Discussing a Concept for an Online Learning Platform with Rural Sixth-Grade Students in Mind: Evidence-Based Guidelines for Designers, Teachers, and Policy Change

Una Discusión sobre el concepto de una Plataforma de Aprendizaje en Línea con consideración a estudiantes de sexto grado de zonas rurales: lineamientos basados en la evidencia para Diseñadores, Docentes y Reforma Curricular

A discussão de um conceito para uma plataforma de aprendizagem on-line levando em conta estudantes rurais de sexta série: diretrizes baseadas em evidências para Designers, Professores e Mudança de políticas

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Abstract: While considerable research recognizes the need to promote linguistic and sociocultural learning among youth English language learners (ELLs) in rural communities, less research has explored the advantages of human-centered design (HCD) in achieving this goal. This study branches from a larger design research project to develop an online learning platform (FUNREAD), co-designed with English language teachers (ELTs), to promote linguistic and sociocultural learning among sixth grade ELLs in rural communities in Costa Rica. This study uses an HCD lens to analyze group interview data from two key national-level English curriculum advisers' insights and suggestions for improving language learning, equity, and representation for rural ELLs in Costa Rica. Key findings include (1) the need to adapt teaching materials and available technologies to demographic characteristics of rural ELLs, (2) especially when rurality plays a major role in how teaching, materials development, and curricular decisions are made. The study concludes that social justice education, with an emphasis on equity, representation, and translanguaging to support English language acquisition, is crucial to the development of effective teaching materials for rural ELLs in Costa Rica. Evidence-based guidelines derived from HCD are provided to assist in the development process.

Keywords: Social justice, Bilingual education, Rural education, Educational materials, Human-Centered design, Online Learning Platform

Resumen: Mientras que un número considerable de investigaciones reconocen la necesidad de promover el aprendizaje lingüístico y sociocultural entre los jóvenes estudiantes de inglés (ELL) en las comunidades rurales, menos investigaciones han explorado las ventajas del diseño centrado en el ser humano (HCD) para lograr este objetivo. Este estudio se deriva de un proyecto de investigación de diseño más amplio para desarrollar una

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plataforma de aprendizaje en línea (FUNREAD), codiseñada con profesores de inglés (ELT), para promover el aprendizaje lingüístico y sociocultural entre los ELL de sexto grado en las comunidades rurales de Costa Rica. Este estudio utiliza una lente de HCD para analizar los datos de entrevistas grupales de dos asesores clave del currículo de inglés a nivel nacional y sus ideas y sugerencias para mejorar el aprendizaje de idiomas, la equidad y la representación de los estudiantes ELL rurales en Costa Rica. Los hallazgos clave incluyen (1) la necesidad de adaptar los materiales didácticos y las tecnologías disponibles a las características demográficas de los estudiantes ELL rurales, (2) especialmente cuando la ruralidad juega un papel importante en cómo se toman las decisiones sobre la enseñanza, el desarrollo de materiales y el currículo. El estudio concluye que la educación para la justicia social, con énfasis en la equidad, la representación y el translenguaje para apoyar la adquisición del inglés, es crucial para el desarrollo de materiales didácticos eficaces para los estudiantes ELL rurales en Costa Rica. Se proporcionan directrices basadas en la evidencia derivadas del HCD para ayudar en el proceso de desarrollo.

Palabras claves: Justicia social, Educación bilingüe, Educación rural, Materiales educativos, Diseño centrado en el ser humano, Plataforma de aprendizaje en línea

Resumo: Embora existam pesquisas consideráveis que reconhecem a necessidade de promover a aprendizagem linguística e sociocultural entre os jovens estudantes de língua inglesa (ELLs) em comunidades rurais, um número menor de pesquisas explora as vantagens do design centrado no ser humano (HCD) para atingir este objetivo. Este estudo deriva de um projeto de pesquisa mais amplo sobre o desenvolvimento de uma plataforma de aprendizagem online (FUNREAD), coprojetada com professores de língua inglesa (ELTs), para promover a aprendizagem linguística e sociocultural entre ELLs da sexta série em comunidades rurais na Costa Rica. Este estudo usa uma lente HCD para analisar dados vindos de entrevistas em grupo a partir das percepções e sugestões dos principais consultores curriculares de inglês em nível nacional sobre como melhorar o aprendizado de idiomas, a equidade e a representação para ELLs rurais na Costa Rica. As principais conclusões incluem (1) a necessidade de combinar os materiais de ensino e as tecnologias disponíveis com as características demográficas dos ELL rurais, (2) particularmente onde a ruralidade desempenha um papel importante na forma como o ensino, o desenvolvimento de materiais e as decisões curriculares são feitos. O estudo conclui que a educação para a justiça social, com ênfase na equidade, representação e translinguagem para apoiar a aquisição do inglês, é crucial para o desenvolvimento de materiais de ensino eficazes para ELLs rurais na Costa Rica. Diretrizes baseadas em evidências derivadas do HCD são fornecidas para auxiliar no processo de desenvolvimento.

Palavras-chave: Justiça social, Educação bilíngue, Educação rural, Materiais didáticos, Design centrado no ser humano, Plataforma de aprendizado on-line

INTRODUCTION

Through design, people have created innovative products and solutions with real impact on people and society. However, only recently has the emphasis on human-centered design (HCD) in education prompted designers to "develop an understanding of and empathy for a diversity of users ... [given] their rich local contextual knowledge" (Klapwijk & Van Doorn, 2015, p. 151) and then "carefully identify stakeholders and contexts of use, and apply creative processes" to deliver solutions that meet users' needs (Giacomin, 2014, p. 609). In turn, these shifts toward HCD "help researchers and community members to explore their basic needs together in new ways, create innovative products and solutions to meet those needs, and deliver the resulting solutions with greater potential for sustainability" (Person et al., 2016, p. 57).

The main difference that educational HCD offers in comparison to previous design approaches is that it places real people at the center of the solution development process. Recent studies implementing HCD with elementary school children have demonstrated its benefits for fostering knowledge of and empathy toward others (Klapwijk & Van Doorn, 2015), decision-making and accountability when designing solutions for themselves and others (Saulnier & Brisson, 2018), enhanced development and implementation of community co-designed solutions (Person et al., 2016), and increased learning engagement overall (Rossano et al., 2020; Sandoval et al., 2022). While these studies are user- and context-specific, they illustrate implementation models for similar HCD educational projects. Specifically, in this study, researchers apply an HCD lens to analyze insights and suggestions for improving equity, representation, and language learning for sixth-grade English language learners (ELLs) and their English language teachers (ELTs) in rural Costa Rica.

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Because language acquisition is never merely linguistic but also sociocultural, it currently contributes to the reproduction of existing social inequities. Alternatively, education can involve a "conscious and reflexive blend of content and process intended to enhance equity across multiple social identity groups, foster critical perspectives, and promote social action" (Carlisle et al., 2006, p. 57). Applying this insight in rural, underserved and marginalized settings often encounters significant barriers when compared to more developed, urban settings (Kam, 2008; Murray, 2011). These obstacles arise across the whole of the educational environment, from classroom interactions with teachers and students to administrative and district level decisions regarding curriculum, particularly in regards diversity, inclusion, and equity (Cazden, 2012). While previous research has established the importance of social justice broadly for students' academic and social-emotional success (Hymel & Katz, 2019)—for example, that pedagogically effective diversity and inclusive curricula can also increase students' self-esteem and self-worth (Tedick & Wesely, 2015)—achieving such an inclusive and diverse education for all children, especially in rural communities, remains a challenge (Bridgeforth et al., 2021; Pettersson, 2017).

