the L2. This also means choosing familiar topics that students can relate to. It is also essential that emergent bilingual students have instructional time for oral language development. Saunders et al. (2006) researched 85 Kindergarten classrooms, some of which had a dedicated English language development (ELD) block, others that were labeled bilingual, and ones with neither. They found that L1 Spanish speakers had a significant increase in oral language development when they were placed in classrooms with a separate ELD block, in comparison to classrooms where the teachers' oral language development was scattered throughout the day. This study suggests that explicit instruction in oral language development is necessary for beginning English literacy development, and can function as a literacy intervention (Goldenberg, 2020). Supporting oral-language development also means integrating it into literacy instruction, alongside language supports such as gestures, visuals, or kinesthetics.

Additional instructional strategies include giving students holistic assessments, where students can access their home language (Cavazos, 2021). Assessment also helps in identifying what students understand, especially in the five areas of literacy. Li et al. (2023), researched how to help emergent bilingual students who have a reading disability build skills in phoneme discrimination and distinguish minimal pairs, which are two words that differ by one phoneme (e.g., *bat* vs *cat*). They found that students' ability to identify minimal pairs was an indicator of students “acquir[ing] the distinctness of phonological representations in the emerging mental lexicon” (Li et al., 2023). For this reason, emergent bilingual students with reading disabilities should be supported explicitly in phoneme discrimination through repeated exposure and by incorporating it into the instruction of other foundational skills. The authors suggest that students need to be given the opportunity to hear, speak, and distinguish phonemes through instruction

that promotes oral and listening development. They provide multiple activities which have visual representations of the target word. Most use consonant-vowel-consonant (CVC) words and high-frequency words. One of the activities requires teachers to first model the word by orally saying it, and then having the student repeat the word. They later on engage in blending sounds, which helps build their phonemic awareness.

In all, when thinking about instructional strategies for teaching a curriculum based on the science of reading, teachers need to make sure they differentiate instruction and implement helpful language supports (visual, auditory, kinesthetic) for emergent bilingual students, especially those who are English language learners. This includes an emphasis on oral language development and access to background knowledge.

Chapter 3

TrUDL:

TrUDL is a fairly new pedagogical framework created by María Cioè-Peña (2022) that intends to address the diverse needs of emergent multilingual students labeled as dis/abled (EMLADS) through the intersection of translanguaging and culturally responsive Universal Design for Learning (UDL). TrUDL encourages multimodality, flexibility, multiculturalism, and multilingualism (Padía et al., 2024). In order to explain the intersection of both of these frameworks, I will discuss scholarship that has been done about each of them individually, and how it pertains to my project.

Translanguaging:

Translanguaging is a theoretical framework and pedagogical strategy. Garcia and Wei (2013) define translanguaging as multiple discursive practices in which people “have one

linguistic repertoire from which they select features strategically to communicate effectively. That is, translanguaging takes as its starting point the language practices of [multilingual] people as the norm, and not the language of monolinguals" (p. 22). This definition moves away from the idea that bilingual people have two-separate brains, and only become bilingual through an additive process. Otheguy et al. (2018) adds to this definition by highlighting that this practice does not adhere "to the socially and politically defined boundaries of named [languages]" (p. 2). This differs from code-switching, which believes "that what the bilingual manipulates, however masterfully, are two separate linguistic systems" (Otheguy et al., 2015). Essentially, the difference between code-switching and translanguaging lies in the idea of people having separate linguistic systems for every language they speak. I believe in the practice of translanguaging where people are not restricted to the sociopolitical definitions of language which were created by nation-states and are often upheld within schools, homes, and other institutions.

In the same sentiment, translanguaging seeks to decolonize language ideologies that uphold linguistic hierarchies. This means dismantling oppressive practices that perpetuate English, standardized English, and the language practices of white students as the norm. Flores and Rosa (2015) coined the term raciolingusitic ideologies to describe how the language practices of linguistically minoritized students are policed in comparison to their white peers. Even if a racialized student uses "standard English" their use of language is still seen as deficient, creating boundaries between languages that are deemed appropriate and those that are not. Further, raciolingustic ideologies bring about abyssal thinking (Garcia et al., 2021) which establishes which knowledge and language practices are seen as "legitimate", while those that aren't are othered. In order to reject these ideas, dual-language teachers need to ensure language separation is not occurring in their classroom and evaluate how racialized bilingual children

make meaning of content. Thoughtful implementation of translanguaging in classrooms promotes language inquiry and acknowledges students as experts in their own language practices. (Martínez & Mejía, 2019).

Translanguaging as an Instructional Strategy:

In order to implement translanguaging pedagogy, first teachers need to understand policies and language ideologies at the national, local, and classroom levels (Henderson, 2017). Doing so will help teachers reflect and decolonize their own language ideologies, especially when it comes to those that impact dual-language classrooms. Aleksić and García (2022) wrote about preschool teachers in Luxembourg who misunderstood translanguaging pedagogy. This study highlighted three strands for effective translanguaging pedagogy. First, teachers need to take a positive translanguaging *stance* before *designing* lessons and translanguaging spaces that benefit emergent bilingual students. This includes diverging from the idea that students have a "home language" and a "school language" (Seltzer, 2019). Lastly, by designing lessons that support students linguistically, teachers are able to engage in moments of *shifts* that respond to students' fluid use of language by adjusting lessons as needed.

It's critical that teachers don't influence students to view language as separate entities. In a dual-language classroom, the separation of language will be more defined if teachers use language such as "right now we are speaking Spanish/English". Phrases like these aren't beneficial for students, and only limit their ability to make connections across languages and present their knowledge to their fullest potential. The meaning of biliteracy is often equated with meaning "double monolingual literacies" (García & Cervantes, 2023), but this isn't the case, and literacy practices should be supported with translanguaging.

In one case study (Johnson et al., 2019) third grade dual-language teachers came across a challenge when their L1 Spanish-speaking students were unable to answer open-ended reading comprehension questions in English. Prior to this, translanguaging wasn't being utilized in lessons because full-immersion of the target language was seen as the best way to "protect" each language. One of the dual language teachers, who is from Colombia, had an "aha" moment when she realized that unlike students in Colombia, "U.S. Latinx [bilingual] students were minoritized, rendered voiceless and powerless" (p. 126). As a result, translanguaging was used to leverage the bilingual identities of her students. This case study is one of many examples of how racialized and linguistically marginalized students struggle to accept their language abilities including in a dual-language setting when systems of oppression that are upheld at the national level are also being sustained in the classroom.

