Pluriversal Designs for Decolonizing Language and Literacy Education Curricula in a Rural Community of the Colombian Caribbean Region

By

Tatiana Becerra Posada, B.Ed., MA
Department of Integrated Studies in Education
Faculty of Education
McGill University, Montreal

A thesis submitted to McGill University in partial fulfillment of the requirements of the degree of Doctor of Philosophy
in Educational Studies & Language Acquisition

Supervisory Committee:
Dr. Susan Ballinger
Dr. Christian Ehret
Dr. Mia Perry
Dr. Amir Kalan

To Emily, *mi cordoncito umbilical*, your love is the compass that guides me to seas of calmness.

To my grandparents, Gilma Elena and Rafael Antonio, the memory of their loving eyes reassures me every time I feel lost. Never was a granddaughter so loved.

To my parents, Monica Elena and Alirio, your heavenly care and love continues to reach me, giving me light in the darkest moments.

Para Emily, mi cordoncito umbilical, tu amor es la brújula que me lleva a mares de calma.

Para mis abuelos, Gilma Elena y Rafael Antonio, el recuerdo de sus ojos amorosos me reconforta cada vez que me siento perdida. Nunca fué una nieta tan amada.

Para mis padres, Monica Elena y Alirio, su cuidado y amor celestial siguen alcanzandome, dándome luz en los momentos mas oscuros.

TABLE OF CONTENTS

ABSTRACT

This dissertation describes a community-based project that explored the land-based literacies of Callemar, a rural community in the tropical dry forest of Northern Colombia, and co-designed language curricula that honors the local knowledges and literacies that sustain life in this community. Following a manuscript-based format, the first manuscript draws on decolonial and community-based methodologies to describe the process of jointly constructing a collaborative and participatory methodology that is guided by the axio-epistemologies of this rural community. Data from walks and community dialogues evince relationality, interdependence and solidarity as the framing values of our collaboration and co-design, thus ensuring that the voices of the community guided the decision-making process and research collaborations. The second manuscript draws on a micro-analysis of participant-generated video-data from two walks with youth and adults from Callemar and showcases how assemblages of land, collective memory and cultural practices produce land-based literacies that allow individuals to relate to other beings and thrive in the changing landscape of their rural community. The third manuscript describes the process of co-designing and implementing land-based literacies and language curricula with Technology, Spanish, and English as an Additional Language (EAL) teachers in the secondary school that serves this rural community. Co-design artifacts, community dialogue extracts, and multi-sensory walks video-data show the potential of these curriculum developments to subvert racist and colonial views of local knowledges and literacies that pervade educational policy in Colombia. Together, these three manuscripts add to current efforts to decolonize research methodologies as well as the policy and practice of language and literacies education.

RÉSUMÉ

Cette dissertation décrit un projet communautaire visant à explorer les littératies territoriales de Callemar, une communauté rurale située dans la forêt tropicale sèche du nord de la Colombie, et à coconcevoir des programmes de langue qui honorent les savoirs et les littératies locales qui soutiennent la vie dans cette communauté. Adoptant un format basé sur des manuscrits, le premier manuscrit s'appuie sur des méthodologies décoloniales et communautaires pour décrire le processus de construction conjointe d'une méthodologie collaborative et participative guidée par les axio-épistémologies de cette communauté rurale. Les données issues de promenades et de dialogues communautaires révèlent la relationalité, l'interdépendance et la solidarité comme valeurs fondatrices de notre collaboration et de notre co-conception, assurant ainsi que les voix de la communauté orientent le processus de prise de décision dans les collaborations de recherche. Le second manuscrit s'appuie sur une micro-analyse de données vidéo générées par les participants lors de deux promenades avec des jeunes et des adultes de Callemar, et montre comment les assemblages entre territoire, mémoire collective et pratiques culturelles produisent des littératies territoriales permettant aux individus de se relier aux autres êtres et de prospérer dans le paysage changeant de leur communauté rurale. Le troisième manuscrit décrit le processus de co-conception et de mise en œuvre de programmes de littératies territoriales et de langues avec les enseignants de technologie, d'espagnol et d'anglais langue additionnelle (ALA) du lycée desservant cette communauté rurale. Les artefacts de co-conception, les extraits de dialogues communautaires et les données vidéo issues de promenades multisensorielles mettent en évidence le potentiel de ces développements curriculaires pour subvertir les visions racistes et coloniales des savoirs et des littératies

locales qui imprègnent la politique éducative en Colombie. Ensemble, ces trois manuscrits contribuent aux efforts actuels de décolonisation des méthodologies de recherche et de la politique et des pratiques éducatives en matière de langues et de littératies

LIST OF FIGURES

ACKNOWLEDGEMENTS

I am deeply grateful for my family—without your support, I would have been lost on this journey, and this dissertation would not have seen the golden autumn light of today. To my daughter, Emily—thank you for your patience, understanding, and for being the best company throughout these four years of adventure, making a home away from home. To my aunt-mothers, Alcira, Amaida, Maria, Orfa, and Maritza—your boundless love and care have sustained me and shaped the woman I am today. To my cousin-siblings and my godson, Adri, Cami, Migue, Linda, Rafael, Cristian and Santiago—gracias por ese amor orgulloso que me sonroja. To my partner, Dav—your love turned my life upside down in the most beautiful way, and your ability to marvel continues to inspire me. To my sister in Montreal, Jess—thank you for your trusting friendship. And to my best-friend-brother in Montería, Salo—thank you for always being there.

I am tremendously thankful for the caring and supportive mentors I have had at DISE, Christian Ehret and Susan Ballinger—thank you for believing in me! My deepest gratitude also goes to my committee members, Mia Perry and Amir Kalan, for their inspring work and for their critical and supportive reading of my dissertation, as well as to the Building 21 co-directors, Anita Parmar and Ollivier Dyens, for their invaluable encouragement in trusting my intuitions.

I have been extremely fortunate to cross paths and bond with extraordinary friends, colleagues, and peers—individuals with whom I have shared in insecurities, strengths, experiences, knowledges, guidance and the gift of co-creation: To Enith Lambraño, Anamaria Sagre, Fernando Alean, Jairo Simanca, Jose David Herazo, Leonardo Pacheco,

Jessica Perez, Emily Mannard, Stephanie Leite, Lana Zeater, Tina Saleh, John dela Cruz, Arianne Maraj, Diana Arroyo, Jose Sandoval, Santiago Ojeda, Nancy Palacios, Marcela Ramos. To my peers at DISE 2020 cohort, at the Graphos writing groups, and at the Learning Sciences Network in Canada—thank you for all the shared conversations, drinks, meals, and meetings. Without you, this path would have been terribly lonely.

I am also deeply grateful to Emerson Sierra and María Angélica Herrera, co-directors at the *Centro de Documentación Regional Orlando Fals Borda* in Montería, Córdoba. Your wisdom, care, and guidance were instrumental in my exploration of Fals Borda's archive—an invaluable collection of field notes, photographs, and newspaper clippings that helped me grasp the intricacies of participatory research.

I acknowledge with gratitude the support of *Universidad de Córdoba* in Colombia for granting me a study leave from 2021 to 2024 to pursue my doctoral studies. I am also thankful for the funding granted by COLFUTURO's loan-scholarship as well as for the *Fonds de Recherche du Québec*'s doctoral scholarship #319894.

Finally, my heart is with the members of the Callemar community, as well as the youth and the principal of El Carmen School, Luz Mila Perez. Your generosity and wisdom are treasures I will forever hold close. Without you, this project would have never become a reality.

CONTRIBUTIONS TO ORIGINAL KNOWLEDGE

Within the last 50 years, education and literacy researchers have called to expand definitions of literacy (Gee, 2008; Street, 1984; The New London Group, 1996), explaining that it includes more than cognitive skills as well as encoding and decoding meaning beyond alphabetic and numeric signs. Literacy studies, especially in the last decades, have been influenced by theories of learning that highlight the role of embodiment (Lenters & McDermott, 2020), affect (Leander & Ehret, 2019), movement (Gutiérrez, 2008), and human and non-human networks and assemblages (Perry et al., 2023; Wohlwend, 2020) in meaning-making. Such scholarship has been pivotal in questioning the overt emphasis on texts, grammars, and designs that has for so long driven literacy research and education (Leander & Boldt, 2013; Kalan, 2024). This research has sparked re-conceptualizations of learning and literacies that have allowed legitimizing the multiple learning, and meaning-making experiences of children, youth and adults from non-dominant groups (e.g., Enciso, 2019; Kinloch, 2009; Pahl et al., 2020; Perry, 2023) and from Global South communities (Dewayani, 2013; Mora, 2015; Sakhiyya & Hapsari, 2021; Zavala, 2019). In our changing and unstable world, questioning how we learn, and the tools and practices, or literacies, we use, is crucial for educators and researchers.

Literacy is a meaning-making tool essential to education. As the Brazilian, decolonial scholar Vanessa Machado (2021) explains, “education is much broader than schooling—it spans the whole length and width of life.” (p.43). Proceeding from this definition, we, humans, use literacy across the life span. I believe that educators, researchers and policymakers have agreed on the importance of literacy in people’s lives;

however, nuanced understandings of peoples' literacies have yet to significantly impact educational systems.

The generalized definition of literacy that pervades educational systems across the globe is incomplete. Ignoring the myriad signs that humans rely on to create meanings has negatively impacted the educational experiences of learners from non-dominant groups. These learners do not conform to the overvalue assigned to the inscription of letters and numbers to express ideas, share their understanding of the world, and participate in knowledge exchange and co-construction within and across communities. Brazilian scholar, Paulo Freire (1983), hinted at such inequity through his reconceptualization of literacy as a tool to read the world. For the Brazilian author, this meant understanding the invisible layers of power that maintain the domination of a few groups over others. Undoubtedly, Freire's work has been a stepping stone to comprehend the critical role of literacy education for emancipation.

Since alphabetic and numerical literacy skills are essential to the market economy, efforts to homogenize literacy and education are enforced by the global powers represented by the OECD (Organization for Economic Cooperation and Development) (Kalan, 2021). Idealising these skills sustains the cultural and linguistic supremacy of the European colonial empires, which have erased languages, peoples and worlds through their thirst for expansion and control. Never has the failure of these educational designs been more evident: youth have been thrown into despair by the possibility of destruction of our planet through wars, global warming, economic instability, and pandemics (Andreotti, 2021; Heugh et al, 2020). Thus, the decolonial call for educational designs that disobey the

globalist normativity and expectations, and instead strive to care for the many worlds in our planet is imperative.

This study makes novel contributions to the fields of education, language and literacy research. First, by bringing current decolonial theories into research and educational praxis, this study contributes answers to questions about how to engage in participatory research with non-dominant communities and how their voices, values, beliefs and desires are essential to research designs (Cabaluz, 2017; Paris & Winn, 2014). Furthermore, by engaging in collaborative work with teachers in this rural community, throughout the initial data generation, the data analysis and then the co-design phases, this dissertation addresses the epistemic erasure of rural teachers, who are often overlooked in educational planning and design (Cruz Arcila, 2018).

This dissertation also adds to research with rural communities across literacies and language education fields. By delving into the rich meaning-making practices of a rural community, the study provides new insights into the ways in which literacy is lived outside rural Global North contexts (Green & Corbett, 2013; Stelmach, 2018). These insights also help to address the pathological portrayals of rural communities and their literacies that have prevailed in educational research (Patel, 2016; Rivera Cusicanqui, 2010a). Thus, illuminating asset-based perspectives that are essential to equitize and decolonize education in rural communities of the global souths. The study's findings add to current efforts to expand literacies conceptualizations (Pahl et al., 2020; Perry, 2023), describing the ways rural youth and adults read the signs from their ecologies while walking the forest or crossing creeks, thus shedding light on the diversity of realities, epistemologies and ontologies that exist in our planet (Escobar, 2017). Finally, through the methodological and

curricula co-designs, the study offers praxis-oriented examples to current theorisations of pluriversal literacies education (Becerra Posada, 2024; Perry, 2021; Williams & Bermeo, 2020).

CONTRIBUTIONS OF AUTHORS

This dissertation follows a manuscript-based format. The data for this dissertation stems from my approved dissertation project, originally entitled "Exploring decolonial frameworks for collaborative, community-based understanding of local literacies and their potential for language education in rural Colombia" and has ethics approval # 22-09-024 by McGill University. Three original manuscripts stemming from this project make the body of this dissertation and are presented in Chapters Two, Three and Four.

The first manuscript entitled "Decolonizing Methodology: Co-Designing research with the voices and footprints of the community" is a single-authored manuscript where I explore auto ethnographically the process of building a research methodology with my partner community. This manuscript is currently under review in the journal *Qualitative Research*. The second manuscript is entitled "Land-based literacies in local naturecultures: Walking, reading, and storying the forests in rural Colombia," and it is co-authored with my co-supervisor Dr. Christian Ehret. We draw on the land-based literacies of my partner community to discuss the inadequacy of universalized, alphabetic literacy models for this rural community with unique sets of knowledges and cultural practices deeply engrained in the land. It has been published by the *Journal of Adolescent and Adult Literacies*. The third manuscript entitled "Curricula co-designs for the pluriverse: living, being and becoming within the territory" is co-authored with Colombian colleagues Enith Lambraño, Fernando Alean, and Jairo Suarez. In this manuscript, we describe and reflect on our collaboration designing curricula that attends to the community's land-attuned knowledges and literacies. It is under review in the journal *Cognition & Instruction*.

As the sole author of the first manuscript, I am completely responsible for its content and writing. For the second and third manuscripts, I wrote 80% of their content. Their crafting, analysis and editing was part of a dialogic process with co-authors and community participants who are acknowledged in each manuscript. I specified research questions for each article, I reviewed the literature on decolonial theories, land-based pedagogies and literacies, community-based and participatory methodologies, and co-design. I described the methodological approaches that informed data generation and analysis for each article. I did fieldwork in Colombia, collaborating with 30 community-members in data co-generation for the first and second manuscripts. The third manuscript stems from data collected during in-person and on-line co-design sessions with the co-authors between August 2023 and April 2024. I led the analysis of the data, engaging community members in the initial phase, and then individually delving into refining categories and themes as well as the representation of the analysis. I relied on community members to discuss results and obtain their approval. The contributing co-authors also helped ensure the accuracy of the data interpretation which involved discussion sessions, proofreading and editing suggestions.

My doctoral co-supervisors, Dr. Susan Ballinger and Dr. Christian Ehret, have been my primary resource of feedback and guidance. Dr. Mia Perry's advice, dialogues and careful reading during my academic visit to Glasgow were essential to the crafting and development of the arguments of the first manuscript. I am utterly thankful for their constructive and valuable advice, which has strengthened the ideas and analyses across the three papers.

CHAPTER 1: INTRODUCTION[1]

Opening story

As a language educator in secondary and post-secondary education, I have grown dissatisfied with the educational systems I am part of. This dissatisfaction may seem contradictory for a person who has benefitted from them. Looking at my academic achievements, it would be reasonable to say I am thankful to the educational system, which has allowed me to attain a job and economic stability, to pursue a doctoral degree in a North American university, and to live in two Global North countries for extended periods. What else could I ask for? Should I not then be advocating for the continuation of the educational system I have benefited from? An answer to this question is not simple. Although I have benefitted from education, there are many who continue to be excluded. Furthermore, the "social mobility" I have achieved came at great sacrifice from my family.

I am the first in four family generations to enter and graduate university. This means that at least three generations of women and men have faced inequity, lacking access to formal education and to dignifying jobs. My grandmother was never remunerated for her care-providing work to 14 children and at least five grandchildren. My mother and aunts could not aspire to stable jobs. They had to care for their children, so the flexibility offered by work doing other people's laundry, house cleaning, and child-sitting was appreciated despite its low pay. Those who got a minimum-wage job, also had fixed schedules that did not allow them to continue studying or pursuing their personal interests. Moreover, despite efforts to equitize access to education in my country and my home province, a generation of

[1] At B21, behind the green door, during a few *Tuesday-Lightnings*, Anita Parmar, Ollivier Dyens, and Alex Chen listened, asked questions, gave advice and encouragement for me to put together the pieces—stories, theories, contradictions, and hopes—that bind this introduction. Thank You!

older cousins could not thrive in schools, and some of them dropped out of high school, while others were expelled. They did not find meaning in sitting, reading and writing in a classroom.

Reading and writing made sense and was meaningful to me. At the age of six, I began to write to communicate with my father who lived in Bogota, 800 kms away from my hometown. Writing and reading letters was my way to love and feel loved by my father. I was often considered a strong reader and writer at school, which gave me the confidence to succeed academically. However, I often felt that I lagged behind my cousins in other ways. They were sharper at noticing and observing, had an incredible sense of humor, and made friends easily. My grand-parents, Gilma and Rafael, and aunts, Alcira, Orfa, Amaida, Maria and Maritza, insisted on the importance of being educated to get out of the poverty cycle that my family has been stuck in for decades. With their encouragement and support, I entered my hometown university, where I learned English, earned my Bachelor of Science in Education and became an English as a second language teacher.

By the time I graduated, the discourse around English learning had gained popularity. The Colombian Ministry of Education enforced the teaching of English across secondary education, to ensure that the Colombian population was competent in the global labour market (Usma, 2009). This discourse still pervades; however, educators and educational researchers have shed light on the fallacy it entails (Mackenzie, 2020). I could add figures, stating the number of students who are betrayed by the educational system. And I say betray, because their families and the students themselves trust the system, put their hopes in it—just as my family did—investing time, money and effort. Unfortunately, the educational system only benefits learners who behave according to colonial/modern

expectations of cult and civilized. They must employ sophisticated vocabulary, use a standardized and accepted form of Spanish, and, perhaps most importantly for the purposes of this study, leave their community's way of living behind. In agreement with Zavala's critique of the Peruvian educational system (2019), I could thus say that succeeding in the Colombian educational system also requires cultural homogenization and assimilation into "elite" cultures.

Formal education fails the many youths who resist this assimilation; despite their creativity, intelligence, abilities and skills, they face barriers to fulfilling their learning potential at school. I saw in despair learners who deemed themselves too inadequate to be able to continue or undergo higher education. I have realized they were seeing a reflection of themselves that had been created through the system.

I remember a conversation with one of my former colleagues at La Esperanza, a rural school in a very poor area in Planeta Rica, Cordoba. She told me about an alumnus who had been killed by neo-paramilitary groups that often harass small rural communities[2]. This was at the beginning of 2021. I was saddened by the news, but more so by the fact that this was not an isolated case. Several of my former students at La Esperanza had met the same misfortune. I felt extremely sad by this family who had lost their child. I felt hopeless, thinking that formal schooling is just a waste of time for many youths who, no matter their wit and skills, would not be enabled to accomplish their dreams.

I felt ashamed of myself and the system, remembering my years at La Esperanza school where I often gave these students speeches on the value of education. I had even

[2] Paramilitary violence, muted into criminal gangs, remains a huge social problem in Colombia, impeding the implementation of peace agreements.

used myself as an example, saying how I, an orphan in a very poor family, had overcome poverty and achieved work stability. As a person who had benefited from educational success, I for a long time believed that literacy education was the solution to these problems. I thought that providing access to specific types of literacy instruction would facilitate marginalized students' entry to social goods. I now know I had simplified the problem and its solution; it is more complex than just devising equitizing literacy instruction as a fixing tool!

During my first PhD semester, taking the *meanings of literacy* class, I began questioning my belief in the idea that literacy education was the key to a successful future, especially for rural students who faced the digital divide and educational inequalities (Rowsell et al., 2017). I felt fragile realizing that my definition of literacy was often a Trojan horse that hid the causes of inequity for many learners in many parts of the world. For instance, I resonated with Heath's (1982) ethnographic accounts of black children's literacies in the South of the United States. I thought of my rural school students and my community neighbors, we all had been required to adapt to the literacy expectations of formal schooling, leaving our home literacies outside the classroom. During that first graduate school semester, I came to understand that literacy was not a single thing, but myriad practices, which existed in our world to enable creation, identity, and learning within communities. This socio-cultural theorisation of literacy is not new (Street, 1984), however it has been insufficient to recognize meaning-making practices outside Eurocentric societies. Despite some exceptions (Heath, 1982; Scribner & Cole, 1978), most of the research I had been acquainted with provided me an incomplete outlook of literacies. Such outlooks centered on certain dominant communities, which were strikingly different from

the rural communities I belong to. This was one of the "gaps" I noticed: only specific practices from elite communities were deemed as literacies, while other everyday practices were excluded (Gee, 2014).

As the veil was falling off, the socio-cultural framework of literacy and the new literacy studies (The New London Group, 1996)—that I had long admired—seemed inadequate to describe the practices that were part of life in my home province. None of these socio-culturally framed rural literacies' (i.e., these are the meaning-making practices that stem from relations in rural communities) descriptions considered contexts familiar to my students (Green & Corbett, 2013). They spoke of lives and worlds that my students would only see in foreign movies.

At the end of this course, I encountered an article (Perry, 2020) that questioned the global need for functional literacies as well as the excessive emphasis in print literacy across educational curricula and assessments. Although I did not understand all its arguments, the idea that we live in a world where many literacies coexist resonated within me. Thus, it provided an entry point to the concept of pluriversality (Escobar, 2007; Mignolo, 2018), a decolonial concept that helped me to make new sense of the meaning-making practices around me. Most of the social, cultural and economical practices in my home province are permeated by the surrounding bodies of water. For instance, the Sinú and San Jorge rivers traverse seventeen municipalities in Cordoba. The Caribbean seashore borders six other municipalities, and estuaries, wetlands, creeks, ravines, ponds, and lakes permeate the other nine municipalities that are not touched directly by the sea or the larger affluents. Our ways of being and living have been shaped by the meaning-making practices that indigenous, black, and peasant communities used to thrive in these lands and waters. I

had long believed that practices like sand-digging, fishing, or traversing the river had no room in educational or academic spaces. I hold special affects for these ways of inhabiting the world as they are important part of my identity; however, I have also resented the dismissal that people from the city or urban centers bestow upon them. Reading Escobar's (2008) descriptions of life in afro descendent communities of the Colombian pacific, inspired me to look back at my roots.

So, I began walking back in circles. I went back to my hometown where I visited one of the cultural centers that holds Orlando Fals Borda's archive. Reading *Historia Doble de la Costa* illuminated me to cross borders between my *identidad sinuana* and my literacy scholar/educator identity. To argue for an amphibian culture that permeated the ontology and epistemology of the Caribbean coast, Fals-Borda (2002) quoted a fisherman describing his practices in the swamp:

> From generation to generation the secrets of the water and the ravine are passed on: how to walk on the floating debris of the swamp; how to channel with force and govern the raft of trunks so that it does not take by torrents without exit; how to defend the roe from the bites of the otter; how to smoke the armadillo and stick the royal parrot; how to avoid the source of the marimonda; how to cut and sew the belly of a live iguana to remove its string of mealy eggs; how to get rid of the leeches that stick to your bare legs without getting upset; how, in short, to wade through the swamp without fearing the tiger, the guinea pig or the perfidious alligator. (p.19A) [my translation]

As I read these words, I made sense of pluriversal literacies (Perry, 2020). I recognized signs and acts of semiosis that constitute the *amphibian literacies* people in my home province use to thrive in their socio-material world.

Through this autobiographical recount, I aimed to position myself within the research field but most importantly to state one of my research objectives: To explore ways of designing educational curricula and practice that redress the inequity of assimilating students to colonial understandings of literacy education.

Becoming a decolonial literacies researcher

As I delved into decolonial theories, I understood that it is the colonial logic that privileges alphabetic literacy in education (Mignolo, 2012). This type of literacy has been a tool to maintain the hegemony of European languages and cultures (Battiste & Henderson, 2000), thus erasing non-Eurocentric forms of knowledge, learning and being in the world that do not concord with Eurocentric values. Literacy, at least from a Eurocentric perspective, is largely guided by perceptions of what it means to be civilized, while oral vernacular traditions are deemed as archaic and basic, not conducive to complex or abstract thinking. Although research has long since debunked these hypotheses (Scribner & Cole, 1978), alphabetical and numerical literacies remain core elements of formal schooling, placing all other meaning-making practices outside of the school domain. I resonated with the call to decolonize literacy education (Battiste, 2013; Macedo, 2019; Patel, 2016) in ways that divest from imposed universal, alphabetical literacy models, and I recognized the diversity of literacies that sustain the worlds of marginalized communities.

Decolonial scholars have pushed back against this colonial universal model of literacy that has harmed indigenous communities. For instance, researchers in the Global Norths and Souths have provided alternative accounts on how indigenous communities in Turtle Island and Abya Yala (i.e., the indigenous names given to the territories currently known as North and South America) engaged in non-alphabetic literacy practices that led to learning and knowledge building, thus aiming to expand literacy notions (Cajete, 2000; Rivera Cusicanqui, 2010b; Mignolo, 1994). Others have questioned the pervasiveness of European literacy ideologies and models in the framing of indigenous literacies, arguing that this imposes colonial ideals of being literate on Indigenous languages. Browning (2016) exemplifies such a contradiction in his critique of the indigenist literature movement of Bolivia that reduces Quechua literacy to the scripting of the language while ignoring the social practices beyond alphabetical scripted literacy that indigenous peoples draw on to make meaning. Similarly, Silvia Rivera Cusicanqui (2015, 2008) relied on non-script signs, like watercolor paintings and elements of oral traditions, to shed light on Aymara´s knowledge creation history. This research has broadened my understanding of literacies and the need for decolonizing literacy concepts, especially within educational systems. It also underlines the need to look for ways to acknowledge meaning-making practices that are germane to minoritized communities who have strived for alternatives to Western ways of living.

In South America, rural areas home Indigenous, Afro-descendent, and mestizo peasant communities. In Colombia, rural education entangles these communities. Colombian scholars (Bonilla et al., 2022; Cruz Arcila, 2018) have already called for curricula that better reflect the realities of these communities. Such curricula would deviate

from hegemonic definitions of learning, literacy, culture and knowledge to ensure the perpetuation of alternative worlds. I have thought of this call with caution. For instance, Silvia Rivera Cusicanqui's (2010a) critique of the commodification of participatory action research by Global North institutions, and Tuck and Yang's (2021) critique of calls to decolonize the mind while overlooking marginalized communities' colonial struggles, have pushed me to ponder what it means to engage in research endeavors with members of these marginalized rural communities. I find that this issue intricately concerns methodology and literacy: how can we make meaning from the data, the stories, the artifacts, the places, the practices, the traditions, and the values that are shared during the process of co-constructing knowledge? How can we engage in research about literacy without falling into the trap of representation that alphabetic literacies afford?

Attempting to answer these questions has drawn me to explore into the methods that can be used to overcome the limitations embedded in our reliance on written texts, for instance, with techniques like interview transcriptions, observation transcripts, questionnaires, and field notes. I found inspiration from scholars who have engaged in ethical participatory research with indigenous, black and marginalized communities across North and South America. They illuminated paths to co-construct knowledge in ways that transcended logocentrism and the focus on observing others, recognizing that our whole body is a cognizant organism (Rivera Cusicanqui, 2015). Their work invited avenues of exploration that centered our bodily sensations (Armitage, 2021; John, 2019; Styres, 2019) and movements to understand relations with the land (Marin, 2013, 2020), the territory (Méndez Torres et al., 2013) and all the beings that inhabit it (Escobar, 2018). These studies privileged the tactile and the bodily sensations over traditional research methods

like the oral interview, which often exacerbates the "subaltern" position of marginalized communities (Espinosa Miñoso et al., 2014).

These works reminded me of Fals-Borda's (1972) *sentipensar*—a term Fals-Borda borrowed from a fisherman in the wetlands of Córdoba—which urged us to think with all our body senses. Thus, this body of work inspired me to not rely solely on logocentric, oculo-centric, and alphabetic practices. Instead, it alerted me to the need to foster sensibilities that integrate our minds and bodies to make sense of our experiences and histories, and to identify the knowledges and literacies that live within our communities' territories. So, I asked: How can we advance decolonial methodologies to include the voices and knowledges of participants in more agentic ways? How can we shift the central role from the researcher to the participants? How might decolonial research allow participants to overcome their subaltern positionalities? How can decolonial research center on subalterns' dreams and desires to spark a genuine decolonial imagination?

I tried to answer these concerns about doing literacy research with communities like my own, where the smell, the texture, the sounds of the rivers, the ponds, the ocean are meaningful signs, conveying messages that shape our socio-cultural interactions. Therefore, in chapter 2, the article *Decolonizing Methodology: Co-Designing research with the voices and footprints of the community* describes how members of the Callemar community participated and led the co-construction of our research methodology, thus actively taking the role of research co-designers. I attempted to move beyond the text, thus, creating visual vignettes that combined photos, stories and my own reflections from the co-experience of walking and storying the wooded hills and creeks with Callemar neighbors Ana, Yeinis, Yamile, German, Didier, Juana, Jose. This work prepared us to then explore their local

literacies along with teachers and students from the community. Thus, in chapter 3, along with my mentor and co-author of the article *Land-based literacies in local naturecultures: Walking, reading, and storying the forests in rural Colombia*, we describe the enacting of our multisensory walk methodology. We started to understand how youth and adults make meaning from signs they daily encounter on the soil, the plants, the memories and the stories of their community. Drawing on multimodal interaction analysis of video-recorded walking journeys (Marin, 2020), we showcased forest and creek crossing as land-based literacies; we delved into the reading of land signs that community members rely on during their daily walks. We discussed how these practices are embedded in collective memory, and how they produce stories that make up part of the community's storytelling traditions.

I very much appreciate the community's generosity in sharing their daily paths with me, an outsider, until one of their teachers opened their school doors to me. The question of *how to transform education to make it meaningful and to avoid feeling betrayed and alienated* grew stronger for me. I did not aim to benefit from exploring these land-based literacies just to learn a new perspective or to expand the literacy and language fields, I felt committed to working with my colleagues towards paths for making the educational experience of their rural students a more meaningful and relevant one. Similarly, my colleagues were profoundly moved by the experience of walking with students and learning about their literacies. We knew that exploring these literacies was just the beginning of co-creating some kind of curriculum. We did not yet know whether the shape it would take, would be meaningful and culturally sustaining for El Carmen students. Therefore, in chapter 4, I draw on the co-authored article *Curricula co-designs for the pluriverse: living, being and becoming within the territory* to describe our curricula co-design process. We

shed light on how teachers can draw on local knowledges and literacies to serve their communities in ways that do not perpetuate colonial understandings of language, literacy and culture. We draw on the community's literacies—meaning-making tools embedded in their cultural-natural ecologies—to design land-based literacy curricula that are culturally founded and relevant.

Through these three manuscripts, this doctoral dissertation aims to illuminate answers to the following questions:

1. How can members of an educational community be engaged as active agents in building curricula that subverts colonial assimilation and honors the literacies that live and sustain life in their territory?
2. How can we, literacy researchers and educators, design educational curricula and practices that redress the inequity of assimilating students to colonial understandings of literacy education?

In sum, the overlapping theme in this dissertation deals with current endeavors to decolonize literacy and language education (Blandón-Ramírez & Colombo, 2024; Guerrero Nieto, 2023; Macedo, 2019; Perry, 2023). Achieving such an aim requires complex answers that I am sure this dissertation will provide only partial contributions to this far-reaching aim. However, I am hopeful it will inspire us to continue learning and transforming our roles as educators and researchers.

Three stories introduce and connect the core manuscripts of this dissertation. This deliberate move is twofold. First, it aims to forward the indigenous idea that stories are theories (Kimmerer, 2013; Machado de Oliveira, 2021). The stories I'll share have become guiding theories for me, they have moved me and the course of my research path. Second,

this move aims to unsettle the often-impersonal format of scientific texts. I invite you to read these stories with your heart and mind.

BRIDGING STORY 1

Meterle el hombro is a common expression meaning to unite forces to accomplish a common objective. Didier and Gabriel´s stories below talk about cooperation, they are more than recounts or anecdotes, they speak of the lived relationality that shapes their community's values and ways of living.

> Esa tradición que, sobre todo por la zona difícil de acceso… que sucede algo en la Pintura o en la Pachaca, lo sacamos en hamaca, a mí me ha tocado participar en eso. Lo sacamos en hamaca y la demora es que aquí se sepa que allá está sucediendo algo malo, enseguida nos ponemos pilas, **todo el mundo le mete el hombro a esa hamaca** hasta encontrar el vehículo que lo va a transportar. (Gabriel, Callemar community member). [This tradition, especially in the difficult access zone, when something happens in La Pintura or La Pachaca, we take them out in a hammock, I have had to participate in that. We take them out in a hammock and the delay is that here we learn that something bad is happening there and we immediately get ready, everyone puts their shoulders into that hammock until we find the vehicle that is going to transport them.]

Gabriel's story describes common episodes where the community joins efforts carrying a hammock to transport a sick community member to the point where they can find a vehicle that gets them to the hospital in the closest urban center. Next, Didier's story recounts the time when his house burnt down, receiving the community support through this hard time.

> Sucedió una tragedia, pero sin embargo la gente no dejó y eso parecía que eso es como un velorio. La gente acompañaba, nos demoró acompañando como 15 días. El uno llevaba una hamaca, el otro un suéter, el otro llevaba un plato, llevaba una cuchara y ahí

se da cuenta uno, que sí, que la gente sí es bastante unida, le agradece mucho a la gente. (Didier, Callemar community member).

[A tragedy happened, but nevertheless the people did not abandon us, and it seemed that it was like a funeral. The people accompanied us for about 15 days. One brought a hammock, the other a sweater, the other a plate, a spoon and there you realize that yes, the people are very united, we are very grateful to them.]

Meterle el hombro was a theory shared through many of the stories in Callemar, a theory that we lived when we all "put our shoulder" to give life to the methodology described in the following manuscript. Aware of the privilege and power dynamics inherent in my position as a doctoral student in a North American university, I positioned myself as an ally to the community. My role was to support their efforts to collect and disseminate stories that honor their knowledges and traditions.