Rurality studies on "less populated places outside of large and small city centers to remote areas in the mountains, plains, and deserts across the nation" (Holder et al., 2016, ¶1) have drawn attention to the need for social justice in education. Broadly speaking, rurality includes non-urban or peri-urban geographic and racial-ethnic/cultural perspectives (Bridgeforth et al., 2021), including compact settlements (Rivera Alfaro & Porras Solís, 2018). Given the inevitable diversity of contexts, people's lived experiences, counter-narratives, and testimonies are central to any adequate framework for understanding local instances of rurality. While Nelson et al. (2021) affirm the need to develop a shared understanding of rurality across multiple geographies and stakeholders , they suggest that policymakers, researchers, and members of different communities should foster equity among communities, access to diverse services, and the well-being of society as a whole . Specifically for education, White (2015) warns against rurality becoming a "blind spot," such that policymakers unwittingly make rural people "invisible" in curricula (p. 53). This operates simultaneously on two levels, in the ways (1) that majority rural people and ways of life can be misrepresented by urban perspectives or values (Amalia, 2016; Murray, 2011), and (2) that groups further marginalized in rural areas (e.g., Indigenous, LGBT, and poorer groups) may not be included in the school, in the curriculum, in the conversation at all (Araujo & Strasser, 2003; Brochin, 2019). How to navigate curricular advocacy for the latter without blanket denigrations of rural majorities as racist, homophobic, or classist presents a model challenge for diversity, inclusion, and equity education generally (Derman-Sparks & Edwards, 2021; Hymel & Katz, 2019). This is especially critical given how dominant educational regimens can accidentally or perhaps deliberately reproduce unequal and unjust social relations (Bunyi, 2008; Kiramba, 2018).

Exacerbating this situation, policymakers have tended to give low priority to rural school needs (Instituto Internacional de Planeamiento de la Educación de la UNESCO & Organizacion de las Naciones Unidas para la Alimentación y la Agricultura, 2003; Masinire et al., 2014). As such, the adoption of specialized, contextualized, and inclusive curricula for underserved rural communities that address specific community needs would be a step toward widening the "methodologies and methods [for] use in rural school choice" (Bridgeforth et al., 2021, p. 10) and giving rural educational stakeholders a voice and opportunity to thrive in society (Ibarra-Vargas, 2022). However, such an approach must be done proactively, since rural ELTs are being asked or mandated to address underserved populations and to consider the full diversity of rural student populations for promoting equity and inclusion (Santamaria-Perez, 2021; Stenman & Pettersson, 2020).

This requires ELTs with professional development or experience facilitating social justice and context-sensitive curricula and professional retention strategies in rural areas that promote the educational development of rural children who are currently disadvantaged in comparison to their counterparts (Bridgeforth et al., 2021; Santamaria-Perez, 2021).

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Educational research in rural areas, especially in developing countries, suggests that rural development requires closer attention to the challenges imposed on their communities (Santamaria-Perez, 2021; White, 2015). In Latin America, a geographical area still considered underdeveloped, rural communities represent 20% of the population (Banco Mundial, 2016). In general, the socioeconomic and educational development of rural areas has been restricted, in part, by unequal policies and power dominance that excludes and subordinates them (Castillo, 2007). Denied strong and effective legislation to assist them, they face continued impoverishment and underdevelopment (Castillo, 2007; White, 2015). However, as White (2015) earnestly states, "Rurality is everybody's business, not [only] for those who live in rural places" (p. 50). Faced with context-specific challenges due to their "geographically isolated and economically distressed locations," (Bridgeforth et al., 2021, p. 5), rural areas experience systemic levels of poverty, developmental stagnation, and pronounced urban/rural educational disparities (Bridgeforth et al., 2021). Without the resources to receive a high-quality education in rural schools (Salas-Acuña, 2018), this results in lower literacy rates, academic underperformance, less access to higher education, and thus poorer employment opportunities, diminished national economies, and greater dependence on social safety nets (Bridgeforth et al., 2021; Masinire et al., 2014; White, 2015).

Language education is a critical site of these inequalities. Current research on bilingual education settings and children's language use in the classroom (e.g., native, heritage, foreign, second language, and multiple combinations) suggests *translanguaging* as a pedagogy "for understanding the process by which teachers navigate the dynamic language practices of their multilingual learners in relation to the kinds of language practices that are desired in school settings" (Donley, 2022, p. 8). Understanding this process would benefit from an inclusive teaching mindset among ELTs and other stakeholders for emerging bilinguals in English-only school contexts (Fu et al., 2019, 1; Viales Angulo & Carmona Miranda, 2014) like Costa Rica, where Spanish (the official language) is used in children's everyday life and English (a foreign language) is primarily used in the English classes.

With inclusive pedagogy built in, *translanguaging* operates both linguistically and socioculturally to "activate language learners' entire linguistic repertoire as learning tools and resources and engage them in rigorous learning in different academic settings" (Fu et al., 2019, 2; Ramírez & Bastidas, 2023; Viales Angulo & Carmona Miranda, 2014). As such, the privileged status of English in curricula and classrooms compared to other spoken languages illustrates how children's actual linguistic resources are "not equally valued in society and schools" (García, 2020, p. 557; Mora Escalante, 2016). This is not to deny the increasingly global dominance of English or the importance of learning it. Rather, it highlights how inadequately operationalizing bi- or multilingual education where English is not a national language has marginalizing effects on non-English speaking populations and students, especially in rural communities where the number of ELLs is steadily increasing (Ankeny et al., 2019).

Accompanying language acquisition as a critical site of education, all curricular language materials must also rely on audio, visual, or written representations of their content. For example, when teaching English vocabulary for the concept of "family," what words and images are chosen to pedagogically represent family? Are they ethnically identical or different? Who and how many head the family? How many family members are there—only immediate relatives or extended ones? Are they of the same or different genders or sex? Is sexuality represented as a significant familial element or is it excluded? What is their social class? That we can anticipate most such representations will feature one mother, one father, at least one son and one daughter (and possibly a pet)—all of them apparently relatively well-to-do—points as much to the problem of representing concepts in teaching materials generally as to the stereotypical power dynamics that define what constitutes a legitimate family in the first place (Araujo & Strasser, 2003; Derman-Sparks & Edwards, 2021). For the child growing up in an indigenous, single-parent, poor, or same-sex parent household—or who does not see themselves represented in the presented image of a family—they receive the "message" that their "family" and they are not really a

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family or family member; whether inadvertently or not, this reproduces marginalization in the language classroom (Murray, 2011; Woodley et al., 2017).

While this problem of representation can be blunted in the classroom by ELTs' verbal inclusion of non-stereotypical family variations (Araujo & Strasser, 2003; Crary, 1992; Derman-Sparks & Edwards, 2021), this does not mandate against such inclusion in pedagogical materials. Specifically, scholars highlight storybooks as a pedagogical concept that not only introduces and integrates a wider variety of words and images in its representations of concepts (Araujo & Strasser, 2003; Derman-Sparks & Edwards, 2021) but also can operationalize translanguaging for bilingual literacy development (Donley, 2022; García, 2020). They also can deflect ostensibly "practical" objections to changes in curricular material that otherwise mask resistance to diversity and inclusion efforts. That is, for the purpose of illustrating "family" for English vocabulary acquisition, it is not necessary to limit representation only to its stereotypical forms.

Accordingly, the purpose of this study is to answer the following research question, "What evidence-based guidelines emerge from national English language curriculum advisers' insights, suggestions, and engagements with proposed improvements to language learning, equity, and representation (using digital bilingual storybooks featuring social justice themes and translanguaging)?" ,

MATERIALS AND METHODS

In general, design research consists of several phases carried out iteratively such that the "scientific findings are also products created (or discovered) through a design process" (Easterday et al., 2014, p. 321, italics in original). Accordingly, this qualitative study draws on participants' insights and suggestions to provide evidence-based guidelines for linguistically and socioculturally effective educational materials' development.