In order to design translanguaging lessons, teachers can use multimodal materials, dramatization, and play. This will help students participate in meaning-making by giving students the option to communicate their understanding through any language, including those that aren't verbal. This requires that teachers trust students' intuition in selecting the appropriate linguistic features that will allow them to convey their understanding (García & Cervantes, 2023). Translanguaging calls for language visibility, and classroom design impacts this. To elevate this, teachers can have books that reflect all the languages students speak or label parts of the room with students' languages. España and Herrera (2022) designed the framework Temas, Textos, and Translanguaging. This tool helps teachers select *topics* that relate to the students communities, *texts* that "affirm students' sense of belonging" (p. 234), and utilizes *translanguaging* so that students have agency in their learning. In order to fit a translanguaging

model, texts can be multimodal. This includes providing students with interviews, speeches, drawings, photographs, music, etc.

Teachers should also consider students home-literacy practices. Making space for parent involvement is part of understanding the way students *do* language. Through parent involvement, teachers can learn about their students' home literacy practices, which helps support translanguaging pedagogy in the classroom. This means, teachers should create projects, activities, or homework assignments that parents are able to understand and use with their children. This is part of creating a multilingual ecology (Seltzer & Ríos, 2021) where language is supported beyond the classroom. By doing this, teachers recognize community knowledge and expertise, and work alongside them as co-learners.

Translanguaging and the SoR:

Implications for teaching a curriculum based on the science of reading using translanguaging pedagogy requires knowledge about both of the target languages. For example, research studies on home-literacy practices have shown that caregivers often teach their children literacy skills based on how they themselves were taught in school. One study of parents of kindergartners from Mexican backgrounds showed that they emphasized teaching syllables in the order of vowels, such as ma, me, mi, mo, mu (Gillanders and Jiménez, 2004). Since Spanish is a syllabic language, many Spanish literacy practices involve the use of syllables — especially early instruction on stressed syllables (sílaba tónica). This is a crucial skill for understanding the rules of diacritics (tilde), which supports both reading and writing. This skill is also crucial for learning how to manipulate phonemes (Ford & Palacios, 2015). In order to create a translanguaging inclusive classroom, teachers should keep in mind these home-literacy practices, alongside others that are used to teach Spanish literacy, such as letras tramposas (tricky letters,

such as the *c* in *cine* vs the *c* in *carro*), or the use of gendered nouns (Urow, 2015). Implementing translanguaging in a curriculum based on the science of reading requires an understanding of how both Spanish and English are taught, including their differences and connections. One effective way to teach these similarities, differences, and cross-linguistic connections in early literacy is through instruction on vowels. While both Spanish and English have the same five vowel letters (a, e, i, o, u), English vowels can represent multiple sounds (e.g., the letter *e* in *egg*, *feet*, or *often*). In contrast, Spanish vowels typically have one consistent sound, such as the *e* in *elefante* or *escuela*. Teachers can use cognates like *elefante* and *elephant* to illustrate how the same vowel letter may be pronounced differently across languages (e.g., /e/ in Spanish vs. /ɛ/ in English). Noguerón-Liu (2020) also discusses the use of the three-cueing system and miscue analysis, which is a common reading assessment that evaluates the types of errors a student makes during oral reading. The author argues that these assessments and strategies should not be dismissed by advocates of structured literacy. Instead, when viewed through a translanguaging lens, they can provide valuable insight into students' metalinguistic awareness. For example, if a student says *beard* instead of *bird*, but simultaneously points to a picture of a bird and says *pájaro*, this reveals their comprehension despite the decoding error and provides insight on students linguistic knowledge, not just on phonics (Ascenzi-Moreno, 2018). This example highlights that when bilingual students are assessed, they are being evaluated not only on literacy skills, but also on language skills. Therefore, educators should reimagine the assessments they use with bilingual students, adopting a holistic approach that incorporates translanguaging practices.

Universal Design for Learning:

Universal Design for Learning (UDL) originated from the field of architecture in the 1990s, which introduced the concept of Universal Design (UD) to create buildings and infrastructure that are accessible to people with disabilities. Building on this concept, the field of education developed UDL as a framework to design curricula and learning environments that accommodate the needs of all students, particularly those with disabilities (Shultz, 2023). While UD focuses on physical accessibility, UDL extends this idea to address the learning needs of students, ensuring that instruction is flexible, inclusive, and promotes learner agency.

The UDL framework is built around three core principles: multiple means of engagement, multiple means of representation, and multiple means of action and expression (CAST, 2024). These principles serve as a guide for educators when planning inclusive and accessible lessons (see Table 2).

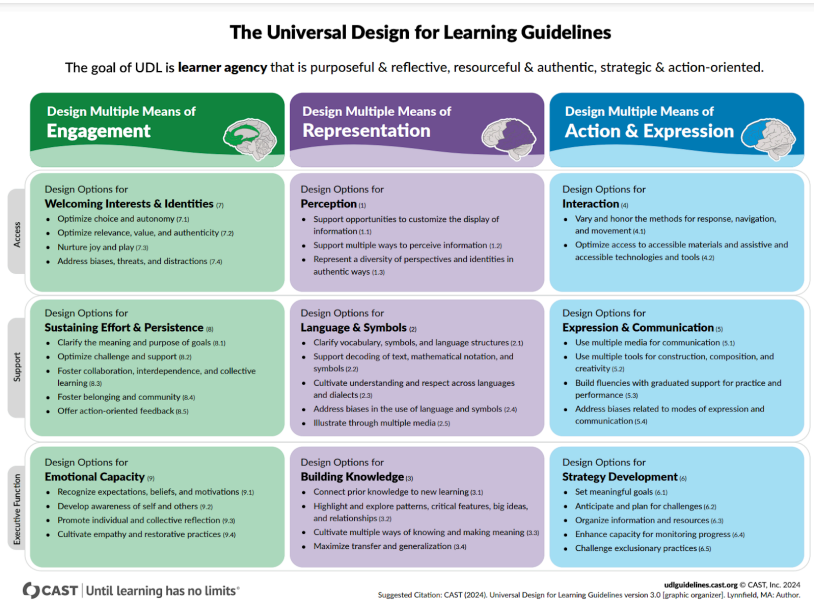
Table 2

Core Principle	Description
Multiple Means of Engagement	This principle addresses the *why* of learning. It focuses on motivating students by tapping into their interests, and offering choices. Teachers are encouraged to ask themselves, "Why should students learn this?". This question helps teachers connect learning goals to students' backgrounds, and motivate them.
Multiple Means of Representation	This principle addresses the *what* of learning. It focuses on the importance of providing students with access to various materials that present content from different perspectives. Teachers should offer students multiple ways to engage with information, including different languages, symbols, and formats, and help them connect new knowledge to their prior knowledge. This approach ensures that all students can make meaningful