Some of these dissemination venues include community dialogue sessions, parental meetings at the school, a community showcase, and digital sharing through WhatsApp. Community members' authorship has been acknowledged throughout the various dissemination outlets we have used within and beyond the community.

Although the manuscript in the following chapter is single authored, it is only one form of dissemination that emerged from my collaboration with the community. With their consent and support, I include and acknowledge their voices and knowledges in this paper, showcasing how they impacted my experience as an allied researcher who listened, reflected, and learned throughout the project. This article does not stand alone, it does not represent the totality of our collaboration. Rather, it does an important job sharing my allied researcher perspective of learning alongside my partner community.

CHAPTER 2: DECOLONIZING METHODOLOGY: CO-DESIGNING RESEARCH WITH THE VOICES AND FOOTPRINTS OF THE COMMUNITY

Author: Tatiana Becerra Posada

In review at *Qualitative Research,* submitted on May 23, 2024.

Relationality is a key principle in indigenous cultural and knowledge-making practices (Cajete, 2000, 2021). It recognizes the essence of relations-between humans and more-than-humans (MTH) in the lands and waters- for knowing and being in the world (Kimmerer, 2013). Decolonial scholars have called for centering relationality in qualitative research, especially through honoring indigenous ways of knowing (i.e., epistemologies) and being (i.e., ontologies), which have historically been neglected by Western understandings of science and research (Battiste, 2013; Patel, 2016; Smith et al., 2019).

Participatory-action-research (PAR) (Fals-Borda, 1979) and community-based design research (CBDR) (Bang et al., 2016) have succeeded at centering relationality in research with marginalized peasant and indigenous communities respectively. Both methodologies forward research as a multilateral endeavor to which communities' perspectives, concerns, and experiences are valuably contributed, deeming participants as co-researchers, co-designers, and co-producers of knowledge (Bang & Vossoughi, 2016).

Although from different spatio-temporal locations, participatory and community-based designs center indigenous epistemologies and ontologies. For instance, Fals-Borda (2002) borrows the term *sentipensar* (feeling-thinking) from peasants, mixed-race individuals with indigenous ancestry, in the Colombian Caribbean region. Sentipensar is a radical epistemology and ontology that rejects the body-mind separation (Botero Gómez, 2019), instead, *sentipensar* calls to trusting both the mind and our body-senses to learn from and sustain life in the ecologies we inhabit. Fals-Borda's participatory research

embeds a relational methodological praxis that subverts colonial forms of knowledge-making by positioning participants as experts whose "popular" knowledges inform the research (Negrete, 2008). Fals-Borda's work contributed to developing popular education initiatives and the consolidation of peasant organizations struggling for landownership in Córdoba, Colombia (Negrete, 2008). His work has been inspirational for grassroots organizations in indigenous, peasant, and afro-Colombian communities of Colombia to fight against inequity, systemic oppression like violence and land disposal (Escobar, 2020).

Similarly, CBDR studies with indigenous communities in North America have intentionally centered indigenous ways of knowing, honoring participant's ways of seeing, relating and knowing the world (Bang & Medin, 2010; Meléndez et al., 2018). This intentionality has marked an axiological innovation in CBDR scholarship (Bang et al., 2010, 2016), which has furthered research on learning, considering the relations between humans and MTHs for Science education (Bang et al., 2015; Marin & Bang, 2018), the relations with land and waters in indigenous language revitalization programs ((Engman & Hermes, 2021; Henne–Ochoa et al., 2020; Hermes et al., 2012) and the development of STEM education programs along with indigenous families and educators (Lees & Bang, 2023; Tzou et al., 2019).

CBDR has also informed school-family partnerships in urban, minoritized communities. Sparking equitable forms of collaboration that foster family agency and decision making in their children's schooling (Barajas-López & Ishimaru, 2020; Ishimaru, 2020; Ishimaru et al., 2018, 2019). Such research partnerships attend to racial equity and honor marginalized communities (e.g., Indigenous, Latinx, Black, Asian) ways of being and learning and relating in the world (Chin et al., 2023; Ishimaru, 2020).

PAR and CDBR are examples of a relational research praxis that centers ethical relationship building and community accountability in Social Science and Educational research, respectively. However, as decolonial scholars warn, a relational praxis can take different ways, depending on the communities we work with. For instance, Halle-Erby (2024), illustrates *openings*, a methodological technique to ensure relational praxis during the design, data generation and analysis of a qualitative study on land ideologies. Similarly, Blocket and colleagues (2022) propose *co-experience* to disrupt the focus to observe culture, and transcend power asymmetries in research interactions. The Gesturing for decolonial futures collective calls for *relational rigor* as a methodological praxis that prioritizes ethical relations over the achievement of predetermined research outcomes (Stein et al., 2022, p. 143). Similarly, Museus and Wang (2022) suggest solidarity-driven research designs to refuse the neoliberal logics of individualism.

The recognition of research as a relational activity that cannot be done in isolation, on the contrary, it is always done in communities of human and MTH beings (Patel, 2016; Tachine & Nicolazzo, 2023) has resonated within me. I mostly concord with Halle-Erby (2024)'s definition of relational praxis as an ontological stance that allows finding alternative ways to knowledge co-construction to the ones proposed by the modern/colonial project (Machado de Oliveira, 2021), and as a political project that does not perpetuate *business as usual designs* (Escobar, 2018), instead uses research to serve the needs of marginalized and racialized communities.

I draw on these decolonial calls to do research *in relation*, honoring the knowledges and voices of those who are often unheard (Battiste, 2013; Patel, 2016). In this project those are the teachers from Cajamar (pseudonym, used for anonymized peer review), a rural

community in the Colombian Caribbean region, who daily endure harsh conditions to get to their schools and who are often dismissed from decision making process in the educational agendas (Cruz Arcila, 2018; Cruz-Arcila, 2020). The students, rural youth who are courageous and wise enough to care for their land, but whose literacies are not often recognized in the educational systems (Becerra & Mannard, 2024). Students' parents, relatives, and neighbors, keepers and passers of the knowledges and literacies that thrive in their territory, and who have endured historical processes of marginalization, along with violent dispossession.

I do not adopt a stance of granting opportunities for these communities to speak, but rather align with the perspective of decolonial feminists, such as Spivak (2003), who assert that marginalized groups are already articulating their experiences. Therefore, individuals in privileged positions, like myself, must endeavor to cultivate active listening skills. In this regard, one of my primary roles has been that of an *oídora*, listening to community's voices, their *historias*, their reflections, and their ideas. I take inspiration from previous oídores, Orlando Fals-Borda (2002) and Silvia Rivera-Cusicanqui (2008), who have made of listening a methodological relational praxis that disrupts power asymmetries between researchers and participants, specifically by centering the voices of peasants, black and indigenous peoples in the co-construction of knowledge.

In this article, I describe the collaborative development of a research methodology within a partnership involving members of the Cajamar township's educational community (parents and guardians of students at La Carmenza Secondary School) in the Colombian Caribbean region. Drawing on field notes, audio and video recordings from both online and in-person meetings, as well as participant-generated video-and audio recordings and photos

during walks, I engaged with seven community members and three teachers over the first five months of the 18-month partnership. The goal of this project was to co-design decolonizing language curricula with rural teachers and their educational community.

The focus of analysis for this part of the project was on participant's interactions and *historias* that shed light on the values that informed the ways of knowing and being in the community. Following decolonial, participatory and community-based methodologies (Bang et al., 2010, 2016; Fals-Borda, 2002; Rivera Cusicanqui, 2015), I endeavored to inquire: 1. How does a rural community's lived relationality inform a collaborative research methodology? I try to answer this question by showing how community dialogue sparked a cotheorising process that allowed joint knowledge-making and how our community-based methodological design led to a new understanding of the community's local literacies.

This piece contributes to current decolonizing research that aims to subvert the coloniality embedded in knowledge-making endeavors. Through the methodological outcomes presented below, this article models, describes, and critically analyzes a decolonial approach that enables future-oriented applied practice in relation with communities.

Developing a collaborative research methodology

This article describes the initial phases of a larger research project that aims to engage rural teachers and their educational community in the process of curricular co-design. This collaboration was held in Spanish, the mother tongue of all the participants, including myself. Collaborating with participants with whom I share a mother tongue and the dialect of our home province of Cordoba was an opportunity to build transparent communication and relationships of trust. In this paper, I aim to center participants' voices,

therefore I intently unsettle the dominant language of academic writing, by keeping the original Spanish version of key terms and participants' quotations. Translation of participants' quotations are provided in footnotes for the non-Spanish-speaking readers.

The first phase of this project started with the relationship-building process with secondary school teachers in a rural community of Cordoba, Colombia, in 2022. I was welcomed into this community by one of the teachers, Ena, who is a long-term friend and colleague of mine. With Ena, I had shared deep worries about the suitability of educational practices and policies for rural learners and their communities when we started teaching in rural schools in small villages of Córdoba and Antioquia, respectively, in 2015. This concern had previously led us to collaborate on material design to cater for the lack of appropriate, contextualized, culturally sustaining teaching materials to use in our classrooms and to nurture discussions and conversations that we continue until the present despite the changes and movements in our professional careers.

Ena welcomed me into her school community, where I met the school principal, teachers, and students. During my visits in the summer 2022, I engaged in conversation about *saberes locales* [local literacies] and meaningful educational experiences with the Social Science, Technology and Spanish language teachers. I continued these conversations during the Fall 2022 with Nando and Ena, who both agreed to collaborate in a project that sustained our educational interests and also supported their design of curricula and teaching materials.

By November 2022, the three of us agreed on developing a collaborative team with community members so that our curricular developments were attuned with the local literacies of their educational community. This paper describes the process of building this

collaboration between December 2022 and May 2023, with 7 locals–parents and guardians–of Cajamar, a township that is home to the educational community of La Carmenza School.

The three of us, Nando, Ena and I, did not envision the shape this project would take, where community knowledge flourished and led us into a continuous process of reflecting and learning. We navigated uncertainty during this period of time since we did not want to do research as usual, telling the community what and how to research. Instead, we wanted to collaboratively design a research methodology that responded to the community members' interests and ways of being and knowing the world. Ethical approval was obtained from the Colombian higher-education institution where I am affiliated on November 30, 2022. Written and verbal consent was obtained from the school principal and community members interested in participating in the partnership. All participants gave written consent to use their names and pictures in the dissemination of the research (pseudonyms are being used for anonymized peer-review).

Research co-designers

Community members are research co-designers on this collaborative project. Their contributions were essential to developing a methodology that nurtured trust, reflexivity and idea generation among community neighbors, teachers, parents and guardians. The following descriptions come from participant's self-descriptive messages in our WhatsApp group and during some of our walks and dialogue sessions. With their permission, I have garnered and translated from Spanish their contributions for inclusion in this section of the methodology.

Nando is the Spanish Language teacher at La Carmenza secondary school. He is a husband and father of two. He started teaching 20 years ago and describes himself as in love with his profession. He likes to share new and meaningful learning experiences with his students. He is convinced that education needs to be contextualized and should not be isolated from students' realities.

Ena is the English language teacher at the La Carmenza rural school. She describes herself as a wife and mother of three children, in love with God, kind, friendly, responsible, hardworking and humble. She is also a good team player, as she tries to see the good in other people. She loves teaching English and is always motivated to teach her students an additional language.

Jairo is the Technology teacher at La Carmenza school. He has been a technology teacher for 18 years, and he joined La Carmenza in 2017. He is a very committed and responsible teacher who is interested in the local technologies. He describes himself as a person on continuous learning, who likes to share with the people who surround him. He is empathetic and spiritual, but not religious. He is convinced that education is a tool to favor conviviality and improve ourselves daily.

Yeina is a local of Cajamar, born and raised in the village. She is in her mid-forties, married and mother of two sons. She has strong ties to La Carmenza school as an alumnus, mother of two alumni, and currently as guardian of a La Carmenza student. She describes herself as a community leader, charismatic and determined, bighearted and a believer of God. She holds major roles organizing community efforts to address drinking water needs in the dry season and maintaining the roads during the rainy season. She holds great

expertise in traditional gastronomyher celele–a traditional dish made of local fresh cheese and vegetables–is very popular in Cajamar, and plant gardening.

Jamile was born and lived her childhood in Cajamar. When she was 9, she and her parents left for another village in the north-East of the Caribbean region. She returned to Cajamar when she was fifteen. She attended and graduated high-school. She is married and mother of two children (5y/o and 2 y/o) who attend La Carmenza primary section in Cajamar. She has great expertise in the creeks and their fish.

Ana is a local of Cajamar. She is in her mid-forties. She is a wife and mother of 5 children, three of whom attend La Carmenza school. She also cares for her granddaughter (5 y/o). Her family is recognized as knowledge holders of plant weaving practices and traditional cooking. She is an expert plant gardener and farmer. She is also an expert baker of traditional corn and yucca bread, her *enyucados* are famous in the community.

Daniel is the son of settlers in Cajamar. His life has spanned between periods of time in Cajamar and Monteria, the closest major town in the province. Daniel holds expertise in various fields such as plant weaving, crop farming, and gravedigging.

Germano is a settler in Cajamar, after marrying a Cajamar local 30 years ago. He has spent all his adult life in Cajamar, where he raised his children. He owns a small store in the center of the village and considers himself an adoptive son of Cajamar. He helps maintain the primary school section where his granddaughters study.

Miguelo is a Cajamar local. He is in his 70's, his grandchildren attend La Carmenza's primary section. He is the spiritual leader of a Christian evangelical congregation in Cajamar. He is an expert on native tree harvesting and carpentry.

Diego is son of Cajamar settlers that came from Antioquia in the 1940's. He has lived all his life in Cajamar, where he is married and has two children (12 and 3 y/o). For 5 years he led the *Junta de Acción Communal*, a civic organization that works together to solve community needs. He is an expert in local agriculture, and he grows rice, corn, plantain, yuca, and yam in a parcel in the nearby hills.

Participatory collaborative analysis

This collaboration has been guided by a continuous process of analysis between the community members and myself, thus blurring the limits between data co-generation and data analysis (Halle-Erby, 2024). Informed by decolonial perspectives that call for the inclusion of often-excluded voices in knowledge-making endeavors (Fals Borda, 2015; hooks, 1994), this analysis draws on the analytical toolkits of community co-researchers, members of a rural community whose analytical skills allows them to thrive in their ecology (Fals-Borda, 2002), and my own, an allied researcher.

The analytical skills of community co-researchers include their analytical depth, to recount present and past events, to extrapolate conclusions and deductions, and to evaluate information for making decisions like collaborating in this project.

My tool-kit is a messy one that includes my previous experience drawing on multimodal discourse and interaction analysis (Goodwin, 2000, 2013), my willingness to listen, and my insecurity to make decisions and draw conclusions from the data, which required me to continuously go back to the data and member-check with participants, even during the writing stages (Bernal, 1998).

Putting together our analytical toolkits has required collective and individual, on-site and off-site, in-person and online analysis sessions. For instance, one of the fist stages

of analysis included community co-researchers making sense of the act of walking together. I took field-notes of their on-site sense-making, which I reviewed off-site.

Individually, I have reviewed my field notes, perused my reading notebooks from the last two years, watched, annotated, and organized co-generated data. Collectively, despite the fear of sharing my individual and messy analytical process, co-researchers and I viewed and analyzed portions of video-and-audio recordings that I had previously organized. We looked into portions of the walks and snippets of conversation that contained *historias*. This collaborative data analysis (Booker & Goldman, 2016) led to a process of co-theorising that I describe in the following sections.

After collectively analyzing and engaging with the data, I continued to make relations across and through segments of data–video, audio, transcription, drawings, notes–thus developing categories that allowed me to see more general themes throughout all the data we co-generated.

After several attempts, trying to represent the relations across data and our analytical stages, I decided to use visual vignettes (Gugganig & Douglas-Jones, 2021) to reflect their interrelatedness. I hope the visual vignette represents my ongoing movement between languages, Spanish, the language I shared with the community members, and English, the language through which I am sharing our analytical process within academia. The visual vignette also gives me space to move between text and image, hoping to provide a glance at how our analytical and reflexive process was embedded through our bodies, seeing, touching, smelling, walking and talking next to each other during field-work.

The community's axio-epistemologies guide the research design

In this article, axio-epistemology refers to the set of values that guide people's sense-making. In this section, I will elucidate how the community's axio-epistemology of interdependence and relationality has informed the development of a community-based methodology.

I first met community members through a *reunion comunitaria* [community meeting] that was organized by Nando and Ena. They invited community neighbors to meet for a maximum of two hours in a classroom of the primary school section in Cajamar. I joined the meeting through a Zoom call which Ena and Nando connected to on one of the school laptops.

As mentioned in the analysis section above, I have followed a messy, circular process of going back to my notes as I revise individually and collectively the video-audio-data we generated. This analysis has shed light on the importance of these first meetings for setting our expectations and laying the foundations for this collaboration. As I registered in my reflection journals, I was jolted by participants' recounts which resembled my theoretical understandings of *sentipensar* [feeling-thinking], as this post-meeting journal entry shares:

> My heart was filled with joy today, feeling people's pride for their pueblo, sharing about their solidarity: "sentimos lo que pasa en los caseríos"… "nosotros no solo somos Cajamar, estamos regados" that was powerful. El saltaarroyo- "si este animalito camina sobre el agua, nosotros debemos aprender a nadar". Estoy sentipensando, aren't I? As I write these verses my heart and my mind are connected. My smile was there on a screen

but they could feel my emotion and excitement as much as I could feel theirs, their pride. (Reflection – Nov 29-2023).

Thinking in retrospective when rereading this note I realize that identifying this feeling-thinking practice in this community's lived experience, especially in their relating with neighbors and the land, was key to form a deep connection with them, and nurtured my role as *oidora*, paying special attention to their recounts, and understanding the axio-epistemology that they entailed.

As stated in my note, community members shared historical recounts of their community that evidenced key values of their axio-epistemology during our first meeting. Interdependence was one of the core values which members of Cajamar expressed to be proud of. They expressed this interdependence in their sense of being a united community, able to sense the events that happened in the neighboring villages ("we feel what happens in the caseríos"), identifying as members of not a single *caserío*, but the whole township ("we're scattered"). Furthermore, they also expressed their interdependence with the land and its influence on their daily practices like swimming ("if this animal walks over water, we need to learn how to swim"). Their words spoke of a type of unity in their township that transcended geographical distance. They affirmed to feel the events that occurred in the neighboring villages like *Morrocoy, Pintura* or *San Miguel*, which happen to be the most distant ones.

Reiteratively, the community expressed this interdependence and relationality that drove acts of solidarity, allowing them to respond in times of need. Diego explained that they are able to sense and mobilize around these events due to their capacity to orally communicate among neighbors across the villages, so the word spreads easily and action is

taken quickly with the help of the community. Then they provided more examples of this solidarity in action such as helping people cross the flooded creeks or misfortunate events, like the time when one of the meeting attendee's house burned down, but the timely response of the community helped his family stay safe and put a roof over their heads in record time.

I listened to these historias and these historias continued to speak to me, they spoke of the lived relationality and interdependence that nurtured life in this community. During our following meetings, I observed this relationality with their neighboring humans in actions like informing and inviting more community members to our subsequent meetings, sharing interest in recollecting historias as a collective endeavor, mobilizing community members, and taking our dialogues out of the school classroom where they had started to the homes of the older neighbors.

I also sensed the community's relationality with their land–creeks, hills and forest– as neighbors insisted on the idea of visiting the territory. For instance, community members proposed the idea of going to the places of the community "where things had originated" or "where events had occurred and needed to be clearly told." They also emphasized a visit to the creek since "the most important thing for these regions, at the community level, is water." I understood their reasoning behind the idea of visiting the land as a way to acknowledge the relationship of the community's history with the land, as well as the community's interdependence with the creek to sustain life.

This expressed desire to work together acknowledging the potential contributions of their neighbors and the land was a turning point for me. I had initially proposed a methodology based on social cartography (Oslender, 2017) and Oral History workshops

(Cusicanqui, 2008) for building collaboration with the community and learning about their *saberes locales* (local literacies). However, the community's interest in working together and walking the land deeply shaped our research methodology, thus, changing my initial plans.

The interdependence and the relationality expressed in their desires became founding principles for our collaboration, thus guiding our decisions to walk together to learn the *historias* of the township, and then to reflect on the *saberes locales* [local literacies] that could be valued at school (Figure 1).

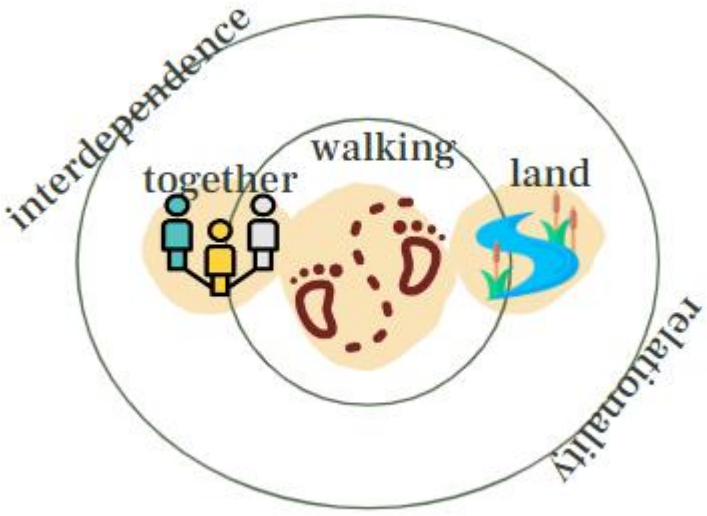


Figure 1. Community's axioepistemology guides the research co-design

Figure 1 shows an outer circle with the words interdependence and relationality to illustrate the influence of the community's axio-epistemology in guiding our methodological decisions, which mainly and at this point entailed walking with community neighbors (i.e., walking together), and walking the land. Through this methodology, we expected to collaboratively engage in knowledge-making that would lead to learning about

the *historias* (i.e., history and stories) of the Cajamar township, and pointing out the saberes (literacies) that could/should be perpetuated in the community through the school curricula.

The community's sentipensar informs multisensory walks

Our emerging community-based methodology was also actively guided by community members with different types of leadership. For instance, community members suggested the best time for our meetings and walks, which occurred in the afternoons, after they had completed their matinal activities. They also suggested the places where we should walk, and which were just stepping stones in developing our walking routes.

During the walks, community members displayed their relational practice that allowed on-the-moment reflections about the local knowledges, and decisions about our future walking routes. This practice reminded of *sentipensar* (feeling-thinking), as community members engaged in the walk with all their senses, observing, smelling, touching while conversing, analyzing, drawing insights and making decisions. I try to illustrate this process through the following visual vignettes of two walks that sparked community members' reflections that later influenced our co-theorising and co-design.

The first visual vignette is of our first walk, which marked a very important step towards starting to recognize land-based literacies, in this case, the indigenous practices of making crafts from plants, through weaving their leaves, stems or fibers.

"Cuando mi marido falleció seguí haciendo las esteras, las angarillas. Nos enseñó a mí y a los niños. Lo había aprendido de su padre y de sus hermanos. Aprendí a recoger el Junco, a secarlo, a cortarlo y a tejerlo. Así nos ganábamos la vida mis hijos y yo. Pero ahora, las cosas son más difíciles, ya la gente no paga mucho por eso."

[When my husband passed, I kept making the esteras (mats), the angarillas (donkey mats). He taught me and the children. He had learned it from his father and his brothers. I learned how to pick the Juncus, how to dry it, how to cut it and weave it. That's how I made a living for me and my children. But now, things are harder, people don't pay much for it.]

Juncus stems drying on Juana's house

Juncus donkey-mat made by Juana and her son

Walking back from the pond

"Yo me quedé admirada, mire como corta el junco, con esa precisión"

[I was amazed, look at how he cut the juncus, with such precision]

Juncus plants on the pond

Jose picks juncus stems at the pond

"eso es indigena, una tradicion indigena, y su abuelo era indigena"

[it is indigenous, an indigenous tradition, and their grandfather was indigenous]

"Los dueños de la finca no quieren que uno recoja el Junco"

[The farm owners don't want you to pick up the Juncus]

"hay que ir lejos dentro de la montaña para poder encontrar la Enea o el Bejuco"

[you have to go far into the mountain to find the Enea or the Bejuco]

We visited Juana, a knowledge-holder of plant weaving and crafting practices. During the visit, Juana told us stories (left) about her family's learning and currently struggling to maintain plant picking and weaving practices. Juana and her son Jose suggested we all go to the pond where they get the Juncus. We agreed to walked together to the pond, where José showed us how he usually picks the juncus stems.

Walking back to Juana's home from the pond, community members reflected on the indigenous origins of this practice, its complexity, and its importance for the sustainability of water in the ponds and the community's traditional knowledge of plant weaving. They also pointed out Juana and Jose's abilities to choose the Juncus stems from the pond, which included the right timing and selection of stems, as well as their braiding and fastening for making durable and comfortable donkey mats

Figure 2. Visual vignette 1**.** Walking with the Juncus weavers

The visual vignette above represents my analysis of our walking together to Juana's home and then to the pond. I believe that locals' acknowledgement of Juncus picking and weaving as an intergenerationally-transmitted indigenous practice and as a practice that entailed specific knowledges and abilities stemmed from the assembly of stories told by Jose and Juana and their demonstration of picking and fastening juncus stems. Furthermore, our embodied experience seeing, smelling, touching the juncus stems may have facilitated our recognition of specific signs, like stems' color, texture, shape and stiffness, all of which are required in picking, weaving and fastening the stems to make juncus mats. This walk also helped seeing the interdependence and relationality between humans and plants; for instance, Juana and Jose's knowledge and skills to weave juncus sustained the community's practice of using mats for riding donkeys.

The second visual vignette illustrates our walk through the creek intersection and our understanding of relationships and interdependence with the creek (Figure 3). It includes transcriptions of the interactions that occurred when we passed the creek intersection. I have included curvy lines–like the course of the creek–that connect the conversation transcript with still pics from the interaction. Locals shared their knowledges of fish common-names, their feeding on fish, the changes on the stream, the plants that grow in the humid creek banks, and the other animals that live in and around the creek. In sum, their discourse and moves during this portion of the walk spoke of their relationality and interdependence with the creek, its plants and fish. I tried to represent this summary with the circle form and pictures at the bottom-right of the vignette.

Y:lo que se consigue en el arroyo
M:moncholo
Y:liso, cacucho.. eh sardina

J:moncholo, el moncholo también
D:cocobolo
y raspacanoa!

Y:[nods] si, lo que pasa es que ahora estamos en verano//
T:hmm está seco
Y:pero sí se encuentran pozas donde se puede llegar el agua aquí a media pierna

D:se puede conseguir pa' embolatar el arroz

what we get in the creek
wolf-fish
black catfish, suckermouth …eh sardine
wolf-fish, wolf-fish too
blue acara
and bristlemouth catfish!
Yes, but now we are in summer//

Hmm its dry
But there are pools where the water reaches half the leg

We can get [fish] to accompany the rice

Yeinis, Martin, Jamile and Didier mention common names of fish in the creek

Walter points at mound where stream-level rises during the rainy season

Didier points at the leaves on the sides of the road brought by the rising stream

W: y ha tenido crecientes esta quebrada (.)el agua llega hasta la loma esa
D: mire ahí está la evidencia, por ahí pasa, por donde ve esas hojas ahí, eso es porque ha crecido la quebrada y llega a ese nivel ahí

And there have been floods in this creek (.)water gets till that mound
Look, there is the evidence, it passes over there, where you see those leaves, that's because the stream rises to that level

J: seño, mire la mata de helecho, ella crece aca en las barrancas del arroyo
T:es que aca hay muchas cosas
D: mire donde estan los micos, están posando a la cámara

G: tenemos una fauna bastante diversa
Y:y si cogieramos una caminada de arroyo a arroyo veríamos//
D:ardillas//
G:salta arroyo//
Y://encontrariamos muchos muchos más animales

Ms, look at the fern, she grows here in the creek banks

There are many things around here
Look where the monkeys are, they're posing for the camera

We have very diverse fauna
And if we walked creek to creek we'd see//
squirrells//
basilisks//
We'd find many more animals

Jamile points at fern that grows on the creek-bank

The stop at the creek intersection sparked conversation about locals' knowledges of the creek, including its changes during rainy and dry seasons, the fish and the plants that live in its stream and banks. The naming of these more-tan-human beings and their relationship with the creek then sparked a broader recognition of the creek as the home of a greater fauna that included squirrels and basilisks, thus, providing another reason to include the creek in our walking route.

Figure 3. Visual vignette 2. Walking with the creek

Both visual vignettes aim to represent the feeling-thinking practice during the walks. We felt and thought the walks as our multisensory experience of seeing, listening, stepping, breathing, smelling directed our talking and walking together. Our multisensory experience, at Juana's home–in the first vignette–shed light on the interdependence between humans, the pond and its plants, and the cultural practice of using juncus mats. In the second vignette, a similar experience of sensing sparked stories of human and non-human life that was sustained and nurtured through the creek. Both previous examples evince the community's feeling-thinking that guided our walks and sparked reflexive dialogue around the value of local literacies like plant weaving, plant picking, and relating with the creek through the MTH beings that inhabit it.

These interactions were common during our walks, and realizing their embedded feeling-thinking inspired me to call them multisensory walks. These walks were stepping stones for the continuous reflexibility that was evinced in the dialogue sessions, another emerging method in our collaboratively designed methodology.

Co-theorizing through community dialogue

After having done 3 multisensory walks in Cajamar and its whereabouts, we reunited at the primary school section which is located in the plaza of Cajamar. Ena and Nando, the two language teachers, Miguelo, Germano, Ana, Yeina, Jamile, the community members, and me, an allied researcher.

As we recollected memories from the multisensory walks, locals told stories of their community. For instance, as we remembered the visit to Juana's home, Miguelo then recounted stories about the weaving practices that used to prevail in the township.

> Aquí en este sector había muchas eh mucha cultura lo que era el propio petate aquí se hacia, ya eso no se hace …el petate es uno de los artículos que se hacían aquí pero que ya ahora no se hacen. El petate lo sacan de una mata que se llama lanceta, eso lo hay en el arroyo y lo hay en la montaña, la lanceta es una mata que saca un cogollo y cuando esta cerraito ese se corta pero eso es lleno de espinas eso es lleno de espinas eso tiene mucha espina, yo estando chiquito yo trabajé eso, eso no se ve ya en este sector (Miguelo, community dialogue)

In his recount, Miguelo said that it was a cultural practice to use *petates* [mats] which are made from weaving plants like *lanceta* [i.e. astrocaryum malybo]. When he was young, he knew where to find the lanceta, how to peel it to get its fiber without hurting himself with the thorns and braid the lanceta to make petates. He told us of families that used to make petates and hats, but they stopped doing it. He emphasized that this culture was lost, by adding other examples like the disuse of Plantain fiber hammocks and Jolón, a very big basket to put on the donkeys' back. Germano agreed with Miguelo's view and added:

> el jolón se hace con una planta que se encuentra en el arroyo que se llama bejuco, lo mismo el balay, es como una ponchera, para ventear el arroz, aunque ahora se ha remplazado con la ponchera plástica, pero era para ventear el maíz y ventear el arroz, todavía hay balay por ahí (Germano, community dialogue)

Germano's comment supported Miguelo, adding the example of jolón and balays, both crafts made from native plants, which have traditionally been used to load donkeys and vent rice have started to be replaced by plastic sacs and bowls. Contrary to Miguelo and Germano's perspective that traditional, plant-based crafts like petates, balay and jolón were lost, Yeina argued that the community's traditional plant weaving and crafting practicers were still alive:

> Yo siento que la cultura no se ha perdido porque todavía hay personas que ejercen eso, ellos salían a buscar [las plantas] en las fincas en las montañas en las pozas en los arroyos y esos dueños de finca que hoy en día hechan veneno y que han impulsado la ganadería son los que han matado esas plantas, porque mas que todo se ha perdido es la planta con que hacer esas cosas. Yo pienso que como cultura todavía existe (Yeina, community dialogue)

Yeina underscored that their plant-based crafting was not lost yet as there are people like Juana and Jose who still engage in plant-crafting practices. However, the problem Yeina highlighted was that plants are harder to find everyday. Yeina added that cattle farming was one of the causes of the native plants' decrease. She explained that cattle-farmers and ranchers use herbicides to poison and kill the native plants that grow on the community's land.

After Yeina's intervention, Ana, Miguelo and Germano provided more examples of plants that had decreased like *bejuco* (Bignonia diversifolia Kunth) and *barbasco* (Cryosophila kalbreyeri). We then concluded that keeping the native plants was essential to maintain the community's weaving practices. This was also expressed by Jamile, who said, "Y por eso es que se pierde la cultura, antes se recogían las plantas"

The co-theorising during this dialogue session was key to understanding the intricate relation between locals and native plants, thus, sparking ideas around native-plants cultivation and care, and the support of plant knowledge-holders like Miguelo, Juana and José to keep and pass the weaving traditions to the youth.

Methodologically, the community dialogues helped me to see the value of multisensory walks for further reflection. Yeina, Jamile and Ana's experience walking to the pond to see the Juncus, listening to Juana and Jose's *historias* about learning to weave and craft plants and their

current struggles to pick plant stems and leaves facilitated a different perspective from the one Miguelo and Germano initially presented. Plant-weaving practices were not lost or a thing of the past, there were still knowledge-holders in the community, whose relations with plants was to be secured through their care and preservation.