The study utilizes group interviews (Creswell, 2009; Spradley, 2016) with two national-level English language education advisers who are responsible for guiding and supporting regional advisers and ELTs across Costa Rica. These key informants (Faifua, 2014) were purposefully selected for their expert status on the topic (Maguire, 2001) and their detailed knowledge of and access to decision-making authority for education and curriculum policy in Costa Rica's public school system. Their global perspectives on the Costa Rican educational context, informed by their expertise, will be used in this study to develop evidence-based guidelines. These guidelines will be further examined with participants in subsequent phases of the study.

Also, for HCD, the earlier the input from participants, the greater the impact on the design of successful educational interventions (Person et al., 2016); data from these high-level educational stakeholders in particular contributes critically to the study overall. Prior to and during the first group interview, both participants were provided comprehensive project details as well as details regarding their voluntary involvement in the group interviews in writing, and they verbally consented to participate in this study. Prior to the interviews in mid-Spring 2022, the researchers shared the presentation materials and group interview questions via a Google® Drive link and the Zoom® link via email.

Two two-hour online Zoom® group sessions in English introduced and explored the concept of storybooks for use in an online bilingual (Spanish/English) learning platform for ELLs grades 1 to 6. Storybooks offer linguistically and socioculturally effective learning materials by incorporating diversity and inclusion—i.e., the portrayal of diverse, underrepresented identity groups—and implementing translanguaging approaches to bilingual literacy development. Sessions were recorded and transcribed verbatim.

Data analysis employed thematic analysis to "describe implicit and explicit ideas within the data ... [and] capture the complexities of meaning within" the interview transcripts (Guest et al., 2012, pp. 10-11).

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Building from this study's rich, thick, and descriptive data (Geertz, 2008), both authors coded the group interview transcripts separately and later conferenced the codes and emergent themes via Zoom® to check for inter-rater agreement (Gwet, 2014), discussing and resolving any disagreements until 100% agreement was reached. To protect the identity of the participants in the data, they were assigned the pseudonyms Participant 1 and Participant 2.

DISCUSSION OF RESULTS

This section presents and discusses the major findings identified in the study, focusing on four themes: (1) issues for inclusion, equity, and diversity in ELL classrooms, (2) the benefits and challenges of translanguaging, (3) the role and impact of curricular content in the classroom, and (4) the need for professional development. These findings have informed the development of guidelines aimed at enhancing educational practices and policies. Subsequently, these guidelines will be further discussed, demonstrating how they are rooted in and supported by the study's findings.

Evidence-Based Guidelines for Rural ELT: Integrating HCD, Social Justice, and Technology in Costa Rican Classrooms

Using an HCD approach (Sims, 2022; Styes, 2020), Table 1 summarizes three evidence-based guideline groups (social justice, technology and language, and sustainable teaching) and their associated sub-guidelines and supporting research that emerged from analysis of the group interview data. Each of these includes a materials development process for use by instructional designers and ELTs of students in rural classrooms in Costa Rica.

Table 1

Guidelines for Developing Linguistically and Socioculturally Effective Learning Materials for Teaching in Rural English-Language Classrooms in Costa Rica

Guidelines & Supporting Research	Materials Development Processes
Social Justice	
1. Teaching materials should explicitly introduce and address social justice matters (Amalia, 2016; Bridgeforth et al., 2021; Brochin, 2019; Cazden, 2012; Masinire et al., 2014; White, 2015)	(1) select a scenario or unit, (2) identify content, guidelines, and examples of social justice-related tasks, (3) consider their own examples, (4) categorize examples according to specific concepts (e.g., equity, diversity, inclusion), (5) evaluate examples for their relevance to children and their immediate context, (6) ask at least one peer expert to review all the former for feedback, (7) make revisions, and (8) execute the approach for materials development.
2. Teaching materials should represent people with different backgrounds (Murray, 2011; Nelson et al., 2021)	(1) select a scenario or unit, (2) identify examples of individuals and groups in the content, (3) consider adding excluded individuals and groups, (4) arrange individuals and groups according to cultural values, identity, and any other relevant aspect of their background, (5) rearrange individuals and groups according to their mutual interests and relationships, (6) ask at least one peer expert to review all the former for feedback, (7) make revisions, and (8) execute the concept for materials development
3. Teaching materials should acknowledge equity and disparity (Bridgeforth et al., 2021; Derman-Sparks & Edwards, 2021)	(1) select a scenario or unit, (2) identify examples of individuals and groups in the content who either experience disparities or not, (3) consider adding unaccounted individuals and groups, (4) arrange individuals and groups according to unequal conditions or treatment, (5) rearrange individuals and groups according to their mutual interests and relationships, 6) ask at least one peer expert to review all the former for feedback, (7) make revisions, and (8) execute the concept for materials development.

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4. Teaching materials should showcase diverse people, their roles, and their contributions (Araujo & Strasser, 2003; Crary, 1992; Derman-Sparks & Edwards, 2021; Funk et al., 2016)	(1) select a scenario or unit, (2) identify examples of underprivileged or discriminated-against individuals and groups in the content whose contributions make a difference in society, (3) consider adding unaccounted individuals and groups, (4) arrange individuals and groups according to their backgrounds and contributions, (5) ask at least one peer expert to review all the former for feedback, (6) make revisions, and (7) execute the concept for materials development.
Technology and Language (as a Technology)	
1. Teaching materials should implement bilingual approaches to learning (Donley, 2022; Fu et al., 2019; García, 2020)	(1) identify philosophical principles and teaching methodologies in the curriculum, (2) consider emerging methodologies and principles for bilingual education not covered in the curriculum, (3) evaluate the alignment of curricular specifications, requirements, examples, and instructions with the former, (4) make a plan for implementing specific principles and strategies, (5) ask at least one peer expert to review all the former for feedback, (6) make revisions, and (7) execute the concept for materials development
2. Teaching materials should consider students' technology needs (Amalia, 2016; Araujo & Strasser, 2003; Glas et al., 2021; Woodley et al., 2017)	(1) identify the technologies available to students for learning, (2) create student profiles to assess readiness and willingness to multiple delivery formats, (3) determine optimal formats to create and deliver materials, (4) create a plan for supporting students in learning available technologies, (5) ask at least one peer expert to review all of the former for feedback, (6) make revisions, and (7) execute the idea or concept for materials development.
3. Teaching materials should consider students' language use needs (Santamaria-Perez, 2021)	(1) identify all classroom languages used formally and informally, (2) create student profiles by languages used for learning, (3) list strategies to promote multiple languages for learning, (4) make a plan for supporting students in collaborating and learning with peers while using multiple languages, (5) ask at least one peer expert to review all the former for feedback, (6) make revisions, and (7) execute the concept for materials development
Sustainable Teaching	
1. Teaching materials should afford accessibility (Glas et al., 2021; Hymel & Katz, 2019; Santamaria-Perez, 2021)	(1) identify students' available technologies for learning, (2) create student profiles according to their accessibility needs, (3) identify the appropriate tools and features in the technologies available to the student, (4) confirm with the student, student's parents, and other teachers the helpfulness of the identified tools and features for learning, (5) create or adapt suggested tasks and examples implementing the tools and features, (6) ask at least one peer expert to review all the former for feedback, (7) make revisions, and (8) execute the concept for materials development
2. Teaching materials should foster autonomous learning (Reinders & Balcikanli, 2011)	(1) select a scenario or unit, (2) create or adapt suggested tasks and examples, (3) arrange tasks and examples sequentially, according to their complexity or mastery requirements, (4) create instructions that guide students and provide suggestions as they move from one step or activity to another, (5) create immediate feedback that provides students with direction and understanding of the content once or in the process of completing tasks, (6) ask at least one peer expert to review all the former for feedback, (7) make revisions, and (8) execute the concept for materials development.
3. Teaching materials should align with mandated curricular requirements (Santamaria-Perez, 2021; Stenman & Pettersson, 2020)	(1) select a scenario or unit, (2) identify curricular specifications, requirements, examples, and instructions, (3) list ideas for materials that meet the specifications and requirements, (4) ask at least one peer expert to review all the former for feedback, (5) make revisions, and (6) execute the concept for materials development.
4. Teaching materials should foster agents of change (Bridgeforth et al., 2021; Nelson et al., 2021; White, 2015)	(1) select a scenario or unit, (2) identify skill sets for task completion, (3) create a plan to foster skill development via learning tasks with examples, (4) ask at least one peer expert to review all the former for feedback, (5) make revisions, and (6) execute the concept for materials development.

