

### Connecting Funds of Knowledge to Funds of Identity through a Bilingual Multimodal Project-Based Approach

## Enlazando Fondos de Conocimiento a Fondos de Identidad a través de Proyectos Bilingües y Multimodales

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#### **KEYWORDS:**

Funds of knowledge Funds of identity Multimodality Project-based learning Bilingual students

#### ABSTRACT:

This study analyzed how bilingual multimodal projects that children and families from Mexican immigrant backgrounds created together facilitated expressions of their funds of knowledge and funds of identity as part of classroom instruction. Twenty-two students and their families participated creating biliteracy family projects that integrated their lives, experiential knowledge and bilingualism into classroom learning in their first-grade bilingual classroom in a U.S. school. Drawing from a sociocultural theoretical lens informed by funds of knowledge, funds of identity and multimodal social semiotics perspectives, children's projects depicted their transnational experiences and their close family networks of support as important funds of knowledge in their lives. Findings illustrate how children internalized these experiences as funds of identity, which included their self-expressions and identity constructions that asserted 1) their Mexican heritage and cultural simultaneity, 2) their roles to maintain family ties and contribute to the family's well-being, and 3) their future selves and aspirations. A culturally sustaining project-based approach toward inviting and integrating children's funds of knowledge and funds of identity can afford pedagogical advances that also foster family collaboration and challenge deficit ideologies by illuminating the depth and richness of children's experiences, and how these are incorporated to construct their identities.

#### **DESCRIPTORES:**

Fondos de conocimiento Fondos de identidad Multimodalidad Aprendizaje en base a proyectos Estudiantes bilingües

#### **RESUMEN:**

Este estudio analizó cómo los proyectos bilingües y multimodales creados por niños y sus familias de origen inmigrante mexicano proporcionaron un espacio para expresar sus fondos de conocimiento y fondos de identidad como parte de la instrucción en el aula. Veintidós estudiantes y sus familias participaron creando proyectos bilingües que integraron sus vidas, experiencias y bilingüismo en el aprendizaje en su aula bilingüe de primer grado en una escuela en Estados Unidos. Partiendo de un lente teórico sociocultural con enfoque en fondos de conocimiento, fondos de identidad y perspectivas de semiótica social multimodal, los proyectos de los niños describieron sus experiencias transnacionales y sus redes familiares cercanas de apoyo como importantes fondos de conocimiento en sus vidas. Los hallazgos muestran cómo los niños internalizaron estas experiencias como fondos de identidad, los cuales incluyeron sus expresiones y definiciones de identidad que reafirmaron 1) su herencia mexicana y su simultaneidad cultural, 2) sus roles para mantener los lazos familiares y contribuir al bienestar de la familia, y 3) sus visiones de sí mismos y anhelos a futuro. Un enfoque de aprendizaje basado en proyectos orientados a la prolongación cultural que invite e integre los fondos de conocimiento y fondos de identidad de los niños puede permitir avances pedagógicos que también fomenten la colaboración familiar y desafíen las ideologías de déficit al demostrar la profundidad y riqueza de las experiencias de los niños, y cómo éstas son incorporadas al definir sus identidades.

Recibido:

Aceptado:

15 de octubre 2020

16 de abril 2021

1ª Evaluación: 13 de enero 2021 2ª Evaluación: 9 de marzo 2021

#### CÓMO CITAR:

Álvarez, A. (2021). Connecting funds of knowledge to funds of identity through a bilingual multimodal project-based approach. Revista Internacional de Educación para la Justicia Social, 10(1), 105-124. https://doi.org/10.15366/riejs2021.10.1.007

#### 1. Introduction

The detrimental deficit perspectives that surround culturally and linguistically diverse families and their children in U.S. schools have been well documented and are in pressing need of attention in order to advance a social justice orientation in schools that promotes educational equity for marginalized and minoritized communities (Delpit, 1995; García & Guerra, 2004; Valencia, 1997). These deficit perspectives position families' racial, socioeconomic, ethnic, and linguistic differences as problematic and at fault for academic achievement discrepancies, rather than positioning racist and discriminatory systems and practices as mechanisms that limit opportunities (Valencia, 1997). Deficit orientations manifest in different ways throughout schooling systems, including pedagogical approaches, school district policies, and types of bilingual education programs. In the U.S., where this study took place, there are approximately 5 million students who are emergent bilinguals enrolled in public schools (Hussar et al., 2020). The term emergent bilingual describes students who have been exposed simultaneously to two languages since birth or who are acquiring two languages sequentially. Although, between 65-82% of students who are emergent bilinguals attending U.S. public schools were born in the U.S. (Zong & Batalova, 2015), many share transnational experiences and immigrant family backgrounds.

A funds of knowledge approach in the 90's responded to the urgent call of shifting deficit views and transforming pedagogical practices by connecting families' historical, cultural, social resources engaged in their well-being to classroom learning (Moll et al., 1992). The original approach entailed teachers conducting ethnographic home visits to learn from families' practices and sources of knowledge with the goal of integrating children's available funds of knowledge in classroom instruction. Thus, by shifting power dynamics and positioning themselves as learners and families as experts, and by seeing homes through a strength-based lens, teachers' perspectives can also shift (Moll & González, 2004; Whyte & Karabon, 2016). Children's experiences and rich cultural and linguistic backgrounds translate to funds of knowledge that children bring with them to their classroom, and these funds of knowledge also translate to funds of identity as resources that students use to construct their identities and to define themselves (Esteban-Guitart & Moll, 2014). Understanding the cultural and linguistic resources students bring to school, both as funds of knowledge and funds of identity, is a critical step toward building and strengthening practices that contribute to social justice and educational equity for students and families from diverse and immigrant backgrounds. In a context that views cultural and linguistic differences as deficits and detrimental for learning, as was the case of the school district where this study took place, the symbolic presence and centrality of students' cultures and languages in classroom instruction is a form of challenge toward deficit views and a step toward educational equity. However, it is not sufficient to illuminate and integrate these essential aspects of students' lives, we must also examine the racist systems and structures that continue to oppress them (Rosa & Flores, 2017).