	connections.
Multiple Means of Action and Expression	This principle addresses the *how* of learning. It focuses on the various ways students can demonstrate and share their understanding. Teachers should provide students with choices for expressing their knowledge, whether through oral presentations, kinesthetic activities, or other methods. Additionally, the use of assistive technologies should be encouraged to make sure that all students can effectively communicate their learning in a way that fits their needs.

Figure 1

UDL 3.0 framework overview



Note. From Cast (2024) https://udlguidelines.cast.org/

Recently, the UDL framework was updated from version 2.2 to version 3.0, which includes six new considerations, and changes in the wording of previous considerations (see

Figure 1). In version 3.0, changes were made to include students' backgrounds and interests, which influence the way(s) they approach learning. There is also an emphasis on choice in how students engage and represent content, which provides students with agency, as well as social emotional learning (SEL) (Chardin, 2024). The six new considerations in UDL 3.0 include:

1. Nurture joy and play (7.3)
2. Cultivate empathy and restorative practices (9.4)
3. Represent a diversity of perspectives and identities in authentic ways (1.3)
4. Address biases in the use of language and symbols (2.4)
5. Address biases related to modes of expression and communication (5.4)
6. Challenge exclusionary practices (6.5).

These new considerations demonstrate a shift to include practices that align with culturally relevant pedagogy (Ladson-Billings, 1995; Giacomini, 2024). This shift is done through the inclusion of honoring diverse perspectives, identities, and ways of expression and communication. In addition, under the principle of *multiple means of engagement*, I also noticed that changes in the wording emphasize community, collective learning, and collaboration, rather than focusing on the individual. Under the principle of *multiple means of representation*, there was a shift to include the representation of multiple identities. When it comes to language it emphasizes designing lessons that clarify vocabulary, symbols, and language structures, as well as respect across other languages and dialects. This differs greatly from version 2.2, which only references language support of syntax and structure. Lastly, under the principle of *multiple means of action and expression*, there is more emphasis on providing an avenue for creativity, movement, accessible materials, and setting meaningful goals.

Although these changes have been modified to include more culturally relevant strategies, there is still room to include practices specifically designed to support linguistically diverse students. To address this gap, combining translanguaging with the UDL framework offers a solution.

UDL and the SoR:

UDL can be integrated into a curriculum grounded in the science of reading to account for learner variability and ensure that literacy instruction is accessible to all students. Burke (2023) emphasizes that students who struggle with reading should not be quickly labeled as "at risk" or as having a reading disability. Instead, educators should recognize that students learn in various ways and may encounter different challenges. For this reason, teachers can implement *multiple means of representation* and *multiple means of engagement*. This might include scaffolding techniques such as using manipulatives, like Legos, blocks, or flashcards to reinforce concepts. It can also involve designing lessons that incorporate visual cues or physical movement to support learning. For example, when teaching vocabulary, activating students' background knowledge aligns with the principle of multiple means of representation. Similarly, when teaching phoneme deletion or phoneme manipulation, teachers can use tactile objects to represent individual sounds in a word. This can help students understand more abstract phonological concepts.

Additional instructional strategies to support emergent bilingual students includes providing oral language opportunities through peer support, collaboration, sentence frames, graphic organizers, or clarification of vocabulary (Doran, 2015). In a digital age, it's common to see technology (iPads, tablets, computers, Smartboards) in classrooms. Teachers can use these tools to support language learning by utilizing features like text-to-speech, or using customizable

options that allow students to engage with auditory, visual, and textual information to meet their learning needs (Rao & Torres, 2017). Rao and Torres (2017) highlight an example of a teacher who created her own multimedia book using a digital platform that incorporated students' drawings, images, and relatable text. Teacher projects like these help students connect to material and make learning more accessible. Additionally, they note that the use of text-to-speech multimedia books was beneficial for students working with decodable texts. Decodable texts are a key component in many curricula aligned with the science of reading. In addition, Lowry and Burke (2019) emphasize the importance of supporting self-regulation among English language learners. They recommend that teachers help students develop reflection skills, including goal setting, planning, and organization (Roa & Torres, 2017). This also involves "acknowledg[ing] the social, linguistic, and material resources they do use, rather than solely looking at their difficulties" (Lowry & Burke, 2019, p. 3). This perspective aligns with Noguerón-Liu's (2020) suggestion of viewing students' reading difficulties, such as those identified in miscue analysis, through a translanguaging lens. In doing so, teachers can understand how emergent bilingual students demonstrate metalinguistic awareness.

The Intersection:

Through the intersection of translanguaging and UDL, TrUDL fills the gap that is created when language is separated from social, emotional, and academic experiences. Cioè-Peña (2022) outlines TrUDLs three core elements below.

1. "Multilingual and multimodal teacher-employed strategies focused on increasing student accessibility and comprehension" (p. 805). This intersectional point addresses the *what of learning* (CAST, 2024). It explains that the strategies and resources the teacher provides should be represented in multiple ways, hence why it should be multimodal. By

emphasizing the representation of multilingual resources, it highlights the importance of supporting students linguistically by letting them access their L1.