At this point, our methodology had evolved from walking the land together, to centering the feeling-thinking experience of the walks and the further reflexibility that led to co-theorising in our dialogue sessions (Figure 4)

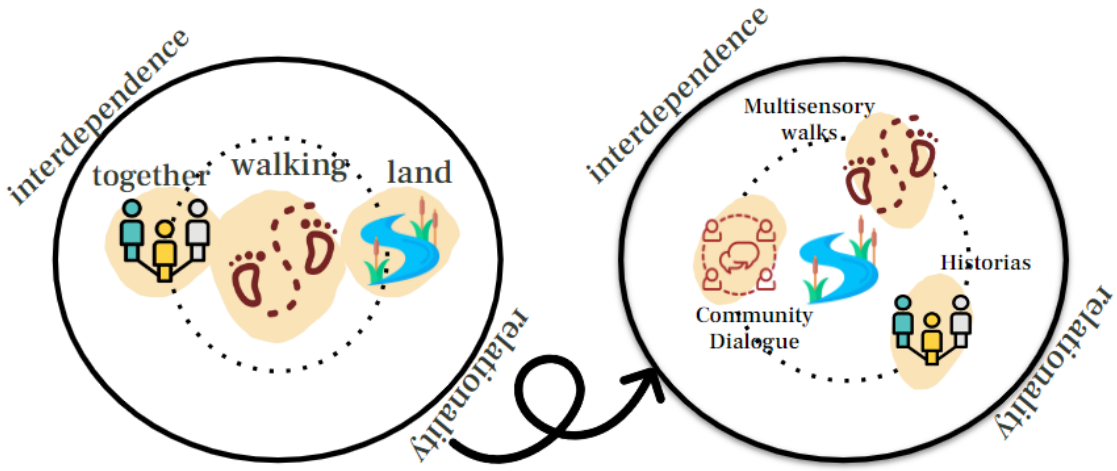


Figure 4. Making sense of our steps

As shown in figure 4, our community-based methodology centered the locals' relationality and interdependence with land through our multisensory walks, the *historias* told during the walks, and the community dialogue sessions that fueled our co-theorising.

Co-theorizing Land-based literacies

Our cotheorizing continued in the following months, the close relationship between native plants and locals' weaving and cultural practices became a dominant theme in our correspondence, through a WhatsApp chat group that Yeina created and named "Reviviendo historias" and via Zoom and WhatsApp calls with Nando and Ena.

During this time, I observed and analyzed the videos from the walks and community dialogues. I shared my conjectures with the community members, especially relating to the idea of land-based literacies. At first, it was blurry to see the distinction between knowledges and literacies, but our reflection allowed us to understand that the weaving practices were examples of land-based literacies that required specific knowledges and decoding signs from the land (see Figure 5).

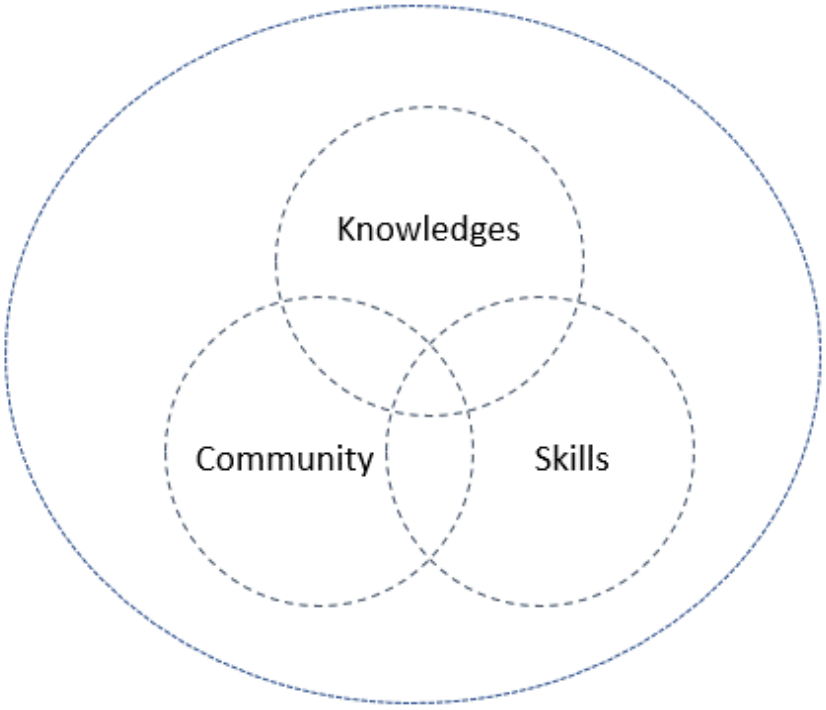


Figure 5. *Our initial conceptualization of land-based literacies*

Through Zoom and WhatsApp calls, we discussed and agreed that the weaving of native plants like Juncus, Enea, Iraka, Lata, Lanceta and Barbasco were examples of land-based literacies. These weaving practices required skills like intersensory reading of the land, knowledge to name, identify and thread the plant depending on the craft to make, and community interdependence that was evidenced on the intergenerational passing of *saberes locales*, as Juana and José had expressed. For instance, in one of our WhatsApp conversations, Yeina commented on the knowledges and skills that are necessary for the practice of Juncus weaving:

> Sacar ese Junco, eso no lo saca todo el mundo. Ella [Juana] sabe cuál es la venita que sirve y cuál es la que no sirve. Y después el proceso de secar el junco y la forma como lo amarran, eso tiene su ciencia, uno [una varita] mira hacia allá, y la otra para acá.

Yeina's comment pointed at the specific knowledges that Juana and José need to tap for selecting the Juncus stems: "She knows which stem works and which one doesn't." The skills needed to dry and weave the Juncus: "and then the process of drying the juncus, and the way they fasten it." Yeina acknowledged that Juncus weaving required specific knowledges and skills: "hat has its science, one [one wand] looks that way, and the other this way."

In conversation with Nando and Ena, they each extrapolated examples of land-based literacies that they had observed in the community. For instance, Nando referred to the tenth-graders of 2022 who had tapped their knowledge of native plants to create a stand about the Amazon on the English Day.

> no utilizaron nada artificial, ni colbón, ni papel, ni siquiera ni siquiera para amarrar las cosas. No utilizaron pitas que compran en las tiendas, no. Lo hicieron con bejuco sacado de los

árboles. Y fue ellos mismos que buscaron la madera para hacerlo. Las Cañas, guadua, buscaron la Palma, la trenzaron, hicieron unas trenzas para colocarlo como como el techo y amarraron con eso.

Nando's example evinces the recognition of students' land-based literacies that require youths' knowledge to identify, locate and use plants according to their properties of resistance and flexibility. Furthermore, students tapped their cutting, weaving and threading skills to use palmier leaves, Guadua to make a roof for their stand, and Bijao leaves to use as plates.

Discussing these examples, we were able to *initially* conceptualize land-based literacies as the community practices that require knowledge of the land and skills to better serve from her (see figure 5). For the first two examples, knowledges include but are not limited to recognizing and naming native plants, and specific skills require selecting plants' leaves, cleaning the leaves, getting the fiber from plants, and threading the fiber into different patterns to make crafts.

In sum, these examples on the co-theorising of land-based literacies show how community members were able to actively participate in knowledge-making endeavors that commenced during the multisensory walks, followed in the in-person community dialogue sessions, and then were nurtured through remote correspondence and virtual meetings. Furthermore, our joint co-theorising allowed Nando and Ena to brainstorm possibilities for integrating these literacies in their classrooms, thus, sparking a shared interest to continue exploring the community's literacies through the multi-sensory walks in the months of July and August, 2023.

At this point, we were looking forward to continuing our collaboration. We agreed that the multisensory walks, the *historias*, and the community dialogue had been important steps to

learning and making knowledge together, thus, honoring the community's axio-epistemology of relationality and interdependence. We learned with the land, with each other, and from the already existing relations between land and humans, like weaving plants, or fishing in the creek. The community members and the teachers agreed with me to continue moving our methodology forward, now involving students more actively.

Our plan to enact our co-designed methodology thus included three multisensory walks and three dialogue sessions during which *historias* would also be shared and collected. Between July and December 2023, our collective data generation and analysis continued to nurture our co-theorising of land-based literacies, which in turn informed curricular co-design with Ena, Nando, and Jairo, another school teacher who became an active participant in our walks and dialogues.

Furthermore, our enactment of our community-based methodology helped us to engage students and parents from the educational community, who contributed their knowledges while guiding our walks and sharing the community's stories. The community members' active and agentic participation, expressing their desires to perpetuate traditional practices like plant weaving, to honor their lived relationality that fosters community care and solidarity, and to value their saberes locales has nurtured a process of curricular co-design that centers the communities' land-based literacies in the language and technology curricula of the ninth and tenth grades at La Carmenza, Cajamar's secondary school. A description of the curricular co-design and implementation is in preparation in co-authorship with the three teachers involved. This project continues as an ongoing collaboration between teachers, students, parents and an allied researcher, with hopes of continuing to honor the community's land-based literacies in the school curricula.

Learning *historias* of relation *in relation* with community co-designers

In this article, I illustrated the collaborative development of a research methodology with members of *Cajamar,* a rural community in the Colombian Caribbean region. As has been described above, community members actively participated and guided the research codesign, proposing walks, *historias* and dialogue as main sources of data generation. Thus, echoing previous studies emphasizing decolonial frameworks' potential to support researcher-community collaborations in non-hierarchical ways (e.g., Bang et al., 2010; Ishimaru et al., 2022)

I argued that the community's axio-epistemology of relationality and interdependence became a guiding principle of our methodological co-design. For instance, the decision to walk together stemmed from community members' relations of mutual caring. The idea of sharing *historias* within a school classroom, where we had our first meeting, was simply not a familiar practice for community neighbors. Although most of the first-meeting participants actively told *historias,* some of them remained quiet. Their desire to engage as many neighbors as possible and to hear their contributions was one of their reasons to suggest walking as their way to engage in co-construction of knowledge. Listening to the community's desires and sense of caring helped me to follow their ways and learn alongside. As I walked, I felt their comfort and easiness; they laughed, joked, showed, and told *historias* together.

The community's *axio-epistemology* also entails land relationality and interdependence, which was reflected in the community members' feeling-thinking practice that directed our walking and talking. For instance, listening to Juana and Jose's *historias* of learning to weave the juncus, and picking the juncus at the pond, Diego and Alfred, who are sons of settlers from the center of the country, without indigenous ancestry, expressed their respect for the plant weaving tradition and recognized its indigenous origins. This feeling-thinking was also observed while

crossing the creek intersection. Community members' present and past relations with the MTHs at the creek unfolded *historias* of floods, fish, squirrels, monkeys; thus, emphasizing the creek as a place of sustenance for their community, and as a must-visit spot in our walking plans. Both recognitions—of plant-weaving traditions as indigenous and of the creek as community-sustaining—reflect reciprocal meaning-making and ethical learning that is often embedded in storying with the Land (Marin et al., 2020).

I also described reflexive dialogue through which community members engaged in the co-theorising of Land-human, nature-culture relations. For instance, Miguelo told childhood *historias* of his own plant weaving experiences, which he confronted with *historias* of the present that warned of the human threats to plant weaving practices. Yeina and Jamile responded with counter stories that spoke of knowledge-holders like Juana and Jose whose relations with Juncus and Bejuco still maintain plant weaving practices in the community. Their co-theorising reflected an understanding of the intricate complexity between plant conservation for maintaining cultural practices like venting rice with Balays or putting children to sleep in Enea mats, as Germano's *historias* pointed out. Through these *historias*, they highlighted the nature-culture relations on which traditional practices depend. This co-theorising is in tandem with indigenous and decolonizing frameworks that challenge the separation between humans and land, a separation that dominates Western epistemologies (Cajete, 2000; Medin & Bang, 2014; Mignolo, 2009).

I see this co-theorising process as a result of our co-experience of walking, storytelling, and dialoging together. Co-experience has been highlighted in previous research that looks at the ethical dimension of learning in research-partnerships with communities (Vossoughi et al., 2020). Also, in literacy scholarship that attempts to expand definitions of literacy as a lived

practice (Pahl et al., 2020), and to contest individual reflexibility in literacy research through the embodied, affective, and collective experience of the social, cultural and material worlds (McLean, 2018). Our co-experience walking the land, enabled us to witness, feel-think, and respond to the emerging relations across humans and Land. For instance, Diego, Alfred, Yeina and Jamile responded to Juncus picking and weaving with *historias* that valued land-based knowledges and skills to sustain human and MTH life in the community. These emerging relations across *historias* helped us to co-theorise land-based literacies later during the community dialogue sessions.

Drawing on Archibald's storywork (2008), Meixi and Elliot-Groves argue storylistening and storytelling with the land "illuminates our relationships to knowing, grows and guides our ethical sensibilities in our own lives in intergenerational and interspatial ways" (in Marin et al, 2020, p.2203). In our co-experience, storytelling emerged as a response to land during the walks, and to other *historias* during community dialogue. For instance, Nando and Ena engaged responsibly as storylisteners in community dialogue, to which they responded with school *historias* that responsibly highlighted students' and parents' land-based literacies. Thus, I see we engaged in storytelling and storylistening loops that resemble the creativity and reciprocality of storywork.

Furthermore, our community dialogue embedded reflexibility that made space for community members to identify community issues, like the harmful effects of pesticides used by cattle farmers on native plants, and to devise ways to mobilize teachers and students around plant caring. In doing so, reflexibility enabled us to imagine change together, thus, challenging the often extractive nature of reflexibility in qualitative research (Museus & Wang, 2022). Community members' *historias* and ideas also speak of community members' agency for

identifying and for devising ways to meet their needs, as has been previously underscored in community-based and decolonizing research with indigenous, Latinx, and rural communities in North and South America (Barajas-López & Ishimaru, 2020; Booker & Goldman, 2016; Escobar, 2018).

Our emerging methodology is also a historia unwinding as we began trusting each other. I feared the walks sometimes, for instance seeing Jose go in the pond to pick the juncus, I did not feel comfortable, I feared for his safety, I felt somehow responsible for it. However, Jose and Juana reassured me, reminding me that they get in the pond almost daily, they know the pond and the practice of Juncus picking. As we became comfortable with the walks; me avoiding paternalistic feelings, community members telling *historias* outspokenly, all of us listening and letting *historias* speak to ourselves, we weaved our methodology: we walked, told *historias* and dialogued in relation with the land.

As has been underscored in community-based studies (Aldemir et al., 2023; Lezotte et al., 2022; Vakil et al., 2016), mutual trust is essential in partnerships with communities. The conception and nurturing of this project has depended on acts of invitation and trust. For instance, Ena's invitation for me to visit her school. Cajamar neighbors accepting the invitation to meet with Nando, Ena and myself to discuss the possibility of a collaboration. Cajamar neighbors' inviting me to come stay and walk with them. Honoring the relations in these acts of trust has allowed us to maintain our bonds, our friendship, our partnership, our collaboration, and to imagine possibilities for sustaining the community's *historias* and land-based literacies in the present and future.

Our methodological historia continues to unfurl with the footprints and voices of the community as we walk together, telling and listening to *historias*. As I mentioned at the end of

the previous section, the first iteration of our community-based methodology mobilized La Carmenza students and parents, who guided the walks, just as their relatives had done when we started walking together. Our co-experience walking has informed our co-design of a land-based curricula, which is progressively implemented and evaluated, leading to new loops of walk, dialogue, and co-design, resembling ongoing cycles of action and reflection in community-based research (Vakil et al, 2016), and strengthening our relationships as friends, colleagues, and co-designers (Bananuka et al., 2023).

Concluding thoughts

Although the colonization of the Americas ended 200 years ago, efforts to erase non-Western knowledges persist through colonial mindsets that prioritize Western, Eurocentric cultures, languages, and values (Escobar, 2010; Mignolo, 2002, 2007; Rivera Cusicanqui, 2010). In South America, for example, indigenous communities were coerced into adopting a peasant identity, a process known as *campesinización*, to obscure their indigenous ancestry (Cusicanqui, 1986). Rural communities in Colombia, comprising the highest proportion of indigenous, black, and peasant populations, continue to face systemic marginalization and discrimination, exacerbating social, economic, and educational inequity. These inequities stem from modernity's exploitative and colonizing practices, which have led to the erasure of knowledges and peoples (Mignolo, 2012).

Social sciences and educational research have been complicit in this erasure through extractivist practices and deficient, pathological portrayals of peasant, indigenous, and black communities (Battiste, 2013; Hermes et al., 2012; Patel, 2016). Realizing the coloniality embedded in education has been painful, especially recognizing my complicity in teaching a colonial language and Eurocentric literacies that are overvalued in my country's educational

system (Fandiño-Parra, 2021; Granados-Beltrán, 2022; Mackenzie, 2020). I hope this paper contributes to current decolonizing research that aims to debunk traditional designs that perpetuate extractivism and erasure in qualitative research, especially in Education and the Social Sciences (Fúnez-Flores & Phillion, 2019; Tachine & Nicolazzo, 2023; Tuck & Yang, 2014).

These findings highlight the potential of decolonizing frameworks to engage in collaborative, non-hierarchical research with non-dominant, rural communities. Our collaboration and the co-design of a research methodology guided by the community's axio-epistemology have been crucial for co-constructing knowledge.

Walking, telling *historias,* and dialoguing in relation to the land enabled us to co-theorize the community's land-based literacies. I aspire for these findings to contribute to literacy, language, and educational scholarship that advocates for alternative, ethical, and equity-oriented research with communities often excluded from knowledge-making and decision-making endeavors (e.g., (Bonilla et al., 2024; Meixi et al., 2022; Pahl et al., 2020). Finally, I hope these findings weave into further research that strives to honor the pluriverse (Escobar, 2020), the myriad ways of knowing and being, that exist and sustain all forms of life in rural communities like Cajamar.

References

Aldemir, T., Yoon, S., Miller, K., & Shim, J. (2023). *Teachers as co-designers: forming equitable participation through the lens of relational trust*. https://repository.isls.org//handle/1/10140

Archibald, J. (2008). *Indigenous Storywork: Educating the heart, mind, body, and spirit*. UBC Press. https://canadacommons.ca/artifacts/1871270/indigenous-storywork/2620455/

Bananuka, T., Perry, M., & Kadoma, A. (2023). Researching without “methods”: an experiment in socio-ecological sustainability research with rural communities. *International Journal of Qualitative Methods, 22,* 16094069231179159. https://doi.org/10.1177/16094069231179159

Bang, M., Faber, L., Gurneau, J., Marin, A., & Soto, C. (2016). Community-based design research: learning across generations and strategic transformations of institutional relations toward axiological innovations. *Mind, Culture, and Activity*, *23*(1), 28–41. https://doi.org/10.1080/10749039.2015.1087572

Bang, M., Marin, A., Medin, D., & Washinawatok, K. (2015). Learning by observing, pitching in and being in relations in the natural world. In R. Mejia-Arauz, B. Rogoff, & M. Correa-Chavez (Eds.),. In *Children Learn by Observing and Contributing to Family and Community Endeavors a Cultural Paradigm* (pp. 303–313). Academic Press Inc.

Bang, M., & Medin, D. (2010). Cultural processes in science education: Supporting the navigation of multiple epistemologies. *Science Education*, *94*(6), 1008–1026. https://doi.org/10.1002/sce.20392

Bang, M., Medin, D., Washinawatok, K., & Chapman, S. (2010). Innovations in culturally based science education through partnerships and community. In M. S. Khine & I. M. Saleh (Eds.), *New Science of Learning: Cognition, Computers and Collaboration in Education* (pp. 569–592). Springer. https://doi.org/10.1007/978-1-4419-5716-0_28

Bang, M., & Vossoughi, S. (2016). Participatory design research and educational justice: studying learning and relations within social change making. *Cognition and Instruction*, *34*(3), 173–193. https://doi.org/10.1080/07370008.2016.1181879

Barajas-López, F., & Ishimaru, A. M. (2020). “Darles el lugar”: a place for nondominant family knowing in educational equity. *Urban Education*, *55*(1), 38–65. https://doi.org/10.1177/0042085916652179

Battiste, M. (2013). *Decolonizing education: Nourishing the learning spirit*. Purich Publishing Limited.

Bernal, D. D. (1998). using a chicana feminist epistemology in educational research. *Harvard Educational Review*, *68*(4), 555–583. https://doi.org/10.17763/haer.68.4.5wv1034973g22q48

Blockett, R., Taylor, L. D., & Mobley, S. D. (2022). “If you can’t go to bella noche’s …”: on the onto-epistemological possibilities for qualitative researchers. In A. Tachine & Z. Nicolazzo (Eds). *Weaving an Otherwise*. Routledge.

Bonilla, S., Cruz Arcila, F., & Cohen, V. (2024). *Raza, racialización y segundas lenguas*. Universidad Distrital.

Booker, A., & Goldman, S. (2016). Participatory design research as a practice for systemic repair: doing hand-in-hand math research with families. *Cognition and Instruction*, *34*(3), 222–235. https://doi.org/10.1080/07370008.2016.1179535

Botero Gómez, P. (2019). Sentipensar. In *In A. Kothari., A. Salleh., A. Escobar., F. Demaria., & A. Acosta (Eds). Pluriverso. Un diccionario del posdesarrollo.* (pp. 431–434). Abya Yala. https://muse.jhu.edu/book/119548

Cajete, G. (2000). *Native Science: Natural laws of interdependence*. Clear Light Publishers.

Cajete, G. (2021). Relational Philosophy. In N. Lushetic, & I. Campbell (Eds). *Distributed Perception. Resonances and Axiologies* (pp. 17–30). Routledge.

Chin, M., Ishimaru, A. M., & Bang, M. (2023). Realizing the future in the present: parent organizing as a practice of solidarity. *Journal of Family Diversity in Education*, *5*(2), Article 2. https://doi.org/10.53956/jfde.2023.174

Cruz Arcila, F. (2018). ELT policy interpretations and translations in rural Colombia. *Current Issues in Language Planning*, *19*(4), 363–382. https://doi.org/10.1080/14664208.2017.1377903

Cruz-Arcila, F. (2020). Rural english language teacher identities: alternative narratives of professional success. *Íkala*, *25*(2), 435–453. https://doi.org/10.17533/udea.ikala.v25n02a05

Cusicanqui, S. R. (2008). El potencial epistemológico y teórico de la historia oral: De la lógica instrumental a la Descolonización de la historia. In *Teoria Crítica dos Direitos Humanos no Século XXI* (S. Carvalho, D. Sanchez, C. Baldi, pp. 154–176). EDIPUCSR.

Engman, M. M., & Hermes, M. (2021). Land as interlocutor: a study of ojibwe learner language in interaction on and with naturally occurring 'materials'. *The Modern Language Journal*, *105*(S1), 86–105. https://doi.org/10.1111/modl.12685

Escobar, A. (2010). Worlds and knowledges otherwise: the latin american modernity/coloniality research program. In *Globalization and the Decolonial Option*. Routledge.

Escobar, A. (2018). *Designs for the pluriverse: Radical interdependence, autonomy, and the making of worlds*. Duke University Press.

Escobar, A. (2020). *Pluriversal politics: The real and the possible*. Duke University Press.

Fals Borda, O. (2015). *Una sociología sentipensante para América Latina* (V. M. Moncayo Cruz, Ed.; Primera edición). Siglo Veintiuno Editores.

Fals-Borda, O. (1979). *El problema de cómo investigar la realidad para transformarla por la praxis*. Ediciones Tercer Mundo.

Fals-Borda, O. (2002). *Historia doble de la costa* (2. ed). Universidad Nacional de Colombia : Banco de la República : Ancora Editores.

Fandiño-Parra, Y. J. (2021). Decolonizing english language teaching in Colombia: epistemological perspectives and discursive alternatives. *Colombian Applied Linguistics Journal*, *23*(2), 166–181. https://doi.org/10.14483/22487085.17087

Fúnez-Flores, J. I., & Phillion, J. (2019). A political ontological approach to decolonization of ethnographic research in education. In S. Sharma & A. M. Lazar (Eds.), *Rethinking 21st Century Diversity in Teacher Preparation, K-12 Education, and School Policy: Theory, Research, and Practice* (pp. 39–54). Springer International Publishing. https://doi.org/10.1007/978-3-030-02251-8_3

Goodwin, C. (2000). Action and embodiment within situated human interaction. *Journal of Pragmatics*, *32*(10), 1489–1522. https://doi.org/10.1016/S0378-2166(99)00096-X

Goodwin, C. (2013). The co-operative, transformative organization of human action and knowledge. *Journal of Pragmatics*, *46*(1), 8–23. https://doi.org/10.1016/j.pragma.2012.09.003

Granados-Beltrán, C. (2022). Disrupting colonial tensions in initial language teacher education: criteria based on critical interculturality. *Íkala, Revista de Lenguaje y Cultura*, *27*(3), Article 3. https://doi.org/10.17533/udea.ikala.v27n3a03

Gugganig, M., & Douglas-Jones, R. (2021). Visual vignettes. In N- Klimburg-Witjes., N.Poechhacker., & G.C. Bowker (Eds). In *Sensing (in)security. Sensors as transnational*

security infrastructures (pp. 215–236). Mattering Press. http://doi.org/10.28938/9781912729111

Halle-Erby, K. (2024). "Relationships *are* reality": Centering relationality to investigate land, indigeneity, blackness, and futurity. *International Journal of Qualitative Studies in Education, 37*(1), 114–131. https://doi.org/10.1080/09518398.2022.2025471

Henne–Ochoa, R., Elliott–Groves, E., Meek, B. A., & Rogoff, B. (2020). Pathways forward for indigenous language reclamation: engaging indigenous epistemology and learning by observing and pitching in to family and community endeavors. *The Modern Language Journal*, *104*(2), 481–493. https://doi.org/10.1111/modl.12652

Hermes, M., Bang, M., & Marin, A. (2012). Designing Indigenous language revitalization. *Harvard Educational Review*, *82*(3), 381–402. https://doi.org/10.17763/haer.82.3.q8117w861241871j

hooks, bell. (1994). *Teaching to transgress: Education as the practice of freedom*. Routledge.

Ishimaru, A. M. (2020). *Just schools: Building equitable collaborations with families and communities*. Teachers College Press.

Ishimaru, A. M., Lott, J., Torres, K. E., & O'Reilly-Diaz, K. (2019). Families in the driver's seat: catalyzing familial transformative agency for equitable collaboration. *Teachers College Record*, *121*(11), 1–39.

Ishimaru, A. M., Rajendran, A., Nolan, C. M., & Bang, M. (2018). Community design circles: co-designing justice and wellbeing in family-community-research partnerships. *Journal of Family Diversity in Education*, *3*(2), 38–63. https://doi.org/10.53956/jfde.2018.133

Lees, A., & Bang, M. (2023). Indigenous pedagogies: land, water, and kinship. *Occasional Paper Series, 49*. https://doi.org/10.58295/2375-3668.1500

Lezotte, S., Krishnamurthy, S., Tulino, D., & Zion, S. (2022). Finding the heart of a research-practice partnership: politicized trust, mutualism, and use of research. *Improving Schools*, *25*(2), 161–173. https://doi.org/10.1177/13654802211019914

Machado de Oliveira, V. (2021). *Hospicing modernity: facing humanity's wrongs and the implications for social activism*. North Atlantic Books. http://ebookcentral.proquest.com/lib/mcgill/detail.action?docID=6715826

Mackenzie, L. (2020). A critical evaluation of the social justice implications of the Colombian government's English-Spanish bilingualism policies. *Current Issues in Language Planning*, *21*(2), 117–134. https://doi.org/10.1080/14664208.2019.1615743

Marin, A., & Bang, M. (2018). "Look it, this is how you know:" Family forest walks as a context for knowledge-building about the natural world. *Cognition and Instruction*, *36*(2), 89–118. https://doi.org/10.1080/07370008.2018.1429443

Marin, A., Halle-Erby, K., Bang, M., McDaid-Morgan, N., Guerra, M., Nzinga, K., * M., Elliott-Groves, E., & Booker, A. (2020, June). *The Power of Storytelling and Storylistening for Human Learning and Becoming*. https://doi.org/10.22318/icls2020.2199

McLean, C. (2018). Insider identities: coming to know the ethnographic researcher. In *Bourdieu, Language-based Ethnographies and Reflexivity*. Routledge.

Medin, D. L., & Bang, M. (2014). *Who's asking? Native science, Western science, and science education.* The MIT Press.

Meixi, Moreno-Dulcey, F., Alcalá, L., Keyser, U., & Elliott-Groves, E. (2022). When learning is life giving: redesigning schools with indigenous systems of relationality. *AERA Open*, *8*, 23328584211062587. https://doi.org/10.1177/23328584211062587

Meléndez, J. W., Radinsky, J., Vossoughi, S., Marin, A., Bang, M., Nolan, C., Phillips, N., Lund, V. K., Gonzales, W., Allen-Hegbe, S., Bild, D., Bruton, I., Carmichael, J., Martell, E., Zoo, L. P., Schmidt, A., Jurow, S., & Hall, R. (2018). Community-based design partnerships: examples from a new generation of CHAT/DBR. *ICLS 2018 Proceedings*, 8.

Mignolo, W. D. (2002). The geopolitics of knowledge and the colonial difference. *South Atlantic Quarterly*, *101*(1), 57–96. https://doi.org/10.1215/00382876-101-1-57

Mignolo, W. D. (2007). Introduction: Coloniality of power and de-colonial thinking. *Cultural Studies*, *21*(2–3), 155–167. https://doi.org/10.1080/09502380601162498

Mignolo, W. D. (2009). Epistemic disobedience, independent thought and decolonial freedom. *Theory, Culture & Society*, *26*(7–8), 159–181. https://doi.org/10.1177/0263276409349275

Mignolo, W. D. (2012). *Local histories/global designs: coloniality, subaltern knowledges, and border thinking*. Princeton University Press. https://doi.org/10.1515/9781400845064

Museus, S. D., & Wang, A. C. (2022). Refusing neoliberal logics in research design. In *Weaving an Otherwise*. Routledge.

Negrete, V. (2008). A la memoria del maestro Orlando Fals Borda: Bases y desarrollo de la investigación-acción participativa en Córdoba (Colombia). *International Journal of Psychological Research*, *1*(2), 85–97.

Oslender, U. (2017). Ontología relacional y cartografía social: ¿hacia un contra-mapeo emancipador, o ilusión contra-hegemónica? *Tabula Rasa*, *26*, 249–262. https://doi.org/10.25058/20112742.n26.12

Pahl, K., Rowsell, J., Collier, D., Pool, S., Rasool, Z., & Trzecak, T. (2020). *Living literacies: literacy for social change*. The MIT Press. https://doi.org/10.7551/mitpress/11375.001.0001

Patel, L. (2016). *Decolonizing educational research: From ownership to answerability*. Routledge.

Rivera Cusicanqui, S. (2010). The notion of "rights" and the paradoxes of postcolonial modernity (M. Geidel, Trans.). *Qui Parle*, *18*(2), 29–54. https://doi.org/10.5250/quiparle.18.2.29

Rivera Cusicanqui, S. (2015). *Sociología de la imagen: Miradas ch'ixi desde la historia andina*. Tinta Limón Ediciones.

Smith, L. T., Tuck, E., & Yang, K. W. (Eds.). (2019). *Indigenous and decolonizing studies in education: Mapping the long view.* Routledge.

Spivak, G. C. (2003). ¿Puede hablar el subalterno? *Revista Colombiana de Antropología*, *39*, 297–364. https://doi.org/10.22380/2539472X.1244

Stein, S., Andreotti, V., Ahenakew, C., Susa, R., Valley, W., Amsler, S., Cardoso, C., Siwek, D., Cajkova, T., & D'Emilia, D. (2022). Methodologies for gesturing towards decolonial futures. In *Weaving an otherwise*. Routledge.

Tachine, A., & Nicolazzo, Z. (Eds.). (2023). *Weaving an otherwise: in-relations methodological practice*. Routledge. https://doi.org/10.4324/9781003448648

Tuck, E., & Yang, K. W. (2014). Unbecoming claims: pedagogies of refusal in qualitative research. *Qualitative Inquiry*, *20*(6), 811–818. https://doi.org/10.1177/1077800414530265

Tzou, C., Suárez, E., Bell, P., LaBonte, D., Starks, E., & Bang, M. (2019). Storywork in STEM-Art: making, materiality and robotics within everyday acts of indigenous presence and resurgence. *Cognition and Instruction*, *37*(3), 306–326. https://doi.org/10.1080/07370008.2019.1624547

Vakil, S., de Royston, M.M, Nasir, N.S, & Kirshner, B. (2016). Rethinking race and power in design-based research: reflections from the field. *Cognition and Instruction*, *34*(3), 194–209. http://dx.doi.org/10.1080/07370008.2016.1169817

Vossoughi, S., Bang, M., McDaid-Morgan, N., Hooper, P., Berry, A., Papak, A., Booker, A., Collins, C., Marin, A., Halle-Erby, K., Agarwal, P., Ng, M., Cortez, A., Nzinga, K., Tayne, K., & Davis, N. R. (2020). Deepening perceptions of learning: studying and designing ethical practice with researchers, teachers and learners. *ICLS*.

BRIDGING STORY 2

> Lo primordial para estas regiones a nivel de comunidad es el agua, por eso si uno tiene una idea bastante positiva, vamos a ir a tal parte que ahí hay eso, puede haber agua, bueno la reunión va a ser en tal parte. **El que viene aquí es el que tiene que aprender lo que hay en estas tierras**. (Ernesto, Callemar community member).
>
> [The most important thing for these regions at the community level is water, so if one has a very positive idea, we are going to go to such and such a place where there is water, well, the meeting is going to be in such and such a place. **The one who comes here is the one who has to learn what is in these lands**]

Ernesto's recount resonated with me, becoming a guiding story that spoke of the importance of land and water for the community, while reminding me that it was me who needed to learn such importance, community members already are aware of it, they live it daily. This story suits perfectly to open the following manuscript, which sheds light on the knowledge construction dynamics that paved the way for the participatory exploration of the Callemar community's land-based literacies. More specifically, the following chapter describes the enacting of our methodology, comprising multisensory walks, and community dialogue. Our co-constructed methodology was essential to start understanding how youth and adults make meaning from signs they daily encounter on the soil, the plants, the memories and the stories of their community. Drawing on multimodal interaction analysis of video-recorded walking journeys (Marin, 2020), we showcased forest and creek crossing as land-based literacies; we delved into the reading of land signs that community members rely on during their daily walks. We discussed how these practices are embedded in collective memory, history and produce stories

that make part of the community's storytelling traditions. Centering walking was instrumental to understand the epistemologies that shape community members' sense-making of the signs in the land. Thus, the following article is closely connected to the previous one, as it describes the actual application of our co-constructed methodology to understand the intricate connection between land, community and literacies.