While home visits are the ideal way for teachers to discover and integrate funds of knowledge in their classrooms, this can be a challenging endeavor with current time restrictions, and the curricular and assessment demands teachers face (Esteban-Guitart & Penuel, 2020). Thus, there is a need to seek and examine alternative approaches that can also be effective pathways to connect students' funds of knowledge and funds of identity to classroom instruction, and in the process also contribute toward strengthening reciprocal equity-oriented family-classroom partnerships. The purpose of this study was to examine biliteracy family projects as a collaborative and multimodal project-based learning approach as an alternative viable method that invites and integrates students' funds of knowledge and funds of identity. More specifically, this work aims to gain understandings of how children's funds of knowledge contribute to their identity constructions through a culturally sustaining project-based learning approach.

Integrating students' experiences, identities, cultural and linguistic backgrounds into their learning experiences in schools is a central pillar of culturally sustaining pedagogy that has been an effective pedagogical approach with culturally and linguistically diverse students (Gay, 2010; Ladson-Billings, 1995; Nieto & Bode, 2008; Paris, 2012). Methods that seek to incorporate these integral aspects of students' lives, not only disrupt deficit ideologies by illuminating important counternarratives (Abril Gonzalez, 2020; DeNicolo et al., 2015; Solórzano & Yosso, 2002), but also engage

multiple resources that contribute to children's learning and literacies, such as multimodality and bilingualism (Gonzales & Gónzalez Ybarra, 2020; Marshall & Toohey, 2010; Taylor et al., 2008). The integration of resource pedagogies in classrooms as innovations (Paris, 2012) that intentionally center on students' experiences and invite family collaboration have the potential to foster transformative and meaningful learning experiences that culturally and linguistically diverse students deserve (Bernhard et al., 2006; Cummins & Early, 2011; Flores, 2018; Flores & Springer, 2021). The biliteracy family projects in this study centered children's lives and experiences, invited a collaboration with their families, and featured their bilingualism and biliteracy. One project entailed creating a timeline depicting children's lives through time, as well as their envisioned future timeline that included their goals and aspirations. In another project, in collaboration with their family, children wrote and illustrated pictures books inspired by a personal or family experience. The research questions that guided this study were: 1) How can a multimodal project-based approach that centers children's experiential knowledge facilitate a pathway between children's funds of knowledge and funds of identity in classroom learning? 2) How do children draw from their funds of knowledge as funds of identity to self-define, self-express and self-understand through artifacts created as part of project-based learning in their bilingual classrooms?

#### 2. Background

The bilingual classroom where I conducted this study is part of a school district that serves a low-income immigrant community with a high percentage of students who are emergent bilinguals. The district boundaries include an industrial sector of a large western city in the U.S. that includes oil refineries, factories and a waste management plant. Mesa Elementary<sup>1</sup> is part of Valley School District, which has a tumultuous history of restrictive language policies, such as eliminating bilingual education programs, and numerous complaints of discrimination and racism. An investigation by the Office for Civil Rights<sup>2</sup> (OCR) concluded that indeed, the school district was hostile and discriminated against Spanish-speaking students, families and staff.

During the time of data collection, the district had briefly reinstated bilingual education programs, only to eliminate them again three years later. This contextual information is key to this study as it grounds the relevance and imperative of integrating families' cultures and language in a setting that has historically used these differences to discriminate, marginalize and dehumanize families. Not only is there evidence in the OCR investigation of discrimination and racism in this school district, but families in this study also shared these experiences first-hand. As Pablo's mother shared,

Tampoco me gusta quedarme callada cuando nos están viendo o hablando feo, a mí eso no me gusta. Si yo no estoy haciendo nada malo, no tiene por qué gritarme. Usted sabe que son gente bien racista, como gente racista que quiere como sobrepasarse con uno.

[I also don't like to stay quiet when they are giving us ugly looks or speaking badly to us, I don't like that. If I'm not doing anything wrong, they have no reason to yell at me. You know they are very racist people, and as racist people they want to take advantage of us.].

The investigation by the OCR discovered numerous instances of discrimination, racism and hostility toward students and families' language, culture and national origin in school settings. For example, the investigation found how administrators were "taking actions to eliminate the use of Spanish from the District (including communicating its intent to eliminate the use of Spanish in social and non-academic settings with students, to include the removal of Spanish language materials from classrooms and buildings when students were present)" (p.1). These detrimental and unjust actions "targeted the use of Spanish by students and staff for criticism, discipline, unfair treatment, and "eradication" regardless of the circumstances" (p. 6). Staff were directed to "remove and destroy Spanish language instructional materials from their buildings" (p. 8) even when students were

<sup>1</sup> All names are pseudonyms

<sup>2</sup> Full citation violates IRB Protocol. Blinded report is available for review.

present. When an administrator observed, students removing instructional materials and inquired about it, a student replied "that they were taking down the Spanish materials because they didn't need Spanish anymore." (p. 8). The profound wounds that these actions caused are unimaginable, especially considering the integral component that language is for one's identity (Bucholtz & Hall, 2004). This positioning of Spanish as a problem and hinderance to students' academic achievement exemplifies how deficit ideologies based on language and cultural backgrounds were manifested into action and policies at this site (Valencia, 1997).

Examples of racism regarding families' origins were numerous as well, the report stated that there was evidence of administrators making derogatory statements, failure to address past complaints of discrimination and not communicating with families effectively. For instance, it was reported that a teacher "told students that they could go back to Mexico" (p. 8) and a principal telling a staff member "to not worry about Hispanic students making messes in the bathrooms because Mexicans are poor, that Mexicans didn't use toilet paper, there were few restrooms in Mexico and Mexican children did not know how to use a restroom" (p.9). These appalling derogatory comments serve as examples of the harmful ways that racial stereotypes feed into deficit ideologies that shape actions and practices in schools (Solórzano, 1997; Valencia & Solórzano, 1997). For this reason, pedagogies that invite and center children's languages, cultures and backgrounds in classroom learning at this site challenge and disrupt deficit ideologies by revealing important counternarratives, humanizing children and families, and affirming diversity and multilingualism.