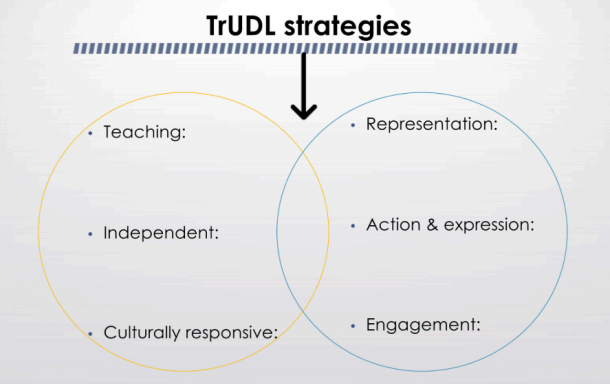
2. “Multilingual and multimodal student practices focused on flexibility and increasing student output” (p. 805). This intersectional point addresses the *how of learning* (CAST, 2024). When students have access to multilingual and multimodal materials, and aren’t limited in how they are able to demonstrate their understanding. This means, students are more likely to produce work independently.
3. “Culturally responsive practices that relate to student interest and identity in order to activate, and/or increase, engagement” (p. 805). This intersectional point addresses the *why of learning* (CAST, 2024). Students should be taught through a culturally responsive lens that cultivates joy, and motivates students to learn more about themselves and the world around them.

It’s important to note that just like translanguaging and UDL, TrUDL is not a scaffolding technique, but an instructional framework. In creating lessons with TrUDL in mind, teachers are taking into account students' linguistic, cultural, academic, social, and emotional learning needs from the start. TrUDL can be applied to existing curriculum and lessons to make them more inclusive.

Below I outline an eight lesson unit on phonological awareness through a TrUDL lens. To ensure my lessons follow a TrUDL framework, I will reference the venn diagram in Figure 2. (Cioè-Peña, 2022).

Figure 2

TrUDL Venn Diagram



Note. From *TrUDL, A Path to Full Inclusion: The Intersectional Possibilities of Translanguaging and Universal Design for Learning* (Cioè-Peña, 2022)

Chapter 4

Unit Plan:

My unit focuses on phonological awareness, an umbrella term that refers to "the ability to recognize and manipulate the spoken parts of words" (Reading Rockets, n.d). These spoken parts include syllables, onset (the part of the syllable before the vowel), rime (the part after the vowel, including the vowel), and phonemes (individual sounds). A unit aligned with the science of reading typically follows a structured and sequential scope and sequence, beginning with phonological and phonemic awareness, followed by phonics, fluency, vocabulary, and comprehension. Each component has its own sequence and should integrate elements of speaking, reading, writing, and spelling as seen fit (Reading Rockets, n.d).

My focus on phonological awareness, which is the first stage in the scope and sequence, stems from my own experience teaching both phonological and phonemic awareness during student teaching. These skills are taught at the start of Kindergarten, making it an entry point for literacy instruction aligned with the science of reading. Mostly, I was interested in exploring how to begin a unit grounded in the science of reading while integrating the principles of TrUDL.

Since phonological awareness encompasses various spoken parts, my unit will **not** focus on all of them. Instead, I will outline a five week unit on one spoken part, which will be syllables (see Table 4). This includes an overview of content and language objectives for each week. I will provide one example per week that contains a TrUDL lesson. Although my unit is not focused on integrating phonological awareness in other content areas, this skill can be taught in conjunction with other subjects such as science, math, or social studies. For example, teachers can have students segment, count, or blend syllables in content vocabulary words.

I will then hone in on week three, Syllable Blending, to outline four individual lessons. This is meant to give insight into what a more detailed day-by-day lesson plan looks like using the TrUDL framework. I will be using a modified Understanding by Design (UbD) lesson plan template to outline the four individual lessons for week three.

Additionally, since this unit is designed for a Kindergarten Spanish-English dual language classroom, I will be using a 90/10 model, with most early literacy instruction being taught in Spanish. For this reason, my lessons will start with teaching students the vowels in Spanish. In Spanish vowels and consonants are often taught first because the vowels in Spanish all make one sound. This differs from English, where the vowels make multiple sounds. In Spanish, after vowels are taught, instructors usually pair the vowels with consonants. In table 4, you'll notice that starting in week 2, students learn syllables such as ma, me, mi, mo, mu. In my

syllable blending lesson plans, I continue teaching students syllables with the consonants, t,n,d, and r. Since my unit is not focused on letter-sound correspondence, I will emphasize oral-language development, and the use of visual representations to represent words.

Table 3

Unit Big Ideas, Enduring Understandings, and Essential Questions

Understanding by Design Unit Goals:
Big Ideas: Phonological awareness and syllables **Enduring understandings:** Recognizing similarities and differences in the structure of syllables in Spanish and English helps strengthen phonological awareness that supports literacy development across languages. **Essential Questions:** How does understanding syllables in English and Spanish support literacy and language development? Why are syllables important to learn? **Prior Knowledge:** Word awareness, rhyming and alliteration.

Table 4

Five Week Unit:

Week 1: Vowel Sounds				
Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Content Objective: Given spoken and visual instructions, students will be able to recognize the vowel sound /a/, pronounce /a/, and identify visuals that start with /a/ 95% of the time. **Language Objective:** Students will orally produce the sound /a/, and vocabulary that begins with /a/ in Spanish. **TrUDL example (Slide 2)**	**Content Objective:** Given spoken and visual instructions, students will be able to recognize the vowel sound /e/, pronounce /e/, and identify visuals that start with /e/ 95% of the time. **Language Objective:** Students will orally produce the sound /e/, and vocabulary that begins with /e/ in Spanish.	**Content Objective:** Given spoken and visual instructions, students will be able to recognize the vowel sound /i/, pronounce /i/, and identify visuals that start with /i/ 95% of the time. **Language Objective:** Students will orally produce the sound /i/, and vocabulary that begins with /i/ in Spanish.	**Content Objective:** Given spoken and visual instructions, students will be able to recognize the vowel sound /o/, pronounce /o/, and identify visuals that start with /o/ 95% of the time. **Language Objective:** Students will orally produce the sound /o/, and vocabulary that begins with /o/ in Spanish.	**Content Objective:** Given spoken and visual instructions, students will be able to recognize the vowel sound /u/, pronounce /u/, and identify visuals that start with /u/ 95% of the time. **Language Objective:** Students will orally produce the sound /u/, and vocabulary that begins with /u/ in Spanish.