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5. Teaching materials should foster engagement and interactivity (Chapman & Rich, 2018; Dehghanzadeh et al., 2019; Nahmod, 2017; Sundqvist & Wikström, 2015; Zarzycka-Piskorz, 2016)	(1) select a scenario or unit, (2) create or adapt suggested tasks and examples, (3) identify students' available learning technologies, (4) list gameful strategies and interactive features available, (4) determine best formats to create and deliver materials with gamified and interactive features, (5) ask at least one peer expert to review all the former for feedback, (6) make revisions, and (7) execute the concept for materials development.
6. Teaching materials should promote professional development (Santamaria-Perez, 2021)	(1) select a scenario or unit, (2) create or adapt suggested tasks and examples, (3) create a teacher section with detailed descriptions of concepts, principles, strategies, tips, and examples supporting teachers' praxis for successful implementation and the development of their own materials, (4) ask at least one peer expert to review all the former for feedback, (5) make revisions, and (6) execute the concept for materials development

The above provides a framework for educational policy change for teaching and decision-making in curricula in alignment with social justice education, translanguaging, and rurality. While further collaborative research with ELTs and community members is needed for the next steps, the guidelines can be complemented by the principles discussed in the themes below.

Social Justice: An Educational Policy and Opportunity in the School Curriculum

Principle 1. Explicitly promote the principles of social justice education in the curriculum.

It is of great importance to visualize a curriculum that takes into consideration a variety of contexts, especially in rural areas, where the idea of a one-size-fits-all approach becomes ineffective and detrimental for schools in rural communities (Johnson & Howley, 2015). In this sense, since the curriculum is the mechanism that educational authorities use to lead societies to socio-political and economic development, it should be equitable. The curriculum should actually reflect the ethnic, racial, and cultural diversity of different communities such that community members' voices are heard and respected in educational practices (Figueroa-Iberico, 2020). A deep restructuring of the school curriculum should be considered in light of an inclusive social justice approach.

In Costa Rica, social justice education is implemented through psychosocial tasks (Mora Escalante, 2016). According to study participants, those curricular tasks include guidelines for ELTs for planning lessons arranged into scenarios. Scenarios provide content, strategies, and task resources to achieve three types of learning: knowing, doing, and being and living in community. Table 2 adapted from Mora Escalante (2016) illustrates select tasks according to the three types of learning.

Table 2
Task and Types of Learning

Learn to know	Learn to do	Learn to be and live in community
Grammar & Sentence Frame Simple present tense and personal subject pronouns (SVC) - (Juan Santamaria, Sandra Cauffman,) are national heroes/famous people. - He/she is sacrificial. (brave, courageous) - He/she fights crime. (flies, disappears, freezes things, destroys, jumps, etc.)	Functions - Describing people's achievements and personal characteristics. - Describing superheroes. - Describing and comparing heroic actions. - Narrating past events using connectors.	Psycho-social Psychosocial - Expressing respect and pride for local and national culture, outstanding people, family, and friends. - Explaining motivations to improve/change lives. - Expressing respect for diversity of gender roles and elders in our society.

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One participant asserted that social justice education is implicitly embedded within the school curriculum above (Participant 2). A second added that the three types of learning should enhance education for a new citizenship within the national school curriculum (Participant 1). They explain how social justice education is fostered in that curriculum

> *It brings this idea that is equal participation or constitution, and it's part of the educational policy of this country: bringing equality and social justice into the classroom, for everyone; not only in the classroom but for future citizenship (Participant 1).*

Beyond an implicit educational policy, participants affirmed that social justice, and social justice education per se, represent an opportunity and a commitment to students from early childhood education onward. Specifically, one participant described social justice as "a big umbrella" and "an issue that should be addressed since early childhood development" (Participant 1). For them, a shift in the ways ELTs present and address social justice and injustice with students, if at all, is "the only way to fight and create a change of mind ... since kids are young; they are beginning their lives" (Participant 1).

Their rationale for needed changes to how social justice education has been implemented in curricula is:

> *We need to begin that at early ages, and as I said before, we have it in our curriculum in an implicit way. But if we can develop materials that can make that more explicit and connected with what we have there, it would be great (Participant 1).*

Principle 2. Encourage practices that promote equity, diversity, inclusion, and rurality both in the curriculum and in children's everyday lives with community members through community engagement activities.

Inadequate educational practices reflected in educational policies for rural communities are detrimental to their development (Johnson & Howley, 2015). In this sense, existing policies fail to provide adequate support for the educational development of these communities. Unfortunately, some of these policies are created based on "ignorance and lack of care for rural places" (Johnson & Howley, 2015, p. 226). Therefore, it is necessary that policymakers identify schools in need of support and provide assistance accordingly. That process should involve collaborative research efforts, including ELTs and community members, to better understand and provide solutions to community and school needs. Additionally, offering public and inclusive spaces for learning and critical discussions with community members, including ELTs and ELLs, is of utmost importance for fostering broader perspectives. The former can be done through community engagement activities, including volunteerism, TED Talks, and community leadership programs.

To explain the relevance of social justice for school curricula, participants focused their discussion on how social justice education is implemented and why it matters. As "a big umbrella," this can cover several other concepts that deserve closer attention such as inclusion (representation), equity (redistribution), and diversity (recognition).

Inclusion (Representation)

One participant, referring to Costa Rica's estimated population of 5.2 million people in 2022, portrayed the country as "a very plural society" with "people from different backgrounds and ethnic groups that need to be recognized" (Participant 1). Among those groups, the participant recalled indigenous populations they have worked with firsthand on literary projects. Collaborations with indigenous groups included "storybooks for indigenous people written in Spanish [official language] and Bribri [indigenous language], or Spanish and Cabecar [indigenous language] ... but their languages are at real risk of disappearing" (Participant 1). They also remarked that the needs and interests of these ethnic groups and

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interests deserve representation in the school curriculum, therefore, "It's really something that we could work more on. We could never say, 'It's enough'" (Participant 1). In support of this statement, the second participant lobbied for acknowledging student life experiences during literacy and literature education.

> *If there is not a person, another human being who can expose me to other realities, and to other contexts, how would I know about that? How can I see how other people think? How can I know what other people are going through in the world if it's not by somebody sharing with me a resource or an experience? (Participant 2).*

They further elaborated on the role inclusive literature plays in representing indigenous groups and giving them a voice.

> *If you go and look for literature, what are those books? What are those stories? So, that's why I agree with you about this perspective on how these resources portray different realities and let people not only portray different realities but also allow everybody to it. To have a voice when they interact with the resources (Participant 2).*

The other participant noted that remaining "more open-minded to diversity … is still a challenge," especially to "other ways of thinking about religion, cultural backgrounds" (Participant 1). They referenced resistance arising from racism given "differences in terms of ethnic backgrounds" and xenophobia, as a "[r] ejection against foreigners according to their background" as well (Participant 2). Nevertheless, "Costa Rica is becoming more open in order to portray different scenarios of families," regardless of the political influence of the Catholic Church, usually supported by Costa Rica as a confessional state (Participant 1).