#### 3. Theoretical framework

The theoretical framework that guided data analyses combined a multimodality and social semiotics lens toward examining students' funds of knowledge and funds of identity as expressed through artifacts resulting from a project-based learning pedagogical approach. Drawing from a sociocultural theoretical lens, a funds of knowledge approach centers on children's experiences and knowledges among their family and environments as "cultural and intellectual resources" (Moll et al., 1992, p. 132) that are often overlooked or devalued by multiple stakeholders in education, yet have immense potential as contributions to their learning process. These funds of knowledge become resources that students draw upon as they construct and define their identities -as funds of identity (Esteban-Guitart & Moll, 2014). Children interpret their experiences in multimodal ways that encompass communication beyond language, such as gestures, visuals, and artifacts; conversely, their expressions also engage multimodality as a resource to convey meaning (Jewitt & Kress, 2003; Kress, 2010). Kress (2010) explains, "there are domains beyond the reach of language, where it is insufficient, where semiotic-conceptual work has to be and is done by means of other modes" (p. 15). Project-based learning is a pedagogical approach in which students' inquiries guide the learning process facilitating curricular spaces for their interdisciplinary explorations, agency and creativity (Bell, 2010). The multimodal nature in project-based learning facilitates spaces where children engage in meaning-making processes with multiple opportunities to express in additional modes beyond language. A social semiotics perspective asserts that expressions, including such varying communicative modes, bear meaning that also reflect broader power structures and ideologies (Hodge & Kress, 1988). In this sense, expressions become 'signs' that carry meaning through social and cultural relations, co-constructions and shared understandings between the 'signifier' and the 'signified.' From a sociocultural perspective, these signs become tools in a mediation process that shift our relationships with each other and the world (Vygotsky, 1978). As Scribner (1990) explains,

The world in which we live in is humanized, full of material and symbolic objects (signs, knowledge systems) that are culturally constructed, historical in origin and social in content. Since all human actions, including acts of thought, involve the mediation of such objects ("tools and signs") they are, on this score alone, social in essence. (p. 92)

Thus, children's thinking and perceptions are mediated by social and cultural tools, and practices around them (Cole, 1996), where funds of knowledge as a "mediated approach" provides a resource to gain deeper understandings of children's lives that can potentially impact classroom teaching and learning (González & Moll, 2002, p. 636). In tandem, a sociocultural and a multimodal social

semiotics theoretical perspectives serve to analyze bilingual projects that were co-created between children and their families across their home and classroom because they offer insights into children's meaning-making processes and the tools they engage in the process. Funds of knowledge and funds of identity become important tools in this process.

Within a sociocultural perspective of learning, a funds of knowledge approach, defined as "the historically accumulated and culturally developed bodies of knowledge and skills essential for household or individual functioning and well-being" (Moll et al., 1992, p. 133), has been examined empirically and further theorized. An important tenet of a funds of knowledge approach has been to emphasize it as both a method and a theory with the ultimate goal for educators to integrate students' funds of knowledge in learning, and in the process, challenge deficit dominant ideologies (Moll, 2019). Empirical studies include examinations of the varying sources of knowledge students bring to their learning process (Andrews & Yee, 2006; Barton & Tan, 2009; Irizarry, 2009; Moje et al., 2004), including bilingualism and language practices as important resources (Dworin, 2006; Martin-Jones & Saxena, 2010; Oikonomidoy & Karam, 2020; Riojas-Cortéz, 2001). Scholars have also examined the differences among definitions of funds of knowledge (Hogg, 2011), alternative research methodologies, such as multimodality (Alvarez, 2018; Becker, 2014; Marshall & Toohey, 2010), as well as the need to include challenging experiences as sources of knowledge (Gallo & Link, 2015; Subero et al., 2015; Zipin, 2009).

An important evolution of funds of knowledge includes the notion of funds of identity, explained by Esteban-Guitart and Moll (2014):

funds of knowledge are funds of identity when people use them to define themselves. Specifically, what we understand by funds of identity are historically accumulated, culturally developed, and socially distributed resources that are essential for people's self-definition, self-expression, and self-understanding. (p. 37)

A funds of identity lens takes into consideration a sociocultural perspective of identity that is socially and culturally constructed through experiences, relationships, contexts, and artifacts (Esteban-Guitart & Moll, 2014). This dynamic view of identity is expressed by children through multimodal resources that serve as semiotic 'symbols' or 'signs' that convey meaning, and give insights to their meaning-making processes and understandings of their social contexts and their role within them. This process involves attention to their sociocultural experiences and funds of knowledge as influencing factors that contribute to the way children self-define, self-express and self-understand. Esteban-Guitart (2012) identified five main forms of funds of identity: 1) geographical (areas and territories), 2) practical (activities and interests), 3) cultural (artifacts and symbols), 4) social (relationships), and 5) institutional (social institutions). These forms of funds of identity informed the analytical process of artifacts created by children and their families in this study.

Recent development in methodologies that aim to unveil children and youths' funds of identity as resources for learning and instruction involve a process that asks participants to depict their identities or that examines identities in multimodal ways, such as through visuals and technology (Esteban-Guitart, 2012, 2020; Esteban-Guitart & Moll, 2014; Poole, 2017). Amplifying methodologies and pedagogies that seek funds of knowledge and funds of identity is crucial during times when home visits can be challenging, especially as these approaches also emphasize the importance and iterative process of connecting theory to practice. For example, an extended multi-method autobiographical approach (Bagnoli, 2004) can be a method that seeks individuals' funds of identity through a variety of tasks and activities as "testimonies of identity" (Esteban-Guitart, 2012, p. 179), (i.e. self-portrait technique, personal narratives, photographs, artifacts). These identity depictions give insights to the ways that an individual self-defines and how identity is distributed among geographical, practical, cultural, social and institutional funds of identity (Esteban-Guitart & Moll, 2014; Saubich & Esteban-Guitart, 2011). In the present study, for example, students portrayed their specific funds of identity through personal multimodal projects as: geographical (towns or regions in Mexico they visit with their family or where their parents are from), practical (their bilingualism and communication practices), cultural (wearing cowboy hats and boots or soccer team shirts), social (close relationships with their extended family), and institutional (church festivities or as future university students). Methods that study identity through "products of identity" or "identity artifacts" have

been an effective practice and vehicle that provides students a space to self-express, self-define and self-understand, providing valuable insights into students' lives and identities (Cummins & Early, 2011; Esteban-Guitart & Llopart, 2019; Subero et al., 2018; Subero et al., 2017; Zhang-Yu et al., 2020). Scholars have encouraged the integration of visual, graphic and art-based methods as vehicles to study funds of identity (Esteban-Guitart, 2012; Esteban-Guitart & Moll, 2014). The present study contributes to the body of work that examines pedagogical pathways that educators can employ to invite, uncover and integrate students' funds of knowledge and funds of identity as resources for learning (Alvarez et al., 2021; Esteban-Guitart, 2016; Esteban-Guitart et al., 2019, 2020; Jovés et al., 2015; Ordoñez et al., 2018; Subero et al., 2015), particularly in practical multimodal methods that challenge deficit notions, foster relationship-building with families, and attend to the current challenges and time demands teachers have. The biliteracy family projects that students created with their families integrated a funds of knowledge and funds of identity approach through multimodal project-based learning that also merged curricular objectives to sustain and support children's bilingualism and biliteracy. This goal represents an important affirmation and curricular integration of students' experiences, identities and bilingualism, especially in a school district with a history of oppressing these same assets.

