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Plurinationality and epistemic justice

The challenges of intercultural education in Ecuadorian Amazonia

Edited by
Ruth Arias-Gutiérrez
Paola Minoia

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Editors

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About This Book

This book focuses on politics and practices of restorative epistemic justice through education. In Ecuador, the Intercultural Bilingual Education (IBE) programme was established to empower the diverse nationalities and peoples constituting the plurinational state. The primary objective of IBE is to integrate various local languages, knowledges, and pedagogies, and it is grounded in the philosophy of *sumak kawsay*, emphasizing community-centric, ecologically balanced, and culturally sensitive approaches. However, over the last decade, implementation of the programme has faced restrictions, and its impact has been weakened by neglect of cultural realities and ancestral knowledge.

The study has observed more specifically higher curricular cycles offered in Kichwa, Shuar, and Sapara territories of the Amazon region. Special attention is given to the high school and university education that accompanies young individuals into adult life. Discussions about interculturality, plurinationality, and decoloniality from the field are based on the collaborative research project "Eco-cultural pluralism in quality education in the Ecuadorian Amazonia" (2018–2022) involving the University of Helsinki and the Universidad Estatal Amazónica and funded by the Academy of Finland (grant no. 318665).

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CHAPTER 1

Introduction: Education as Cultural and Ecological Revitalization Among Amazonian Nationalities

Paola Minoia and Ruth Arias-Gutiérrez

Plurinationality and Epistemic Justice

Plurinationality represents an inclusive characteristic of the state that acknowledges various peoples and their organizational structures as possessors of equal sovereign rights. As a principle, plurinationality aims to guarantee the political representation of the different nationalities and ethnicities of peoples living in territories delineated by state borders.

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The popularization of the political discourse on plurinationality has occurred principally through constitutional changes in the Andean States, as a result of Indigenous movements' resistance to the hegemony of white populations and the marginalization of Indigenous nationalities, Afro-descendants and other mestizo and minority populations. This discourse has spread to other countries, mainly as a political objective but only rarely adopted, and is situated within the struggles for decolonization, seeking to disrupt the exclusive control of a limited group over a diverse space in its geographical, material, cultural and symbolic dimensions.

In order to materialize, plurinationality must implement an expansion of governance both over territories and the resources that constitute the material basis of livelihoods for many societal groups (Radhuber and Radcliffe 2023), and over knowledge and education, to guarantee the pluralism of historical narratives and the ontological and epistemological foundations of different cultures (Blaser 2014; Rivera Cusicanqui 2012). Often, decolonization has been hindered by violent actions of epistemic injustice (Fricker 2007) that devalue language and knowledge systems, leading to epistemicide, that is, to annihilation, silencing and the erasure of knowledges.

Efforts towards plural subjectivity are, therefore, carried out through positive actions of epistemic justice, healing from discriminatory and cultural marginalization processes. A renewed ethic of knowledge has been proposed by collectives representing plural identities, which have established programs of recovery, restitution and revitalization of languages, cultures and worldviews. Public education is considered among the most appropriate instruments of cultural change, leading to a democratization and pluralism of knowledges, in which native communities can be recognized as producers and transmitters of knowledge that does not necessarily follow the European canon. For this reason, this book analyzes policies and educational practices proposed in Ecuador that are considered to be appropriate for the recovery of epistemic justice at the country level.

Access to schooling and higher education is crucial to empowering marginalized groups and improving their living conditions. In Ecuador, the Intercultural Bilingual Education (IBE) program was established to empower diverse cultural identities forming the plurinational state. Indigenous organizations, within the framework of the 500th anniversary of the Ibero-American conquest, fought for the constitutional recognition of the plurinational character of the country—a legal restructuring

allowing for the exercise of self-determination and the legal administration of crucial matters such as education in the communities (Rodríguez 2018). The goal of IBE, then, was to offer accessible schooling to all communities, integrating the various local languages, knowledge and pedagogical practices into an education based on the philosophy of *sumak kawsay*, ecologically balanced and culturally sensitive, and aiming to represent and revitalize cultures that have been under processes of invisibility and erasure for a long time.

However, especially in the last decade, implementation of the program has faced numerous challenges. According to critical arguments expressed by Indigenous organizations, as we will see in the next chapter, educational practices have been weakened by various restrictions repurposing full adherence to homogenized Eurocentric standards, neglecting specific cultural realities or ancestral knowledge. This educational approach places Indigenous nations and other peoples at a disadvantage compared to the majoritarian white-mestizo culture. Here, the terms majority and minority should be interpreted in terms of power rather than demographics. Minoritization indicates a process of racial subordination and racial oppression that also involves the cultural expressions and knowledge of subjugated groups.