Equity (Redistribution)

COVID-19 widened the gaps around inequitable access to resources and educational quality, affecting both students and ELTs. One participant recalled rural school students need computers to receive class materials and submit their work and stressing a need for flexibility and change of paradigm in teaching:

> *They [students] do not have the technology. ... The thing is that we have to be flexible … and I think that is part of the social justice approach to know which populations can benefit more. I think we have to review our educational paradigms [and] bring new things that can help us to offer more opportunities to everyone because I think that's the idea. To not leave anyone behind (Participant 1).*

For the second participant, the above links equitable access and flexibility to accommodating students' needs, specifically a policy of fostering accessibility both in the curriculum and didactic materials.

> *[On] the topic of accessibility: I think that it's interesting because you're talking about diversity and minorities, and I know that this is a new topic because it happened to [the other participant] and me when we came into the office last year, and I said, "We need to create accessible material" (Participant 2).*

Finally, one participant commented on equity matters such as access to essential services and challenges specific to making equity issues visible in the curriculum:

> *We need to be more aware of the people that do not have a house; that do not have a job; that still cannot even finish primary school, high school, or university, because of poverty. We need to be aware of that and become a more empathetic society that really wants everybody to have the same opportunities. It is also a challenge to approach that, to make those topics age-appropriate for children (Participant 1).*

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Diversity (Recognition)

"Multiple groups in Costa Rica require and deserve recognition in the social sphere," one participant recalled (Participant 1). At the same time, because of misrecognition and historical gaps that continue to harm underserved groups, especially women, the misrecognition of women and gender roles have negatively affected women and the work needed to prompt change.

> *The social gaps are becoming bigger and bigger. So, I think in terms of gender, we have a debt. I think Costa Rica is working, but still, we need to continue creating more opportunities for women. We also need to empower them and develop good relationships and an understanding of gender roles. I think that is important in our country; there is a lot of violence. … The issue of gender equity is an issue in Costa Rica. I think violence against women is something that we have to keep on fighting, and besides that, I think of racism (Participant 1).*

Although women and racism were recognized as legitimate diversities, the second participant also highlighted (real or perceived) challenges around recognizing some underserved social groups, in this case LGBT:

> *I read the story "Arturo stays home," and yeah. There was something there that I was like, "Are we ready to talk about this? Are we ready to portray this kind of family openly in a story?" (Participant 2).*

Consequently, one participant emphasized that the pedagogic goal to "learn to live and be in the world" requires integration in curricula and teaching practices as well.

> *So, because we need to learn to live, we have one pillar in our curriculum which is "learn to live and be in the world." So, I think that in order to learn to live and be, we need to understand the rights of other people and the needs that other people have. We need to create an understanding of the otherness. I think that is very necessary for our society, which is not equal in Costa Rica (Participant 1).*

The discussion on social justice "a big umbrella" in the curriculum aligns with existing literature, emphasizing the integration of equity, diversity, and inclusion into curricula. This approach is particularly tailored to various contexts, including rural areas (White, 2015), aiming to reflect community diversity and challenge traditional power dynamics in educational content (Amalia, 2016; Murray, 2011), such as the representation of family structures (Araujo & Strasser, 2003; Crary, 1992; Derman-Sparks & Edwards, 2021). In Costa Rica, this is implemented through psychosocial tasks within the curriculum, which promote different types of learning. This method mirrors the literature's advocacy for inclusive language learning materials (Araujo & Strasser, 2003; Brochin, 2019), underlining the importance of inclusive educational resources.

Furthermore , the findings highlight the critical role of educational practices in promoting equity, diversity, and inclusion (Derman-Sparks & Edwards, 2021; Hymel & Katz, 2019), offering a nuanced perspective in the Costa Rican context (Ibarra-Vargas, 2022). This approach addresses specific challenges such as representing diverse family structures, indigenous groups, and addressing gender and racial inequities, echoing literature concerns about marginalization in education (Araujo & Strasser, 2003; Brochin, 2019). Additionally, the importance of initiating social justice education from early childhood is stressed, resonating with literature that advocates for embedding these values early in education to foster a more inclusive and equitable society (Araujo & Strasser, 2003; Derman-Sparks & Edwards, 2021).

Translanguaging: A Useful and Flexible Teaching and Learning Strategy

Principle 3. Implement Bilingual Education Using Translanguaging to Respond to Students' Needs.

Despite difficulties posed by rural schools' small budgets and resource shortages experienced in the classroom, translanguaging offers a valuable tool for promoting inclusive learning in communities with

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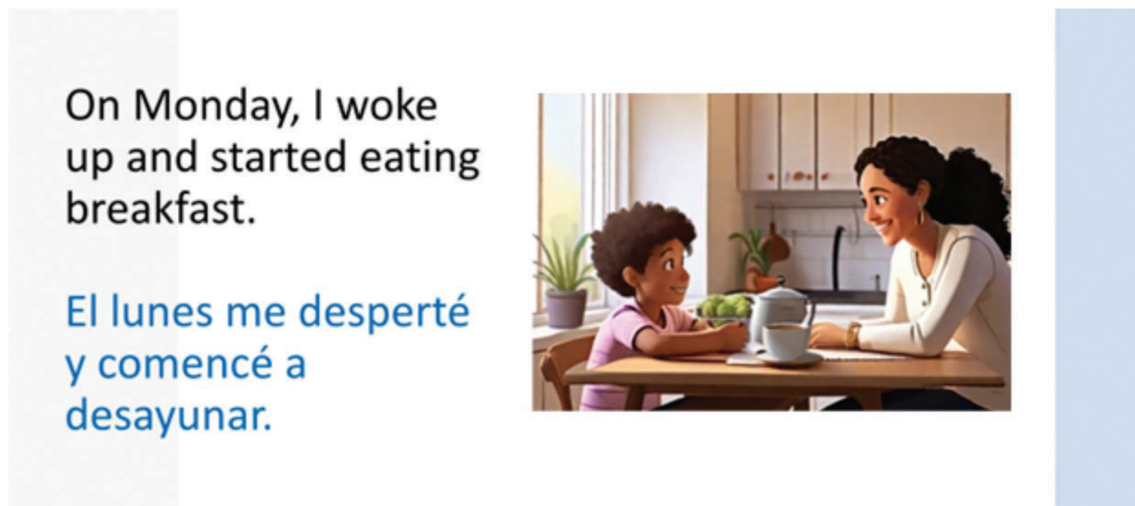
diverse students (Wijesekera et al., 2019). Translanguaging in rural classrooms offers a beneficial approach for assisting ELLs learning English, both in classrooms and online. Translanguaging as pedagogy allows rural ELLs to draw on their existing linguistic knowledge to develop literacy for negotiating meaning and communicating in English (Donley, 2022; Fu et al., 2019). Most importantly, translanguaging supports emergent bilinguals—especially children in rural communities—when developing English language skills, mediated by their overall repertoire of linguistic resources (Fu et al., 2019).

The Costa Rican primary school curriculum adopted a socio-constructivist approach where "[c]onstruction and reconstruction of knowledge is a continuing process, progressive, and never ending," that learners are "responsible member[s] of a world community," and that ELTs are "social engineers" (Mora Escalante, 2016, pp. 19-20). Within this curriculum, ELTs should be "knowledgeable about updated English language theories and methodologies'' (ibid, p. 28), should "[t]each English in English" (ibid, p. 35), and be "aware and sensitive about local and global issues and learners' affective and socio-cultural needs" (ibid, p.28). This background is a preamble to our findings concerning translanguaging and the school curriculum.