#### 4. Methods

This qualitative study examined data collected during five months from 22 bilingual children and their families from Mexican immigrant backgrounds when their first-grade bilingual classroom in the U.S. implemented a project-based approach through biliteracy family projects. The purpose of this study was to examine how a multimodal project-based approach that centers on children's experiential knowledge can facilitate children's funds of knowledge and funds of identity into classroom learning, and to better understand how young children draw from their funds of knowledge as funds of identity to self-define, self-express and self-understand. A main goal was to illuminate children's lives and experiences within a school district that discriminated families from Mexican immigrant backgrounds through a deficit lens. Main data sources included students' projects, parent interviews, home and school observations during the creation process, and focus groups with children.

An exploratory case study research design of one first-grade bilingual classroom offered the opportunity to study if and how children in this classroom depicted their funds of knowledge and funds of identity through project-based learning as an integrated or bounded system that is also embedded within a specific community and sociopolitical context (Creswell, 2014; Stake, 1995; Yin, 2017). This approach allowed for an in-depth analysis that considered the history and sociopolitical layers at the research site, such as the fact that the district has been found to be hostile to Spanish-speaking families and that it serves a low-income immigrant community.

#### Context

My involvement at Mesa Elementary began when I was part of a partnership between a local university and the school district that focused on providing professional development to teachers when the district reinstated bilingual education programs. I collaborated in the design and delivery of these professional development sessions for bilingual teachers. As part of these sessions I shared my own experiences as a bilingual teacher and the project-based learning I integrated in my classroom that was meant to learn from students' lives outside school.

After the professional development session, Ms. García, a bilingual first-grade teacher, expressed interest in implementing the project-based ideas that I had presented and our collaboration initiated shortly after. Ms. García had been teaching in bilingual classrooms for 14 years. She had immigrated from El Salvador and Spanish was her home language. From all the project ideas shared, Ms. García decided on two projects that she wanted to implement in her classroom, creating a timeline of students' lives and an envisioned future timeline, and writing and illustrating a picture book inspired by a family experience. We collaborated in designing components of the projects and classroom instruction that also fostered students' bilingualism. For example, students engaged in dialogue about

their projects that included language supports. Some parts of the projects were created in the classroom and others with their families. Final projects were presented in the classroom and with a neighboring kindergarten classroom, and parents were invited to attend and participate in classroom presentations. Although Ms. García and I collaborated in the projects' design and implementation, she was not involved in the research process.

#### **Participants**

The participants in this study were Ms. García's 22 students and their families in her first-grade bilingual classroom. All but one child in this study were born in the U.S., yet, all parents with the exception of two were born in Mexico and had immigrated to the U.S. within the range of six months to 14 years. Parents' occupations varied mostly within labor and service industries, such as factories, restaurants, and construction, and their education levels varied mostly between having completed elementary and middle school in Mexico.

#### Researcher Positionality

I am a Spanish-speaking Latina who grew up in Mexico and moved to the U.S. as an older child. I was a bilingual teacher for eleven years in a border community between the U.S. and Mexico in a school district that serves a large population of families from Mexican immigrant backgrounds in a low-income area. I shared some background experiences with families and the teacher in this study, such as having transnational connections and moving to the U.S. without speaking English. These shared experiences contributed to reciprocal relationships and trust-building. However, I was also aware how my positionality as a researcher and member of the university also influenced our relationships in that families often perceived me as knowledgeable of navigating systems and reached out for help to find resources, such as seeking housing, filling out job applications and finding immigration services. Throughout the study, I was intentional in privileging the families' knowledge and voices. I recognized their frustration that I myself had experienced and tried to offer help and support.

#### Data collection and analysis

Data collection spanned over five months and included observations and home visits during the creation process (24), parent interviews (23), focus groups with students (9) and all artifacts created as final projects (61). All data was organized and coded using the qualitative software MAXQDA. I conducted an initial analysis of the content depicted in students' projects following an inductive and descriptive first and second cycle coding (Miles et al., 2014). The purpose of this initial analysis was to seek how this project-based approach facilitated an entry point of children's experiential knowledge in a bilingual classroom and the affordances these forms of knowledge brought in terms of better understandings of families' lives in this context (Alvarez, 2020). In the first cycle coding, I identified themes that projects depicted concretely, such as connections to family in Mexico or the children's future professional aspirations. In the second cycle coding, I sought patterns among codes and connected these initial themes to excerpts in additional data sources. For example, I connected coding themes in students' projects to instances in parent interviews in which they discussed those situations, such as their familial connections in Mexico or their aspirations for their children's future. Findings from this analytical stage and research study detailed how children demonstrated their simultaneous cultural knowledge through their projects, which their parents facilitated and protected, often as a form of resistance (Alvarez, 2020).

My analytical approach for the present study began by reviewing the codes from the first research study that identified themes in children's experiences that were depicted in the projects as sources of funds of knowledge. For example, children's experiences of crossing the border to visit family in Mexico and the communication they maintained with their extended family were important funds of knowledge as cultural and linguistic resources that also gave them keen understandings of their sociopolitical context, the cultural simultaneity they experienced and their role as a family member. Saldaña (2016) describes a theme as "an outcome of coding, categorization, and analytic reflection" (p.198). I used these themes in a descriptive second cycle coding process in which I focused on the instances when children self-identified, self-expressed, and self-defined within those initial themes

of funds of knowledge (Saldaña, 2016). This process was meant to identify connections and links between themes in the projects and the ways children constructed their identities. That is, I sought identity representations in these multimodal artifacts as examples when children internalized funds of knowledge and used them to make meaning, and to understand and describe themselves. For example, a common theme of sources of funds of knowledge were the close familial connections children had with their immediate and extended family members. These close ties also represented support systems among families, such as when extended families lived together in a household or offered child care for each other. An example of a second cycle coding in this theme revealed how children described themselves as care-takers of their siblings. This analytical coding process was informed by Esteban-Guitart's (2012) description of sources of funds of identity (geographical, practical, cultural, social, institutional). The coding example that connects the externalized children's self-understanding as care-takers or contributors to their family to the theme of internalized family connections and networks of support would be an example of social funds of identity that refer to familial relationships. Because these coding cycles were applied to visual data, the artifacts created as biliteracy family projects. I also examined additional data sources from participants to seek confirming and disconfirming evidence in order to condense themes, and to draw and verify conclusions. This process served to address the limitation of researcher interpretation and as a strategy for triangulation, (Miles et al., 2014). Other main data sources included parent interviews, classroom and home observations, and focus groups with children. After I identified patterns in the ways children constructed their identities engaging their funds of knowledge, I examined additional data that could provide further insights of their perspectives and my interpretations. I pulled excerpts in parent interviews that mentioned relevant funds of knowledge and reviewed student focus groups and field notes for instances in which they mentioned their identities or funds of knowledge. I then connected these examples to individual student cases as confirming or disconfirming evidence. In this last analytical step, I examined clusters of data that conceptualized themes and contributed evidence to the patterns identified in the second cycle coding (Miles et al., 2014).