Week 2: Counting and Segmenting Syllables				
Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Content Objective: Given 2 and 3 syllable words, students will be able to segment the syllables in the words with 95% accuracy. **Language Objective:** Students will listen for 2 and 3 syllable words and orally segment them in Spanish. **TrUDL example (Slide 3)**	**Content Objective:** Given 2 and 3 syllable words that contain **ma, me, mi, mo, mu** students will be able to segment and count how many syllables are in each word with 95% accuracy. **Language Objective:** Students will listen for 2 and 3 syllable words and orally segment them in Spanish.	**Content Objective:** Given 2 and 3 syllable words that contain **pa, pe, pi, po, pu** students will be able to segment and count how many syllables are in each word with 95% accuracy. **Language Objective:** Students will listen for 2 and 3 syllable words and orally segment them in Spanish.	**Content Objective:** Given 2 and 3 syllable words that contain **la, le, li, lo, lu**, students will be able to segment and count how many syllables are in each word with 95% accuracy. **Language Objective:** Students will listen for 2 and 3 syllable words and orally segment them in Spanish.	**Content Objective:** Given 2 and 3 syllable words that contain **sa, se, si, so, su**, students will be able to segment and count how many syllables are in each word with 95% accuracy. **Language Objective:** Students will listen for 2 and 3 syllable words and orally segment them in Spanish.

Week 3: Syllable Blending				
Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Learning Objectives: Given a list of syllables that contain **ta, te, ti, to, tu**, students will be able to blend 2-3 syllables to form 10 words. **Language objective:** Students will listen to spoken syllables and orally produce 10 new words by blending them. **TrUDL example (Slide 4)**	**Learning Objectives :** Given a list of syllables that contain **na, ne, ni, no, nu**, students will be able to blend 2-3 syllables to form 10 words. **Language objective:** Students will listen to spoken syllables and orally produce 10 new words through blending them.	**Learning Objectives:** Given a list of syllables that contain **da, de, di, do, du**, students will be able to blend multisyllable words, and identify the correct visual representation of at least 10 words. **Language Objective:** Students will listen to spoken syllables and orally produce 10 new words through blending them.	**Learning Objective:** Given a list of syllables that contain **ra, re, ri, ro, ru**, students will be able to blend 2-3 syllables to form 10 words. **Language Objective:** Students will listen to spoken syllables and orally produce 10 new words through blending them.	**Learning Objectives :** Given a list of syllables, students will count, segment, and blend at least 5 words, and draw and tell a story using the blended words **Language Objective:** Students will listen to spoken words and syllables to orally segment, count, and blend them.

Week 4: Syllable Substitution				
Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Learning Objective: Given a list of spoken 2 syllable words, students will be able to substitute the **beginning** syllable for 10-15 words. **Language Objective:** Students will listen for the beginning syllable in 2 syllable words and orally produce a new word with a different beginning syllable. **TrUDL example (Slide 5)**	**Learning Objective:** Given a list of spoken 2 syllable words, students will be able to substitute the **final** syllable for 10-15 words. **Language Objective:** Students will listen for the final syllable in 2 syllable words and orally produce a new word with a different final syllable.	**Learning Objective:** Given a list of spoken 3 syllable words, students will be able to substitute the **mid syllable** for 10-15 words. **Language Objective:** Students will listen for the mid syllable in 3 syllable words and orally produce a new word with a different mid syllable.	**Learning Objective:** Given a list of spoken multisyllabic words, students will be able to substitute the beginning, final and mid syllable for 10-15 words. **Language Objective:** Students will listen for the beginning, final, and mid syllable in multisyllabic words and orally produce a new word with a different beginning, final, or mid syllable.	**Learning Objective:** Given a list of spoken multisyllabic words, students will be able to count, segment, blend, and substitute the beginning, final, or mid syllable for 10-15 words. **Language Objective:** Students will listen for multisyllabic words and orally produce a new word through counting, segmenting, blending, or substitution.

Week 5: Syllable Addition				
Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Learning Objective: Given a list of spoken words, students will be able to change a word by adding a syllable at the beginning of the base word. **Language Objective:** Students will listen for words and new syllables and orally produce a new word with a new beginning syllable. **TrUDL example (Slide 6)**	**Learning Objective:** Given a list of words, students will be able to change a word by adding a syllable at the end of the base word. **Language Objective:** Students will listen for words and new syllables and orally produce a new word with a new final syllable.	**Learning Objective:** Given a list of words, students will be able to change a base word by adding a new beginning or final syllable. **Language Objective:** Students will listen for words and new syllables and orally produce a new word with a new beginning or final syllable.	**Learning Objective:** Given a list of words, students will be able to change a base word by adding a syllable at the beginning or end of the word. **Language Objective:** Students will listen for words and new syllables and orally produce a new word with a new beginning or final syllable.	**Learning Objective:** Given a list of multisyllabic words, students will be able to segment, count, blend, substitute, and add syllables to other syllables or base words. **Language Objective:** Students will listen for multisyllabic words and orally produce a new word through counting, segmenting, blending, substituting, or adding syllables.

Lesson Plans:

Day 1: Syllable Blending Introduction

Objectives & Standards

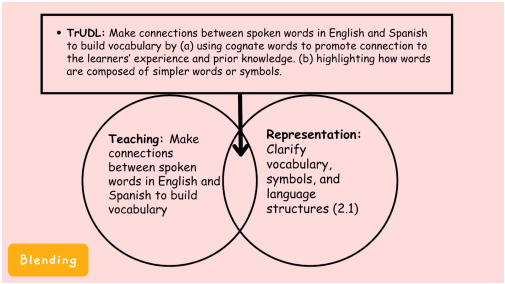
Learning Objectives: Given a list of syllables that contain **ta, te, ti, to, tu**, students will be able to blend 2-3 syllables to form 10 words.

Language objective: Students will listen to spoken syllables and orally produce 10 new words by blending them.

Standards: **Standard - CC.1.1.K.C:**

- Demonstrate understanding of spoken words, syllables, and sounds (phonemes).
- Count, pronounce, blend, and segment syllables in spoken words.
- Blend and segment onsets and rimes of single-syllable spoken words.

TrUDL:



Assessment Evidence

I will use hand movements/signals to demonstrate blending words, oral questioning to get ideas about similarities or difference between words and syllable structure in Spanish and English, think-pair-share, and a bingo game at the end. This will connect to the TrUDL objective of using cognate words to promote connection to the learners experience and prior knowledge. In the future, this will facilitate the blending of non-cognate words in thinking about syllable structure.