Prior to a discussion on translanguaging and the school curriculum, participants reviewed seven digital bilingual storybooks narrated in both English and Spanish (see Figure 1 and Synopsis). The researchers explained to participants that materials had been created at the onset of the COVID-19 lockdown in Costa Rica and highlighted social justice issues (e.g., socioeconomics, sexual identity) affecting school-age children in grades 1 to 6, their families, and communities, and are intended as sample materials for further development.

Figure 1

Illustrative picture of a page from the digital bilingual storybook, Arturo Stays Home.



Storybook synopsis: "Arturo Stays Home" captures the experience of a young boy, Arturo, during a sudden shift to remote living due to a global health crisis. The story begins with Arturo's confusion about why his parents are still at home on a Monday and not at work, and why there is no school for him. His mothers explain that they are working from home and that he will also be doing his schoolwork from home due to a pandemic. The story describes Arturo's initial struggle to understand and adapt to this new routine, his longing for outdoor activities and play, and his challenge in focusing on schoolwork at home. It also introduces children to the concept of a pandemic and the importance of staying indoors for safety. As the story progresses, Arturo grows to appreciate the extra time spent with his family and learns to balance his school responsibilities with the new family dynamics at home.

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During the group interview, participants acknowledged that translanguaging was a new concept to them. One wondered aloud about the rationale behind translanguaging for materials development and teaching: "Why did you decide to use this type of translanguaging? What is the reason? I see both English and Spanish, an immediate translation. What is the rationale behind that?" (Participant 1). To guide the discussion, the researchers provided the following explanation:

> *The idea behind translanguaging is to give students the feeling that they can produce language, to give students that empowerment... that English is something they can conquer, that they can communicate. Translanguaging allows students to feel empowered, and in Costa Rica, there is a need to let students use some Spanish during their English classes. One of the reasons why this is important for me is because I remember my own education and how many times I was silenced in English classes because I did not know how to say something. I wish we could move beyond that. As a student, if using a few words in Spanish is not going to get me in trouble, I will be able to move forward. Translanguaging is also a way to balance language proficiency levels in the classroom while allowing students to speak, to use language. In our context, translanguaging is of utmost importance for inclusion, considering students who are underrepresented, students with challenging backgrounds, and students who have been silenced many times because of their lack of education... because they're underdeveloped; because they didn't have the opportunity that mainstream has. Translanguaging is a way to facilitate learning (Researchers).*

After developing a more comprehensive idea of translanguaging, one participant acknowledged and recalled translanguaging when facilitating Spanish literacy to indigenous people: "I think translanguaging and this type of bilingual approach to English learning can be important because I've had experiences working with indigenous people in our country, and we use that" (Participant 1). Nonetheless, she expressed doubts about the benefits translanguaging might provide for English teaching: "I think in our context, where English is taught as a foreign language, and we are moving by proficiency levels, the right worth for [utility of] translanguaging will vary" (Participant 1). The circumstances of COVID-19 and the creation of digital bilingual storybooks during the onset of the 2020 lockdown suggested the helpfulness of translanguaging for students who were learning English remotely:

> *[When] students are working on their own, they need it [translanguaging]. So, I would say that in Costa Rica we are still working with different student populations with different needs. I think translanguaging can be a useful strategy for [remote] learners ... because they do not have a teacher next to them. … Even when we were developing resources and guidelines that students were taking home, ... they had to do it on their own, their parents didn't know any English. So, in our case, we support the use of Spanish when it's needed, and we understand how it's used to negotiate meaning among themselves. I think that when we are in a context where several languages are spoken, we would use our native language before the new one, but that's okay (Participant 1).*

Ultimately, they supported the classroom use of translanguaging when called for:

> *[Students should] use translanguaging for reading when it is needed, with a purpose. I would not recommend this in contexts where we have a teacher that is mediating and facilitating materials that are age-appropriate, at their level, and are promoting reading for understanding without translation (Participant 1).*

For the second participant, translanguaging is "... something that happens in the classroom whether we like it or not."

> *If you ask your students, mostly in primary school, to work in pairs reading books or something, they will immediately go back to Spanish because they do not have the language to actually carry out all the things that they have to do in English, they are just beginners. So, they need to go back to Spanish, then they come back to English. That's something natural that happens in the classroom (Participant 1).*

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It is critical to emphasize here that this is not an example of merely “switching” languages; translanguaging maintains that all people (monolingual to multilingual alike) practice a unified repertoire of speaking strategies that draw upon their linguistic experience overall. Conceptually, translanguaging accounts for all use of languages, not just multi- or bi-lingual contexts. Nonetheless, the second participant also expressed concerns about translanguaging in the classroom, specifically the overuse of Spanish (rather than English) in classroom interactions between students and teachers and students alike, as an obstacle to children’s English language development.

> *I just have concerns in terms of how to use Spanish because, in my experience as a teacher, when you offer kids both English and Spanish, even if you’re translating at the moment you’re speaking, they will prefer using their native language, and they will totally avoid the second language, which in a certain way affects their acquisition of the second language. [This could hamper English acquisition, because students] will think, “Translation is coming, so why would I make any effort?” It even happens to some of us when we are reading subtitles on T.V. Most of the time, we will focus on reading, even if we totally understand what we are listening to. So, that is one of my concerns (Participant 2).*

However, they acknowledged the historic moment and reasons why bilingual storybooks were created and agreed that students needed additional support during lockdowns:

> *If translanguaging is going to add to that purpose, it will be welcomed. If you’re thinking about students working with the materials by themselves, you should have exercises that can give you immediate feedback because you’re working on your own. Even if you’re working at home with your parents, [they] may not speak English, so you need that material to give you some feedback immediately (Participant 2).*

They also referred back to the rationale for translanguaging by acknowledging the negative effects of prohibiting the use of Spanish in the classroom during the process of learning English. He stated, “We do not want to get to what [you] said before, which is shutting the kids off because they’re not used to the second language. They cannot speak if they aren’t used to the second language. So, it’s about flexibility” (Participant 2). It must be emphasized here that the research on translanguaging does not reflect a two-language (e.g., Spanish and English) situation but a unitary practice (neither quite Spanish nor English ultimately) that draws upon the linguistic resources of both languages. Classically, the use of Spanish in the English classroom could be construed as scaffolding (using one’s native linguistic knowledge to understand a new language) not resistance. [On this point, we should not lose sight of the fact that the English classroom is a place where passing the class may be of higher priority to students rather than mastering English.] In contrast, translanguaging points to the developing repertoire of linguistic practices (including new vocabulary, grammar, and syntax in the context of passing the class).

The issue of translanguaging in the classroom also pivoted into teaching practice:

> *In fact, it also raises some questions. For example, if the expectation is that the kids can use certain expressions of a certain language in the classroom, and they aren’t doing it, what is it that I’m not doing as a teacher that they are not using the target language [English]? So, instead of saying, “Do not use Spanish,” ask yourself, “What do they need to communicate, to understand, that they go back to Spanish?” And that is also part of my self-assessment as a teacher (Participant 2).*

While this explicitly highlights the unified repertoire of translanguaging, participants agreed that professional development and a mutual consensus among educational authorities would be necessary for translanguaging to be implemented.