CHAPTER 3: LAND-BASED LITERACIES IN LOCAL NATURECULTURES: WALKING, READING, AND STORYING THE FORESTS IN RURAL COLOMBIA

Authors: Tatiana Becerra Posada & Christian Ehret

Published in *Journal of Adolescent & Adult Literacy*, Volume 68, 2024. https://doi.org/10.1002/jaal.1375

Land-based literacies scholars have expanded conceptualizations of literacies to include how often marginalized cultures understand literacy, in part, as a collaboration between humans and the natural environment (Hermes et al, 2023; Marin & Bang, 2018; Styres, 2019). In this article, we contribute to this equitizing broadening of literacies with an analysis of how nature influences the meaning-making practices of rural, subaltern communities in the Global South. Learning alongside the Land and communities that inhabit the tropical, dry forest of the Colombian Caribbean, we illustrate how decolonizing literacies pedagogies can sustain *naturecultures* that themselves support thriving human-nature relations (Deloria, 1979; Haraway, 2003). We draw on indigenous (Deloria, 1979) and post-humanist (Haraway, 2003) conceptualizations of nature-culture, to refer to the assemblages of land, collective memory and cultural practices.

Many communities such as those in the Colombian Caribbean, who have lived in close connection with the Land for centuries, currently face territorial struggles, like lack of access to water, decrease of native plants, and soil contamination caused by Land settlers' extensive cattle farming. These struggles reflect urgent environmental crises confronting communities globally. Analyzing how our participants use their based Land-based literacies in more ethical relations to nature, we provide a conceptual framework for global educators to examine local, Land-based literacies in their surrounding communities, considering their implications for more ethical, inclusive, and decolonizing approaches to literacy education.

Drawing on micro-analysis of participant-generated video-data from two walks with Colombian youth and adults, we highlight ways naturecultural practices produce Land-based literacies. Specifically, we describe Land-walking, including forest and creek crossing practices, as literacies that require reading and meaning-making with the Land, and that allow individuals to relate to other beings and thrive in the changing landscape of their rural community. The guiding question of this article asks: How are Land-based literacies produced through the felt and sensed relationships with nature, history and culture in a rural community in northern Colombia? Through our analysis, we invite literacy researchers and educators to consider how Land-based literacies in local naturecultures might inform literacy education that environmentally and culturally sustains the present and future lives of rural communities.

Literature review: Land-based literacies

Land-based literacies research draws upon indigenous conceptualizations of Land central to indigenous philosophy (Cajete, 2000; 2021; Styres, 2017) and knowledge systems (Bang & Marin, 2015; Lees & Bang, 2023). Land-based literacies have been described as indigenous in their search for knowledge from the Land and cosmos (Pugh et al., 2019). Such searching, Styres (2019) explains, requires inter-sensory reading, using all senses to gain intimate and profound experiences with the spaces and places we inhabit. Land-based literacies include practices such as storying and journeying to recognize the "Land as sentient, as consciousness, as teacher, as relation" (Smith et al, 2019 p.17). They also entail the reading of stories that are "etched into the essences of [more-than-humans] every rock, tree, animal, pathway and waterway" (Styres, 2019, p.29). We find value in this definition as it contests the nature-culture divide that prevails in a Western definition of literacy, which often narrowly focuses on the development of individual skills with alphabetic and multimodal texts, traditionally conceived.

Indigenous scholars have illustrated the ways indigenous science and knowledge systems have developed from generations of observations and felt, sensory experiences with the Land; oral traditions that tell stories about the Land and its significance to the people; ceremonies and rituals that pay respect to the Land and its resources; and spiritual beliefs that view the Land as a living entity that needs to be respected, felt and cared for (Cajete, 2000; 2021; Kimmerer, 2013). Indigenous scholars Ormiston (2019), John (2019) and Armitage (2021) provide deep and detailed descriptions of these relations, recounting indigenous practices like canoe-paddling journeys, horsemanship, and storytelling traditions like Yarning and Tjukurpa. Storying and inter-sensory reading of the Land are showcased as key practices through which indigenous communities –from the Northwest territories of Canada, the Diné Navajo in the US, and the Anangu in Australia—make sense of signs from the Land, survive in nature, enact indigenous values, strengthen relations with other beings, and thrive in the world.

The work of these indigenous scholars to conceptualize and showcase Land-based literacies within the practices of their indigenous communities has helped to contest hegemonic definitions of literacy and to re-present indigenous ways of knowing. Marin and Bang's (2018) scholarship also adds to these decolonizing efforts by delving into the micro-practices that entail reading and storying the Land. They have shed light on the relational activity of reading Land through their micro-analysis of interactions between indigenous families and the more-than-human beings during forest-walks (Bang et al, 2014; Marin, 2019). Such activity requires the coordination of attention practices through, for example, speech and body movement that allows learning from the Land (Marin & Bang, 2018). Bang and Marin argue that these attention practices are also sparked by the relationships between humans and our more-than-human relatives (Lees & Bang, 2023; Marin, 2019). In line with indigenous scholarship that

acknowledges the agentic role of Land for knowledge making (Bang et al., 2015; Cajete, 2000; 2021; Kimmerer, 2013; Medin & Bang, 2014), the authors explain that more-than human beings produce resources (e.g., the flowers of plants, the trails of deer), which shape human activity. This means that humans draw on these resources within Land to create interpretations, or stories, that guide human decision-making. This relational activity of reading Land and the resources made by more-than-humans requires cognitive processes like observing, finding evidence, drawing cause and effect relations (Marin & Bang, 2018), all of which constitute tools for learning and knowledge-making, especially for understanding our natural surroundings.

Theoretical framework: Pluriversal literacies

Inspired broadly by Perry's (2021; 2023) Pluriversal Literacies (PLs) framework that questions the universalization of one single form of literacy, our conceptual framework for analyzing Land-based literacies focuses first on local naturecultures. We employ a PL's framework to build on this literature in Land-based literacies. This literacy framework is founded on the epistemic proposal of the Pluriverse, which originated in the decolonial struggle of the Zapatistas, an indigenous social and political movement in Mexico. The Pluriverse entails the decolonial ideal "Un mundo donde quepan muchos mundos" (a world where many words fit) (Escobar, 2017, p.16) and was developed as a decolonial response to the patriarchal and colonial ontologies imposed by the modern West. The pluriverse is based on convivial and dialogical principles that acknowledge myriad ways of understanding and experiencing the world (Escobar, 2020; Mignolo, 2018). This epistemological concept has inspired decolonial action in diverse fields such as planning theory (Vasudevan & Novoa, 2021), agroecology (Paulson, 2018), peace education (Williams & Bermeo, 2020), global education (Pashby et al, 2020), and literacy education (Perry, 2021).

Although pluriversality does not explicitly concern literacy education, an epistemic change such as the one it proposes is urgently needed to transform literacy education, which has become a key element of educational systems worldwide. Perry (2023) describes PL's as the myriad meaning-making and communication micro-practices that allow humans to relate to other human, non-human and more-than-human beings in the world. She describes how literacies of print, faith, body, land, water, and matter, for example, can "sustain lives …in a plural and interdependent world" (Perry, 2023, p.141). However, she wisely acknowledges that a PL's framework should be ever-expanding in ways that will account for the variety of literacies that flourish across global cultures.

Our study contributes to this scholarship on Pluriversal and Land-based literacies, describing the role of more-than-humans, especially the Land and its inhabitants, as active beings in the process of meaning-making. We show how the assemblage of more-than-human beings that inhabit nature along with intergenerationally transmitted cultural artifacts like storytelling produce the Land-based literacies of a rural community in northern Colombia. Throughout, we use assemblage to refer to how independent actors–for example, trees, people, soil, water–come into relation with and affect each other, from moment to moment.

Methodology

Indigenous scholars have shed light on the important role that embodied experiences with the Land play on knowledge making for indigenous communities, thus centering walking as one of the most ancient human ways of knowing (Cajete, 2000; Deloria & Wildcat, 2001). For instance, walking allows the activity of fieldwork, visiting sites, and meeting with participants; however, walking has only recently begun to be recognized as a valuable research methodology. Work in anthropology (Ingold & Vergunst, 2008; Pink, 2009) has been influential in developing

walking as a qualitative method for analyzing more embodied and situated understandings of social phenomena, especially humans' learning in relation to nature.

Walking as a research method continues to evolve and expand, with various scholars and disciplines exploring its potential. For instance, researchers in urban studies and geography (Evans & Johns, 2011; Jones et al., 2008) explored the concept of walking interviews, where participants and researchers walk together while talking. This research has shed light on the importance of landscapes for informing and shaping discussions, especially for producing rich narratives (Evans & Johns, 2011) and for framing which places are visited and how they might be revised and reconsidered by participants and researchers in situ (Riley & Holton, 2011). Post-humanist and feminist scholars have also described the potential of walking methodologies to engage in non-hierarchical and collaborative writing and knowledge production in the social sciences and humanities (Springgay & Truman, 2018).

In education research, walking as a methodology has opened analyses of how material worlds and ecosystems can racialize and perpetuate educational inequities (Springgay & Truman, 2018; Taylor, 2020; Taylor & Pacini-Ketchabaw, 2017). Walking as a methodology has also influenced participatory design (Curnow & the Abolitionist futures collective in Vadeboncoeur et al., 2023), with researchers centering the relations between human and more-than-human bodies for identity building (Rahm in Vadeboncoeur et al., 2023) and for learning from and with the Land (Bang & Marin, 2015; Marin, 2020; Pugh et al, 2019).

Multisensory Walks to Feel-think the Land

Ingold and Vergunst (2008) argue for walking as a form of thinking and feeling that allow us to learn in the world and with the other bodies we encounter in our way. We proceed

from this definition using Fals-Borda's (2002) sentipensar (feeling-thinking) to contribute to the growing breadth of walking methodologies in social science research. Sentipensar is an onto-epistemological concept that draws from the intricate body-mind relationship that informs the ways of being of rural peasants in the Colombian Caribbean. Through this body-mind relationship, peasants—along with indigenous and Afro-descendant communities—have produced Land-attuned knowledges that allow thriving in and co-existing with the natural world (Escobar, 2020). We therefore focus our analysis on the thinking-feeling practices (Escobar, 2020; Fals Borda, 2002) that the Callemar community has developed through close connections with Land over time, especially through walking.

Alongside the Callemar community, we developed the method of multisensory walks to experience these thinking-feeling practices. Our development of multisensory walks is influenced by indigenous science research (e.g., Marin, 2013) and Fals-Borda's (2015) feeling-thinking and participatory research that centers the epistemologies and voices of community members. Through our analysis, we focused on the relationship between participants' embodied and discursive interactions with other members of the community and with ecological elements from the Land.

Ethics in Multisensory Walking. The multisensory walks are part of a larger community-based project whose goal is to co-design Land-based language and literacy curricula with the community, students, parents and teachers, at the secondary school El Carmen. The school principal, teachers and leaders of the Callemar community expressed their interest to collaborate with Tatiana—author 1—and then gave written and oral consent to undertake the collaboration in their community through their community-developed process.

During the multisensory walks, Tatiana walked with community participants, youth and their parents, neighbors, and teachers, around the places that community members often navigate. Participants wore POV cameras to capture their interactions with each other and with the more-than-humans with whom they share the Land. Through this design, participants generated audio and video recordings that allowed obtaining a participants' perspective of their social practices in relation to the Land. This collective data generation process started after also having obtained ethical approval # 22-09-024 from McGill University, the institution where Tatiana is undertaking her doctoral studies.

Context

El Carmen school serves five small neighboring villages: Callemar, El Carmen, El Ñeque, Rabo Largo and Arroyo Grande, which make up the Callemar township in the rural area of San Carlos municipality in a province of northern Colombia. Each of these villages' population ranges between 75 and 100 people. The villages are interconnected by creeks and roads that community members walk and cross daily to undertake activities such as Land and animal farming, going to school, and participating in social and cultural activities.

Participants

A total of twenty-three community members, or eight adults (between 26 and 70 years old) and fifteen youth (between 13 and 17 years old), participated in the multisensory walks. All the youth were secondary students at El Carmen School, some of the adults were students' parents; others were relatives and neighbors from the community, and two adults were the English, and Spanish language teachers. They were invited to participate in the walks after having expressed their desire to do so. All participants signed consent forms through which they agreed to wear POV cameras and be audio and video recorded during the walks. In this article

we focus on the interactions of participants Germán, Yamile, Yeinis and Oney in the first multisensory walk, and Anamaria and Fernado, in the second one. Below is a description of each focal participant:

- German was born in San Carlos and has lived in Callemar for over 30 years, after marrying a Callemar local. His children were born and raised in Callemar and attended El Carmen school. He owns a small store in the center of the village and considers himself adoptive son of Callemar. He helps maintain the primary school section where his granddaughters study.
- Yamile is in her late twenties. She left Callemar for a period of five years between her childhood and adolescence. Upon her return, she attended and graduated high school at El Carmen school. She is married and the mother of two children (5y/o and 2 y/o) who attend El Carmen primary section in Callemar.
- Yeinis was born and raised in Callemar, she is in her mid-forties, married and mother of two sons. She has strong ties to El Carmen school as alumnus, mother of two alumni, and currently as guardian of a El Carmen student. She holds major roles organizing community efforts to address drinking water needs in the dry season and maintaining the roads during the rainy season. She holds great expertise in traditional gastronomy and plant gardening.
- Oney was 16 years old and a senior student in El Carmen secondary school at the time of the study. He helps his dad with household chores like collecting water from the creek on the back of their home. He also collects palmier leaves that his dad uses for plant weaving and construction purposes. He is an avid walker, often wandering around the

neighboring villages in the township. He likes to write and tell stories, he loves to play with the video camera, and he wants to study philosophy or literature.

- Anamaria was 13 years old and a sixth-grader at El Carmen school at the time of the study. She lives in a small village on the top of a hill named El Ñeque. She is the youngest of three siblings. She likes to play soccer, dance, sing and attend the church service. She is an expert of the creek and bushy hills she navigates daily on her walk to school.

- Fernando is in his early forties, married, the father of two children and a local of Monteria, the main urban center at 40 minutes from Callemar. He's been the Spanish Language teacher at El Carmen secondary school for 18 years. Fernando is an enthusiastic, creative and inspiring teacher in his school community, where he has mobilized students on several classroom and school-based projects around literature and theater.

Data generation and analysis

Tatiana participated in three multisensory walks lasting 60-90 minutes with adult neighbors and youth (between 12 and 17 y/o) from the community between July and September 2023. A total of seven hours of video-and-audio data were generated with participants. In this article, we draw on segments from two hours of these co-generated data during two multisensory walks through creeks, hills and mountains. These segments include clips from each of the walks presented in this article and were selected by participants and Tatiana during the first phase of analysis.

The first of these walks occurred at the end of July 2023 and involved the participation of four youth and five adults, all of them neighbors and residents of Callemar, one of the villages that surrounds and is served by El Carmen secondary school. Two of the adults (Yamile and Yenis) and two of the youth (Oney and Eliana) volunteered to wear POV cameras to record their interactions with each other and with the Land during the walk. The second walk occurred a week later at the beginning of August 2023, and it involved 13 youth and two adults, who are the youth's teachers. Three of the youth, Anamaria (age 13), Javier (age 15), and Oney (age 17), wore POV cameras and recorded their walk. Before starting the walks, participants also expressed a preference for having their identities disclosed in the videos. Our theoretical understanding of Land as co-producer of meanings along with humans (Bang et al., 2014; Cajete, 2000; 2021) informed our data analysis, specifically the development of codes and categories through which meaning-making relations between humans and Land could be showcased.

We followed three phases of data analysis. The first phase involved iterative video-viewing, first individually by Tatiana to discard repeated videos, since several participants recorded the same interactions with their POV cameras, and then, collectively with community members for selecting video segments that reflected community members' relations with the Land, and the telling of stories during the walks. The second phase involved transcribing and micro-analyzing the collectively selected segments. Micro-analysis, an analytical approach that examines interactions at a granular level (Erickson, 1992), focuses on moment-to-moment details and includes multimodal elements such as comments and screen captures of each moment. This method requires iterative viewing of video data, often in slow motion, to capture the nuances of the interaction.

During micro-analysis, we paid special attention to participants' embodied gestures and ambulatory actions (e.g., pointing, leaning, touching, squatting or ducking), participants' discursive moves (e.g., questioning, narrating, directing), and the Land elements that participants included during their embodied, ambulatory and discursive moves (e.g., plants, trees, ditches, creeks, rocks). Drawing on previous studies (Engman & Hermes, 2021; Marin, 2020), our transcripts included verbatim discourse of human participants and screenshots to document non-verbal interaction with human, non-human and more-than-human participants.

The third phase entailed sharing and discussing results from micro-analysis with community members and Christian, Author 2.

Findings: Land-based literacies in Callemar's naturecultures

The emergence of stories within naturecultures

In this section, we focus on the Land-based literacies of storytelling while walking the Land on our way to El Griton. We focus on two episodes that occurred during the walk to El Griton to evince the ways in which naturecultures foster the formation of stories that have become cultural characteristics of the community, especially for adults who grew up in close interaction with the Land. We specifically describe the trajectory of the stories told, evincing how interaction with non-human and more-than-human beings in the Land influences storytelling in this community. The following research question trains our analysis: How are Land-based literacies produced through the felt and sensed relationships with nature, history and culture in a rural community in northern Colombia?

Walking El Gritón

El Gritón is a hill located in the southwest of Callemar village, approximately at 2kms from the village's plaza. During Tatiana's first visit to Callemar, community members shared their desire to undertake one of the walks at this hill. They expressed that this site, which used to be a densely forested hill, was difficult to access and walk through without a machete. The inaccessible nature of the hill catalyzed many of the myths, legends, and spooky anecdotes about the area. El Griton was a place that was also close to the community's families as several of them have crops of rice, corn, cassava at this hill. During Tatiana's second visit, the community decided to do the first walk to El Griton- 5 adults (Yenis, Germán, Ana, Edinson, and Yamile) and 4 youth (Andrea, Eliana, Oney and Marlon) between 13 and 16 years old walked up the hill and then followed Edinson's lead to walk through the remains of thick, tropical forest. We argue that Yeinis' storytelling of legends related to the hill developed relationally with more-than-human beings on the hill. Our analysis of the video data revealed how Yeinis creates a network of meanings that encompasses the trees, the myths associated with social histories of the community, and other humans, including her neighbors Yamile, and Oney.

As we were walking up to El Gritón, Yeinis saw the Guarumo trees (i.e., Crateva Tapia), a species that is native to the Tropical Dry Forest of the Colombian Caribbean (SanMartin-Sierra et al, 2016). In Figure 1, Yeinis began her recount relying on her reminiscence of a specific Guarumo tree that she started to look for (lines 1, 3, 5). Then she pointed at the changes in the hill while walking and examining their surroundings (line 6).

Yamile followed Yeinis' discursive and ambulatory moves, asking a follow up question (line 9) and then discarding the stump (line 12). Oney also followed Yeinis closely (still pics in lines 10 to 12 in Figure 2).

	HP	Discursive moves	Embodied/Ambulatory moves	NH/MTH P
1	Yeinis	Por aquí había una mata de Guarumo. There was a Guarumo tree around here	 Yamile's views of the surrounding	Trees on surrounding
2	Yamile	¿Cuál? Which one?	 Yamile moves around	Trees on surrounding
3	Yeinis	Ya no está. El guarumo es esa mata que está ahí. It isn't here anymore. The Guarumo is that tree that is there	 Yeinis points at Guarumo tree	Guarumo tree
4	Yamile	Esa That one	 Yamile points at Guarumo tree	Guarumo tree
5	Yeinis	Pero el Guarumo estaba era por aquí but the Guarumo was around here	 Yeinis points at surrounding	Surrounding space
6	Yeinis	Cuando, esto era bien boscoso, había bastante, era bastante espeso este monte acá When this was very woodsy, there was, it was very thick this hill here	 Moves around and signs the space with hand	space without trees

Figure 1. Reminiscing and looking for the Guarumo tree

	HP	Discursive moves	Embodied/Ambulatory moves	NH/MTH P
7	Yeinis	Una mata de esa que está ahí se llama Guarumo A tree of those that is there, it is called Guarumo	 Yeinis points at Guarumo tree	Guarumo tree
8	Yeinis	Estaba por aquí, lo que no recuerdo es el lugar it was around here, what I don't remember is the place	 Yeinis Turns around	The trees around
9	Yamile	¿De dónde estaba? where it was?	 Yamile views Yeinis turning	Surrounding space
10	Yeinis	No sé yo que harían de ese árbol, no sé I don't know what they would make of that tree. I don't know	 Yeinis looks down	Soil
11	Yeinis	Estoy viendo este tronco, ¿será? I'm seeing this stump, would it be?	 Yeinis gets close to a tree stump	Tree stump
12	Yamile	no, no es, ese es roble, parece. No, that's not, that's Pink Poui, it seems.	 Yamile looks at Yeinis and the stump	Tree stump

Figure 2. Continuing to look for the Guarumo tree

In Figure 3, Yeinis continues to tell a popular spooky story. She stopped looking for that specific Guarumo tree, and then started telling about an older neighbor, Camilo [pseudonym], who was said to have had an encounter with the mythical creature that inhabits El Griton (lines 1 to 3). Oney challenged the veracity of Yeinis' story, suggesting an alternative explanation (line 4). Yeinis replied to Oney's challenge by referring to the changes in the hill, reaffirming Mr. Camilo's experience while pointing to a Guarumo tree, and adding popularized stories of a dwarf (lines 5 to 7). Yamile echoed Yeini's desire not to see the spooky creature as she turned to face Oney, Yeinis and Tatiana (line 8).

	HP	Discursive moves	Embodied/Ambulatory moves	NH/MTH P
1	Yeinis	El señor Camilo Barrios vino aqui a la montaña y encontró a un tipo montado en el guarumo que le hacia asi Mr. Camilo Barrios came here to the mountain and found a guy on the top of the Guarumo who was calling him like this	 Yeinis gestures with hand	
2	Yeinis	Tres veces lo llamó three times he called	 Yeinis turns and gestures with hand	
3	Yeinis	Y èl se asustó tanto que se fue para allá ab ajo, huyendo And he was so frightened that he ran down the mountain, on the flight.	 Yeinis signals down the hill with hand	Foot of hill
4	Oney	de pronto fue un mico que vió, osea, no todo tiene que ser el misterio well maybe he confused a monkey he saw, I mean, not everything has to be a mystery	 Oney looks at trees	Trees
5	Yeinis	En ese entonces aqui eso era muy aparatoso, ese el guarumo, o sea, ese no es el guarumo, o sea, ese es la planta guarumo ajá es un árbol nativo de aqui de la montaña Well back then it was very spooky up here This is the Guarumo, well not that Guarumo, but this is the plant Guarumo, it's a native tree of this mountain	 Yeinis looks at Guarumo tree	Guarumo Trees
6	Yeinis	Y a ese señor Camilo Barrios le sucedió. Al mamón, ahi por donde entramos llegó casi muriéndose And that happened to Mr. Camilo. At the Mamón, where we crossed, he got there almost dying, scared because he had seen a man at the crown of the Guarumo.	 Yeinis looks at trees on the side	Trees on the side
7	Yeinis	aqui, dice la gente que no hace mucho tiempo, que hay un enano que ha asustado a más de uno que él, tiene cabellos por todas partes ,yo nunca lo he visto Here, people says that still, not too long ago, there was a dwarf here, he has scared more than one, he has hair everywhere, I've never seen him, nor do I want to see him.		Trees and road
8	Yamile	Yo tampoco porque te digo que la carrera es grande me neither because I tell you that the flight is huge	Yamile turns to face Yeinis, who walks next to Tatiana	

Figure 3. Storytelling about spooks on the hill

Several aspects are intriguing in this episode of the multisensory walk. First, is Yeinis' interest in finding a specific Guarumo tree she remembered. She moved and pointed across the area, trying to find the Guarumo tree. She also inspected a trunk remaining from a tree. During Yeini's inspection, Yamile was also an active participant who followed Yeinis' conversation, asking and responding to questions, helping to discard evidence, in the case of the pink poui (Roble) stump that Yeini's thought could be the Guarumo, and supporting Yeinis story.

We understand Yeinis' effort to find the Guarumo tree as motivated by the close relationship between the story she was about to tell and the place where it is known to have occurred. Perhaps, sparked by the enigma of nature, the thickness of the rainforest, its presence, and especially the sounds, movements, and appearance of animals. Thus, we posit there is an intricate assemblage in this storytelling, including a collective memory that associates Mr. Camilo's frightening experience with the Guarumo tree in the hill El Gritón.

Furthermore, Yamile's and Oney's responses to Yeini's storytelling seem to be influenced by their individual experiences with the Land. On the one hand, Yamile, a close friend of Yeinis', shares the experiences of being on the hill and of hearing their parents, older relatives and neighbors tell first-person accounts of mythical encounters in this area of the village. Stories, especially myths and legends, occupy a significant role in Colombian Caribbean lore, indexing beliefs and superstitions, and informing ways of relating to the environment, especially in the countryside or rural areas (Fals-Borda, 2002). On the other hand, Oney's response seems to draw on the watching of red monkeys (Figure 4), native to the tropical dry forest, who are often seen at the top of trees around the village. It is interesting how these two counter responses are motivated by different interactions with Land. Yeinis and Yamile's

experience with Land spark more metaphoric stories, while Oney's seems to be more rational, based on his immediate observation.

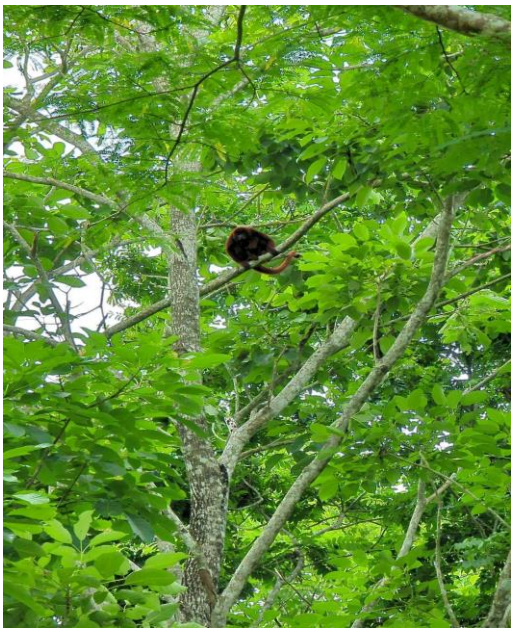


Figure 4. Picture of red monkeys on the trees during the day of the walk to El Griton

In the following section, we describe another of these natureculture assemblages, analyzing the close relationship between Land, collective memory and cultural practices.

The ditch as catalyst. In this portion of the walk to El Gritón, we encountered a small ditch that had been formed by the erosion of soil. Yeinis looked down at the ground, noticing the small ditch which opened wider as we walked ahead. This noticing catalyzed the following storytelling event that Yeinis and Oney joined (Figure 5). The interaction in Figure 5 starts with Yeinis telling Tatiana about the practice of drinking water from the ditches when she was little (line 2). Yeinis then responded to Tatiana's question about the effect of the ditch water on their health (lines 3 and 4). Oney joined, referring to the cleaner state of things in past times, which

was echoed by Yamile (lines 5 and 6). Yeinis added that they—children of her generation—were happy engaging in this practice. Although Yamile is younger than Yeinis, she joined completing Yeinis' sentence (lines 6 and 7).

	HP	Discursive moves	Embodied/Ambulatory moves	NH/MTH P
1	Yeinis		 Looks down at ground as she walks	The ground
2	Yeinis	¿seño y sabe usted que nosotros cogíamos el agua de estas sanjas para tomar? si nosotros no traíamos agua. Cuando nos daba sed, nosotros tomábamos agua de esta sanja Ms., we used to get water from these ditches to drink, you know? Yes, we didn't bring water (.) when we were thirsty, we drank water from the ditch	 Turns to face Tatiana	Ditch on the ground
3	Tatiana	¿No se enfermaban? You didn't get sick?		
4	Yeinis	No, nunca nos enfermamos No, we never got sick	 Oney and Yeinis look at ditch	Ditch on the ground
5	Oney	=es que antes todo era mas limpio =is that everything was cleaner before		
	Yamile	=Más limpio =cleaner		
6	Yeinis	Y nosotros éramos felices And we were happy	 Yeinis looks at water ahead	Water on the ditch
7	Yamile	=tomando esta agua =drinking this water		
8	Yeinis	Entonces que hacíamos? Escogíamos las hojitas anchas que encontramos then what did we do? We would choose the wider leaves that we encountered	 Yeinis points at plants	Palmiers

Figure 5. Reminiscing and storytelling about past water-drinking practices

The interaction follows in Figure 6, when Yeinis explained how they would choose wide leaves of certain plants, while being wary of venomous ones like Matapuerco (lines 8, 9). Yamile confirmed the venomous characteristic of the Matapuerco plant (line 10). Yeinis then specified the type of plant they would use (line 11). Yamile joined telling how they would use the leaves (line 12) and Yeinis followed demonstrating how they would fold the leaves to drink water (line 13).

	HP	Discursive moves	Embodied/Ambulatory moves	NH/MTH P
9	Yeinis	pero no Matapuerca porque a nosotros desde chiquitos nos enseñaron que esta mata es venenosa But not Matapuerca, because we were taught since little that this plant is venomous	 Yeinis points at Matapuerca plant	Matapuerca plant next to palmier plant
10	Yamile	= venenosa y da rasquiña = venomous and gives a rash	 Yamile views plants in front of her	Iraka and matapuerca plants
11	Yeinis	Entonces nosotros, esa planta no la cogimos, pero cogiamos la hoja esa de de la Palma de Iraca o de la de bijao Then, its leaf, we didn't grab it, but we would grab the leaves of the Iraka palmier or Bijao ones	 Yeinis points at Iraka palmier	Iraka palmier
12	Yamile	=Las doblabamos =we would fold them	 Yeinis gestures with hand	Iraka palmier
13	Yeinis	la doblábamos y haciamos un cosito así, lo metiamos, cogiamos agua y tomabamos And we did a thingy like this, and we put it in, we got water and drank	 Yeinis gestures with hands	Water on the ditch and Iraka palmier

Figure 6. Storytelling with the plants

Several moments of this storytelling seem to show the natureculture assemblage—Land and the cultural practices—that are foundational to the storytelling practices of this community. First, we wonder whether this story would have been told during the walk had we not encountered this ditch. We also noticed the effect of Land on producing participants' reminiscences of specific practices which then become stories.

For instance, Yeinis shared this experience of drinking water from the ditch, which entailed knowledge of the Land that both Yamile and Yeinis also held. This knowledge includes the kinds of plants that were useful due to their chemical and physical properties to safely hold water. Their cultural and historical knowledge also allowed them to identify *Matapuerca* as an unsafe plant to use for the purpose of drinking water. These knowledges are still valued in their community, and as described in the story, they may not be used to drink water from ditches nowadays, but they remain useful to the practices of living and navigating the tropical forest.

This storytelling, sparked by the Land, in this case a ditch formed by the erosion of running rain-water, seems to be valuable not only to Yeinis and Yamile who were closely connected to their reminiscence of this shared experience, but also to Oney, who listened actively and commented on the feasibility of this practice in the past when "everything was cleaner". Through co-telling stories with a changed Land, Yamile and Yeinis develop their relationships to each other and to the altered landscape, sharing feelings of pride for their cultural practices and nostalgia for the ways things were. These storytelling experiences with the changed Land also seem to change storytellers in how they produce new feelings that carry forward as was the case for Oney.

In tandem with humans, their collective memories and cultural practices, our examples revealed how non-human and more-than-humans, the trees, the ditch, the soil, the water, and the plants, participated in the co-construction of the stories told as we walked the hill El Gritón. These co-produced literacies first involved the absence of a Guarumo tree and the changes in the hill sparking a revision of a popular spooky story. And later, the encounter with a ditch catalyzed stories of childhood practices that Yamile and Oney were keen to support.

Youth's Land-based literacies: Forest-and-creek-crossing up to El Ñeque

In this section, we describe a brief segment of the walk that 13 youth from the school, aged between 13 and 17 years old and two of their teachers took on a school day at the end of July 2023. We focus on the interactions that evince the youths' Land-based literacies of forest- and creek-crossing. As in the previous section, we demonstrate the participation of more-than-human beings like the creek bed, rocks and soil, in Anamaria's enactment of forest and creek-crossing literacies.

El Ñeque is a hill located at the southeast of El Carmen school. Several students from El Carmen school live in El Ñeque. The hill has an elevation of 240 mts. The youth walk down the forested hill and traverse the creeks to get to school every morning. At 1pm they walk up the hill to get home after the school day has finished. The teachers and youth from the school suggested visiting el Ñeque, because of its creek that is surrounded by rocky mountain walls. They call this creek Angostura, and it is a popular place for swimming amongst locals and visitors.

During the walk, Fernando, one of the language teachers, and Anderson, an 11th-grade senior student, dared each other to keep their shoes dry during the walk to El Neque. In this brief interaction (Figure 7), Anamaria leads Fernando and Tatiana, who could not keep the pace of the

other twelve students and the other language teachers. The three of them got to a point where there were no dry spots in the creek's bed, and the streamflow was wider thus posing a huge challenge for Fernando who looked at the stream in front of him and wondered what to do at that moment (line 1).