This book addresses in particular the implementation of IBE in the Amazonian region. It follows the public and academic debates that have taken place in the country (Almeida and Figueroa 2016) and also internationally (Mato 2008, 2012). In particular, its focus is on the province of Pastaza, observing the application of IBE in educational units in the Kichwa, Shuar and Sapara areas, with special attention to high-school and university education—those that prepare young people for adult life.

The book is the product of a research collaboration involving researchers from the University of Helsinki, from the Universidad Estatal Amazónica (UEA), activists from the Confederación de las Nacionalidades Indígenas de la Amazonía Ecuatoriana (CONFENIAE) and instructors operating in schools in the study area. The project's intention was not so much to study the issue of bilingual or plurilingual presence in education, but rather the inclusion of themes and pedagogies that support the cultural and ecological identity of young Amazonians.

For the project's researchers and the contributors to this book, the inclusion of Indigenous pedagogies and knowledge is part of quality education in the Ecuadorian Amazonia. The inclusion of ecological aspects is crucial because Amazonian Indigenous groups have strong

connections to the land and nature, currently threatened by illegal logging, oil extraction and climate change. The ties to the land define particular relationships among human, non-human, and more-than-human beings, in a cosmology sustained through ancestral knowledge and a non-extractive but respectful relationship with the different forms of nature. Pluriversalizing education by advocating for this diversity of ecocultural identities (Castro-Sotomayor and Minoia 2024) means protecting both the natural environment of the Amazon and the Indigenous peoples from poverty and epistemic erasure.

Furthermore, it should be considered that the implementation of IBE has been challenged not only by changes in the political objectives of the Ecuadorian government, but also by the socioeconomic poverty of the region, and the reduced investment in the education sector. IBE institutes are mostly located in marginalized areas and despite official claims highlighting their crucial role in the realization of the plurinational state (Cruz Rodríguez 2013; Cabrero 2019), they lack public funding. The overall disinvestment in IBE is reflected in the shortage of teachers with knowledge of Indigenous languages and intercultural pedagogy, and in the poor quality of educational materials. The available manuals are far from being capable of nurturing the cultures, cosmologies and ways of life of Indigenous students and propose standardized contents, presenting concepts and information disconnected from ways of life and ancestral practices based on the land and ecological cycles, relations with non-human entities, and spiritual connections with the forest.

Therefore, this book first addresses the educational policy debate between governments and Indigenous organizations, and then reports on experiences based in various educational units of the Amazonian province of Pastaza and at the UEA. Fieldwork led us to observe other issues that we initially did not plan to address, such as the difficulties for Indigenous students to access higher education, and various socio-psychological implications. Challenges in adaptation experienced by students from rural and Indigenous communities may in fact cause feelings of estrangement, low self-esteem and subalternity, and exclusion, ultimately leading to school drop-outs. Franz Fanon (2001) addressed this issue in *The Wretched of the Earth*. The research has also demonstrated that interculturality cannot solve the problems of epistemic injustice only at an intellectual and political level, but must also integrate aspects of caring that require socio-psychological support. Echoing the triple meanings of coloniality—the coloniality of knowledge (De Sousa Santos

2010), the coloniality of power (Quijano 2000) and the coloniality of being (Maldonado-Torres 2007)—we believe that this latter has to be crucially addressed by intercultural education programs. However, forms of support for Indigenous and minoritized student wellbeing, though necessary, are not provided by intercultural educational programs; rather, they are left to self-organized spaces of student circles, sometimes with volunteer support by individual teachers through extracurricular activities (Arias-Gutiérrez and Minoia 2023). In the book, we will present experiences of student care circles offered at the UEA.

Theories and Guiding Concepts

The different chapters of the book reflect the diverse experiences and positionalities of the authors; however, there are certain principles and terms that we share as common foundations. In particular, the shared orientation is towards a decolonial education which liberates from the centrality of European knowledge and its project of modernity/rationality (Quijano 2007) that has established a social classification based on ethnicity and disempowered Indigenous forms of knowledge, described as primitive (Quijano 2011). We reflect on our subjectivity, also in terms of ethnicity and privilege (although whites normally do not reflect on their own position), and the relation between scientific knowledge and power. We support education as a space for nurturing an ecology of knowledge without ranking and in a relation of incommensurability. We believe that education should be instrumental in the recognition of identities and land-based localization of Indigenous peoples, providing decolonial alternatives for sustainable transformative futures and socioecological justice (Nakata et al. 2012; Kerr and Andreotti 2018). Hence, intercultural education can contribute to the construction of a plurinational citizenship allowing for the exercise of collective rights by Indigenous peoples (Cabrero 2013; González Díez et al. 2022).