> *I think we need to know more, and it would be nice if we could make a first introduction to the decision makers in terms of curriculum development in the country so that we understand exactly what it means*

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> *to teach using translanguaging [rather than saying] we are going to give that to the teachers without understanding what is embedded in all that (Participant 2).*

The findings on translanguaging in Costa Rican schools reveal its appropriateness and acceptance from educational authorities as a teaching and learning strategy, particularly in bilingual education contexts. This aligns with existing literature that advocates for translanguaging as a pedagogical tool to navigate the dynamic language practices of multilingual learners (Donley, 2022). Studies emphasize the importance of leveraging students' complete linguistic repertoires in educational settings (Fu et al., 2019, ¶2; Ramírez & Bastidas, 2023; Viales Angulo & Carmona Miranda, 2014), which is consistent with the observed benefits of translanguaging in rural schools within compact settlements with limited resources.. Moreover, the Costa Rican curriculum's socio-constructivist approach, emphasizing knowledge construction as a continuous process, parallels the literature's view of translanguaging to engage students in rigorous learning.

However, the findings also highlight some discrepancies with existing literature. While the literature emphasizes the equal value of all linguistic resources in education (García, 2020; Fu et al., 2019), the findings from Costa Rica indicate a cautious approach towards translanguaging, particularly regarding its potential to hamper English acquisition if overused. This concern reflects a tension between the theoretical ideal of valuing all languages equally and the practical challenges of implementing this in classrooms where English has a privileged status (García, 2020, p. 557; Mora Escalante, 2016). Additionally, the findings suggest a need for professional development and consensus among educational authorities for effective translanguaging implementation, which is less emphasized in the literature.

The Role and Effects of Curricular Content

Principle 4. Provide Spaces for ELTs To Collaboratively Develop Materials that Follow Evidence-Based Guidelines and HCD Principles.

As outlined in Table 1, teaching materials play a central role in classroom curricula as sources of knowledge and learning expected to be transmitted to society. As potential tools that teachers can use to inspire learning, creativity, and critical thinking, most are very dated, rarely reflect today's world demands, and often even fail to align with educational policies and goals (Santamaria-Perez, 2021). In addition, the limited to nonexistent Internet access for ELLs exacerbated educational inequities in online and hybrid learning, which relied on simplified instructional content (Estado de la Nación, 2021). This issue was especially acute during COVID-19, as ad-hoc home schooling disproportionately affected the poorest and most vulnerable students, exacerbating educational inequalities and potentially increasing future poverty levels (Glas et al.; Henry, 2010). In this scenario, teachers in rural schools can play a decisive, intervening role through materials development that facilitates content in meaningful ways. Professional development before and during the school year should become a requirement for ELTs to teach and should be demanded by educational authorities.

Materials' Role in the English Classroom

One participant stated that materials need the representation of the entire population, ultimately also including the nonhuman worlds, since biodiversity and preservation of natural resources are fundamental to Costa Rica's socioeconomic development:

> *I like this idea of diversity. I would like to see indigenous people from our country represented there as well as where the stories are set. It would be also nice to include things that are more connected to our biodiversity. Something that is a high point, connected also with this, is including sustainable development and the importance of reflecting on the pandemic (Participant 1).*

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This led to the need to provide a format for materials development for ELTs. Specifically, ELTs "should have a template or model to follow" not only for materials development but also for pedagogical mediation; that way, teachers can follow suggested guidelines to use materials appropriately; accordingly, a "recommendation is to provide the teacher a format. I do not know if perhaps you're going to negotiate with the teacher what is going to be the structure, the design" (Participant 1).

> *When creating materials to teach English, it is essential to take into consideration everyone's needs and contexts in favor of an inclusive and respectful education. In other words, ELTs should be cognizant that materials introduce content in a sensitive and respectful way. That way students might expand their viewpoints and worldviews through these materials (Participant 2).*

> *This way they can ask: what other possibilities do you see? What is your context? I think we need to do this in a subtle and respectful way so that everybody who sees the material does not feel threatened or disrespected but can see it as an open way to see the world. … We must review our educational paradigms, and we need to bring new things that can help us offer more opportunities to everyone because that's the idea: not to leave anyone behind (Participant 2).*

The second participant also stressed a need to align materials to the school curriculum's goals: "In terms of lesson plans, again, they do not have the structural components of our curriculum. I also think that when students are working on reading comprehension, the task should be related to reading comprehension" (Participant 2). They added that materials should be not only respectful and thoughtful of students' needs and worldviews but also in line with the implicit expectations in the curriculum.

Materials Responding to Students' Needs and Demographics

One participant stressed the need to cater resources to students' needs first.

> *In terms of a social justice approach to teaching resources, it's very important to consider the inclusiveness of the resource itself. I saw that a lot of visuals are used. The type of font is large, so you can really see it comfortably, and you can read it. What about the audio? Did you record audio for those readings? Is there no audio? And, finally, have these resources been used by kids already? How can we make some adjustments to make them pertinent to the new context that we are living in right now, and also connecting them more to the curriculum? (Participant 1).*

The second participant added the importance of providing features for students with different learning difficulties (as part of a more inclusive curriculum):

> *What I'm saying is that the pictures that you have in the stories… They need what is called "alternative text." And, also, you have to be sure that blind people can actually read those stories because you do not know if there are going to be blind people trying to access the materials (Participant 2).*

Cognitive and Emotional Engagement

One participant noted the need to align materials with cross-curricular themes in Costa Rica's educational policies: namely, ELTs' pedagogical mediation such that children can become respectful, reflective, inclusive, and problem solvers.

> *We have four main cross-curricular themes; one is sustainable development, another is the use of technology, the next one is collaboration with people and teamwork, and the last one is cognitive skills development (critical thinking, creativity, innovation, all that). I think there is a lot of potential in the resources presented for all that (Participant 1).*

They added that being part of a society where people embrace digital technologies, collaborate with others, and become critical thinkers is one of main goals of the Ministry of Education in Costa Rica;

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therefore, ELTs can incorporate cross-curricular themes while creating materials to promote relevant critical skills:

> *I think that would be the biggest challenge: making them engaging, attractive, meaningful, authentic, and interactive. They may include gamification where children can play and learn at the same time; where children can develop their critical thinking skills, their communication skills, and their collaborative skills. That they take them beyond the classroom setting, and they can share this learning with their communities, with society, and even with the world if they have the technology. I think those are the challenges when you are designing resources. … [Maybe some] a type of digital book where you flip pages interactively, perhaps hypertexts where words are highlighted and explained, and they can be played in English and Spanish. Perhaps words that are important for communication, meaning, and understanding of a text (Participant 1).*

These findings extend existing research by focusing on the sociocultural dimensions of language education in rural, underserved areas. They build on previous literature that emphasizes the importance of inclusive pedagogy in bilingual education (Donley, 2022; Fu et al., 2019), but they also highlight the unique challenges faced by rural communities. These include limited resources, geographical isolation, and a tendency for their needs to be either overlooked or misunderstood by policymakers (White, 2015; Bridgeforth et al., 2021). This highlights the disparity between urban and rural educational settings, where not all linguistic resources are equally valued (García, 2020).

Furthermore, the research highlights the need of adopting context-sensitive and socially just educational strategies in rural areas, where diverse student populations encounter distinct challenges (Bridgeforth et al., 2021; Nelson et al., 2021; Rivera Alfaro & Porras Solís, 2018). It raises crucial considerations regarding the implementation of inclusive and diverse education in a way that avoids stereotyping or marginalizing certain groups (Araujo & Strasser, 2003; Brochin, 2019). This is particularly vital in rural contexts, where there is often a balance to be struck between representing the majority rural culture and addressing the needs of marginalized groups within these communities. (White 2015).

Need for Professional Development for Different Regions

Principle 5. Provide Professional Development to Pre- and In-Service ELTs On Effective Approaches to Bilingual Education.