Instructional Plan

Time	Materials	Activity:
5 minutes	Slides Pictures of words that start with the vowel sounds	Warm up activity: ● Review vowel sounds, and choose 3 words to count and segment ● Optional: Play a song so get kids moving (stomp, or clap to syllables)
5 Minutes		Introduce syllable blending:

		● Remind students that words are made up of syllables. ● Tell students that syllables need to come together to form words. When syllables come together, this means they are blending. ○ Ask students to turn to a partner and discuss or show eachother what blending looks like (hand motion, someone can come up to draw what they think it means) ○ Ask students what the words means in their home language ● Clarify meaning, and give students 3 examples of what syllable blending looks like. ○ Ex: "Cuando la sílaba *ta* se mezcla con *pa*, ¿qué palabra forma?"/ "when the syllable *ta* blends with *pa*, what word does it make?" ■ Look for student response ■ Show a picture of a lid (tapa) as the answer, or provide students with multiple images, and have them vote for the correct answer that represents the word once blended.
8 minutes		Cognate words and whole group practice: ● Give students a list of cognate words that begin with ta, te, ti, to, tu. ○ Ta: Taco ○ Te: Telefono/telephone ○ Ti: Tigre/Tigre ○ To: Tomate/tomato ○ Tu: Tucán/Tucan ● Go through these words one by one, starting with the syllable *te* (telefono/telephone). ○ Ask students to blend the words (e.g., mezcla te con le…fo…no) ○ Think-Pair-Share: Ask students what they notice when they hear the word telefono and telephone? Do they sound similar? Ask them to segment the word and count the syllables with a partner. Do they have the same amount of syllables? How are they different?
15 minutes	Bingo card handout.	Independent Practice: ● Bingo: provide students with bingo cards with images. Students need to listen to the syllables, blend the syllables, and look at their card to see if they can match the pictures with the word.

Differentiation and Accommodations:

Accommodations: Repeat instructions, and provide students with images, pictures, or an additional video to show what syllable blending is.
ELLs: English language learners will learn through Spanish instruction, but will also learn about cognate words in English, and learn about similarities and differences between these words which helps build metalinguistic awareness.
Differentiation: For the students who struggle with blending syllables, provide them with manipulatives (blocks) to guide them in understanding how syllables come together to form words. For students who have mastered syllable blending, provide them with 4-5 syllable words or non-cognate words.

Day 2: Syllable "Blending Kitchen"

Objectives & Standards

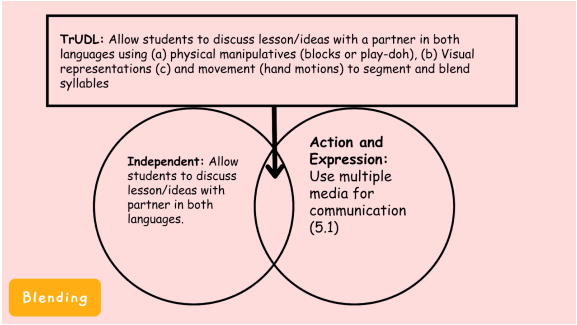
Learning Objectives : Given a list of syllables that contain **na, ne, ni, no, nu**, students will be able to blend 2-3 syllables to form 10 words.

Language objective: Students will listen to spoken syllables and orally produce 10 new words through blending them.

Standards: **Standard - CC.1.1.K.C:**

- Demonstrate understanding of spoken words, syllables, and sounds (phonemes).
- Count, pronounce, blend, and segment syllables in spoken words.
- Blend and segment onsets and rimes of single-syllable spoken words.

TrUDL:



Assessment Evidence

The assessment I'll be using includes elements of oral questioning and think-pair-share. During pair/independent practice students will be paired in groups of two and role-play segmenting (cutting), and blending words. This assessment relates to the student objectives because students are able to discuss ideas/think through syllable blending with a partner in their home language using manipulatives (play-doh, images, "blender"). In the future, this assessment will help students understand how words they use often are formed.

Instructional Plan

Time	Materials	Activity
3 minutes	Slides	Warm-up activity: ● Students get up and use hands to blend syllables that begin with ta, te, ti, to, tu. They use their body to show what word the blended syllables create.
10 minutes	Play-doh	Whole-group instruction: ● Introduce students to manipulatives of choice (blocks, play-doh, etc). For this activity, students will use a physical manipulative, which will be play-doh. ● Tell students how to use play-doh, allow some time for them to feel out the play-doh, and set expectations. ● Tell students: "Hoy vamos a combinar sílabas de palabras que empiezan con na, ne, ni, no, nu. ¿Alguien conoce alguna palabra que empiece con la sílaba na?" / "Today we will be blending syllables for words that begin with na,ne, ni, no, nu. Does anyone know a word that begins with the syllable na?" ○ Have students turn to their partner. Allow students to answer in any language. You can use the sentence phrase: "una palabra que comienza con la sílaba na es ____"/ "A word that starts with the syllable na is ____". ● Tell students they will take apart the play-doh to represent the syllables, and blend them together to make the word. Choose at least four (one from each) from the list below. ○ Na: naranja, nariz, nachos ○ Ne: negativo, nectar ○ Ni: nido, niña, Nicaragua ○ No: noche, nopal, norte, noticias ○ Nu: nube, nudo, nueve ■ Provide students only with the syllables to these words. Have them blend it with a partner.
10 minutes	"Blending Kitchen" Role-Play handout.	Partner Practice ("Blending Kitchen" Role-Play): ● Pair students into groups of two. ○ Assign one student as the "segmentador/segmenter" who will segment the words by "cutting" them into however many syllables the word has. ○ The other students will be assigned as "mezcladores/blenders". ● Students will be given a licuadora/blender and pictures of the words. Once the pictures are cut into the syllables they will need to place them in the blender to form the

		word. ● The instructor and the students can get into character as chefs who are creating words out of syllables. You can bring in thematic words about food, especially foods that students might eat often, and related to their culture so that the activity can also be culturally responsive. This offers students the opportunity to see how the words they use frequently are made up of syllables.