#### 5. Results

In this section I present finding that reveal the connections between the funds of knowledge that the biliteracy family projects portrayed with the ways that children engaged them to construct their identity. I examined how biliteracy family projects facilitated children's funds of knowledge and funds of identity into classroom learning, how children engaged funds of knowledge as funds of identity, and how this approach provided an important counternarrative that juxtaposed the district's perceptions and practices with minoritized families. Children's projects provided insights into their lives and experiences, making visible important funds of knowledge. Common themes that emerged in this process included transnational and border-crossing experiences, familial networks of support and connection, the importance of school and peers, and children's past accomplishments and future aspirations. As children described themselves and their perceived roles, they drew from these sources to construct their identities and future aspirations.

#### 5.1. Transnational and border-crossing experiences

The experiences depicted in projects showed the many transnational and border-crossing experiences and connections to Mexico children had in their lives. Due to immigration circumstances, many families had not been able to return to visit their family in Mexico. Nevertheless, children still depicted their cultural and familial ties to Mexico as funds of identity, a country they had never seen or been to before. Other children shared their experiences visiting Mexico for various reasons, such as cultural celebrations, funerals, weddings, and to meet or visit family. Children's inclusion of these type of experiences in their projects pointed to the vast cultural and social knowledge these connections gave them. Consequently, there were many instances in which children also engaged these funds of knowledge to construct their identities. Figure 1 shows data examples of children's border-crossing and transnational experiences, which depict not only geographical funds of identity through these connection to Mexico, but also cultural funds of identity through traditions, social

funds of identity through family relationships, and institutional funds of identity through religious references.

Figure 1 Children's border-crossing and transnational funds of knowledge

# Emma

Pablo

Gabriel

Este año fuimos a México porque mi abuelita enferma y murió. Todos tristes por lo que pasó.

This year we went to Mexico because my grandma was sick and died. Everyone was very sad because of what happened.]

Yo voy cada año a San Juan de los Lagos a ver a la Virgen.

TEach year I go to San Juan de los Lagos to see the Virgin.]

Fui a Chihuahua, México por primera vez. Yo jugué con mi tío y con niños que no conocía. Yo jugué con Alex mi primo.

[I went to Chihuahua, Mexico for the first time. I played with my uncle and with children I didn't know. I played with my cousin Alex.]

#### Transnational Knowledge ¶



Raúl

Daniela



Gladys



Mi mami me platicó que allá en México celebran las posadas. Las posadas son tradiciones mexicanas que empiezan el 16 y terminan el 24 de diciembre.

[My mommy tells me that over in Mexico they celebrate posadas. The posadas are Mexican traditions that start on the 16th and end on December 24th.

Día de los muertos. Ponemos ofrendas para nuestros seres queridos.

Day of the Dead. We make offerings for our loved ones

Pedimos posada en las casas a ver quien se queda con los peregrinos.

[We ask for shelter around the houses to see who keeps the pilgrims

We also celebrate Jesus' birth and on the 24th of December we pray. Also, we rock back and forth el niño Dios. [baby Jesus]

Descriptions in children's border-crossing experiences also revealed additional sources of social and cultural funds of knowledge. In the case of Emma and Gabriel, the children describe their travels to Mexico, but they also emphasize the familial connections that undergird the reasons for the families' trip, that is, the death of a family member and meeting family for the first time. Children who did not have border-crossing experiences still depicted their transnational connections and knowledge. For example, Alberto's book gives evidence of the conversations he has with his mother about the posada traditions in Mexico and others shared cultural traditions they partake in, such as creating a Day of the Dead altar in their homes and "rocking" the baby Jesus as a religious tradition on Christmas. Parents in this study were adamant about making intentional efforts to avoid cultural and linguistic loss in their children and these efforts often resulted in acts of resistance within the school environment.

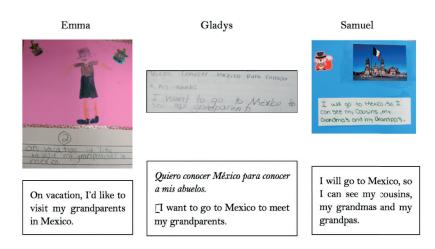
Daniela's mother shared insights about her role in transmitting cultural traditions to her children, despite not being able to take them there:

Aquí siempre hemos acostumbrado a llevar como las tradiciones, todo eso. El tiempo de navidad nosotros organizamos los rosarios, vamos a los rosarios, vamos a las posadas, hacemos el 24 nochebuena, hacemos comida. El "turkey" nosotros lo festejamos por ellos [...] Y si yo me hinco, Daniela está aquí conmigo, hincada también. Pues es algo que nos ven hacer y que ellos también lo hacen porque, como le digo yo a mi esposo, nosotros somos los primeros maestros de nuestros hijos, después está la escuela.

[Here we have gotten used to keeping our traditions, all of that. During Christmas time we organize the rosaries, we attend rosaries, we go to the posadas, we have Christmas eve on the 24th, we make food. We only celebrate "the turkey" for them [...] If I kneel down, Daniela is right with me, also kneeling down. It's something that they watch us do and that they also do, because, as I tell my husband, we are the first teachers for our children, then there is school]

Daniela's mother explained that Daniela is constantly asking her when she will go to Mexico and in a surprising comment, Daniela told her mother that she knew why they didn't go, "ustedes no pueden ir a México porque no tienen papeles" [you can't go to Mexico because you don't have papers]. The mother was surprised to learn that her young daughter knew about their immigration status and responded reassuring her that one day they will all go together to visit their grandmother. She explained that she believed that children are very smart and realize many things around them, but that as long as she can, she will continue to instill their heritage, traditions, and values. When children portrayed their future selves and aspirations, visiting Mexico was a common theme used to describe themselves, regardless of whether they had the experience of traveling there or not (Figure 2).