	HP	Discursive moves	Embodied/Ambulatory moves	NH/MTH P
1	Fernando	Y ahora? And now?	 Fernando looks down at the stream	The creek stream
2	Anamaria	Mire profe, pise allá, pise allá y allá look, step there, step over there and over there.	 Anamaria looks and points at rocks	Rocks on the creek
3	Anamaria	Cuidado con el bejuco Watch out the bejuco!	 Anamaria looks at the creeper plant Tatiana is just passing by	Bushes and plants on the side of creek
4	Anamaria	Ese bejuco da rasquiña That bejuco causes rashes	 moves closer to creeper plant	Creeper plant (bejuco)
5	Anamaria	Pise allá y allá	 Anamaria moves and directs Fernando	Creek and rocks

Figure 7. Expert creek crosser on the lookout

Anamaria moved ahead of Fernando and then directed him on an almost instantly devised strategy to move forward without getting his shoes wet. She said, “Look, step there, step over there and over there” (line 2). Tatiana started to follow Anamaria’s directions when Anamaria warned her not to touch a creeper plant on the side (line 3). Anamaria got closer to the creeper plant and advised Fernando and Tatiana of its poisonous characteristic (line 4). Then Anamaria moved towards Fernando to guide him with her ambulatory moves and pointing (line 5).

It is surprising how quickly Anamaria was able to come up with a strategy that allowed Fernando to achieve his goal of keeping his shoes dry. This brief interaction seems to evince Anamaria’s knowledge of the creek, being able to identify the dry spots and the firmness of the soil that would hold Fernando’s weight to keep him over the surface and not sink in the wet soil of the creek’s bed and banks.

We deem Anamaria’s quick response to Fernando’s conundrum a result of her practice of walking the creek daily. When walking to school, Anamaria has to traverse the creeks and still arrive wearing her uniform properly, which includes the schools’ cleanliness and dryness standards. Creek crossing is a Land-based literacy not particular to Anamaria but shared by the community members who often move around their village through the creeks. In enacting this Land-based literacy, Anamaria reads the Land, including the signs provided by the more-than-humans like the water, the plants, the rocks, the soil she encounters daily. Her Land-based literacy of creek-crossing enabled her, in this case, to create an oral text—the strategy and warning—to interact with her teacher and Tatiana, positioning herself as a knowledge holder and expert in the creek-crossing practice.

In her daily life, Anamaria uses her Land-based literacies to make decisions that impact her way of navigating the creek as well as the moves she makes to get to school on time and safely. These literacies also impact the way Anamaria relates to the creek when noticing and providing her own explanations for changes in the creek as shown in Figure 8. For example, pointing at uneven parts of the creek bed she said, “That over there was dug by the water, because it used to be even” (line 1).

In this brief comment, Anamaria referred to a part of the creek bed that used to be at level with the rest. However, by the time of our walk, the streamflow had increased due to the recent rain. Its force had eroded the point that Anamaria showed us. Her Land-based literacy may have allowed her to identify this spot of the creek, noticing its changes and also providing a feasible explanation for such a change. Although Anamaria does not use the terms erosion, soil, current, or force, her observation and comment reveal Anamaria’s ability to associate the effects of the rain on parts of the creek bed (“was dug by the water”). Similarly, she then pointed at a portion of the creek bank that had slid (line 2).

	HP	Discursive moves	Embodied/Ambulatory moves	NH/MTH P
1	Anamaria	Eso ahí se cobó por el agua, antes estaba parejo That over there was dug by the water, because it used to be even.	 Anamaria looks at eroded portion of creekbed	Creek bed, rocks, sand, plants and roots
2	Anamaria	Y mire, eso se revino de allá And look, that one came down from there	 Anamaria points at mud	Creek bank, rocks, plants, roots, and mud

Figure 8. Reading and relating with the creek

Anamaria added this comment as evidence of the effects of the rain not only on the creek bed she had previously pointed out but also on the creek bank. In signaling these spots, Anamaria demonstrates her understanding of the effect of the rain on the stream current which becomes stronger and drags the sand and mud, thus leaving these dragged spots on the creek bed and the piles of falling mud on the creek bank. Anamaria's reading of the Land is pivotal for deciding whether or not to go to school on a heavy rain day, or which path will get her safely to school. Anamaria's examples also shed light on the assemblages of human and more-than-humans that produce creek-crossing, a Land-based literacy that Anamaria has learned within her community and shares with her peers and neighbors.

Discussion and Conclusion

Across the globe, the natural world is undergoing profound, human-made changes. If we conceptualize literacies as emerging through an interdependent, plural world, then we must also recognize that changes in the natural world impact how we use and develop our literacies. Walking alongside Yamile, Yeinis, Oney and Anamaria in-person, and later while analyzing their POV videos, we felt how their literacies were co-produced with a landscape that had changed over time. How their literacies changed in relation to the Land helps us to understand not only how literacies and Land are interdependent, but also how they are vulnerable to each other.

The changing landscape of El Griton, for instance, affected a different response from an adolescent, Oney, than from an adult, Yeinis. For Yeinis, the landscape has for decades been a thick foreboding forest of myth, producing wonder and healthy trepidation for a child receiving the myths. For Oney, El Griton feels different, now partially cleared by commercial, agricultural development. They both feel pride for the Land that for which they care, and that cares for them, but its physicality, its presence, affects the nature stories they tell. The changing landscape of El Griton affects them as they generate stories, and how they think and feel through storying affects how they develop their practices of nurturing and caring for the Land.

The constant changes that El Ñeque goes through during the yearly, rainy seasons have allowed Anamaria to engage in readings of the Land that help her to wayfind her route to school every day. In doing so, she has developed Land-based literacies that are crucial to her and her rural community, especially for adapting to the changes in nature, which is an important aspect of sustainable living in rural areas. In our described interaction, Anamaria's Land-based literacies helped her teacher to navigate a changing environment that he is not used to, which

may speak of the criticality of these Land-based literacies for adapting to environmental challenges.

How can educators and researchers design literacy education that is sensitive to Land and literacies' interdependence, and to the change that such interdependence brings for people and the Land that sustains them? The imposition of Westernized, universal literacy education in communities such as Callemar, El Ñeque and El Carmen threatens to ignore this interdependence and therefore ignores how literacies affect and are affected by the Lands on which they are practiced. We hope our descriptions of these Land-based literacies spark reflection among literacy educators about the ways learners make meaning from the Land across diverse global contexts. Thus, we emphasize the need to first, recognize and understand learners' literacies and second, to find pathways to honor and leverage these literacies in formal school contexts.

Our collaborative experiences of walking with the youth attending El Carmen school, alongside their parents and teachers, have enabled collective reflection on the profound significance of their community's ontologies and epistemologies. These foundational beliefs underlie their interconnected and distinctive Land-based literacies. We, thus, suggest that the design of pluriversal literacies education must work from the understanding that literacies both shape the environment and are reciprocally influenced by it.

Engaging in community dialogues with youth and adults in Callemar, we are actively co-designing and implementing curricula that place emphasis on the knowledge systems and literacies enabling this community to thrive in harmony with the evolving Land. While journeying through the dense rainforest, acquiring insights into plant knowledge, and engaging in ancestral practices like the weaving of native plants, teachers, young learners and parents are

collaboratively working to integrate Land-based literacies into the Languages and technology curricula of their school. Such integration is thereby a decolonial effort to pluralize approaches to formal language learning, which often draws on Western culture as the only context for learning English. Literacies within naturecultures can therefore play a crucial role not only in aiding the decolonization of language and literacies education, but also in sustaining the literacies that sustain the natural environment.

ACKNOWLEDGEMENTS

We want to acknowledge the principal and teachers at El Carmen Educational Community, as well as the students, parents, and neighbors of the Callemar Township in San Carlos, Córdoba, for their trust and generosity. This study was funded by COLFUTURO and Universidad de Córdoba in Colombia, and the Fonds de Recherche du Quebec Social Sciences Doctoral Scholarship # 319894.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest

References

Armitage, J. (2021). Desert Participants guide the research in Central Australia. In K. Heugh, C. Stroud, K. Taylor-Leech, & P. De Costa (Eds.), *A sociolinguistics of the South.* (pp. 214-232). Routledge.

Bang, M., & Marin, A. (2015). Nature–culture constructs in science learning: Human/non-human agency and intentionality. *Journal of Research in Science Teaching*, *52*(4), 530–544. https://doi.org/10.1002/tea.21204

Bang, M., Marin, A., Medin, D., & Washinawatok, K. (2015). Learning by observing, pitching in and being in relations in the natural world. In R. Mejia-Arauz, B. Rogoff, & M. Correa-Chavez (Eds.), *Children Learn by Observing and Contributing to Family and Community Endeavors a Cultural Paradigm* (pp. 303-313). Academic Press inc.

Bang, M., Curley, L., Kessel, A., Marin, A., Suzukovich, E.S., & Strack, G. (2014) Muskrat theories, tobacco in the streets, and living Chicago as Indigenous land, *Environmental Education Research, 20*(1), 37-55.https://doi.org/10.1080/13504622.2013.865113

Cajete, G. (2021). Relational philosophy. In N. Lushetic, & I. Campbell (Eds.), *Distributed Perception. Resonances and Axiologies* (pp. 17-30). Routledge.

Cajete, G. (2000). *Native science: Natural laws of interdependence*. Clear Light Publishers.

Deloria, V. (1979). *The metaphysics of modern existence*. Harper & Row.

Deloria, V., & Wildcat, D. (2001). *Power and place: Indian education in America*. Fulcrum Publishing.

Engman, M. M., & Hermes, M. (2021). Land as Interlocutor: A Study of Ojibwe learner language in interaction on and with naturally occurring 'materials.' *The Modern Language Journal, 105*(S1), 86–105. https://doi.org/10.1111/modl.12685

Escobar, A. (2017). *Designs for the pluriverse.* Duke University Press.

Escobar, A. (2020). Política pluriversal: Lo real y lo posible en el pensamiento crítico y las luchas latinoamericanas contemporáneas. *Tabula Rasa, 36,* 323-354. https://doi.org/10.25058/20112742.n36.13

Evans, J., & Jones, P. (2011). The walking interview: Methodology, mobility and place. *Applied Geography*, *31*(2), 849–858. https://doi.org/10.1016/j.apgeog.2010.09.005

Fals Borda, O. (2015). *Una sociología sentipensante para América Latina* (V. M. Moncayo Cruz, Ed.; Primera edición). Siglo Veintiuno Editores.

Fals Borda, O. (2002). *Historia doble de la Costa* (2 ed.). Ancora Editores.

Haraway, D. J. (2003). *The companion species manifesto: Dogs, people, and significant otherness*. Prickly Paradigm Press.

Hermes, M. R., Engman, M. M., Meixi, & McKenzie, J. (2023). Relationality and Ojibwemowin † in forest walks: Learning from multimodal interaction about land and language. *Cognition and Instruction*, *41*(1), 1–31. https://doi.org/10.1080/07370008.2022.2059482

Ingold, T., & Vergunst, J. L. (Eds.). (2008). *Ways of walking: Ethnography and practice on foot*. Ashgate Publishing, Ltd.

John, K. D. (2019). Rez ponies and confronting sacred junctures in decolonizing and indigenous education. In L. T. Smith, E. Tuck, & Y. Wang (Eds.), *Indigenous and decolonizing studies in education: Mapping the long view* (pp. 51-63). Routledge.

Jones, P., Bunce, G., Evans, J., Gibbs, H., & Hein, J. R. (2008). Exploring space and place with walking interviews. *Journal of Research Practice*, *4*(2), D2–D2. http://jrp.icaap.org/index.php/jrp/article/view/150

Kimmerer, R. (2013). *Braiding sweetgrass: Indigenous wisdom, scientific knowledge and the teachings of plants* (1 ed.). Milkweed Editions.

Lees, A., & Bang, M. (2023). Indigenous pedagogies: Land, water, and kinship. *Occasional Paper Series, 2023*(49). https://doi.org/10.58295/2375-3668.1500

Marin, A. (2013). *Learning to Attend and Observe: Parent-Child Meaning Making in the Natural World.* [Doctoral Dissertation, Northwestern University]. ProQuest Dissertations and theses Global.

Marin, A. (2019). Seeing together: The ecological knowledge of indigenous families in Chicago Urban Forest walks. En I. M. Garcia Sanchez, & M. Orellana (Edits.), *Everyday learning: Leveraging non-dominant youth language and culture in schools* (págs. 41-58). Routledge.

Marin, A. (2020). Ambulatory sequences: Ecologies of learning by attending and observing on the move. *Cognition and Instruction, 38*(3), 281-317. https://doi.org/10.1080/07370008.2020.1767104

Marin, A., & Bang, M. (2018) "Look it, This is how you know:" Family forest walks as a context for knowledge-building about the natural world, *Cognition and Instruction, 36*(2), 89-118. https://doi.org/10.1080/07370008.2018.1429443

Medin, D., & Bang, M. (2014). *Who's asking? Native science, Western science, and science education.* The MIT Press.

Mignolo, W. (2018). Foreword. On pluriversality and multipolarity. In B. Reiter (Ed.), *Constructing the pluriverse: The geopolitics of knowledge.*(pp.ix-xvi). Duke University Press.

Ormiston, N. T. (2019). Haa shageinyaa: 'Point your canoe downstream and keep your head up!'. In L. Smith, E. Tuck, & Y. Wang (Eds.), *Indigenous and decolonizing studies in Education: Mapping the long view* (pp. 38-50). Routledge.

Paulson, S. (2018). Pluriversal learning: Pathways toward a world of many worlds. *Nordia Geographical Publications, 47*(5),85–109. https://doi.org/10.4119/jsse-3463

Pashby, K., da Costa, M., & Sund, L. (2020). Pluriversal possibilities and challenges for global education in northern europe. *Journal of Social Science Education, 19*(4), 45–62.

Perry, M. (2021). Pluriversal literacies: Affect and relationality in vulnerable times. *Reading Research Quarterly, 56*(2), 293-309. https:///doi.org/10.1002/rrq.312

Perry, M. (2023). *Pluriversal literacies for sustainable futures: When words are not enough* (1st ed.). Routledge. https://doi.org/10.4324/9781003302360

Pink, S. (2015). *Doing sensory ethnography.* Sage Publications .

Pugh P., McGinty M., Bang M. (2019). Relational epistemologies in land-based learning environments: Reasoning about ecological systems and spatial indexing in motion. *Cultural Studies of Science Education*, 14(2), 425–448. https://doi.org/10.1007/s11422-019-09922-1

Riley, M., & Holton, M. (2016). *Place-based interviewing: Creating and conducting walking interviews*. SAGE Publications, Ltd. https://doi.org/10.4135/9781446273050155953 86

Sanmartín-Sierra, D. R., Angarita-Hernández, D. F., & Mercado-Gómez, J. D. (2016). Estructura y composición florística del bosque seco tropical de Sanguaré-Sucre (Colombia). *Ciencia en desarrollo*, *7*(2), 43-56. https://doi.org/10.19053/01217488.v7.n2.2016.4142

Smith, L. T., Tuck, E. & Wang, Y. (2019). *Indigenous and decolonizing studies in education: Mapping the long view*. Routledge.

Springgay, S., & Truman, S. E. (2018). *Walking methodologies in a more-than-human world: WalkingLab*. Routledge. https://doi.org/10.4324/9781315231914

Styres, S. (2019). Literacies of land. In L. T. Smith, E. Tuck, & W. Yang (Eds.), *Indigenous and decolonizing studies in education. Mapping the long view* (pp. 24-37). Routledge.

Styres, S. (2017). *Pathways for remembering and recognizing Indigenous thought in education: Philosophies of Iethi'nihsténha Ohwentsia'kékha*. University of Toronto Press.

Taylor, A., & Pacini-Ketchabaw, V. (2017). Kids, raccoons, and roos: awkward encounters and mixed affects. *Children's Geographies*, *15*(2), 131–145. https://doi.org/10.1080/14733285.2016.1199849

Taylor, C. (2020). Walking as trans(disciplinary) mattering. A speculative musing on acts of feminist indiscipline. In C. Taylor, C. Hughes, & J. Ulmer (Eds.), *Transdisciplinary Feminist Research: Innovations in Theory, Method and Practice* (pp.4-15). Routledge. https://doi.org/10.4324/9780429199776

Vadeboncoeur, J., Takeuchi, M. A., Rahm, J., Marin, A., Curnow, J., Chowdhury, A., Kopparla, M., Thraya, S., Czuy, K., Halwany, S. E., Edino, R., Marlow, S., Turner, K., Adams, J. D., Qureshi, N., & Schaffer, K. (2023). *Reimagining learning research in "Canada" as "road Making": Opportunities to move toward equity through walking methodologies*. https://repository.isls.org//handle/1/9981

Vasudevan, R., & Novoa E., M. (2021). Pluriversal planning scholarship: Embracing multiplicity and situated knowledges in community-based approaches. *Planning Theory*, 14730952211000384. https://doi.org/10.1177/14730952211000384

Williams, H. M.A & Bermeo, M. J. (2020). A decolonial imperative: Pluriversal rights education. *International Journal of Human Rights Education, 4*(1) .Retrieved from https://repository.usfca.edu/ijhre/vol4/iss1/1

BRIDGING STORY 3

Va subiendo la corriente
Con chinchorro y atarraya
La canoa de bareque
Para llegar a la playa
El pescador (habla con la luna)
El pescador (habla con la playa)
El pescador (no tiene fortuna)
Sólo su atarraya[3]

I took this fishermans' photo on a tour to Cispatá Bay. It was a way to capture a moment of vulnerability, admiration and illumination. My daughter and I had spent the afternoon on one of the tours around Bahía Cispatá Bay, in San Antero a small coastal town in Córdoba. After bathing in the unique sandbank amidst the bay, the time to return to the shore came, so we along with the other passengers hopped back on the boat. The boat driver tried to start the engine without success, he pulled from the cord, but the engine did not start. It was mute. There was no

[3] Extract from El Pescador (the fisherman) a cumbia song written by Colombian composer Jose Barros Palomino. In this video you can watch Totó la Momposina interpreting the song with her powerful voice.

sound nor smoke indicating it had power. The boat driver had untied the boat from the deck on the sandbank, and it was moving with the sea waves. We started joking to ease the stress of being in the middle of the bay, with 35 mts of water beneath us. We just wanted to hear the engine starting! The boat driver communicated with other boat drivers via radio, asking for help to bring us ashore. We had to wait. I felt helpless. Fortunately, the driver persisted until the engine shouted. We all shouted back, relieved that there was power to get the boat moving. On the ride back to the shore, I saw the fisherman in the photo, in a wooden canoe, without engine, waiting, reading the signs that would prompt him to throw his net into the water. I have seen many fishermen in their canoes in the middle of the sea, but after experiencing my illiteracy of the sea and feeling vulnerable and helpless, I could only marvel at his ability.

Jose Barro's song captures the appreciation for the fisherman's practices. As the song goes, the fisherman speaks with the moon, with the beach. There are many fishermen who go fishing at night, on their canoes, to bring fresh fish by sunrise. Their literacies, ways of reading the sea, thus out pass our sensory perception of alphabetic signs through sight; they depend on the sharpening of all senses to orient themselves in the sea in darkness. Their literacies, I have learned, unite and sustain worlds, being vital to their communities' livelihoods. The song also says the fisherman does not have fortune, only his fishing net. The fishermen's literacies may resemble no fortune and may be oblivious to many, disregarded as traditional knowledge and considered obsolete and unimportant to the extractive-capitalistic model dominating our world.

The following chapter draws on stories, like the fishermen in my photo and this popular cumbia, that youth and adults shared during walks across Callemar. These stories helped us, me

and my fellow teachers[4], to see the land-based literacies living and sustaining human and more-than-human life in the tropical dry forest surrounding Callemar. In the following manuscript, my co-authors and I describe our attempt to move our experience living and walking the territory into reshaping the English, Spanish and technology curricula. We hope our curricular designs for the territory challenge the coloniality that impedes seeing value in the literacies that sustain the lives of many communities outside of the Western model.

[4] A collage describing co-designers/ co-authors has been blinded in the submitted manuscript. Thus, I'm including a non-blinded version of the collage in this footnote:

Enith

I am married, I have three children, 15, 11 and 3 years old. I'm a God loving, kind, friendly, responsible, hardworking, honest, humble, cheerful, grateful person. I'm able to solve problems, work in a team, I see the good in other people. English teacher at El Carmen rural school. I love what I do and every day I am motivated to teach my students a second language.

Tatiana

I am a mujer sinuana (women of the Sinú river), mother of a tween and member of El Retiro, a rural community in Córdoba, Colombia.

Language educator disenchanted by the coloniality of Educational systems that maintain conditions of inequity in rural, marginalized communities. Currently a PhD candidate, living between Colombia and Canada.

Allied co-researcher and colleague.

Jairo

I am grateful for all the things I have achieved and I am constantly learning. Everyday I try to improve as a person and as a professional. I am empathic and at the same time emotional, I am still trying to master my bad temper 😇. I do not follow any religion in particular but I consider myself very spiritual, I am convinced that education is a tool that enables a healthy coexistence and increases our awareness to perform our actions better.

Fernando

I am the father of an 18 year old boy and an 11 year old girl, married for 19 years. I have been teaching Spanish for 20 years, since then my love for this profession is constantly growing. I like to share with my students new experiences that contribute to their development and knowledge. I am convinced that education must be contextualized and not isolated from the students' reality.

CHAPTER 4: CURRICULA CO-DESIGNS FOR THE PLURIVERSE: LIVING, BEING AND BECOMING WITHIN THE TERRITORY

Authors: Tatiana Becerra, Enith Lambraño, Fernando Aleán and Jairo Suarez
In review at *Cognition and Instruction*, submitted on November 14, 2024

Rural communities in the global south have faced the inequity of *educational designs*—policies, curricula, assessments, and materials—that exalt a modern, urbanized, individualistic world (Rivera Cusicanqui, 2010b). For instance, their jargon is deemed outdated, their ways of using language are often judged incomprehensible, their tools and practices are considered archaic, their rites and remedies are considered superstitious, their relations with the forests, rivers, mangrove, hills, and other humans in their territories are ignored (Bonilla et al., 2024; Souza et al., 2012). In sum, their ways of living, their knowledges and literacies are often rejected in Western educational designs.

We draw on work from a community-based project that aimed to engage members of Callemar, a rural community in Colombia, in co-designing school curricula that subverts modern/colonial, educational designs. Following a *pluriversal literacies* framework (Perry, 2023), we explored the literacies—ways of reading the world—in the Callemar community. Understanding literacies as emerging from territorial relations, with humans and more-than humans (Becerra Posada & Ehret, 2024), also helped the co-design team to ponder on the meaning of territory during the co-design process. Thus, we describe the continuous learning, reflection and iteration cycles that informed our design decisions and enactment (Fals Borda, 2001). Specifically, we describe each educator's journey co-designing and enacting land-based, subject-specific curricula (Spanish, English and Technology) during 4 months.

Our methodology (author 1, in press) entailed three *caminatas multisensoriales* (multisensory walks), three dialogue sessions with students, parents and neighbors from the

educational community, and 12 co-design sessions. Through our collaborative analysis of co-generated video-and-audio recordings, artifacts, and dialogical reflections during the co-design sessions, we illustrate how our own experience of territory refigured our concept of literacies, questioned the need for national curricula, and framed each teacher's co-design and enactment of curricula that centers life sustenance in the territory.

In doing so, we attempt to respond to the question that prompted our inquiry: How can a rural educational community engage in constructing decolonizing languages and technology curricula that honor and dignify their ways of knowing and being in their territory? RQ: How may the concept of territory inform the co-design of school curricula that re-center relations with the land?

In what follows, we explore the literature related to participatory design in literacy education and the learning sciences. Then, we describe our decolonial theoretical framework that foregrounds territory and the pluriverse in design work (Escobar, 2008b, 2018). We then delve into the co-design phase, showing how our curricular co-designs are attuned to our ongoing reconceptualization of territory and land-based literacies. We illustrate how each of the three secondary school teachers develop expanded, decolonial conceptualisations of literacies through which they transform their educational curricula.

Through co-designed curricula, teachers challenge the inequity and inadequacy of Western standardized educational models for learners in rural contexts of the global south. We discuss the implications of this participatory design for decolonial theory and method in literacy education and learning research (Rivera Cusicanqui, 2010a). We hope this article extends the current theories of pluriversality in literacy and language education (Ortega, forthcoming; Perry, 2023, 2022) as well as inspiration for other paths to contest and challenge the corrective nature

of educational designs, specifically curricula and materials, that serve the interest of so-called global economic development organizations.

Why designing for the pluriverse? Design, territory and communities

In this article we draw on the idea of design, as used by decolonial anthropologist Arturo Escobar (2018, 2020), to refer to the intricacy of practices, objects, tools, culture that permeate all scales and spheres of human and more-than-human lives. Social theorists have shed light on the non-neutrality of design, as it is produced from the relations between communities and their ecologies (Ingold, 2012). Therefore, the objects and tools we create stem from the needs and problems we aim to resolve; however, these tools and objects will shape the relations we will then continue to build through their use.

Western designs, like the machinery used to extract rubber, gold, carbon, and oil, have occupied the territories of indigenous, black, peasant communities in the Global South. Latin American critical theorists have shed light on the significance of these communities' struggles that not only intend to defend a piece of land from occupation, but the knowledges, cultures, traditions that have sustained their ways of living and index their sense of identity and belonging in their territories (Halvorsen & Zaragocin, 2021), amidst a modern/colonial world that often excludes and ignores them, pushing them to the margins (Escobar, 2010; Fals Borda, 1979). Decolonial feminisms have underscored the role of women in keeping their ancestral mining practices and defending their territories' lands and waters (Berman-Arévalo, 2021; Espinosa Miñoso et al., 2014; Ulloa, 2016). Exploring these resistance movements has enabled to articulate onto-epistemological perspective like cuerpo-territorio (Heimer, 2022; Kennelly & Castro, 2020; Zaragocin & Caretta, 2021) that emphasizes the intricacy between bodies and land.

This intricacy is also key to the decolonial concept of the pluriverse, which

stems from communities' struggles to preserve the relations between human and more-than-human worlds that have for long existed and form their territories. The idea of designing for the pluriverse (Escobar, 2018) thus summons us, all humans, to work towards the care for these territories that risk being destroyed by modern designs, objects and tools.

As educators, we are interested in the designed objects and tools that shape educational practices. One of such objects is the school curricula, which along with teaching materials shape educational practices that are lived in school classrooms. Our interest stems from our critique and dissatisfaction with current, mainstream educational designs that fail to serve our educational rural communities. For several years we have questioned the inadequacy of Western, standardized educational systems to ensure equitable learning environments for children and youth in the rural communities we have served. Indeed, the mainstream discourse maintains a deficit view of youth in rural communities, emphasizing the so-called rural-urban divide and achievement-gaps as measured by standardized tests.

Co-design studies in literacy education and learning research

Considering the importance and ubiquity of design in human lives (Escobar, 2018; Ingold, 2012), this study looks at educational designs that have paved the path towards the acknowledgement of the myriad ways of knowing and doing that co-exist in our planet. Since this study provides a case of co-design that attends to the ways of knowing, doing and relating in a rural community, we review co-design studies that honor knowledges and literacies that have been pushed to the margins by the modern/colonial ontology.

Co-design

Co-design is a participatory design approach that aimed to foster collaboration with users, non-experts, in the design of future tools (Sanders & Stappers, 2008). The approach is well-

established in educational research where it positioned as a promising alternative to bridge the gap between researchers and practitioners (Severance et al., 2016). However, critiques question its real collaborative nature to design tools for facilitating learning (Laitinen et al., 2016). For instance, researchers kept the power to decide the problems to solve, which contexts to work with, the interventions and tools to be used, and the end products (Engeström, 2011).

This critique has sparked new iterations of co-design research that aims to disrupt the hierarchization of expert knowledge and asymmetrical power relations between researchers and participants (Penuel, 2019; Vakil et al., 2016). We agree with this equity-oriented version of co-design research that centers the ubiquity and transformative impact of design (Gutiérrez et al., 2016) and acknowledges and encourages people's participation in design process in their everyday lives and in their futures (Gutiérrez, 2008).

Co-design studies have shown ways in which teachers and learners can take more agentic roles in research partnerships. For instance, involving teachers in collaborative data generation and analysis (Booker & Goldman, 2016), attending to the affects that may enable or hinder youth's sense of belonging and participation in design projects (Ehret & Hollett, 2014, 2016), and considering teachers and youths' relationships and experiences within their communities (Cruz-Arcila, 2018; Pham, 2022). This scholarship has also shed light on co-design as ongoing learning, where co-designers' continuous reflection and reflexibility are key to make sense of the design process and goals (Gutiérrez & Vossoughi, 2010; Potvin et al., 2024; Sagre et al., 2021). Thus, transformation of reality is not expected from the design of products but from the transformations that occur within each co-designer and amidst the co-design team (Morales et al., 2024).

Co-designs have involved partnerships, not only with teachers, but also with community members, especially parents and students from non-dominant groups, who have often been dismissed from the design process (Anderson-Coto et al., 2024; Beltrán-Grimm, 2023). These co-design projects have not stemmed from a need to fix communities, but from considering their roles to pinpoint at the problems of their reality (Bang & Vossoughi, 2016). Thus, making space for non-dominant communities' everyday practices—often deemed as inadequate in formal educational spaces—and positioning their members as experts whose wealth of knowledges are key to reconfigure educational spaces (Barajas-López & Ishimaru, 2020; Booker & Goldman, 2016; Gutiérrez et al., 2009; Ishimaru et al., 2019). This scholarship has also shed light on the transformational power of communities when research partnerships are done ethically (Jadallah, 2024), honoring participants subjectivity and knowledges, listening to their stories and experiences (Meixi, Marin, et al., 2022; Windchief & San Pedro, 2019).

Efforts to address the political and ethical dimensions of co-design research have challenged the coloniality it embeds, where historically dominant knowledges and ways of co-constructing knowledge have been praised and perpetuated (San Pedro & Kinloch, 2017; Shanahan et al., 2023). These efforts align with the theoretical framework that informs this study and that urges us to care for the pluriverse. Therefore, we take inspiration from codesign research that nurtures communities' ways of living and relating to the land and waters, thus, illuminating paths for transformational education practices that disrupt the aims and desires of modern/colonial, neoliberal educational systems (Curivil Bravo et al., 2018; Grisales-Bohórquez et al., 2022; Meixi, Moreno-Dulcey, et al., 2022).

Although this equity-oriented generation of design research has been given various names (e.g. participatory design research, social design experiments), we abide by the term co-

design, especially for its practicality to name all participants as co-designers. We deem this naming important, since we do not aim to distinguish between the knowledges and experiences of the team members, we all are equally valued as co-designers in this process. In accordance with participatory research, we embrace our different types of expertise, encouraging learning amongst ourselves, putting our best capabilities for the benefit of our community (Fals Borda, 1979, 2015).

This article extends this recent body of scholarship on co-design that considers epistemologies and ontologies that center relations with land. By centering the Latin American concept of territory, which transgresses the utilitarian view of territory as property and resource (Escobar, 2008a; Halvorsen, 2019), we provide examples of co-design that center the living relationships between humans and more-than-humans that make the ontology of the pluriverse.

Methodology in the Co-design project

This project followed a community-based approach to curricula co-design. Below, we describe the context, participants, data generation, analysis and co-design phases. Through this process, we aim to address the questions: (1) How can a rural educational community engage in constructing decolonizing languages and technology curricula that honor and dignify the ways of knowing and being in their territory? and (2) How may the concept of territory inform the co-design of school curricula that re-center relations with the land?

Context and Participants

This project is based in Puentelargo (pseudonym) a rural township in Colombia, comprising five neighboring villages. Creeks and roads connect the villages, which community members walk daily. Agricultural activities permeate the community's social and cultural activities. El Carmen secondary school serves ~150 youth in these five villages, thus the

educational community includes parents, neighbours, teachers and students.

Figure 1. View of the township from the top of one of the surrounding hills, thick vegetation hides the view of homes and roads. Photo taken by author 1.

Informed by community-based design and participatory methodologies (Bang et al., 2016; Fals Borda, 2015), this 12-month project engaged a total of 24 community members, in the co-construction of decolonizing educational curricula that honored their community's local literacies. Nine adults aged 26–70 years, and 15 youth aged 13–17 years participated in the project's first two phases which entailed methodology co-construction and data co-generation and collaborative analysis, between January and August 2023. Eleven of the youth were ninth and tenth graders, and the other four were seniors. Six of the adults were students' parents, guardians and relatives, and the other three were teachers of English, Spanish and technology. In this piece, we focus on the project's curricula co-design phase, spanning from mid-August to mid-December 2023. Curricula co-designers, and co-authors of this article, are four Colombian

educators, born and raised in the Caribbean region. Below is a photo-collage with co-designer's self-descriptions (Figure 2).

Figure 2. Collage with co-designers' photos and translated self-descriptions (blinded)

Ethics

After being introduced to the educational community by Author 2 in summer 2022 and having established a relationship with community members through in person conversations, WhatsApp correspondence, and Zoom meetings, Author 1 obtained ethical approval # 22-09-024 in May 2023 from her higher education institution to undertake a community-based project with the Puentelargo community. Author 1 requested written consent from the school principal to undertake and video and audio record some of the activities in the school premises. Parents and students who individually expressed their desire to collaborate with Author 1, gave oral and written consent to participate in the data co-generation consisting of 3 *caminatas*

multisensoriales and 3 dialogue sessions. Teachers agreed to participate in 12 design sessions, entailing collaborative data analysis, idea sharing, design planning. Small compensations, refreshments and food were offered to participants in each activity.

Collaborative Data Analysis

The data collected and analyzed for this manuscript includes the video and audio recordings from 3 dialogue sessions with parents, students and teachers, 12 co-design sessions with the team, and co-designed artifacts during planning of units, lessons, and materials, student-produced artifacts and lessons video-recordings during the enactment of the curricula. Our analytical approach draws on circularity, leading to co-design continuum, loops that entailed dialoging, planning, enacting (Figure 3).

Figure 3. Illustration of co-design continuum loops

We reduced the data, paying special attention to mentions of the territory by community members, students and co-designers. Our understanding of the importance of the territory informed our design decisions like literacies to center in our curricula, the importance of these literacies in the territory and relations between curricula and the territory.

Throughout our codesign, we reflected on these decisions, refining curricular goals and defining tasks and projects that ensured relations with literacies in the territory through the co-design phased described below.