Differentiation and Accommodations:

Accommodations: Repeat instructions, and provide students with images, pictures, or an additional video to show what syllable blending is.
ELLs: Pair students with peers who speak the same home language, so they can discuss their work/ideas.
Differentiation: For the students who struggle with syllable blending, provide students with images to reference as answers. For students who have mastered syllable blending, provide them with a mix of syllable structures.

Day 3: i-Spy Syllable Blending Game

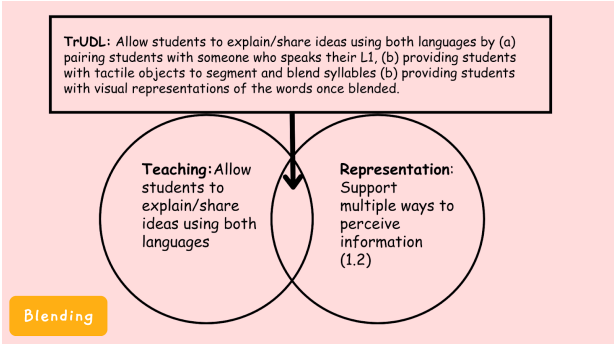
Objectives & Standards

Learning Objectives : Given a list of syllables that contain **da, de, di, do, du**, students will be able to blend multisyllable words, and identify the correct visual representation of at least 10 words.

Language Objective:
Students will listen to spoken syllables and orally produce 10 new words through blending them.

Standards: **Standard - CC.1.1.K.C:**
- Demonstrate understanding of spoken words, syllables, and sounds (phonemes).
- Count, pronounce, blend, and segment syllables in spoken words.
- Blend and segment onsets and rimes of single-syllable spoken words.

TrUDL:



Assessment Evidence
The assessment I'll be using will include elements of oral-questioning and a game called "slap it". In this game, students will use a paper cut out of a magnifying glass to look for the correct visual representation of the word the teacher asks students to blend. This assessment relates to student objectives because students are given visual representations of the words through an interactive game that allows them to explain their thinking to the class. In the future this will help students understand how words are formed.
Instructional Plan

Time	Materials	Activity
3 minutes	Slides	Review: ● Students review syllable blending of words with na, ne, ni, no, nu.
20 minutes	I-spy magnifying glass & cut outs.	Whole-Group Instruction: ● Tell students: “Hoy aprenderemos a combinar palabras que tienen las sílabas da, de, di, do, du.” / “Today we will learn how to blend words that have the syllables da, de, di, do, du”. Ask them if they know a few words that begin with the sound da … de …. etc. Students can answer in any language if the syllable sounds the same. Address differences and similarities between languages. ● Using the list of words below, the teacher will lead a “yo veo” / i-spy syllable game. ○ Da: dado, dama, danza ○ De: dedo, deporte, dentista ○ Di: dinero, dinosaurio ○ Do: dólar, doble ○ Du: dulce, duplicar, duro ● The class will be split into groups of two. Each student will receive a paper magnifying glass cut-out, and each group images of the words. The teacher gives clues by saying: ○ “Yo veo un objeto que tiene dos sílabas. La primera sílaba es *da*, la segunda sílaba es *do*. Que veo”/ “I-spy an object that has two syllables. The first syllable is *da*, the second syllable is *do*. What object do I-spy? ○ Students will think through the answer with their group. Students will find and “slap” the image of the word they think the teacher is looking at using their magnifying glass. If the person finds the correct word their team wins a point. ○ When the student “slaps” the image they will need to explain why they chose that image in any language. They can use the sentence starter: “Yo creo que tu ves _____ porque _____. / I think you spy the _____ because _____.”

Differentiation and Accommodations:

Accommodations: Repeat instructions, and provide students with more time to "turn and talk" about answers, in order to accommodate for thinking/processing time.
ELLs: Pair students with peers who speak the same home language, so they can discuss their work/ideas.
Differentiation: For the students who struggle with syllable blending, provide them with 2-syllable words. For students who have mastered syllable blending, provide them with a mix of syllable structures.

Day 4: Syllable Blending with "Candy Land"

Objectives & Standards

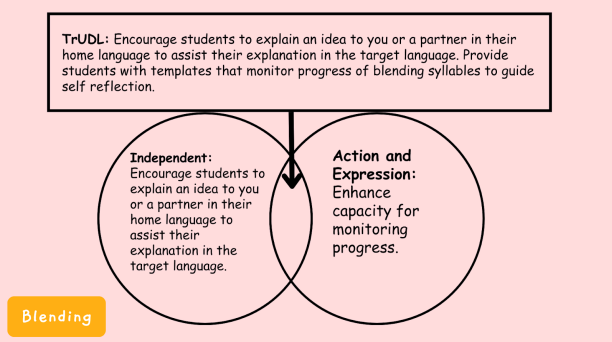
Learning Objective: Given a list of syllables that contain **ra, re, ri, ro, ru**, students will be able to blend 2-3 syllables to form 10 words.

Language Objective:
Students will listen to spoken syllables and orally produce 10 new words through blending them.

Standards: **Standard - CC.1.1.K.C:**

- Demonstrate understanding of spoken words, syllables, and sounds (phonemes).
- Count, pronounce, blend, and segment syllables in spoken words.
- Blend and segment onsets and rimes of single-syllable spoken words.

TrUDL:



Assessment Evidence

The assessment I'll be using is a mix of oral-questioning and partner-work. This assessment relates to the objectives because through the candy land game, students are able to monitor if they are able to segment words, and count and blend syllables correctly. They will have a partner who can help them. In the future this can help students understand that we can blend syllables and also take words apart by segmenting them. This will serve as a checkpoint for them to connect everything to what they've been learning.