Figure 2
Children as future travelers to Mexico to maintain family ties



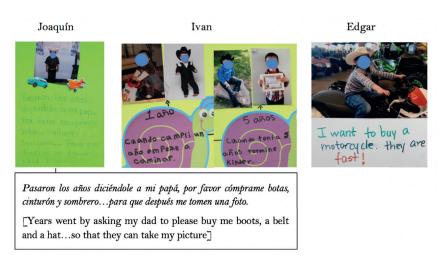
Children's funds of knowledge included transnational knowledge and cultural traditions that they explicitly incorporated in their projects. This knowledge, as in the case of Daniela, also pertained to issues of immigration and sociopolitical aspects about crossing the border. These experiences and knowledge contributed to the ways children foresaw their future selves as travelers to or citizens of Mexico, often stating family connections as their rationale behind their visit. These examples show how children incorporated *geographical* and *social* funds of identity to describe themselves and their future aspirations. Of most significance is the fact that these assertions took place as part of classroom instruction in a classroom within a school district where evidence showed the multiple derogatory comments from teachers and administrators against children's Mexican backgrounds.

For Pablo, his trip to Mexico was based on a religious celebration of importance to his family. In his picture book, Pablo described the celebration of the Day of the Virgin of Guadalupe and all the events that took place. Pablo's parents explained that this celebration has been central in their family traditions, and that she will continue to foster and maintain these traditions in her children. Pablo's mother shared a glimpse of a moment of the celebration, "baja la Virgen de Guadalupe, y él dice 'mami, yo siento tan bonito.' Y en la noche reza, rezamos los tres, y piden, 'Virgencita cuídanos y que ya merito sea la hora de irnos a México para ver tu castillo." [the Virgin of Guadalupe comes

down and he says 'mommy, it feels so beautiful.' And at night, he prays, the three of us pray, and they ask 'dear Virgin, please take care of us and that it is almost time to go to Mexico to see your castle.] The religious celebration was a cherished yearly family pilgrimage that intended to transmit and maintain an aspect of their children's heritage, which Pablo drew upon as *cultural*, *practical* and *institutional* funds of identity to define himself as a member of this community.

Other forms of funds of identity emerged as children made sense of and engaged their funds of knowledge to define themselves. Cultural artifacts were one example that children used to describe and define their identities, as *cultural* funds of identity. In an excerpt of his book Pablo wrote, "*Toda mi familia celebramos la misa, después comemos y vamos al jaripeo y me pongo mis botas*" [My entire family celebrates mass, then we eat and we go to the rodeo and I put my boots on]. In this excerpt, Pablo describes himself as putting on his boots, a cultural symbol and artifact that asserts Pablo's identity as a member of this community and participant in this celebration in his parents' hometown in Mexico. Other examples in projects, highlighted how children's funds of identity incorporated cultural symbols that represent community membership, such as soccer team shirts and clothing items (boots and cowboy hats). Joaquín, for example, explicitly included his desire to acquire these items to proudly pose for a picture, while others often included them as part of their timeline project (Figure 3).

Figure 3
Cultural artifacts



Although children often incorporated funds of identity that depicted their family's cultural heritage, they also were making meaning of their contextual environment and the fact that they had been born and were growing up in the U.S. In his picture book about the Day of the Virgin of Guadalupe, Pablo wrote "My parents are from Guanajuato, Mexico. The town's name is Guadalupe de Jalpa, that is why we celebrate December 12th<sup>3</sup>." In this example, Pablo makes a distinct assertion that it is his parents who are from Mexico in the written text, but the illustration shows a drawing of the town with the label "*La ciudad de dónde soy*" [the city where I am from]. Pablo's description shows how he is making meaning of his cultural simultaneity by acknowledging that his parents are from Guanajuato, but also affirms that he perceives it as his city as well and perceives himself as a community member. In his future timeline, Pablo's expresses this meaning making process by expressing that he wants to be a soldier to save lives and he included a drawing of himself dressed as a soldier holding the U.S. flag.

In a similar example, Gladys wrote in her book "Yo soy de Denver, pero mis papás son de México y a mí me encantan las comidas típicas de Aguascalientes" [I am from Denver, but my parents are from Mexico and I love the typical foods from Aguascalientes]. Gladys also marks this difference and then affirms her love for her parents' hometown traditional cuisine. Children in this study asserted a form of cultural simultaneity in the knowledge they are acquiring that encompasses aspects from lived experiences in their family, as well as in the broader society where they are growing up. This analysis illuminates the evident connections in children's funds of knowledge to their funds of identity.

 $<sup>3\,</sup>$  December  $12^{th}$  is the Day of the Virgin of Guadalupe

#### 5.2. Familial networks and relationships of support

Family connections were another common theme in the biliteracy family projects. There was vast evidence of the importance of immediate and extended family in children's lives as experiences very often included the presence of family members and examples of the ways that children and families maintain connections. These connections occurred with both family members living in the same city and in Mexico as well. Grandparents, cousins, aunts and uncles were described in children's everyday experiences, such as playing, cooking, celebrations, and learning something new. However, there were also instances that revealed how families take care of each other, such as grandmothers providing child care or extended family living in the same household. In a previous example, Emma's experiences provided an example of their close familial ties when her entire family traveled to Mexico when her grandmother was very ill and passed away. In her project she also described the many activities that took place and the close connection she has with her *madrina* [godmother]. Emma's mother described her crying profoundly when she had to say goodbye. In the examples below Emma describes how part of her Christmas celebration involves making phone calls to family in Mexico, and Joaquín describes how his family sends photos to Mexico so family can see how he is growing up (Figure 4).

Figure 4
Fostering transnational family connections

Emma.



También hablamos a nuestra familia en México para desear una feliz Navidad. [We also call our family in Mexico to wish them a merry Christmas] Joaquín



Aquí termina todo lo que he pasado de lo que puse. Para México mandaba fotos para que mi familia de allá fuera viéndome...estoy muy agradecido con la vida a pesar de todo porque me he esforzado para salir a delante. Gracias compañeros.

This is where my endeavors come to an end from what I shared. I sent photos to Mexico so my family there could see me...I am grateful to life despite everything because I have worked hard to overcome challenges. Thank you, classmates.