The co-design Phases

Co-design sessions (Figure 4) started in mid-August 2023, after having participated with parents and students in three *caminatas multisensoriales* to Arroyo Negro, El Gritón, El Ñeque, and three dialogue sessions for discussing and analysing video-audio-data and artifacts collected during these *caminatas* (details in Becerra-Posada & Ehret, 2024). In these sessions, we listened to students and their parents, who expressed their desire to honor their community's *saberes locales* (local literacies) and to continue passing them to the younger generations while ensuring their children receive an education that allows them to benefit from higher education opportunities through which they might give-back to their community. These insights helped us to affirm our intention to co-design the school's languages and technology curricula, led by Author 2, Author 3 and Author 4. We agreed to work on a series of three joint co-design sessions that would provide the opportunity for making collective decisions that responded to our growing recognition of the community's land-based literacies, or the *saberes locales* that emerge from relating with the land and waters.

Figure 4. Collage of photos from dialogue and co-design sessions

After the joint sessions, we decided to engage in a one-on-one co-design cycle. This cycle spanned three, three-hour sessions where Author 1 met individually with Author 3, Author 4 and Author 2 to co-design subject specific activities. At the end of the three, one-on-one sessions, each teacher had their first co-designed instructional plan, including detailed descriptions of the activities the teachers had decided to use as steps to facilitate our focus on land-based literacies as well as subject-specific learning in ninth and tenth grades.

Co-designing for the territory

Below, we describe our reflections and learning during the stages of our co-design, and end with insights from the enactment of our co-designed curricula.

Caminando juntos—The territory we move and moves us

"Claro, yo llevo a Chalán conmigo, en mi corazón"

Author 2, Co-design session, August 14, 2023

We start this section with a commentary shared by Author 2 about her hometown: “I carry Chalán with myself, in my heart.” That could be a translation of Author 2’s assertion, which she shared during our first co-design session in August 2023, when we discussed our experiences with the *land* and the notion of *territory.* Both concepts have so many social implications in Colombia, a country where land (dis)possession led to an armed conflict of more than 50 years and whose impact we, Colombians, continue to face, despite a peace agreement in 2016 (Colombia, 2022). Author 2 herself was a victim of land dispossession; violence obliged her family to leave her hometown of Chalán in the 1990’s. Displaced, they arrived in Cartagena, where Author 2 grew up before moving to Monteria. Listening to Author 2’s unfortunate experience, we thought about the meaning of territory and the relationships we build with the land we call home. We pondered the importance and transcendence of the territories we inhabit in shaping our lives. We thought about our ways of bringing our Caribbean coast with us when we move away from her; for example, bringing our vegetables, our cheese, and our river fish are some ways to move our territory with us. Author 2’s assertion as well as our shared experiences of carrying the Caribbean within and with ourselves helped us to realize the immaterial nature that land can have for communities, thus becoming the abstract concept of territory.

During our second co-design session, inspired by our conversation of the territory, our experiences with the land, and the land-based literacies we had observed during caminatas multisensoriales, we started drafting and annotating ideas for our first co-design iteration (Figure 5)

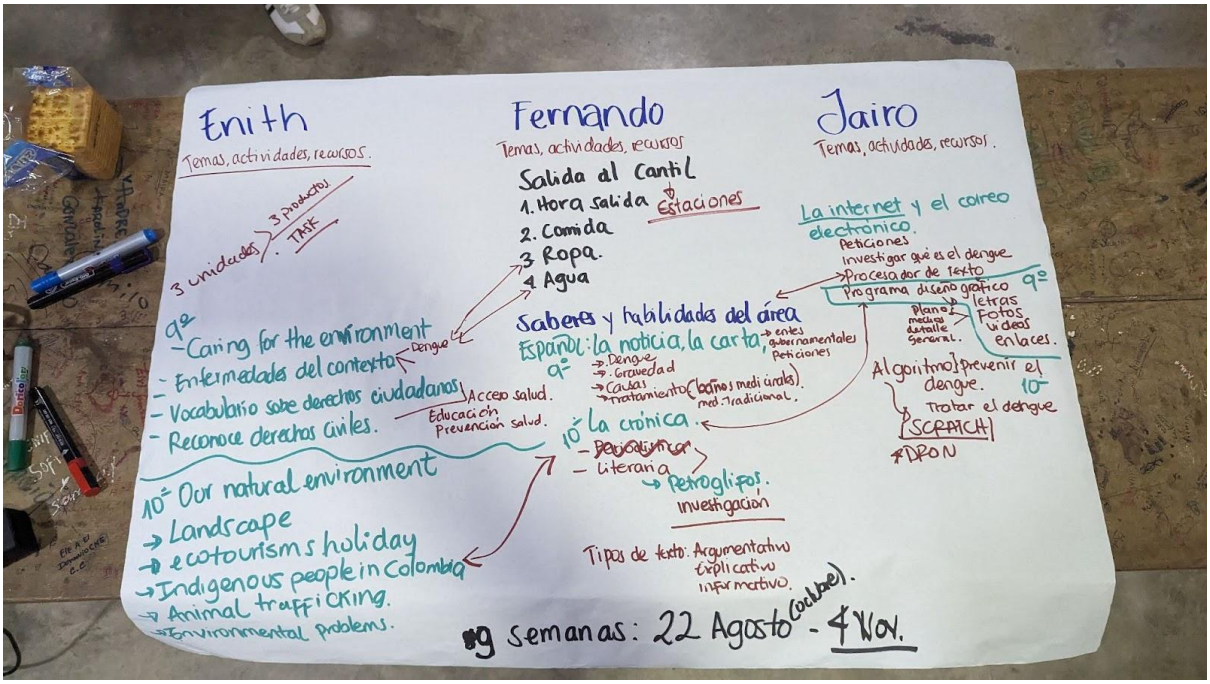


Figure 5. Picture of our co-design notes

Figure 5 shows we designed Salida al Cantil as core activity for our term co-design. Our analysis of the co-design session revealed that our decision was motivated by our previous dialogues that would allow us to respond to students', neighbors' and teachers' interests in our planning. During informal chats and dialogue sessions, students reiterated their desire to learn outside the classroom. They also shared positive written comments and drawings about the previous caminata to El Ñeque, one of the surrounding hills. Their insights and our own experience walking together motivated us to consider land-walking as a core term-activity for our first planning. While making this decision, Author 4 reminded us of El Cantil, a place that elders had brought our attention to several times during our caminatas and dialogue sessions. El Cantil's distant location had impacted its current state; people, whether locals or foreigners, it is unknown, had crafted obscene drawings on the stones where petroglyphs had laid before. Author 2 and Author 3 agreed, emphasizing the importance of this place for locals, and the excitement it

would generate on students. Thus, we decided to plan our third-term curricula around the caminata to El Cantil.

While discussing possibilities to make connections between each subject and the main activity, Author 3 suggested viral infections like Dengue, which were then proliferating in the community. Dengue is a virus transmitted through mosquito bites, especially during the rainy seasons, as stagnant water makes a perfect home for the proliferation of mosquitoes in tropical and subtropical climates. Realizing the close relation between dengue and land since the tropical forest makes an ideal home for dengue transmitting mosquitoes, we started to make connections across the three subjects (see figure 5).

The red lines in figure 5 represent the connections across the three subjects. Walking to El Cantil required logistical details like best date and time to leave, depending on the weather. Food, water and clothes students and teachers would bring were also considered in our logistics list. Author 2 then connected the need to wear long sleeves to protect from mosquito bites with the content on health in the Suggested English Curriculum (SEC). Author 2 would then connect to the theme of citizen rights that is requested in the SEC by focusing on access to health services and creating prevention routes to viruses like Dengue. Similarly, Author 3 connected with textual production of health service requests and the description of health treatments. These moves from Author 3 and Author 2, then, helped Author 4 find a relationship with algorithms, the main suggested concept in the Guide 30, the national curricula for technology. Author 4 explained, when asked by Author 2, that algorithms were sequences of steps to solve a problem. Then, he thought students could use algorithms to illustrate steps followed to treat the Dengue infection.

At the end of this session, we had drafted our very first co-designed unit plan which centered on land-walking literacies in our tenth-and-ninth-grade curricula for the third term of 2023 and reflected the relation between land and the community.

Through the co-design sessions, we continued imagining together how we could center our students' land-based literacies in each subject area through each teacher's practice. Therefore, some of the topics and connections that we initially outlined developed into connected objectives that reflected our evolving understanding of land-based literacies curricula (see Figure 6).

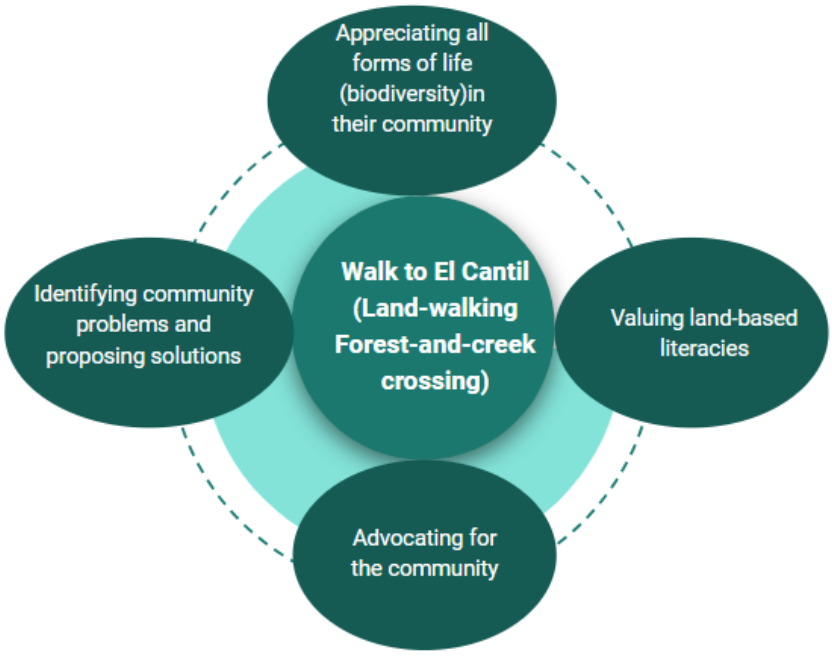


Figure 6. Main activity and objectives for our land-based curricula

We agreed the Caminata al Cantil was an opportunity to center land-walking and forest-and-creek-crossing literacies, which we expected students to tap on during the central activity for

the third term. The ovals around represent the main objectives we planned for the term, which along with the caminata became our guiding route for our second stage of one-on-one co-design.

Caminando uno a uno: Honoring our collective focus on land

Author 1 met individually with Author 3, Author 4 and Author 2 to plan subject-specific teaching/learning experiences attuned to our co-designed goals. Informed by her previous experience with task-based teaching, a prominent English language teaching method, Author 2 co-designed three main tasks for each grade. Author 3 on the other hand decided to co-design his instruction around projects that would span between four and five weeks with ninth grade, and the full nine weeks of the term with tenth grade. Similarly, Author 4 co-designed one project with each class, given his course's lower hour intensity (Figure 7).

ENGLISH AS ADDITIONAL LANGUAGE (EAL)	
9th grade tasks	**10th grade tasks**
Create an infographic about the diseases and illnesses that are currently affecting the **community**	Curate an album of pictures depicting the natural beings to care for in their **community**
Compose a video, tiktok, reel, or IG post, telling about traditional treatments for **local** illnesses	Create a mind map explaining the role of indigenous peoples in preserving the plants and animals in their **community**
Design a brochure to show the problem to access health services in the **community** and propose solutions to facilitate access	Create a campaign or ad to stop or mitigate the effects of animal trafficking in their **community**
SPANISH	
9th grade projects	**10th grade project**
Create a news report or digital newspaper informing about the problems faced by the **community** of El Cantil	Compose a literary chronic about the life of **indigenous communities** in the municipality of San Carlos
Write a petition letter requesting governmental solutions to a problem observed in the villages of the **community**	
TECHNOLOGY AND COMPUTERS	
9th grade project	**10th grade project**
Multimodal chronicle about the **community**	Algorithm sequence to solve a **community problem**

Figure 7. Designed tasks and projects for the third term 2023

These tasks and projects were developed progressively as the co-design pairs thought together the activities and connections to the experience of land walking and their specific subject areas. Designing these tasks and projects reflected our commitment to achieving the

objectives we had collectively designed for the unit (see figure 8). For the objectives, *appreciating all forms of life in the community* and *valuing land-based literacies*, Author 3 planned a project that prompted tenth-graders to compose a literary chronicle about the life of indigenous communities. Similarly, Author 4 planned a project that enabled students to use algorithms to sequence steps of daily activities in the platform SCRATCH. Author 2 designed tasks that prompted 10th graders to probe on the role of indigenous communities for preserving plants and animals, to curate a photo album from their walk to El Cantil focusing on the care for nature, and to craft a campaign to raise awareness of animal trafficking.

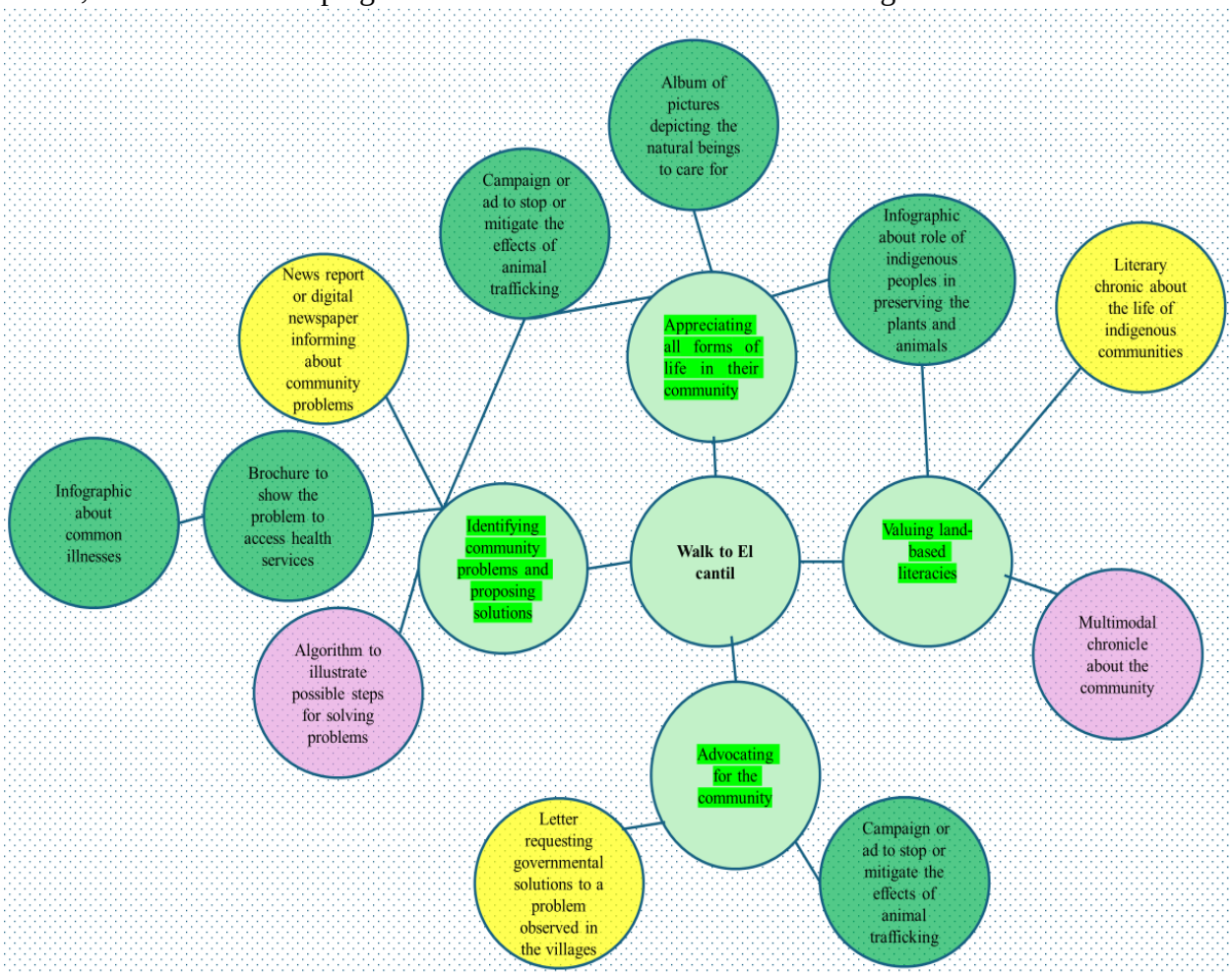


Figure 8. Relations across term objectives and tasks and projects

Note: Light-green ovals: Central activity and objectives. Dark-green ovals: English tasks. Yellow-ovals: Spanish projects. Purple ovals: Technology projects.

We also considered the other two objectives: *identifying community problems* and *advocating for the community*. For instance, Author 3 planned a news report to inform of community issues students might observe during the caminata. Author 4 planned to merge his focus on algorithms to create sequences of steps to propose solutions to community problems. Author 2 designed tasks that required 9th graders to create infographics about the seasonal common illnesses in their community and to design a brochure that illustrated difficulties to access health services. While co-designing these tasks and projects, Author 1 shared with each peer their partners' ideas, thus enabling continuous communication of shared activities across the co-design team.

Our co-designed objectives emphasized the relation of communities with the land to make territories. This understanding was reflected in our development of tasks and projects, as observed in their focus on the community (bolded in figure 6), and in their response to our unit objectives.

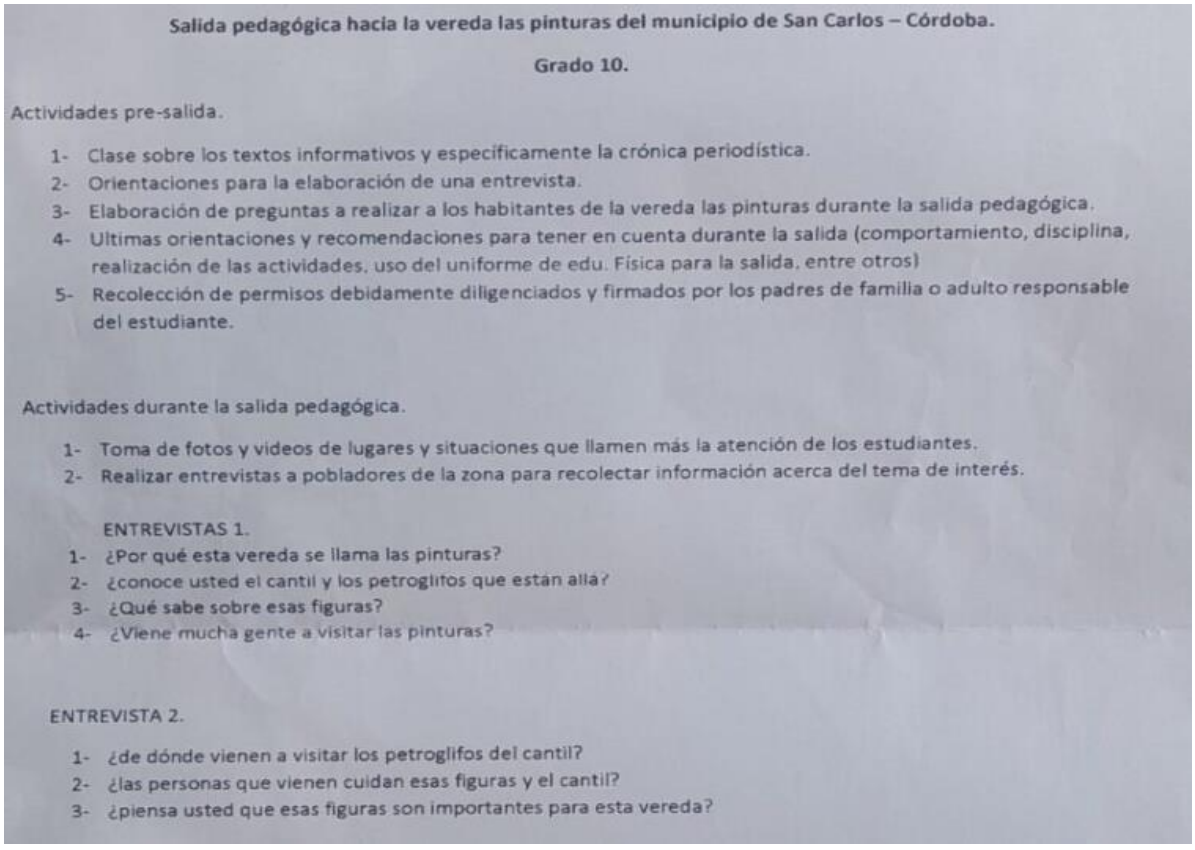
Land-territory relations in subject-specific co-designed instruction

Aiming to prepare students to complete the tasks and projects that we had set for our unit, we co-designed instructional activities that reflected our understanding of land-based literacies as the relations between land and community members lived experiences, knowledges, and practices.

Land and the lived territory. Author 3 closely connected his instructional plans with the Caminata to El Cantil. For instance, the first activity he had planned for the very first week of the third term with both grades consisted of preparing for the caminata (Guía Pre-salida on figure 9). Accordingly, he provided students with a plan and instructions to follow before, during, and after the caminata (Figure 10).

Ago 28- Sep 1	Sept 4 - 8	Sept 12- 15	Sept 18-22	Sept 25-29
•Guia pre-salida: •Instrucciones parahacer registro fotográfico y hacer entrevistas, grabando con el celular. •Texto informativo noticia •Ejemplos: Periodico, blog, noticiero, radio	•Redactar esquema de la noticia •Que, cuando, donde, quien, como, porqué •Revision esquema •Titular	•Redacción noticia •Ejemplo: Partes de la noticia •Imágenes •Borrador de la noticia •Guia •Revisions	•Consejo de prensa. •Los grupos presentarán su esquema de noticias y se harán comentarios y sugerencias •Edición de la noticia	•Grabación de la noticia •Presentación de la noticia- identificación de las partes, autoevaluación.

Figure 9. Author 3's weekly instructional plan



Salida pedagógica hacia la vereda las pinturas del municipio de San Carlos – Córdoba.

Grado 10.

Actividades pre-salida.

1- Clase sobre los textos informativos y especificamente la crónica periodística.
2- Orientaciones para la elaboración de una entrevista.
3- Elaboración de preguntas a realizar a los habitantes de la vereda las pinturas durante la salida pedagógica.
4- Ultimas orientaciones y recomendaciones para tener en cuenta durante la salida (comportamiento, disciplina, realización de las actividades, uso del uniforme de edu. Física para la salida, entre otros)
5- Recolección de permisos debidamente diligenciados y firmados por los padres de familia o adulto responsable del estudiante.

Actividades durante la salida pedagógica.

1- Toma de fotos y videos de lugares y situaciones que llamen más la atención de los estudiantes.
2- Realizar entrevistas a pobladores de la zona para recolectar información acerca del tema de interés.

ENTREVISTAS 1.

1- ¿Por qué esta vereda se llama las pinturas?
2- ¿conoce usted el cantil y los petroglifos que están allá?
3- ¿Qué sabe sobre esas figuras?
4- ¿Viene mucha gente a visitar las pinturas?

ENTREVISTA 2.

1- ¿de dónde vienen a visitar los petroglifos del cantil?
2- ¿las personas que vienen cuidan esas figuras y el cantil?
3- ¿piensa usted que esas figuras son importantes para esta vereda?

Figure 10. Picture of Author 3's instructional plan for the Caminata

Figure 10 shows Author 3's shared plan with tenth-grade students, divided in three sections: Pre-visit activities, during the visit activities, and examples of interview questions

during the visit. Fernado had decided to focus on a single project with the tenth graders whose outcome was to write a literary chronicle about the indigenous communities that had inhabited the area, based on interviews and photographic material collected during the visit to El Cantil.

Author 3's pedagogical moves, developing a plan handout with interview questions for tenth graders, and collectively generating interview questions and rehearsing interviews with ninth graders evinced his instruction's close connection with the caminata. He had mentioned several times during our previous interviews that El Cantil "es un lugar mágico" [is a magical place], full of stories that locals would often share. The locals at El Cantil were also part of the educational community, thus, interviewing the locals was a unique opportunity to get their insights about how the territory is lived**,** their experiences, perceptions and complaints. All their insights would be valuable to later composing the news reports and chronicles with the ninth and tenth grade classes, respectively. In developing these texts, Author 3 saw an opportunity to make links between the national curricula that required the textual production of chronicles and reports, and our co-designed land-based curricula, a tension the three teachers felt and aimed to respond to during the codesign.

In sum, Author 3's understanding of land as territory that is lived and made by communities was reflected in his instructional plan as he centered the Caminata to El Cantil and the interviews with locals as the foundation of students' news reports and chronicles projects to be developed during the unit.

Knowledges and experiences in the territory. Author 2's instructional units centered students' experiences and their parents' and neighbors' knowledges. In the case of 9 grade, Author 2's instructional plans for the term required students to inquire and identify illnesses in the community. The instructional activities included visual cueing to familiarize students with

the English names of illnesses and diseases affecting their community and discussions about students' background knowledge of these illnesses. The final task would require students to inquire community members about the populations affected by the illnesses, then create an infographic that illustrated these relations between illnesses and specific groups in their community (figure 11). In this way, this first unit would prompt students to draw on their own and their community members' experiences with illnesses.

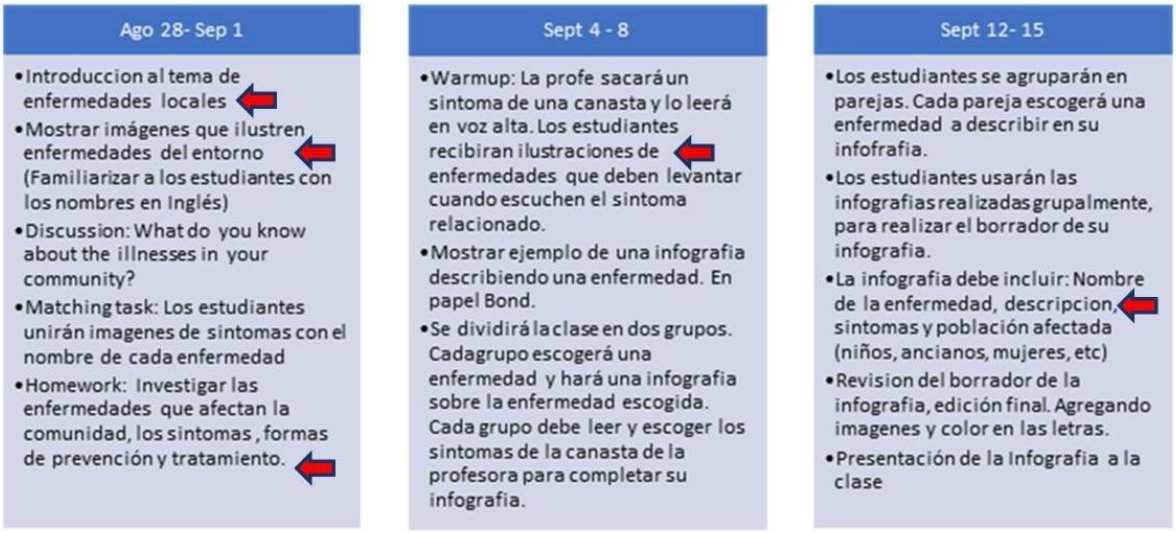


Figure 11. Activities planned to support the first task in ninth grade

Author 2's focus on illnesses in the first unit reflects her understanding of the unity between land and humans through personal experiences and through intergenerationally transmitted knowledges, something we had discussed several times during our dialogue and co-design sessions. Furthermore, our previous walking with neighbors and students, as well as the relations with parents, had sparked Author 2's recognition of land-based literacies that included relating to plants which have been used for millennia to cure. This focus on human relations to plants was evinced in our co-designed instruction for the second unit (Figure 12).

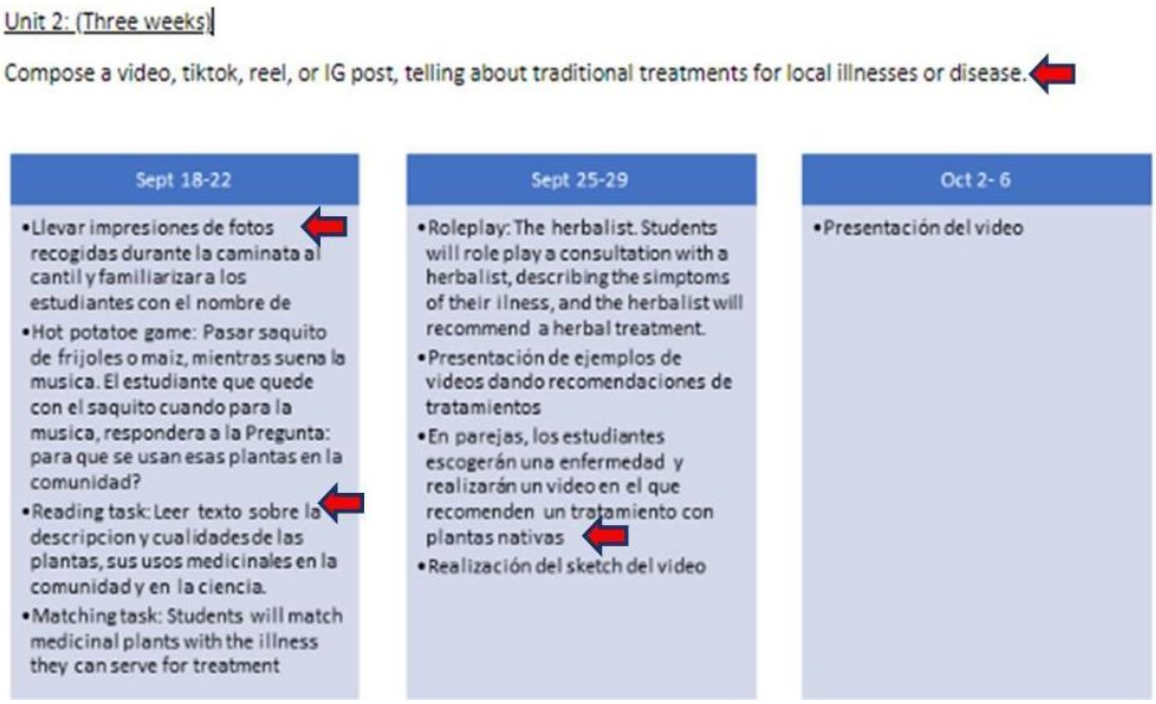


Figure 12. Author 2's second-unit instructional plan focusing on traditional treatments

Similarly, the activities on the second unit (figure 10) aimed to center students' knowledge of the land, like naming the plants photographed by their teachers and peers during the visit to El Cantil, sharing about the medicinal uses of the plants, describing common plant-based treatments and the illnesses they are used for in their community.

The third unit focused on access to health services. The codesigned activities prompted students to reflect on their community's geographical position and relation to other communities in the territory, like the municipality they belonged to and the access to it. Author 2 drew on community members recounts of encounters with snakes and snake bites told during the previous caminatas multisensoriales to spark discussion about the routes to access health services.

In sum, Author 2's instructional activities for her ninth-grade class aimed to foster connections to the territory through the recognition of students and their families' experiences, as well as their community's knowledges and abilities to meet their needs in the territory. Similarly, in her tenth-grade unit, Author 2 centered relations between land and territory, designing

activities that would prompt students to privilege connections with the more-than humans in the land, through: 1. The observation of plant pictures and the creation of a collectively curated photo album of plants from their caminata to El cantil. 2. The inquiry of community members on the histories of indigenous ancestry to do a mind map that reflected these relations. 3. The creation of a campaign to advocate for the care of animals in their territory and to warn against animal trafficking practices.

Community tools to live in the territory. Author 4's instructional plan centered the practices around traditional tools that connect the land and the community. For instance, in his tenth-grade instructional plan, Author 4 continued to develop our initial idea of using algorithms. However, instead of centering community problems as we had initially outlined, he highlighted the community's use of traditional technologies. Thus, Author 4 showed the communities' land-based literacies as algorithmic tools that allow community members to solve the problems they encounter. Author 4 then planned to start this unit by presenting a short video of Sra. Ana weaving Juncus to make a "esterilla" (donkeymat) (figure 13), and then deconstruct with the students the steps followed by Sra. Ana. Author 4 expected at the end of the unit, students would be able to use algorithms (e.g., flow diagrams, pseudocodes) to illustrate the uses of traditional technologies to solve community problems, on the SCRATCH platform. In this way, Author 4 was able to balance his desires to focus on traditional technologies used in the community while integrating new digital technologies and responding to the demands in the national curricula.