Instructional Plan

Time	Materials	Activity
3 minutes	Slides	Review: ● Students review syllable blending of words with da, de, di, do, du.
7 minutes		Whole-group instruction: ● Tell students that today they will be learning about words that start with the syllables ra, re, ri, ro, ru. Ask them what sound is in the beginning of ra, re, ri, ro, ru. ● Ask students what words they know that start with ra … re … etc. ● Tell students that today, they will segment, count, and blend words. ● Provide students with 3 words they need to count and segment, and a list of syllables to blend. Model to students the game of "candy land" they will play with a partner, which is described below.
15 minutes	Self-monitoring checklist (segmenting words, counting and blending syllables) "Candy land" game.	Independent Practice: Given the list of words below. Pick and choose what words you want students to segment, count, and blend. ● Ra: ramo, rana, rata, rayo ● Re: reloj, rezar, reina ● Ri: rico, risa, riqueza ● Ro: loro, roca. ropa, rosca ● Ru: ruta, rutina, rumor Students will work with a partner to complete a series of tasks: 1. Segment words 2. Count how many syllables are in each word 3. Blend syllables to form words On their "candy land" worksheet, there are three signs labeled *Segment land, counting land,* and *blending land.* These signs indicate to students what they should do in each section. The goal is to get to their destination – *Word land.* Each group will be provided with a pack of images that they will need to segment and count. When they get to blending land, they will need to raise their hand and ask the teacher for the clue. ● Tell students that they will take turns with their partner.

Differentiation and Accommodations:
Accommodations: Repeat instructions **ELLs:** Pair students with peers who speak the same home language, so they can discuss their work/ideas. **Differentiation:** For the students who struggle with syllable blending, counting, or segment words provide them with 2-syllable words. For students who have mastered syllable blending, provide them with a mix of syllable structures.

Day 5: Syllable Blending Story

Objectives & Standards

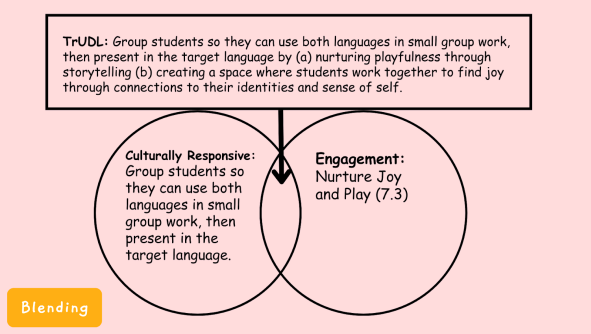
Learning Objectives : Given a list of syllables, students will count, segment, and blend at least 5 words, and draw and tell a story using the blended words

Language Objective:
Students will listen to spoken words and syllables to orally segment, count, and blend them.

Standards: **Standard - CC.1.1.K.C:**

- Demonstrate understanding of spoken words, syllables, and sounds (phonemes).
- Count, pronounce, blend, and segment syllables in spoken words.
- Blend and segment onsets and rimes of single-syllable spoken words.

TrUDL:



Assessment Evidence

The assessment I'll be using is a mix of oral-questioning, drawing, and storytelling. This assessment relates to the objectives because students are able to present their work to their peers in any language, which helps when they present their work to the class in the target language. It also helps them be creative through the integration of art. In the future, this can help students make-meaning of words and how students use these words in different contexts.

Instructional Plan

Time	Materials	Activity
3 minutes	Slides	Review: ● Students review syllable blending of words with ra, re, ri, ro, ru
12 minutes		Whole-Group: ● Give students a list of syllables. ○ Ca-rro ○ ra-na ○ Te-le-fo-no ● Ask students to help you blend the words ● After they blend the words, tell students that you will create a story using the words they just blended. ● Create a story through drawing, guiding students by telling them how you are making meaning of the words.
20 minutes		Independent work: ● Instruct students to go back to their seats. Provide them with a list of syllables they will need to blend. These words can be ones used previously in other lessons or new words: ○ Ti-gre ○ No-che ○ Den-tis-ta ○ Rei-na ● Ask students to create a story by drawing it out. They can have 10-15 minutes to do this. After drawings are finished, let them share their story with a partner in any language. Afterwards, students can share their story orally with the class in the target language. You can share the drawing by projecting it, or students can present at the front of the class. ● You can provide students with sentence frames. ○ Mi historia es de _____. /My story is about _____. ○ Primero _____. Luego _____. / First _____. Then _____. This activity is focused on making meaning of the blended words. Since this is the last day of the week, let students show you what they know about the words they blended and what they mean through storytelling. If you want to stick to blending, you can modify the activity by… 1. Providing students with compound words, where they have to draw out each syllable (e.g., telaraña, nochebuena, lavamanos, etc) 2. You can choose one syllable pair to work with (e.g.,

		ma, pa, ta, de, ri). You give students words they need to blend with that syllable, and they need to draw it out. After drawing out 3-5 words, they can create sentences using those words.

Differentiation and Accommodations:
Accommodations: Repeat instructions, and provide sentence frames so that students can orally discuss the story they created in the target language. **ELLs:** Pair students with peers who speak the same home language, so they can discuss their work/ideas. **Differentiation:** For the students who struggle with syllable blending, counting, or segment words provide them with 2-syllable words. For students who have mastered syllable blending, provide them with a mix of syllable structures, or more words that they use to create a story.

Conclusion:

Throughout this thesis I explored ways to make a curriculum aligned with the science of reading more inclusive by considering the needs of both dual language teachers and students. I used TrUDL to create a unit on syllables which helped me develop activities and assessments that were multilingual and multimodal. Using the TrUDL framework facilitated the process in making sure emergent bi-/multilingual students and diverse learners were accounted for in lessons. It helped me explore different ways to make my teaching and the independent work of students more culturally and linguistically responsive. I focused on oral language development, and strived to make cross-linguistic connections across languages. Creating this unit and applying TrUDL helped me find joy in eventually teaching a curriculum based on the science of reading. In the future, I hope teachers can have more agency when teaching curriculums based on the science of reading, especially in districts and schools where it's heavily mandated, and curricula are monitored. For this reason, I see TrUDL and its implementation as a way for teachers to find agency in creating lessons that will best meet their students' needs, paving the way for student agency.

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Appendix

TrUDL Weekly Diagrams:

https://www.canva.com/design/DAGkiKbHHcM/rnPcq8isIRvNDVw_LRc8JQ/edit?utm_content=DAGkiKbHHcM&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton

Syllable Blending Slides (Day 1-5):

https://www.canva.com/design/DAGkpluAXfM/XiZZKf8nEWiTaKdi7E94sA/edit?utm_content=DAGkpluAXfM&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton

Lesson Handouts:

https://drive.google.com/drive/folders/18hXslZyIDXZW7i2z1_IsAWVWPtjhnyAO?usp=sharing

Website Version of My Thesis:

https://karinaflorres.wixsite.com/thesis-unit-1