ELTs in rural areas often come from the same communities where they teach and are not highly qualified to teach specialized subjects such as foreign languages. During the COVID-19 pandemic, primary school teachers, particularly in rural areas, struggled to teach English due to an "educational blackout" (Estado de la Educación, 2021, p. 38). This term encapsulates the lack of technological resources and access, exacerbating educational inequities (Montenegro, 2021). Rural households were especially disadvantaged in adapting to remote education, deepening the digital divide and territorial inequalities (Estado de la Educación, 2021; Gandolfi et al., 2021; Henry, 2010; Iivari et al., 2020). Prior to the pandemic, single-teacher rural schools were already facing faced challenges in teaching English due to limited resources (Badilla, 2016). The shift to online and hybrid models during the pandemic further intensified these issues, highlighting the need for meaningful integration of digital technology into educational practices, beyond mere access (Iivari et al., 2020; Montenegro, 2021). This situation underscores the urgency to address the systemic disparities affecting English language teaching in primary education, especially in economically disadvantaged areas (Glas et al.; Henry, 2010).

This challenges efforts to help rural ELLs master a second language (Johnson & Howley, 2015). In 2016, the National English Language Curriculum was implemented, requiring proficient English among ELTs and education stakeholders. Yet, 40% of them ranked below B1 level in English proficiency according to the Common European Framework of Reference (Barquero Mejía, 2018). Despite Costa Rica Multilingüe and National English Plan (Bonilla Lynch & Rojas-Alfaro, 2012), professional development programs to

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improve language skills and instruction, teacher proficiency levels remain low, particularly in rural areas (4%) compared to urban communities (12%).

Unfortunately, highly qualified teachers in rural areas often leave rural communities for better opportunities elsewhere (Johnson & Howley, 2015; White, 2015), while opportunities for professional development for rural ELTs are scarce (Johnson & Howley, 2015). This makes professionalization imperative for pre-service and in-service ELTs, but to achieve this requires educational authorities to devote the necessary funding and resources to prepare rural ELTs with innovative practices which, in turn, can help ELLs learn English effectively (Johnson & Howley, 2015). As a pedagogy with demonstrable potential for assisting rural ELLs using Spanish to negotiate meaning while learning English (García, 2020), translanguaging affords rural ELTs the benefit of this framework while helping their students to succeed. ELLs too benefit by learning environments without threatening or frustrating English-only contexts (Fu et al., 2019).

Participants said that preparing ELTs to teach and develop materials and to be active participants in the teaching and learning process is central to best teaching practices:

> *I think that this type of initiative demands teachers' professional development. We need to make teachers participate. As you suggested in our first meeting, you said, "teachers will be the writers. Teachers will be developers." I think that's great because, as I said at that time, it creates ownership (Participant 1).*

Aware of the many disparities and challenges in education between rural and urban regions, one participant mentioned the need to provide contextualized professional development to ELTs across different contexts. They noted, for example, that every region of Costa Rica has differences and access to certain types of information might be limited in places, especially rural ones.

> *There can be communication between different populations who live in two different settings and have different struggles. Or even within San Jose [an urban city in Costa Rica], we have places that have a lot of difficulties in terms of all that you have been describing. And people who live in other geographic areas where those struggles do not exist (Participant 1).*

The second participant drew attention to the importance of conversations with ELTs about materials development and how they need to align with curricular goals:

> *I wouldn't say training, but it would be nice to have a conversation with teachers about this to create awareness from this perspective. This is a major issue if we are going to use these resources. How are these resources aligned with the elements of our curriculum? (Participant 2).*

The study and existing literature consistently highlight the critical need for professional development tailored to the unique challenges of ELTs, especially in rural areas (Estado de la Educación, 2021; Montenegro, 2021). This includes direct involvement of ELTs in creating and developing teaching materials to promote ownership and active engagement in the educational process. Such an approach addresses the notable disparities between rural and urban educational settings, focusing on bridging gaps in technological resources, teacher qualifications, and English proficiency levels (Estado de la Educación, 2021; Gandolfi et al., 2021; Henry, 2010; Iivari et al., 2020).

Both sources emphasize the importance of accessible and relevant professional development for rural ELTs to effectively tackle the systemic challenges in English language teaching. The digital divide, intensified by the COVID-19 pandemic, underscores the urgency of integrating digital technology into educational practices Gandolfi et al., 2021; Iivari et al., 2020). Additionally, the concept of translanguaging is presented as a valuable pedagogical tool, offering a more effective approach for rural ELTs to improve English language learning environments for their students (García, 2020), particularly in economically disadvantaged areas (Glas et al.; Henry, 2010).

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CONCLUSIONS

This study used HCD to identify and outline teaching materials development processes for an online learning platform for ELLs in grades 1 to 6 in Costa Rica. From the data, social justice education—particularly around equity, representation, and translanguaging—emerged as an overarching "big umbrella" for informing linguistically and socioculturally effective teaching materials development (and their accompanying classroom presentation). In other words, incorporating an inclusive and diverse equity and representation in English-language teaching materials is a more effective approach for bilingual ELLs in Costa Rica than approaches that do not incorporate these elements.

In particular, translanguaging is not only essential but is already being used "unofficially" in classrooms to support ELLs' English acquisition as they negotiate meaning via their multiple but integrated linguistic repertoires, including Spanish. But rurality, specifically compact settlements, also plays a key role by presenting both opportunities and challenges to unveiling existing inequities in educational policies that disparately impact rural communities (across both the rural/urban divide and for marginalized groups in rural areas). Rurality illuminates how teaching, materials development, and curricular decisions can be collaboratively developed by ELTs and community members to integrate social justice goals like equity and representation that generate better educational outcomes.

Specifically, the evidence-based guidelines and recommendations (Table 1) generated by this study's HCD approach provide instructional designers and ELTs concrete steps for developing linguistically and socioculturally effective teaching materials for rural ELLs in Costa Rica. While professionalization will advance these goals, in most respects the use of translanguaging in classrooms and the development of more equitable and representative classroom materials do not add tremendously to existing ELTs workloads. The greater challenge involves modeling the leadership to counter resistance to these goals—something necessary, in any case, if the national goal of educating all children is to be achieved.

The study's findings starkly contrast with the existing literature, particularly regarding ELL classrooms. Despite the well-documented importance of inclusion, equity, and diversity, the study reveals that professional development and resource allocation often fail to meet the unique needs of rural ELL classrooms. This discrepancy underlines a persistent gap between educational theory and practice, especially in rural areas where there may be a lack of resources and teacher proficiency. Additionally, the study's focus on the benefits and challenges of translanguaging offers a counterpoint to the monolingual approaches commonly supported by policy and curricular frameworks. These insights suggest the need to reassess educational strategies and embrace bilingual education practices that accurately reflect students' linguistic realities.

As a contribution to the learning sciences, this study provides empirical evidence of the effectiveness of an HCD approach in curriculum development, particularly within the rural Costa Rican context. The study highlights HCD's potential to generate more effective and culturally responsive educational materials and strategies. The evidence-based guidelines proposed in the study serve as a practical blueprint for educational policy alignment with social justice education, translanguaging, and consideration of rurality, offering educators and policymakers a clear path to fostering inclusive and equitable learning environments.

Future research directions stemming from the study are multifaceted. There is an imperative for more collaborative research involving ELTs and community members to enhance and broaden the scope of the proposed guidelines. Additionally, there is a call for research on the long-term effects of HCD-informed strategies on student learning outcomes, with a focus on rural areas that are typically underserved, including compact settlements. Finally, the study advocates for a comprehensive review of how translanguaging practices could be systematically incorporated into national curricula and teacher

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education programs and the subsequent effects on students' linguistic and cognitive growth. Pursuing these research paths promises to not only deepen academic conversation but also contribute to the development of more equitable and effective educational policies and practices.

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