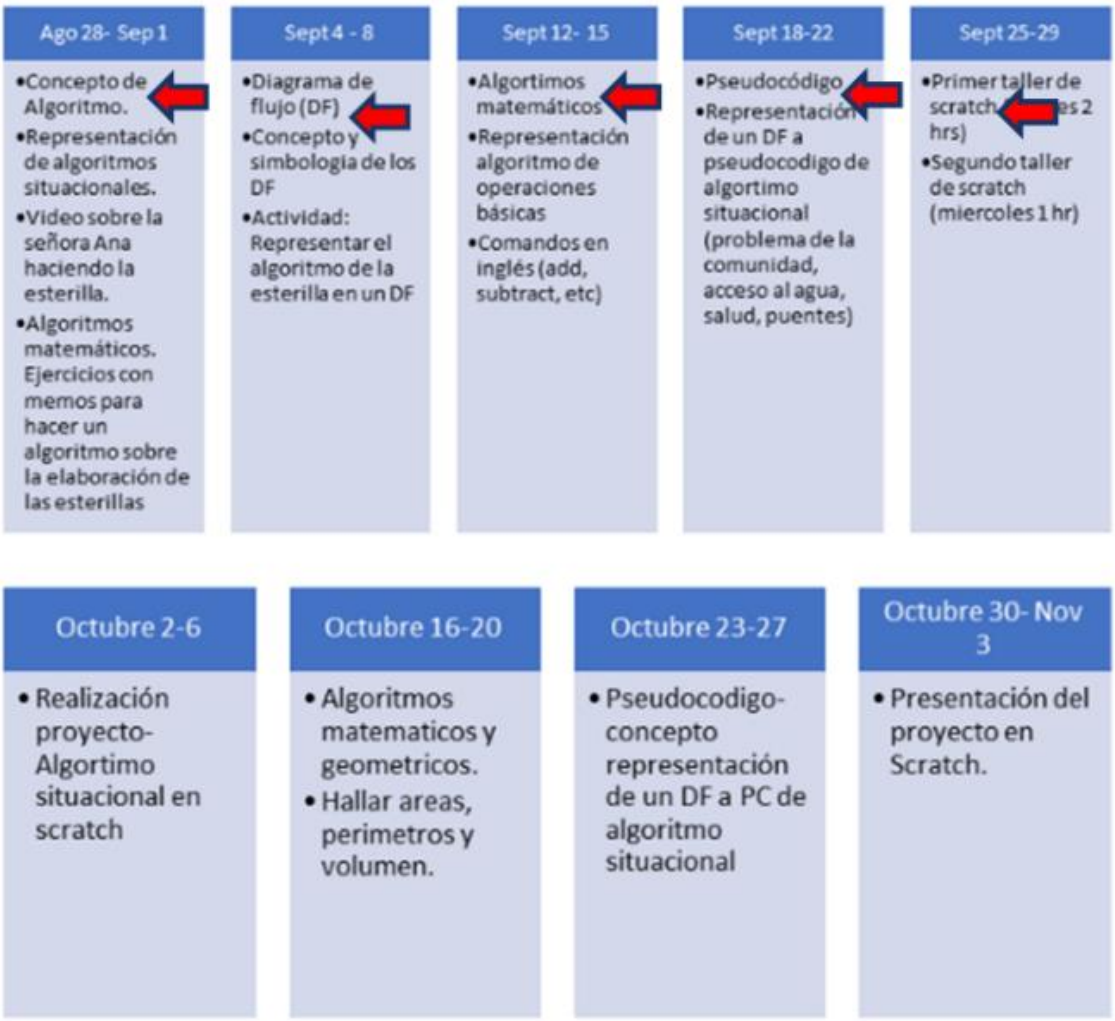


Figure 13. Author 4's tenth grade instructional unit

Similarly, Author 4 planned his ninth-grade term unit around the idea of using digital technologies to create a video that showcased the community's stories. Thus, Author 4 balanced his plan, including technical concepts like types of shots and frames, which students should draw on to produce their videos. Author 4 also included the *script* as a key concept in his planning that would allow students to do a well-planned video. He emphasized the idea of students producing a well-crafted video, "un trabajo de calidad", that would differentiate schoolwork from students' spare-time tiktok videos.

Figure 14. Author 4 balances technical concepts and land-based literacies

Centering traditional technologies as community tools to relate to the land served a two-fold purpose in Author 4's land-based codesign. First, acknowledging the communities' land-based literacies that sustain life in the territory. Second, allowing Author 4 to continue his connection to the different communities he's part of: El carmen educational community, the township where students and their families live, and the national territory where the school curricula is embedded.

The three teachers' instructional plans described reflect our understanding of the intricate relation between land and territory through their centering of locals' stories that reflect how the territory is lived, students and their parents' knowledge and experiences in facing the world, and communities' practices requiring the use of tools to live with the land. In the next section, we'll describe how relations with the land-territory continued to evolve as the teachers enacted their land-based curricula.

Caminando en comunidad: Enacting our land-based curricula

In the following section we'll describe the enactment of our co-designed curricula, emphasizing values that honor communality, relationality, and solidarity in the land-territory.

Communality in the land-territory. Author 3 centered relations with the land-territory through enacting communality. From the very beginning of the unit, Author 3 marched to El Cantil alongside the students, sharing his enthusiasm about doing the interviews in the most legitimate ways. He carried a tripod and audio recorder that students could borrow to support the quality recording of their interviews. He also accompanied students, backing them up when approaching locals, while being mindful of giving them the autonomy to do the interviews by themselves (Figure 15). All these pedagogical moves evinced Author 3's value of community work supporting and encouraging students in undertaking their interview tasks during the caminata.

Figure 15. Author 3 sets a tripod and cellphone for students' interviews

Communality became stronger in his classes as Author 3 mobilized students in working together to complete the planned class projects. For instance, he started the "consejos de redacción" (drafting councils) with ninth graders to support the completion of their news report. The drafting councils were whole-class sessions for students to collectively share their progress towards the final news report project. Students counseled their peers in relation to their work, contributing suggestions at different textual layers, for example, the news design, structure, cohesion, orthography and grammar. Author 3 served as a guiding consultant for students. Through the drafting councils, the class shared their insights from the caminata to El Cantil, which included their observations and sensory experience of the land as well as excerpts from the interviews they had done. In sharing all these elements, the ninth-grade class composed four pieces of news that they would later include in their class's news program. The student-created pieces of news highlighted the uniqueness of the forest and the creeks. They also pointed out the social issues that the community faced like the difficulty to manage garbage and to access drinking water, as well as the road conditions limiting access to goods and health services. The news included extracts from the student interviews to locals and pictures and video taken during the caminata to El Cantil.

The council drafts were so useful in the early stages of the ninth-grade project, thus motivating Author 3 to replicate the strategy with the tenth-grade class. In sharing their experiences and collected material during the caminatas, tenth graders and Author 3 shifted their project, agreeing on writing a chronicle about the caminata to El Cantil, instead of writing about the past presence of indigenous communities in the area, as had been initially planned. At the end of the unit, Author 3 also supported students, contributing materials,

spaces and guidance to record and edit the ninth graders' news report and the tenth-graders' chronicles.

During the meeting with parents at the end of this first implementation, Author 3 showed pride in students' collectively produced news and chronicles. He underscored the importance of counseling and building their projects together. For instance, the ninth-graders composing, recording and editing their news videos in and outside the classroom, and the tenth-graders composing their chronicles collaboratively through the WhatsApp messaging platform.

In sum, throughout the enactment of our codesign, Author 3 along with students centered communality, disrupting individualism and favoring learning through and with each other. In supporting each other to interview locals during the caminata, and then counseling each other in co-constructing their texts in the classroom, students and teacher strived as a community to achieve collective outcomes, in this case, their news reports and chronicles that centered their relations with the territory.

Solidary co-designs. During the enactment, Author 4 strengthened connections with the territory, centering traditional practices. Author 4 instructed ninth-graders to do "field" exploration, to find out experts in traditional community practices, that would be showcased in their videos. Students' videos included recordings and shoots of their search for community experts, and showcased community practices like snake-bite treatments, rice-husking, mat crafting, fish-net crafting, and barbasco brooms. Similarly, the tenth graders' projects focused on the use of algorithms, specifically flowcharts and pseudocodes, to represent practices like plant-weaving. In connecting to the community practices, Author 4 and students acknowledged the value of traditional tools and

knowledges, which were as worthy of inclusion in the videos as would be contemporary tools.

In adapting his instruction to include community practices and traditional tools, Author 4 also enacted solidarity with his team-mates, Author 3 and Author 2. During the implementation of the curricula, Author 4's focus on audio-visual production provided support for students' production of videos for the news-report project in their Spanish class with Author 3, and for the videos of local treatments in the English class with Author 2. Likewise, by centering communities' plant-related practices during his lessons on algorithms, Author 4 provided background knowledge that Author 2 drew on to teach her unit about plant-based treatments for common illnesses. At the end of the first implementation, Author 2 acknowledged that Author 4's moves, including similar themes in his lessons, had facilitated her own instructional delivery as students saw resemblance across the topics taught in the English and technology classes. Author 4 recognized to have done so consciously and intentionally. He stated during the co-design's evaluation session that he saw his technology class as a tool to support Author 2 and Author 3's class.

Thus, during co-design Author 4 centered relations with the land territory, enacting solidarity with the Callemar community through the recognition of their traditional knowledges and practices, and with the co-design team through his desire to make best use of his technology lessons to achieve our commonly shared goals for the term.

***Embracing relations with ancestral knowledges and practices*.** During the enactment phase, Author 2 grew closer to the territory, centering students and their families' literacies. For instance, during the unit on traditional treatments for illnesses, Author 2 brought pictures of local plants, snapped during the Caminata to El Cantil, and sparked

discussion about these plants' medicinal uses. When showing the picture of a matarraton (mother of cocoa) plant, students actively contributed their knowledges and experiences of santiguar, an ancestral practice to heal body discomfort in babies and toddlers. The practice usually entails anointing the sick child's head with a mixture of plants along with other rites like the crossing of healthy children around the sick baby following a cross shape. The practice reflects the syncretism of rural communities thus combining indigenous and catholic symbols and rites.

Students responded to Author 2's questions providing details of the practice like the ways the plants are used (e.g., whipping the plant), the symptoms that might require attention (e.g., bloated belly, continuous crying), and the ailments that might be healed (e.g., constipation, evil eye). Author 2's questions during the class interaction expressed her genuine curiosity about the santiguar practice, a practice that Author 2 was not acquainted with and was skeptical of due to her own religious beliefs. However, she displayed a very respectful attitude in the class, showing genuine interest and curiosity in students' knowledges.

During the implementation of the unit, Author 2 continued to center local literacies, prompting students to inquire about traditional plant-based treatments among their parents and relatives. From these inquiries, students then composed videos that described traditional beverages from plants such as anamu, mother of cocoa, guava flowers, lime, eucalyptus and calabash to treat fever, nasal congestion, headaches, cough, and common cold.

Author 2's appreciation for students' land-based literacies continued to grow through the implementation of our curricular co-design as was evidenced in Author 2's

commentary during the meeting with parents: “I was very surprised by the great knowledge that they [students] have, [they] have a literacy that maybe they say ‘well, we have not read it, but our parents have taught it to us’. Maybe they [the parents] haven't told them ‘Look my son, this is good for the flu’, but when they get sick, they make the beverage and they are learning that this plant is good for the fever, that this one is good for the cough.”

In highlighting the importance of intergenerationally transmitted land-based literacies like the use of plants for medicinal treatments, Author 2 acknowledged and honored relationality with ancestors and with the land as sources of invaluable knowledge. In this way, her codesign enactment facilitated students’ and Author 2’s connection with the territory.

Learning in the land-territory as autonomous design for the pluriverse

Co-designing these curricula within our community was a new experience for the four of us. We are experienced teachers, trained to design our syllabi, unit plans and materials on our own, thus, it was a novelty, and a tension, to navigate curricula co-design with colleagues teaching a different subject to our own, and with parents and students who often do not participate in this process (Ishimaru, 2020).

We were puzzled at first, feeling unsure of the future unfolding of the project. However, we faced this challenge by leaning on each other, and working alongside community members, whose desires and knowledges helped us to inform our curricula (Anderson-Coto et al., 2024; Gordon et al., 2024). Recognizing our doubts was an initial step to acknowledging our shared humanity (Paris & Winn, 2014), and to embracing learning while doing together (Chaves et al., 2018).

In our doing together, we disrupted traditional co-design research that distinguishes across researchers and participants roles, often, describing the former as agentic decision makers and scaffolders (Penuel, 2019; Severance et al., 2016). Unlike these traditionally upheld differences, we described the four co-designers' agency, whose ideas were centered and acknowledged by each team member. For instance, Author 1's role as notetaker during the *joint* and *one-on-one* codesign sessions enabled the central participation of each co-designer in setting objectives, finding relations across the three curricular subjects (Spanish, English and technology), and drawing on our own pedagogical toolkits to inform our instructional designs.

We embraced the idea of co-designing curricula that responded to our *vivencia* (lived experience) (Fals Borda, 2001) of the territory. Through our reflexive dialogue, we came to understand land and our experience with our territory as mutually constituent. Our memories, histories and identities are intricated within the land-territory. Therefore, our codesigned instruction reflected these intricate relations among all forms of life in the territory, thus, rejecting the imposed separation between land and humans. For instance, our decision to center walking attended to the community's desires to perpetuate dear places that honor their indigenous ancestry like El Cantil. Our set objectives of *appreciating all forms of life, valuing land-base literacies, identifying community problems* and *advocating for the community* emphasized the relationships with humans, animals, plants to learn and thrive in the township. Our co-designed projects and tasks (e.g., news report about community issues, infographics about common illnesses) stemmed from the Caminata al Cantil while centering the students' relations with the community and the territory.

Our decision to center our unit on walking the land along with students, we argue expressed our growing recognition of the land as teacher, as a site where students have grasped and experienced learning in their daily lives (Styres, 2019). Recognizing land as first teacher, helped us also to seek connections between land walking, well-being, and land-care (Marin, 2013)**.** Listing care elements to consider during the Caminata to El Cantil, amidst the rise of Dengue cases, enabled us to connect to topics included in the national curricula for English, Spanish and technology like health care practices, access to health services, care for water bodies, and petitions.

In finding these relations, we recognized our land-based curricula potential for interdisciplinary work, connecting subject-specific concepts and alphabetical, multimodal literacies valued in the national curriculum, while responding to the community's expressed desires to perpetuate their saberes locales. For instance, Author 3 connected our caminata and listening to locals' stories with academic activities like recording, analysing, and editing interviews, and composing news reports and chronicles. Author 2 centered students, their parents and neighbors' knowledges in completing their infographics, labelling their photo albums, and composing videos about traditional plant-based treatments in English. Author 4 centered traditional tools key to cultural practices like venting rice while engaging with concepts like algorithms, pseudocodes and flow diagrams.

Centering relations to the territory and their land-based literacies may at first glance seem at odd with the teaching of literacies that are honored in formal educational systems. However, we argue that this coupling speaks of the dialogue among the myriad ways of knowing and being in the world that decoloniality entails (Rivera Cusicanqui, 2010b). It is not our aim to position land-based literacies in a hegemonic place or to be universalized

(Perry, 2023); we understand these literacies unique relation to understand, navigate and thrive in *this* land-territory.

We see this coupling as evidence of our ongoing learning, dealing with the expectations to meet the demands of the national curricula, the parents and students' desire to succeed in the Western educational systems, and our shared desire to open spaces for non-hegemonic literacies in formal school contexts. We argue our focus on land-territory paved the way for decolonizing the curricula as we prioritized the community's ways of being, doing and knowing in the territory. Instead of imposing practices mandated in the curricula that often disregard these ontologies and epistemologies, we aimed to put both ways in dialogue.

In centering land-based literacies our co-design took first steps to perpetuating the community's knowleges and practices in the school, thus, aligning with previous land-based research (Engman & Hermes, 2021; Marin & Bang, 2018; Pugh et al., 2019). However, we were careful to avoid romanticising the community and the territory, a common critique of decolonizing endeavors (Machado de Oliveira, 2021). Our objective *advocating for the community* inspired us to point at inequity issues in the community. Thus, our co-designed activities prompted students, for instance, to point at the difficulty to access health services in their infographics, and to warn of the diminished creek-water quality in their news reports and chronicles. This is an important gain, that also speaks of the potential of our land-based curricula to foster sociocritical awareness (Gutiérrez, 2008).

Finally, we posit that our emerging co-design instantiates diseño autónomo (autonomous design) (Escobar, 2018) as we used the pedagogical toolkits learned in western schooling, like Author 4's use of concepts, and Author 2's use of tasks, coupling

with the educational community's pedagogical tools and axio-epistemologies. These instances of diseño autónomo have implications for pluriversal literacy education as we have shown how we have "recrafted communal forms of being" (Escobar, 2018, p.166) like walking and storying the land to center land-based literacies in the school curricula. Furthermore, our conceptualizations of literacies were refigured during our co-design as we understood the value of locals' stories for the interviews in the Spanish class, of traditional tools that sustain the weaving of cultural and knowledge making practices in the community, and of intergenerationally transmitted knowledges to thrive in the territory. These expanded conceptualisations of literacies not only facilitated transformative decolonizing paths for our educational curricula, but also autonomous pedagogies (Freire, 2006) that center solidarity, relationality and communality as was observed during the enactment phase.

Sharing a communal vision for our design favored learning and transformation over the design of end products (Zavala, 2016). Centering communality from the very inception of the larger project, honoring the solidarity that sustains Callemar, our co-design disrupted the hierarchical, individualistic and competitive practices that are favored in educational systems, among teachers and among students (Carvajal Medina et al., 2022) (Freire, 2006)

Had we followed usual top down, expert-based approaches, this co-design process would have surely perished, however, our findings describe its *envisioning* and *implementation* during this first cycle spanning mid-august to mid-December 2023 (Rajala et al., 2023). Although we do not report on the following two co-design cycles corresponding to the two trimesters of 2024, these co-design iterations are speaking of its

sustenance within a yearly scale. We hope to continue this work across the school grades and in the future across neighboring educational communities in our province.

References

Anderson-Coto, M. J., Salazar, J., Lopez, J. L.-S., Sedas, R. M., Campos, F., Bustamante, A. S., & Ahn, J. (2024). Towards culturally sustaining design: Centering community's voices for learning through Participatory Design. *International Journal of Child-Computer Interaction*, *39*, 100621. https://doi.org/10.1016/j.ijcci.2023.100621

Bang, M., Faber, L., Gurneau, J., Marin, A., & Soto, C. (2016). Community-based design research: Learning across generations and strategic transformations of institutional relations toward axiological innovations. *Mind, Culture, and Activity*, *23*(1), 28–41. https://doi.org/10.1080/10749039.2015.1087572

Bang, M., & Vossoughi, S. (2016). Participatory design research and educational justice: Studying learning and relations within social change making. *Cognition and Instruction*, *34*(3), 173–193. https://doi.org/10.1080/07370008.2016.1181879

Barajas-López, F., & Ishimaru, A. M. (2020). "Darles el lugar": A place for nondominant family knowing in educational equity. *Urban Education, 55*(1), 38–65. https://doi.org/10.1177/0042085916652179

Becerra Posada, T., & Ehret, C. (2024). Land-based literacies in local naturecultures: Walking, reading, and storying the forests in rural Colombia. *Journal of Adolescent & Adult Literacy, n/a*(n/a). https://doi.org/10.1002/jaal.1375

Beltrán-Grimm, S. (2023). *No solamente ellos aprenden, aprendemos nosotros también: Latina mothers' experiences with Co-design approaches in creating a math activity for their children*. 1–20. https://doi.org/10.1080/15348431.2023.2252506

Berman-Arévalo, E. (2021). Geografías negras del arroz en el Caribe Colombiano: Tongueo y cuerpo territorio 'en las grietas' de la modernización agrícola. *Latin American and Caribbean Ethnic Studies*, 1–19. https://doi.org/10.1080/17442222.2021.2009638

Bonilla, S., Cruz Arcila, F., & Cohen, V. (2024). *Raza, racialización y segundas lenguas.* Universidad Distrital.

Booker, A., & Goldman, S. (2016). Participatory design research as a practice for systemic repair: Doing hand-in-hand math research with families. *Cognition and Instruction*, *34*(3), 222–235. https://doi.org/10.1080/07370008.2016.1179535

Carvajal Medina, N. E., Hurtado Torres, F. Á., Lara Páez, M. Y., Ramírez Sánchez, M., Barón Gómez, H. A., Ayala Bonilla, D. A., & Coy, C. M. (2022). Entretejidxs: Decolonial threads to the self, the communities, and EFL teacher education programs in Colombia. *Íkala, Revista de Lenguaje y Cultura*, *27*(3), 596–626. https://doi.org/10.17533/udea.ikala.v27n3a02

Chaves, M., Macintryre, T., Verschoor, G., & Wals, A. E. J. (2018). Radical ruralities in practice: Negotiating buen vivir in a Colombian network of sustainability. *Journal of Rural Studies*, *59*, 153–162.

Colombia (Ed.). (2022). *Resistir no es aguantar: Violencias y daños contra los pueblos étnicos de Colombia* (Primera edición). Comisión de la Verdad.

Cruz-Arcila, F. (2018). The wisdom of teachers' personal theories: Creative ELT practices from colombian rural schools. *Profile: Issues in Teachers' Professional Development*, *20*(2), 65–78. https://doi.org/10.15446/profile.v20n2.67142

Curivil Bravo, F. D., Pinto Rodríguez, L., Cortez Canchari, N., & Guzmán Paco (Bolivia), D. (2018). Experiencias emergentes de metodologías descolonizadoras de investigación frente al extractivismo epistémico. Aportes para la investigación educativa intra-, intercultural y plurilingüe en Bolivia. *Sinéctica*, *50*. https://doi.org/10.31391/S2007-7033(2018)0050-010

Ehret, C., & Hollett, T. (2014). Embodied composition in real virtualities: Adolescents' literacy practices and felt experiences moving with digital, mobile devices in school. *Research in the Teaching of English*, *48*(4), 428–452. https://www.jstor.org/stable/24398691

Ehret, C., & Hollett, T. (2016). Affective dimensions of participatory design research in informal learning environments: Placemaking, belonging, and correspondence. *Cognition and Instruction*, *34*(3), 250–258. https://doi.org/10.1080/07370008.2016.1169815

Engeström, Y. (2011). From design experiments to formative interventions. *Theory & Psychology*, *21*(5), 598–628. https://doi.org/10.1177/0959354311419252

Engman, M. M., & Hermes, M. (2021). Land as interlocutor: A study of Ojibwe learner language in interaction on and with naturally occurring 'materials.' *The Modern Language Journal*, *105*(S1), 86–105. https://doi.org/10.1111/modl.12685

Escobar, A. (2008a). *Territories of Difference*. https://doi.org/10.1215/9780822389439

Escobar, A. (2008b). *Territories of difference: Place, movements, life, redes*. Duke University Press.

Escobar, A. (2010). Worlds and knowledges otherwise: The Latin American modernity/coloniality research program. In *Globalization and the Decolonial Option*. Routledge.

Escobar, A. (2018). *Designs for the pluriverse: Radical interdependence, autonomy, and the making of worlds*. Duke University Press.

Escobar, A. (2020). *Pluriversal politics: The real and the possible*. Duke University Press.

Espinosa Miñoso, Y., Gómez Correal, D. M., & Ochoa Muñoz, K. (Eds.). (2014). *Tejiendo de otro modo: Feminismo, epistemología y apuestas descoloniales en Abya Yala*. Coloquio Tejiendo de Otro Modo : Feminismo, Epistemología y Apuestas Descoloniales en Abya Yala, Popayán, Colombia. Editorial Universidad del Cauca.

Fals Borda, O. (1979). *El problema de como investigar la realidad para transformarla por la praxis*. Ediciones Tercer Mundo.

Fals Borda, O. (2001). Participatory (action) research in social theory: Origins and challenges. In P. Reason & H. Bradbury (Eds.), *Handbook of action research: Participative inquiry and practice* (pp. 27–37). SAGE Publications.

Fals Borda, O. (2015). *Una sociología sentipensante para América Latina* (V. M. Moncayo Cruz, Ed.; Primera edición). Siglo Veintiuno Editores.

Freire, P. (2006). *Pedagogia da autonomia. Saberes necessários à prática educativa* (25th ed.). Paz e Terra.

Gordon, E., Gardner, R., Chéry, C., Sacks, C., & Masiakos, P. T. (2024). Collaborative critical making in higher education: A case study of a community-centred

storytelling effort to transform harmful narratives of gun violence in Boston. *CoDesign*, 1–20. https://doi.org/10.1080/15710882.2024.2329559

Grisales-Bohórquez, C., Reynolds-Cuéllar, P., Muñoz Martinez, G. I., & Sicard Currea, A. (2022). Participation reimagined: Co-design of the self through territory, memory, and dignity. *CoDesign*, *18*(1), 78–94. https://doi.org/10.1080/15710882.2021.2016849

Gutiérrez, K. D. (2008). Developing a sociocritical literacy in the third space. *Reading Research Quarterly*, *43*(2), 148–164. https://doi.org/10.1598/RRQ.43.2.3

Gutiérrez, K. D., Engeström, Y., & Sannino, A. (2016). Expanding Educational Research and Interventionist Methodologies. *Cognition and Instruction*, *34*(3), 275–284. https://doi.org/10.1080/07370008.2016.1183347

Gutiérrez, K. D., Morales, P. Z., & Martinez, D. C. (2009). Re-mediating literacy: Culture, difference, and learning for students from nondominant communities. *Review of Research in Education*, *33*(1), 212–245. https://doi.org/10.3102/0091732X08328267

Gutiérrez, K. D., & Vossoughi, S. (2010). Lifting off the ground to return anew: Mediated praxis, transformative learning, and social design experiments. *Journal of Teacher Education*, *61*(1–2), 100–117. https://doi.org/10.1177/0022487109347877

Halvorsen, S. (2019). Decolonising territory: Dialogues with Latin American knowledges and grassroots strategies. *Progress in Human Geography*, *43*(5), 790–814. https://doi.org/10.1177/0309132518777623

Halvorsen, S., & Zaragocin, S. (2021). Territory and decolonisation: Debates from the Global Souths. *Third World Thematics: A TWQ Journal*, *6*(4–6), 123–139. https://doi.org/10.1080/23802014.2022.2161618

Heimer, R. dos V. L. (2022). *Travelling Cuerpo-Territorios*: A decolonial feminist geographical methodology to conduct research *with* migrant women. *Third World Thematics*, 1–30. https://doi.org/10.1080/23802014.2022.2108130

Ingold, T. (2012). Introduction. The perception of the user-producer. In W. Gunn & J. Donovan (Eds.), *Design and anthropology* (pp. 19–33). Ashgate.

Ishimaru, A. M. (2020). *Just schools: Building equitable collaborations with families and communities*. Teachers College Press.

Ishimaru, A. M., Lott, J., Torres, K. E., & O'Reilly-Diaz, K. (2019). families in the driver's seat: Catalyzing familial transformative agency for equitable collaboration. *Teachers College Record*, *121*(11), 1–39.

Jadallah, C. C. (2024). Positionality, relationality, place, and land: Considerations for ethical research with communities. *Qualitative Research*, 14687941241246174. https://doi.org/10.1177/14687941241246174

Kennelly, M., & Castro, L. R. (2020). 'We are not poor things': Territorio cuerpo-tierra and Colombian women's organised struggles: *Feminist Theory*, *22*(3), 339–359. https://doi.org/10.1177/1464700120909508

Laitinen, A., Sannino, A., & Engeström, Y. (2016). From controlled experiments to formative interventions in studies of agency: Methodological considerations. *Educação*, *39*(4), 14. https://doi.org/10.15448/1981-2582.2016.s.24321

Machado de Oliveira, V. (2021). *Hospicing modernity: Facing humanity's wrongs and the implications for social activism*. North Atlantic Books. http://ebookcentral.proquest.com/lib/mcgill/detail.action?docID=6715826

Marin, A. (2013). *Learning to attend and observe: Parent-child meaning making in the natural world* [Doctoral dissertation]. Northwestern University.

Marin, A., & Bang, M. (2018). "Look it, this is how you know:" Family forest walks as a context for knowledge-building about the natural world. *Cognition and Instruction*, *36*(2), 89–118. https://doi.org/10.1080/07370008.2018.1429443

Meixi, Marin, A., Nzinga, K., Palomar, M., Elliott, E., Elliott, S., Shield, A. E., Scott, M., Shaw, M. S., Zuniga-Ruiz, S., & Booker, A. (2022). *Storytelling and storylistening towards collective learning and relational becoming*. https://repository.isls.org//handle/1/8971

Meixi, Moreno-Dulcey, F., Alcalá, L., Keyser, U., & Elliott-Groves, E. (2022). When learning is life giving: Redesigning schools with Indigenous systems of relationality. *AERA Open*, *8*, 23328584211062587. https://doi.org/10.1177/23328584211062587

Morales, M., Franklin, M., Vossoughi, S., Carroll, S., Lansana, O., Bang, M., & Mayed, S. (2024). World-making through a feminist abolitionist lens in a STEAM middle school program. *Reading Research Quarterly*, *59*(3), 257–281. https://doi.org/10.1002/rrq.532

Paris, D., & Winn, M. T. (Eds.). (2014). *Humanizing research: Decolonizing qualitative inquiry with youth and communities*. SAGE Publications.

Penuel, W. R. (2019). Co-design as infrastructuring with attention to Power: Building collective capacity for equitable teaching and learning through design-based implementation research. In J. Pieters, J. Voogt, & N. Pareja Roblin (Eds.), *Collaborative curriculum design for sustainable innovation and teacher learning* (pp. 387–401). Springer International Publishing. https://doi.org/10.1007/978-3-030-20062-6_21

Perry, M. (2023). *Pluriversal literacies for sustainable futures: When words are not enough* (1st ed.). Routledge. https://doi.org/10.4324/9781003302360

Pham, J. H. (2022). Racial micropolitical literacy: Examining the sociopolitical realities of teachers of color co-constructing student transformational resistance. *Curriculum Inquiry*, 1–26. https://doi.org/10.1080/03626784.2022.2042162

Potvin, A. S., Teeters, L. P., Penuel, W. R., & Dimidjian, S. (2024). Humanizing co-design through attention to educators' affective and relational experiences. *Journal of the Learning Sciences*, *33*(1), 41–79. https://doi.org/10.1080/10508406.2024.2318557

Pugh, P., McGinty, M., & Bang, M. (2019). Relational epistemologies in land-based learning environments: Reasoning about ecological systems and spatial indexing in motion. *Cultural Studies of Science Education*, *14*(2), 425–448. https://doi.org/10.1007/s11422-019-09922-1

Rajala, A., Cole, M., & Esteban-Guitart, M. (2023). Utopian methodology: Researching educational interventions to promote equity over multiple timescales. *Journal of the Learning Sciences*, *32*(1), 110–136. https://doi.org/10.1080/10508406.2022.2144736

Rivera Cusicanqui, S. (2010a). *Ch'ixinakax utxiwa: Una reflexión sobre prácticas y discursos descolonizadores*. Retazos : Tinta Limón Ediciones.

Rivera Cusicanqui, S. (2010b). The notion of "rights" and the paradoxes of postcolonial modernity (M. Geidel, Trans.). *Qui Parle*, *18*(2), 29–54. https://doi.org/10.5250/quiparle.18.2.29

Sagre, A., Herazo Rivera, J. D., Montes, P. G., Becerra-Posada, T., Machado, L. P., & González-Humanez, L. E. (2021). Contradictions and critical praxis in foreign language teachers' implementation of reading to learn. *Teaching and Teacher Education*, *108*, 103516. https://doi.org/10.1016/j.tate.2021.103516

San Pedro, T., & Kinloch, V. (2017). Toward projects in humanization: Research on co-creating and sustaining dialogic relationships. *American Educational Research Journal*, *54*(1_suppl), 373S-394S. https://doi.org/10.3102/0002831216671210

Sanders, E. B.-N., & Stappers, P. J. (2008). Co-creation and the new landscapes of design. *CoDesign*, *4*(1), 5–18. https://doi.org/10.1080/15710880701875068

Severance, S., Penuel, W. R., Sumner, T., & Leary, H. (2016). Organizing for teacher agency in curricular co-design. *Journal of the Learning Sciences*, *25*(4), 531–564. https://doi.org/10.1080/10508406.2016.1207541

Shanahan, M.-C., Kim, B., Takeuchi, M. A., Koh, K. H., Preciado Babb, A. P., & Sengupta, P. (Eds.). (2023). *The learning sciences in conversation: Theories, methodologies, and boundary spaces*. Routledge, Taylor & Francis Group.

Souza, E. C. de, Pinho, A. S. T. de, & Meireles, M. M. de. (2012). Tensões entre o local e o global: Ruralidades contemporâneas e docência em escolas rurais. *Educação*, *37*(2), 351–364. https://doi.org/10.5902/198464444128

Styres, S. (2019). Literacies of land. In L. T. Smith, E. Tuck, & W. Yang (Eds.),. In *Indigenous and decolonizing studies in education. Mapping the long view* (pp. 24–37). Routledge.

Ulloa, A. (2016). Feminismos territoriales en América Latina: Defensas de la vida frente a los extractivismos. *Nómadas*, *45*, 123–139. https://doi.org/10.30578/nomadas.n45a8

Vakil, S., de Royston, M.M, Nasir, N.S, & Kirshner, B. (2016). Rethinking race and power in design-based research: Reflections from the field. *Cognition and Instruction*, *34*(3), 194–209. http://dx.doi.org/10.1080/07370008.2016.1169817

Windchief, S., & San Pedro, T. (2019). *Applying Indigenous research. Storying with peoples and communities.* Routledge.

Zaragocin, S., & Caretta, M. A. (2021). Cuerpo-territorio: A decolonial feminist geographical method for the study of embodiment. *Annals of the American Association of Geographers*, *111*(5), 1503–1518. https://doi.org/10.1080/24694452.2020.1812370

Zavala, M. (2016). Design, participation, and social change: What design in grassroots spaces can teach learning scientists. *Cognition and Instruction*, *34*(3), 236–249. https://doi.org/10.1080/07370008.2016.1169818

CHAPTER 5: DISCUSSION

In this chapter, I discuss the three main manuscripts's finding, providing implications for decolonial theory research as well as for educational praxis. Most importantly, I explain how these three manuscripts, together, respond to my research questions:

1. How can members of an educational community be engaged as active agents in building curricula that subvert colonial assimilation and honor the literacies that live and sustain life in their territory?
2. How can we design educational curricula and practice that redress the inequity of assimilating students to colonial understandings of literacy education?

This dissertation explored possibilities for transforming literacy education for sustaining the learning of rural secondary students in formal schooling from three different, yet enmeshed perspectives: methodological, theoretical and praxis oriented. Overall, the findings of this research have shed light on the complexity of such aim, since transforming education cannot be done through the replication of dominant, colonial, neoliberal approaches to working with educational communities as has already been argued by critical language and literacies scholars (e.g., Edwards & Kalan, 2024; Gagné et al., 2022) and decolonial qualitative researchers (e.g., Stein et al., 2022; Tachine & Nicolazzo, 2023). Thus, these findings hope to outline pathways for participatory research that engage community members, teachers, students and their educational community, as active agents in building decolonizing curricula that honors the literacies that live and sustain life in their territory.