In this example, Joaquín also explains how they often send pictures of him to Mexico so that family there can watch him grow up. Interestingly, he also expressed gratitude to his classmates and referenced that he is grateful to life for overcoming challenges. The close familial ties in children's lives and the support that these ties represented for their family became important *social* funds of identity when children described their roles and desires to care for family members. For example, in her timeline project Gladys expressed that in the future she always wants to care for her mother (Figure 5). She also included her desire to visit Mexico and meet her grandparents. In an interview with Gladys' mother, she explained how even though Gladys had never met her grandparents she stayed in close contact with them and that her grandma would send her videos of the town's *quinceañeras*, 4 an event that Gladys also included in her envisioned future timeline. Gladys' mother shared her perspective of these long-distance, but close relationship, "a ella le gusta mucho platicar de allá, de sus abuelitos. Que aunque no los conoce, ella los quiere, y aunque a ella no la conocen. Ella dice, a mí me quiere mi abuelita" [she loves to talk about over there, of her grandparents. Even if she doesn't know them, she loves them, and they don't know her either. She says, my grandma loves me]. Gladys was engaging her social funds of identity when she described herself as a care taker for her mother (Figure 5). Students often described themselves as care-takers or contributors to their family's well-being.

<sup>4</sup> Traditional right of passage celebration for girls' 15th birthday

Figure 5
Children's roles caring for family

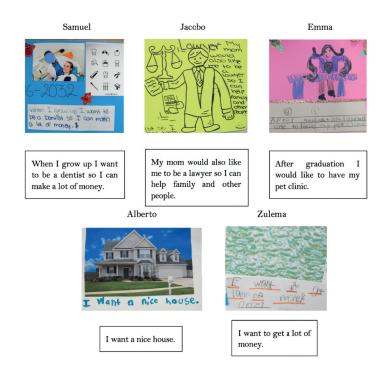
Gladys Alberto Samuel Vuestra familia Yo quiero siempre cuidar a Mi hermanito se llama Jacob, es muy juguetón y divertido. Aunque también es mi mamá. muy travieso. Pero yo lo quiero mucho a mi [I want to always take hermanito pequeño, y yo por ser su hermano care of my mom mayor, lo tengo que cuidar. I will go to the store and [My little brother's name is Jacob, he is buy food for my son, my daughter and my baby. very playful and fun. But I love my little brother so much, and because I'm his older brother I need to take care of him

In a draft that Alberto and his mother created together for his picture book project, they describe his role as a big brother and his responsibilities of loving his little brother and taking care of him. In addition, Samuel describes his future self as a provider for his family. These descriptions reflect children's *social* funds of identity by emphasizing their family relationships, as well as *institutional* funds of identity by referring to family as a system of support.

#### 5.3. Future selves and aspirations

Children's projects included their visions of themselves in the future, including their goals and aspirations. Two relevant themes were children's desires to attain financial security and educational achievement. In his timeline, Samuel included a visual where his picture was cut out and added to the face of a picture of a dentist. The written description states that he wants to be a dentist to make "a lot of money." Acquiring financial security was often connected to the ways children discussed their future aspirations (Figure 6).

Figure 6
Children's future aspirations



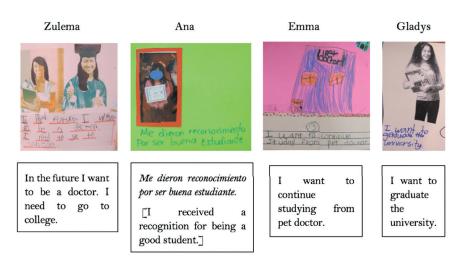
In some occasions, children provided a rationale for acquiring wealth or status, such as providing for their family as was mentioned in Samuel's prior example. In Jacobo's case, he states that it is his mother who wants him to be a lawyer with the specific goal of helping their family and other people. Even though the suggestion comes from his mom, this is perhaps evidence of how parents are transmitting the value of education, as well as helping and contributing to the family's well-being. The drawings show pictorial features of themselves in a professional setting with the tools they need to perform their job. In these examples, children engaged *practical* and *social* funds of identity to define themselves. These examples are reflective of children's sense-making of their family's financial struggles and how they perceive themselves as instrumental to improve this aspect in their family. For example, Zulema's mother explained how the family experienced financial struggles and the sacrifices she made for her daughters,

En mi pueblo éramos muy pobres, pero mi papá trataba de darnos. Mi papá a veces ni comía, se ponía un cartón de suela en sus zapatos para darnos estudios a nosotros. [...] Yo como le digo a mis hijas, miren mijas, yo me sacrifico muchisisísimo porque a veces la verdad duro semanas que yo no más me duermo, cuando mucho dos horas por día. Les digo que a veces salgo muy cansada, muy regañona, pero porque yo necesito que ustedes aprendan. [...]Yo trabajo mucho, a veces ando con los zapatos rompidos, les digo, pero a ustedes no les hace falta nadita. Les digo, todo lo que agarro en mi cheque es para mis hijas. La vida es muy difícil, mucho muy difícil.

[In my town, we were very poor, but my dad tried to provide. Sometimes my dad wouldn't eat, he would put cardboard on the sole of his shoes to give us education. [...] Like I tell my daughters, look my dears, I sacrifice so so much because sometimes, honestly, I spend weeks only sleeping two hours per day at most. I tell them that sometimes I'm very tired and grumpy, but it is because I need them to learn. [...] I work a lot, sometimes my shoes are torn, I tell them, but you have everything you need. I tell them, everything I make in my check is for my daughters. Life is very difficult, very, very difficult.]

Parents discussed their challenges in this context, which were not limited to financial struggles. They also spoke of issues of immigration, being separated from family in Mexico, language barriers, discrimination and racism. In Zulema's case, her mother emphasized the importance of education and school, which was also a common theme in children's projects as they portrayed themselves through graduations, academic achievement and recognitions drawing from *practical* and *institutional* funds of identity that show the action of studying as members of a higher education institution (Figure 7). Zulema expressed her desire to make money (Figure 6) and that her path to achieving financial security was through a college education (Figure 7).

Figure 7
Children's educational aspirations



In the example above, Zulema draws from her mother's teaching and transmission of a value for education when she self-describes as a future doctor and understands that she will "need" to attend college to accomplish this goal. Children expressed how they perceive themselves in the future as professionals with academic accomplishments. Children made sense of these experiences and externalized their understandings of their roles as contributors to their family, and the importance of graduating from college to acquire financial stability. This represents a very different reality and construed vision of their futures than the district's perceptions and actions that included poor communication with parents and limiting their involvement in school decisions.