Throughout the former manuscripts, this research argues for the active participation of communities in efforts to transform education. Without the Callemar community's

stories, ideas and concerns, I would have not been able to understand the sets of values that are at the core of the relational ways of being honored in the community. Having the community's engagement in this project transformed my role as a researcher. In line with humanizing research endeavors (Rahm, 2019; San Pedro et al., 2017), listening to the community members became a critical element of this research partnership that enabled us to design a path for knowledge co-construction attuned to the community's ways of living and sharing knowledges.

Furthermore, through critical active listening, teachers and I were able to hear stories that embedded knowledges and guided us to notice the signs that the students and their community daily rely on to navigate their territory. Through listening to each other, my teacher colleagues and co-researchers were able to produce curricular designs that honored the community's land-literacies and their desires and concerns for the future. These three articles thus show the active roles of community members, whose stories and ideas were listened to and honored, thus informing the research.

In highlighting the roles of community members, this study extends previous research in learning and literacies that centers communities (Bang et al., 2016; Ishimaru, 2020; Pahl et al., 2020). Thus, methodological suggestions are emphasized through the findings, where we progressively show the envisioning and enactment of multisensory walks as a participatory method to understand land-based literacies as well as the description of co-design where the community's voices are honored and acknowledged. Through the three core chapters, this dissertation shows my attempt to subvert transactional, objectifying relationships that prevail in research endeavors framed within modern, colonial understanding of science. Therefore, this study's findings extend previous

research that attends to the ethical dimensions of research with marginalized communities and calls for relationality to challenge extractive research practices (Museus & Wang, 2022; San Pedro & Kinloch, 2017; Vossoughi et al., 2020).

Data for this dissertation was co-generated with my research partners. Through the three scholarly articles presented above, we describe participatory data collection through multisensory walks, community dialogues and co-design sessions. By centering these methods in the research design, this dissertation also contributes to decolonial methodologies. For instance, Silvia Rivera Cusicanqui (2015) argues for methods that divest from logocentrism and favor the sensory experience of participants. The Aymara scholar argues, "To walk, to know, to create [are] the verbs of a method in movement" [my translation] (Rivera Cusicanqui, 2015, p.8). Through our research journey, described in the former manuscripts, we make a case for alternatives to traditional verbocentric and logocentric research methods. Therefore, we shed light on our joint process of walking, storying, and coming to know with the land. Videorecording ensured data was captured participatorily. Then, through different phases that entailed, participatory and independent analysis sessions, data was reduced and analysed. Through this ongoing engagement with the data, I have learned that the stories, the walks, the questions, the ideas, the dreams, and the desires are, as Ehret (2015) argues, "of course, more than 'data'…" (p.8). The data cogenerated is part of the histories of these humans that happened to coincide with mine in this time and space, holding similar visions for the future. My intention is to honor these stories and not present them just as data, but as a life experience that has generated learning and transformations at the individual and community levels like our community-based curricula design that center the relations with the territory. As described in Chapter 3: [Title

of chapter], the shared experience of walking the land, traversing creeks, and exploring forested hills enabled us to co-theorize land-based literacies. This co-theorizing process informed the curricula co-designs—described in Chapter 4: [Title of chapter]— developed in response to the community's voiced desires and concerns, and that brought to the concrete our shared wish to decolonize the school curricula.

Theoretical Implications

Latin American Critical social theory, or what is known in the Global North academy as decolonial theory (Escobar, 2010), has invited us to look beyond the accounts produced by the dominant, hegemonic groups. It has pointed out the need to overcome Western bias, through learning from the knowledges of 'subaltern' communities (i.e., oppressed groups like indigenous, peasant communities). Unlike utilitarian calls to learn from other subaltern knowledges to expand our perspective of the world, decoloniality seeks to confront the inequity that sustains our sociopolitical systems and that has maintained conditions of poverty and marginalization of racialized, subaltern groups (Mignolo, 2002; Rivera Cusicanqui, 2010b). The decolonial idea of the Pluriverse thus draws from the experience and struggles of subaltern communities, like the Zapatistas in Mexico to advocate for their right to exist. Calling out the violence exerted by the Western capitalist modernity against these communities, the notion of the pluriverse challenges the imposition of a single, universal ontology that has led to destruction of peoples, territories, and our planet as we are witnessing now (Escobar, 2014, 2020).

This dissertation's findings advance Latin American decolonial theory by shedding light on the naturecultures that exist amidst the tropical dry forests in the Colombian Caribbean region. We describe how the natural world, the lands, the waters, the trees, the

plants, the ditches, the absence or the changes in water bodies and the woodsy hills is experienced by members of the Callemar community.

Our description of the land-based literacies living in this natureculture thus expands descriptions of the pluriverse as the relationship between humans and more-than-humans in territories and communities outside of Western ways of living. Community stories, along with their forest landscape, are changing. These changes are framing community members' desires to transform the education their youth receive in formal schooling, in ways that perpetuate their ways of knowing and living. They have realized that caring for their plant-crafting traditions requires caring for the lands, water in this community, thus shedding light on the nature-culture intricacy that permeates their literacies.

In sum, our pluriversality-informed analysis and co-theorisation of land-based literacies has paved the way for devising curricula that attend to the relationships between land, histories and communities. Such uptake constitutes a contribution to decolonial and pluriversal studies, bringing the principles of relationality, sustainability and border thinking to practice in this research and design partnership. Thus, this study's findings support previous efforts to bring decolonial theories, especially the idea of the pluriverse into literacies and language education (Carvajal Medina et al., 2022; Guerrero Nieto et al., 2022; Ortega, 2023; Perry, 2023).

Practical implications

The three papers in this dissertation have important implications for transforming education and enacting pluriversal literacies curricula. The first implication encompasses teachers' reciprocal relationships with their educational community. The teachers in the study have developed a sense of belonging and care for their educational community

throughout their more than 7 years of service at El Carmen school, getting to know and build relationships with the students, alumni, parents and neighbors. They are seen as trustworthy people who contribute to youths' development. These relationships of care, respect, and trust have been essential for teachers and community members to work on this collaboration. Furthermore, such a collaborative attempt requires a willingness from teachers to resist power hierarchies that position them as knowledgeable.

This work would not have been possible without teachers' willingness to learn alongside community members. For instance, throughout the dialogue sessions and walks, the three teachers actively and attentively listened to parents, neighbors, and students, following their lead, acknowledging their expertise and reflecting on the community's stories. Thus, one of the implications for teachers is the importance of engaging in reciprocal relationships with their educational community, where diverse knowledge-holders are valued and recognized despite their diverse life experiences. All in all, the data collected and analyzed through this study has shed light on how teachers can draw on local knowledges and literacies to serve their communities in ways that do not perpetuate colonial understandings of language, literacy, and culture.

The second implication calls for rethinking the purpose of education. This collaboration stemmed from our shared dissatisfaction with the educational system to serve rural students. Throughout the study, we have delved into the process of reimagining educational curricula that is relevant to students' lives in their community. What's the life the national curriculum is preparing students for? That's a question that we have pondered and that has guided us to devise curricula for the territory, which means designing for the relationships that sustain human and more than human lives in the Callemar community.

Understanding the close relationship between community and territory enabled us to center land-based literacies in our curricula, thus, reframing goals and projects for our units, informing the types of instruction, pedagogical moves and learning experiences that honor the ways of being and knowing in the community.

Although we have found a tension, trying to also balance the imposed need for alphabetical literacies—producing alphabetic texts that evidence student learning in English, Spanish and technology—, we have succeeded in making space for pluriversal literacies that are often dismissed in formal schooling. This tension might be seen as a limitation to the decolonizing objectives of the study and has been also present in previous scholarship in language and literacies education of minoritized learners in Latin American contexts (Navarro, 2024).

Border thinking, or crossing epistemological borders, is one of the key arguments for the pluriverse as a counterproposal to the universalization of colonial thought (Mignolo, 2018). Then, I argue that a pluriversal literacies curricula cannot fall under the same dismissal of difference that sustains Western educational models. Seeing and crossing the limits of alphabetical and land-based literacies might enable us to overcome the alienation and assimilation inherent in formal schooling and to unleash more creative practices to share meaning and support learning in schools.

Another important implication deals with avenues to foster the self-determination of educational communities, especially to promote agency across community members (Owoo, 2022). Similar to previous studies that emphasize the agency of teachers and communities for social change, this study highlights the role of teachers, especially those serving marginalized communities, to address inequity from their own practices and

designs (Cruz-Arcila, 2018; Ortega, 2023; Pham, 2022; Posada Ortiz & Castañeda Peña, 2021).

In this line, this study has shown three paths that teachers followed to engage in educational planning within decolonial principles. First, engaging in proleptic dialogue with the community, through which desires and changes for the future were voiced and envisioned. Second, exploring, learning and co-theorizing the land-based literacies along with the community. Finally, designing curricula that centers these life-sustaining literacies and responds to the communal imaginings of the future. Such designs centered teachers' co-experiencing (Blockett et al., 2022) activities and practices that are meaningful to the community, like walking through forests, bathing in creeks, picking fruits, talking and listening to elders, weaving Iraka leaves, crafting calabash, and transforming corn into meals. In sum, these three paths have allowed decentering decolonial understandings of literacies in the school curricula, thus, showing students that the literacies embedded in their territory are valuable and have a place in their school.

Although schools and teachers are required to follow within the expectations of the national educational system, this study provides tangible and concrete examples of curricula designs that teachers have used to decolonize the school curricula, making it more relevant, responsible and attuned to their learners' lives and worlds—in other words, their pluriverse. We hope designs from this study allow other teachers to extrapolate ideas to tailor their curricula for sustaining the knowledges and literacies of their students' communities. Previous research in language and literacies has emphasized the suitability of teacher-researcher collaborations for culturally responsive teacher development that sustains learners' identities and community belonging (Ballinger et al., 2024). In this line,

findings from this study show the potential of decolonial theories and methodologies for informing teacher-researcher development programs that challenge colonial mindsets and practices that, while often invisible, often harm and alienate learners from non-dominant groups. A future direction for this study may involve horizontal collaboration with student-teachers to develop pathways that transcend the neoliberal framing of education to acquire goods and services. Instead, aiming to maximize schools' educational potential to sustain the present and future of our communities' pluriverse.

CHAPTER 6: CONCLUSION AND SUMMARY

This dissertation contributes substantively to previous efforts to humanize, decolonize and unveil the complex layers that sustain educational inequity and marginalization in languages and literacies education in Global South countries like Colombia (Bonilla et al., 2022, 2024; Guerrero Nieto et al., 2022; Mejía et al., 2022; Ortega, 2022). Not only do the findings advance the discourse on decolonizing methodologies, but they also provide practical implications that bridge decolonial theories and educational research and praxis. For instance, the methodological developments—exploring alternative methods of knowledge co-construction that serve marginalized and racialized communities—respond to the pressing need for a relational praxis and rigor in qualitative research (Carvajal Medina et al., 2022; Stein et al., 2022).

Furthermore, the three papers in this dissertation have important implications for decolonizing literacies and language education in communities that have been historically marginalized. Striving towards the reconceptualization of literacies beyond a Eurocentric ideal or perspective, this study has shed light on the meaning-making practices of this rural community, showing how its members read and respond to the signs from the soil, the trees, the waters, the wind. These practices shape the cultural fabric of the community as has been described in the genesis of their storytelling traditions dependent on the characteristics of their surrounding hills and forests. Furthermore, the land-based literacies such as walking the forest or crossing creeks sustain the livelihoods of this community, for instance through the identification of water supplies as well as the creation of plant-based crafts that shape their circular economy. This decolonial understanding of the community's land-based literacies has important implications for sustainable literacy education to inform

land-caring practices in formal school contexts within rural communities. The curricula that have been cocreated with three teachers and community members of the Callemar township and El Carmen school are a good example of such uptake.

This study has demonstrated that teachers and community co-construction is possible and should be sustained since it has a transformative power. However, such participatory knowledge co-construction requires leveling status and respectful listening (Meixi et al., 2022; Rahm, 2019; San Pedro et al., 2017). I am hopeful that the codesigns stemming from this community-based collaboration shed light on the possibility of reframing educational purposes and that they help to overcome the push to homogenize students into Eurocentric, colonial ideals of what it means to be an ideal member of society.

Closing story

I am thinking of my grandpa Rafael, Papi, and his carpentry shop at the front of our house in Monteria. I remember the floor covered with sawdust. It was golden yellow most of the time, while others it was orange or brown. I supposed it would depend on the type of wood that had been sawed. I remember its strong smell prompted me to taste it, and I discovered that it was unexpectedly bitter. I loved playing with sawdust in my hands, and I remember its feeling—soft but hard to grasp within your clenched hand. At the age of 89, Papi was still in the workshop, making *marañitas*, or little carpentry work that was poorly paid. He was strong as a roble, we would say, sawing thick wooden slats despite the shoulder and back pain he would bear at night. He endured it most of his life until his last days.

When I moved in with my now ex-husband, Papi gifted us a rocking chair he had crafted with his own hands. I don't remember exactly how, but this rocking chair on which I breastfed my daughter during her first year of life, was broken after Papi passed. I asked my uncle Pedro, my grandpa's only apprentice from his 14 children, to fix it. However, he couldn't. There was a secret to the assembly of the chair that my uncle did not learn and that Papi had taken with him.

I can not separate my (hi)story from this research study. While my grandfather Rafael showed great wit and skill in communicating meanings through the crafting of furniture, his skills to bring his designs alive through wood were never valued enough, at least not in a socioeconomic sense. I wonder how a Western education had enabled him to overcome poverty without being alienated from his knowledges and literacies, from his skills to read and compose texts with wood.

The Western education I have received has enabled me to develop alphabetic and academic literacies through which I have secured economic and social privileges. One of those privileges is having the time to dedicate four years of my life to pursuing a question and walking a path that has taken me to unforeseen answers. However, being part of and benefiting from this educational system, I have also realized its flaws, one of which is the limitation to hegemonic forms of knowledge construction. Limiting our knowledge to the Western gaze not only dismisses other outlooks, but it also actually destroys worlds, territories, communities and their ways of being.

I have grappled with the tension of meeting the academic expectation of Western social sciences while doing research on pluriversal literacies. For instance, while I advocate for pluriversal literacies, I have not succeeded in articulating my ideas through means other

than written words. I have carried this tension since the collaboration with the Callemar community started. I have feared not to be able to articulate clearly enough the value of their stories and literacies, not to honor the uniqueness of their practices. I ask forgiveness for any misinterpretation or dismissal that this study may carry.

Nonetheless, I also find that this is an opportunity to call out one of the limitations of Western literacies to construct and disseminate knowledges: there is so much that written words cannot tell. Many knowledges living in the land, the waters, the many territories that resist being grasped by the Western one world ontology. I close this study partially, hoping to leave traces to open new paths for literacies education that sustains the pluriverse.

REFERENCES

Armitage, J. (2021). Desert participants guide the research in central australia. In *In K. Heugh, C. Stroud, K. Taylor-Leech, & P. De Costa (Eds.), A sociolinguistics of the South* (pp. 214–232). Routledge.

Ballinger, S., Fielding, R., & Tedick, D. J. (Eds.). (2024). *Teacher development for content-based language education: international perspectives* (1st ed). Multilingual Matters.

Bang, M., Faber, L., Gurneau, J., Marin, A., & Soto, C. (2016). Community-based design research: Learning across generations and strategic transformations of institutional relations toward axiological innovations. *Mind, Culture, and Activity*, *23*(1), 28–41. https://doi.org/10.1080/10749039.2015.1087572

Battiste, M. (2013). *Decolonizing education: Nourishing the learning spirit*. Purich Publishing Limited.

Battiste, M., & Henderson, J. Y. (Sa'ke'j). (2000). *Protecting Indigenous knowledge and heritage: a global challenge*. University of British Columbia Press. https://doi.org/10.59962/9781895830439

Becerra Posada, T. (2024). Potential of a pluriversal literacies framework for decolonizing English as foreign language (EFL) policy and practice in Colombia. *Colombian Applied Linguistics Journal*, *26*(1), 24–32. https://doi.org/10.14483/22487085.20531

Blandón-Ramírez, F., & Colombo, L. (2024). Nuevos estudios de literacidad: Reflexiones sobre desarrollos conceptuales para ampliar perspectivas decoloniales de

investigación con comunidades. *Folios*, *60*, Article 60. https://doi.org/10.17227/folios.60-18826

Blockett, R., Taylor, L. D., & Mobley, S. D. (2022). "If you can't go to bella noche's …": on the onto-epistemological possibilities for qualitative researchers. In *Weaving an otherwise*. Routledge.

Bonilla, S., Cruz Arcila, F., & Cohen, V. (2024). *Raza, racialización y segundas lenguas*. Universidad Distrital.

Bonilla, S., Cruz, F., & Solano, V. (2022). Configuraciones de alteridad en prácticas pedagógicas de segundas lenguas—Español e inglés—En Colombia. *Praxis & Saber*, *13*(35), e14712. https://doi.org/10.19053/22160159.v13.n35.2022.14712

Cabaluz, F. (2017). Educación, Racismo y Descolonización. Reflexiones pedagógicas a partir de Silvia Rivera Cusicanqui. *Actuel Marx/Intervenciones*, *22*, 153–174.

Cajete, G. (2000). *Native science: Natural laws of interdependence*. Clear Light Publishers.

Carvajal Medina, N. E., Hurtado Torres, F. Á., Lara Páez, M. Y., Ramírez Sánchez, M., Barón Gómez, H. A., Ayala Bonilla, D. A., & Coy, C. M. (2022). Entretejidxs: Decolonial threads to the self, the communities, and EFL teacher education programs in Colombia. *Íkala, Revista de Lenguaje y Cultura*, *27*(3), 596–626. https://doi.org/10.17533/udea.ikala.v27n3a02

Cruz Arcila, F. (2018). ELT policy interpretations and translations in rural Colombia. *Current Issues in Language Planning*, *19*(4), 363–382. https://doi.org/10.1080/14664208.2017.1377903

Cruz-Arcila, F. (2018). The wisdom of teachers' personal theories: Creative ELT practices from colombian rural schools. *Profile: Issues in Teachers' Professional Development*, *20*(2), 65–78. https://doi.org/10.15446/profile.v20n2.67142

Dewayani, S. (2013). What do you want to be when you grow up? self-construction in indonesian street children's writing. *Research in the Teaching of English*, *47*(4), 365–390. https://doi.org/10.58680/rte201323631

Edwards, W., & Kalan, A. (2024). Addressing the subjugation of knowledge in educational settings through structuration of teacher research. *The Canadian Journal of Action Research*, *24*(1), 56–80. https://doi.org/10.33524/cjar.v24i1.664

Ehret, C. (2015). *Movement, sensibilities and desire: Coming to know affective dimensions of adolescents' experiences with literacy and new media in school, on their own, and in the hospital*. Vanderbilt University.

Enciso, P. (2019). Stories of becoming: Implications of *future-oriented theories* for a vital literacy education. *Literacy*, *53*(1), 46–55. https://doi.org/10.1111/lit.12175

Escobar, A. (2007). Worlds and knowledges otherwise: The Latin American modernity/coloniality research program. *Cultural Studies*, *21*(2–3), 179–210. https://doi.org/10.1080/09502380601162506

Escobar, A. (2008). *Territories of difference: Place, movements, life, redes*. Duke University Press.

Escobar, A. (2010). Worlds and knowledges otherwise: The Latin American modernity/coloniality research program. In *Globalization and the Decolonial Option*. Routledge.

Escobar, A. (2014). *Sentipensar con la tierra. Nuevas lecturas sobre desarrollo, territorio y diferencia* (1st ed.). UNAULA.

Escobar, A. (2018). *Designs for the pluriverse: Radical interdependence, autonomy, and the making of worlds*. Duke University Press.

Escobar, A. (2020). Política pluriversal: Lo real y lo posible en el pensamiento crítico y las luchas latinoamericanas contemporáneas. *Tabula Rasa*. https://doi.org/10.25058/20112742.n36.13

Espinosa Miñoso, Y., Gómez Correal, D. M., & Ochoa Muñoz, K. (Eds.). (2014). *Tejiendo de otro modo: Feminismo, epistemología y apuestas descoloniales en Abya Yala*. Coloquio Tejiendo de Otro Modo : Feminismo, Epistemología y Apuestas Descoloniales en Abya Yala, Popayán, Colombia. Editorial Universidad del Cauca.

Fals Borda, O. (2002). *Historia doble de la costa* (2. ed). Universidad Nacional de Colombia : Banco de la República : Ancora Editores.

Freire, Paulo. (1983). The importance of the act of reading. In P. Freire & D.Macedo (Eds.), *Literacy: Reading the word and the world* (pp. 139-145). Bergtin & Garvey.

Gagné, A., Amir Kalan, & Sreemali Herath. (2022). *Critical action research challenging neoliberal language and literacies education: auto and duoethnographies of global experiences*. Peter Lang Inc., International Academic Publishers.

Gee, J. P. (2008). *Social linguistics and literacies: Ideology in discourses* (3rd ed). Routledge.

Gee, J. P. (2014). *Literacy and education.* Taylor & Francis Group. http://ebookcentral.proquest.com/lib/mcgill/detail.action?docID=1873790

Green, W., & Corbett, M. (2013). *Rethinking rural literacies: Transnational perspectives.* Palgrave Macmillan.

Guerrero Nieto, C. H. (Ed.). (2023). *Unauthorized outlooks on second languages education and policies: Voices from Colombia*. Palgrave Macmillan.

Guerrero Nieto, C. H., Jordão, C. M., & Veronelli, G. (2022). Decoloniality in ELT: A political project. *Ikala, Revista de Lenguaje y Cultura*, *27*(3), 586–594. https://doi.org/10.17533/udea.ikala.v27n3a01

Gutiérrez, K. D. (2008). Developing a sociocritical literacy in the third space. *Reading Research Quarterly*, *43*(2), 148–164. https://doi.org/10.1598/RRQ.43.2.3

Heath, S. B. (1982). What no bedtime story means: Narrative skills at home and school. *Language in Society*, *11*(1), 49–76. https://doi.org/10.1017/S0047404500009039

Ishimaru, A. M. (2020). *Just schools: Building equitable collaborations with families and communities*. Teachers College Press.

John, K. D. (2019). Rez Ponies and confronting sacred junctures in decolonizing and indigenous education. In L. T. Smith, E. Tuck, & Y. Wang (Eds.). In , *Indigenous and decolonizing studies in education: Mapping the long view* (pp. 51–63). Routledge.

Kalan, A. (2024). Towards a posthumanist sociomaterial conceptualization of intercultural rhetoric. *Journal of Rhetoric, Professional Communication, and Globalization, 12*(1), 1-21. https://docs.lib.purdue.edu/rpcg/vol12/iss1/1/

Kalan, A. (2021). *Sociocultural and power-relational dimensions of multilingual writing: Recommendations for deindustrializing writing education.* Multilingual Matters. https://doi.org/10.21832/9781788927819

Kimmerer, R. W. (2013). *Braiding sweetgrass: Indigenous wisdom, scientific knowledge and the teachings of plants* (First paperback edition). Milkweed Editions.

Kinloch, V. (2009). Literacy, community, and youth acts of place-making. *English Education, 41*(4), 316–336.

Leander, K. M., & Ehret, C. (Eds.). (2019). *Affect in literacy teaching and learning pedagogies, politics, and coming to know.* Routledge.

Lenters, K., & McDermott, M. (2020). *Affect, embodiment, and place in critical literacy: Assembling theory and practice*. Routledge. https://www.routledge.com/Affect-Embodiment-and-Place-in-Critical-Literacy-Assembling-Theory-and/Lenters-McDermott/p/book/9780367784164

Macedo, D. P. (Ed.). (2019). *Decolonizing foreign language education: The misteaching of English and other colonial languages*. Routledge.

Machado de Oliveira, V. (2021). *Hospicing modernity: Facing humanity's wrongs and the implications for social activism*. North Atlantic Books. http://ebookcentral.proquest.com/lib/mcgill/detail.action?docID=6715826

Mackenzie, L. (2020). A critical evaluation of the social justice implications of the Colombian government's English-Spanish bilingualism policies. *Current Issues in Language Planning, 21*(2), 117–134. https://doi.org/10.1080/14664208.2019.1615743

Marin, A. (2013). *Learning to attend and observe: Parent-child meaning making in the natural world* [Doctoral dissertation]. Northwestern University.

Marin, A. (2020). Ambulatory sequences: ecologies of learning by attending and observing on the move. *Cognition and Instruction*, *38*(3), 281–317. https://doi.org/10.1080/07370008.2020.1767104

Meixi, Marin, A., Nzinga, K., Palomar, M., Elliott, E., Elliott, S., Shield, A. E., Scott, M., Shaw, M. S., Zuniga-Ruiz, S., & Booker, A. (2022). *Storytelling and storylistening towards collective learning and relational becoming*. https://repository.isls.org//handle/1/8971

Mejía, A.-M. de, Giraldo, S. V., & Miranda, N. (2022). Critical perspectives on language education in multilingual Colombia: An introduction. In *Language Education in Multilingual Colombia*. Routledge.

Méndez Torres, G., López Intzín, J., Marcos, S., Osorio Hernández, C., Red Interdisciplinaria de Investigadores de los Pueblos Indios de México, Asociación Civil, & Red de Feminismos Descoloniales (Eds.). (2013). *Senti-pensar el género: Perspectivas desde los pueblos originarios* (1a. edición). Red Interdisciplinaria de Investigadores de los Pueblos Indios de México : Red de Feminismos Descoloniales ; Taller Editorial La Casa del Mago.

Mignolo, W. (1994). Signs and their transmission: The question of the book in the new world. In E. Hill Boone & W. Mignolo (Eds.), *Writing without words: Alternative literacies in Mesoamerica and the Andes* (pp. 220–270). Duke University Press.

Mignolo, W. (2002). The geopolitics of knowledge and the colonial difference. *South Atlantic Quarterly*, *101*(1), 57–96. https://doi.org/10.1215/00382876-101-1-57

Mignolo, W. (2012). *Local histories/global designs: coloniality, subaltern knowledges, and border thinking* (1st ed.). Princeton University Press. https://doi.org/10.23943/princeton/9780691156095.001.0001

Mignolo, W. (2018). Foreword. On pluriversality and multipolarity. In B. Reiter (Ed.), *Constructing the pluriverse: The geopolitics of knowledge* (pp. ix–xvi). Duke University Press.

Mora, R. A. (2015). City literacies in second languages. *Journal of Adolescent & Adult Literacy, 59*(1), 21–24. https://doi.org/10.1002/jaal.440

Museus, S. D., & Wang, A. C. (2022). Refusing neoliberal logics in research design. In *Weaving an otherwise*. Routledge.

Navarro, F. (2024). Prólogo: ¿Enculturación o justicia? Tensiones entre competencias y prácticas académicas en la enseñanza de la escritura. In K. Rengifo Mattos & E. M. Ochoa Villanueva (Eds.), *Centros y programas de escritura: Estrategias y modelos* (pp. 6–18). ITESO.

Ortega, Y. (Forthcoming). *Pluriversal Applied Linguistics: Implications for language teaching and research from the Global South*. De Gruyter Mouton

Ortega, Y. (2022). Late capitalism and the commodification of English in Colombia: The shaping of language education policy and practice. In N. Miranda, A. M. De Mejia, & S. V. Giraldo (Eds.), *Language education in multilingual Colombia: critical perspectives and voices from the field* (1st ed.). Taylor & Francis Group.

Ortega, Y. (2023). Onward to Pquyquy (or thinking with the heart): Conceptualizing the decolonization of being for language teaching and research. In *Decolonizing applied linguistics research in Latin America*. Routledge.

Owoo, M. A. A.-N. (2022). Mobilizing pedagogical agency for mother tongue-based bilingual education (MTBE) in Ghana: An autoethnography. In A. Gagne, A. Kalan, & S. Herath (Eds.), *Critical Action Research Challenging Neoliberal Language and Literacies Education: Auto and Duoethnographies of Global Experiences* (1st ed., pp. 265–286). Peter Lang Inc., International Academic Publishers.

Pahl, K., Rowsell, J., Collier, D., Pool, S., Rasool, Z., & Trzecak, T. (2020). *Living literacies: literacy for social change*. The MIT Press. https://doi.org/10.7551/mitpress/11375.001.0001

Paris, D., & Winn, M. T. (Eds.). (2014). *Humanizing research: Decolonizing qualitative inquiry with youth and communities*. SAGE Publications.

Patel, L. (2016). *Decolonizing educational research: From ownership to answerability*. Routledge.

Perry, M. (2021). Pluriversal literacies: Affect and relationality in vulnerable times. *Reading Research Quarterly*, *56*(2), 293–309. https://doi.org/10.1002/rrq.312

Perry, M. (2023). *Pluriversal literacies for sustainable futures: When words are not enough* (1st ed.). Routledge. https://doi.org/10.4324/9781003302360

Perry, M., Ramos, M., & Palacios, N. (2023). Changing conceptions of literacy: Pluriversal literacies. In M. Slowey, H. Heribert, & M. Osborne (Eds.), *Adult Education and Social Justice: International Perspectives* (pp. 163–174). Firenze University Press.

Pham, J. H. (2022). Racial micropolitical literacy: Examining the sociopolitical realities of teachers of color co-constructing student transformational resistance. *Curriculum Inquiry*, 1–26. https://doi.org/10.1080/03626784.2022.2042162

Posada Ortiz, J. Z., & Castañeda Peña, H. (2021). Commodity, immunity, and struggle: (re)visiting senses of community in ELT. *Colombian Applied Linguistics Journal*, *23*(2), 182–195. https://doi.org/10.14483/22487085.16707

Rahm, J. (2019). The restorying of STEM learning through the lens of multiples. *Cognition and Instruction*, *37*(3), 408–413. https://doi.org/10.1080/07370008.2019.1624550

Rivera Cusicanqui, S. (2010a). *Ch'ixinakax utxiwa: Una reflexión sobre prácticas y discursos descolonizadores*. Retazos : Tinta Limón Ediciones.

Rivera Cusicanqui, S. (2010b). The notion of "rights" and the paradoxes of postcolonial modernity (M. Geidel, Trans.). *Qui Parle*, *18*(2), 29–54. https://doi.org/10.5250/quiparle.18.2.29

Rivera Cusicanqui, S. (2015). *Sociología de la imagen: Miradas ch'ixi desde la historia andina*. Tinta Limón Ediciones.

Rowsell, J., Morrell, E., & Alvermann, D. E. (2017). Confronting the digital divide: debunking brave new world discourses. *The Reading Teacher*, *71*(2), 157–165. https://doi.org/10.1002/trtr.1603

Sakhiyya, Z., & Hapsari, C. T. (2021). Critical literacies in Indonesia. In J. Z. Pandya, R. A. Mora, J. H. Alford, N. A. Golden, & R. S. De Roock, *The handbook of critical literacies* (1st ed., pp. 169–176). Routledge. https://doi.org/10.4324/9781003023425-19

San Pedro, T., Carlos, E., & Mburu, J. (2017). Critical listening and storying: Fostering respect for difference and action within and beyond a native american literature classroom. *Urban Education*, *52*(5), 667–693. https://doi.org/10.1177/0042085915623346

San Pedro, T., & Kinloch, V. (2017). Toward projects in humanization: Research on co-creating and sustaining dialogic relationships. *American Educational Research Journal*, *54*(1_suppl), 373S-394S. https://doi.org/10.3102/0002831216671210

Scribner, S., & Cole, M. (1978). Literacy without Schooling: Testing for Intellectual Effects. *Harvard Educational Review*, *48*(4), 448–461. WorldCat.org. https://doi.org/10.17763/haer.48.4.f44403u05l72x375

Stein, S., Andreotti, V., Ahenakew, C., Susa, R., Valley, W., Amsler, S., Cardoso, C., Siwek, D., Cajkova, T., & D'Emilia, D. (2022). Methodologies for gesturing towards decolonial futures. In *Weaving an otherwise*. Routledge.

Stelmach, B. L. (2018). A Synthesis of international rural education issues and responses. *The Rural Educator*, *32*(2). https://doi.org/10.35608/ruraled.v32i2.432

Street, B. V. (1984). *Literacy in theory and practice*. Cambridge University Press.

Styres, S. (2019). Literacies of land. In L. T. Smith, E. Tuck, & W. Yang (Eds.),. In *Indigenous and decolonizing studies in education. Mapping the long view* (pp. 24–37). Routledge.

Tachine, A., & Nicolazzo, Z. (Eds.). (2023). *Weaving an Otherwise: In-Relations Methodological Practice*. Routledge. https://doi.org/10.4324/9781003448648

The New London Group. (1996). A Pedagogy of multiliteracies: designing social futures. *Harvard Educational Review*, *66*(1), 60–93. https://doi.org/10.17763/haer.66.1.17370n67v22j160u

Tuck, E., & Yang, K. W. (2021). La descolonización no es una metáfora. *Tabula Rasa*, *38*, 61–111. https://doi.org/10.25058/20112742.n38.04

Usma, J. (2009). Globalization and language and education reform in Colombia: a critical outlook. *Íkala, Revista de Lenguaje y Cultura*, *14*(2), Article 2. https://revistas.udea.edu.co/index.php/ikala/article/view/2200

Vossoughi, S., Jackson, A., Chen, S., Roldan, W., Escudé, M., Meg Escudé, Meg Escudé, & Meg Escudé. (2020). Embodied pathways and ethical trails: studying learning in and through relational histories. *The Journal of the Learning Sciences*, *29*(2), 183–223. https://doi.org/10.1080/10508406.2019.1693380

Williams, H., & Bermeo, M. J. (2020). A decolonial imperative: Pluriversal rights education. *International Journal of Human Rights Education*, *4*(1). https://repository.usfca.edu/ijhre/vol4/iss1/1

Wohlwend, K. E. (2020). *Literacies that move and matter: Nexus analysis for contemporary childhood*. Routledge.

Zavala, V. (2019). Justicia sociolingüística para los tiempos de hoy. *Íkala, Revista de Lenguaje y Cultura*, *24*(2), 343–359. https://doi.org/10.17533/udea.ikala.v24n02a09