#### 6. Discussion

The integration of a funds of knowledge approach through multimodal project-based learning in this classroom was twofold in its goals. First, it served to challenge deficit ideologies that children and families continuously encountered in this context. Secondly, it fostered a collaborative space for children and families to co-construct projects that integrated and validated their experiences, identities and bilingualism as part of classroom instruction. Data from their projects provided insights into children's daily lives, their transnational experiences, and their family networks of support. In school districts that position children's home language and experiences as hindrances to their academic development and as problems to eliminate, there is an urgent need to counter these systemic deficit models; a funds of knowledge project-based learning approach is one tool that can be implemented to yield counternarratives that place families' language and experiences under an illuminating and strength-based light. When teachers and schools learn about and from families, deficit perceptions can shift (Moll & González, 2004; Whyte & Karabon, 2016). This is a crucial step toward the effort of utilizing culturally sustaining and critical pedagogies as vehicles to challenge dominant deficit ideologies since current power dynamics still position educators as "gatekeepers" of the knowledge that is included in classroom learning or not (Paris & Alim, 2014). Thus, the integration of these forms of pedagogy have enormous potential to incite change that begins organically at the classroom level and contribute to broader systemic change. This elevates the fundamental intent behind these approaches toward social justice and disrupting deficit orientations about culturally and linguistically diverse students and families (Esteban-Guitart et al., 2019; Subero et al., 2015).

In addition, this classroom-based approach also fostered collaboration between families and this classroom. Effective practices to build reciprocal and culturally responsive family-school partnerships include validating families' culture and language, building trust, and listening to families (Auerbach, 2011; Delgado-Gaitán, 2004; Jasis & Ordoñez-Jasis, 2004). In order to build trust with families, we must first build relationships, and to build relationships we must first learn from one another. A collaborative approach in creating the biliteracy family projects afforded a space for families in classroom learning while fostering a safe space to share personal experiences, strengths and accomplishments. Opportunities for families to build solidarity with one another about shared experiences, including immigration and educational equity, can facilitate a process of parental empowerment and advocacy (Jasis & Ordoñez-Jasis, 2012).

The second focus of this study was to analyze how children engaged their funds of knowledge as funds of identity in their identity constructions. Students' creations regularly included instances where children self-defined and self-expressed making use of their funds of knowledge. These self-descriptions revealed the intricate connections between their sociocultural experiences and their understandings of themselves within these experiences that also connect to sociopolitical factors, such as immigration and transnational familial kinship. The importance of knowing our students and building meaningful relationships with them that are not deficit, but rather consider sociopolitical, sociocultural and systemic challenges is a key component of culturally sustaining pedagogies (Ladson-Billings, 1995; Sleeter, 2012). This approach also challenges imposed identities and superficial cultural perspectives that place students in "fixed" boxes of identities (González, 2005). Findings in this study support the notion that identity and culture are socially and contextually constructed, hence the cultural simultaneity students displayed in their identity constructions. There is great danger in making assumptions that reduce cultural understandings and impose identities on children and families, rather than engaging in a process in which it

is the children and families themselves who define these parameters, which are vast and encompass a diaspora of experiences and backgrounds. A one-size-fits-all approach does not suffice.

A funds of knowledge project-based learning approach has the potential to advance educational equity in schools that serve culturally and linguistically diverse students by centering children's lives and experiences in classroom instruction as resources for learning and by providing meaningful learning experiences that foster their creativity and agency. A multimodal approach can support this process by creating flexibility in the range of modalities, including literacy and language practices, that children and families can engage to share their experiences. Although it may seem simple, but the mere presence of projects that integrated these life experiences and the use of Spanish speaks back to the district's history of assimilationist and subtractive practices that derive from deficit ideologies. I invite a reflection that contrasts the image of children removing Spanish instructional materials from their classroom to one where they work with their families on a bilingual project to share their lives. The Office for Civil Rights report stated,

Based on the evidence, we determined that a hostile environment against Hispanic students, teachers, and administrators existed at the District. Specifically, we conclude that the preponderance of the evidence establishes that Hispanic students, teachers, and administrators experienced national origin harassment that was sufficiently serious to deny or limit an individual's ability to participate in or benefit from the services, activities or privileges provided by the District. (p. 15)

When hostility, harassment and discrimination are a daily reality, it is imperative to heal wounds, restore spirits, and affirm culture and language as valuable resources. The empowerment and resistance that can emerge in this process is essential in the pathway toward educational equity. At the time of data collection, the school district had reinstated bilingual programs and this opened the opportunity for bilingual pedagogy that is also culturally sustaining. However, three years later, the district once again moved toward the elimination of bilingual programs.

An imminent next step in research that examines these approaches and methodologies is to explore their impact on classroom practices, educator perspectives, and school environments. Better understandings of how these methods can contribute to strengthening relationships between families and educators can pave a trajectory toward restructuring family engagement approaches that are integrated at the classroom level. Furthermore, there is a need to understand how these methods can contribute to shifting deficit ideologies and orientations among all stakeholders and structures in schools, and if these shifts can transform classroom and school practices to be more strength-based and equity-oriented.

Policy implications include the need to revise family engagement efforts at the district and school level to consider how these include opportunities to learn about families' lives and if they are integrated in both, classroom and school-wide approaches. Teacher preparation programs can be impactful by centering practices that include culturally sustaining project-based learning and family collaboration as part of regular instruction. Importantly, future teachers can realize the many opportunities multimodal projects afford to learn how students construct their identities, and about the experiences and contexts that shape them.

An important implication for educators means that aside from district policies, it is possible to embed pedagogical elements that promote a funds of knowledge and funds of identity approach in ways that also integrate curricular connections, as these are not mutually exclusive when learning experiences in classrooms are meaningful and hold high expectations. Educators can engage in self-reflection regarding their pedagogical practices to inquire about the opportunities their students have to 1) share and include their experiences in classroom learning, 2) express and explore their identities, 3) integrate and collaborate with their families, and 4) make use of their full linguistic and multimodal resources in learning. Biliteracy family projects present an additional tool for educators to invite and integrate children's funds of knowledge and funds of identity to foster family collaboration and challenge deficit ideologies by illuminating the depth in children's experiences outside of school, and how these are incorporated to construct their identities.

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