In line with these principles, the research intention is to identify the elements influencing the praxis of intercultural reconstruction in the communities of the Amazonian region. We do this by observing, listening, conversing and participating, with a qualitative research approach and, for some of the authors, an ongoing commitment beyond this research project.

Even from a theoretical point of view, we owe much to the pedagogical reflections of Catherine Walsh regarding, for example, the destructive

consequences of standardized national programs for community identities and territorial self-determination (Mignolo and Walsh 2018), the relationship between racism, sexism and nature, or the need to integrate depatriarchalization into the decolonial project (Walsh 2007).

In addition, from Walsh (2008, 2012) we have borrowed the distinction between the different understandings of interculturality that have led to misunderstandings, conflicts and frustrations, especially on the part of the representatives of minority—or, better said, minoritized—populations. The distinction particularly refers to the fundamental difference between functional interculturality and critical interculturality. The neoliberal model that recognizes cultural diversity without questioning the foundations of global capitalist exploitation (Walsh 2012) frames the former and is present in the discursive rhetoric about inclusive multicultural education (Walsh 2008; Mignolo and Walsh 2018). Critical interculturality, in contrast, acknowledges the persistent culture of colonial and racial exploitation and advocates for a social reconstruction with equal rights, without annulment or subordination from any side (Walsh 2014). Our study adopts the critical interculturality goal, in line with the struggles led by Indigenous movements for a radical social transformation. The objective is not to replace one cultural hegemony with another, but to create a new political and social order based on conviviality. Within this principle of critical interculturality, some chapters interpret the term of intercultural education in a more radical manner, close to Indigenous pedagogy and as a basis for political action, while others maintain the profile presented in ministerial programs of the Modelo del Sistema de Educación Intercultural Bilingüe (MOSEIB) and its curricular redesign for the Amazonian region, called Apliquemos el Modelo del Sistema de Educación Intercultural Bilingüe en la Amazonía (AMEIBA).

The Amazonian Context

Latin America is characterized by significant socioeconomic inequality inherited from the Iberian conquest and colonization. The republics formed since the nineteenth century adopted European models to rule uniformly diverse societies throughout various spheres of economic, political, social and symbolic power. Education followed, and still maintains to this day the same Eurocentric pattern of dominant thought—the Western one—from primary education until university instruction.

Although Amazonian cultures have shown a high degree of efficient adaptation to the forest environment since about 3000 BCE (Valdez 2003), the knowledge developed in the Amazonian environment and its diverse cultural existence have not received sufficient attention and sensitivity from government powers. The Amazonian territories where Indigenous nationalities live have been exploited, particularly through oil deposits, for the development of the rest of the country, assimilating the various peoples into a common order. This is a tragic example of a nation aware of its *mestizaje*, but lacking a real understanding of its Indigenous peoples (Goldman 1982).

The large number of mestizo populations living in the Amazonian region has its origins in the mid-twentieth century, when government policies promoted the migration of settlers from densely populated mountainous and coastal areas to the Amazon, dispossessing Indigenous peoples of much of their traditional lands (Minoia et al. 2024). Consequently, Indigenous groups live fragmented in remote rural areas, while rapidly growing towns contribute to the standardization of languages and cultures despite ethnic segregation (Bilsborrow et al. 2004).

Development and modernization strategies, and management and control plans focused on ethnic homogenization have proved inadequate for tropical ecosystems and promoted white supremacy affecting Indigenous peoples, even in their symbolic manifestations (Whitten 1978, p. 10). This has led to the emergence of self-determination claims (Whitten 2003), involving the pursuit of pertinent intercultural education responding to the needs of territories and their Indigenous nationalities.

From a socioeconomic perspective, Ecuadorian Amazonian provinces are among the poorest with unmet basic needs (Castillo and Andrade 2016, p. 126). Inequalities particularly affect provinces with a larger Indigenous population and rural areas (Instituto Nacional de Estadística y Censos INEC 2022). Poverty is continually exacerbated by environmental disasters of anthropogenic origin. For instance, during our study period, numerous incidents caused by river floods resulted in extensive environmental, infrastructure, residential and local economic damage. In addition, an oil spill caused tremendous and widespread soil and water contamination (Minoia 2020). Furthermore, communities remain on constant alert due to numerous public interventions to divert water from their sacred rivers to meet the water and electricity needs of other urban and industrial areas. Finally, the geography of the region, despite comprising community territories, is disputed by mining and

oil industries that have obtained concessions from state governments. Movements defending the territories, resisting expropriation (frequently executed with military involvement) and countering forced migration by all possible means, are common.

Public services in the Amazonian region, including higher education, are rather poor and with minimal public investment. The educational gap affecting these communities is part of a broader condition of social marginalization and poverty due to the limited distribution of infrastructure and basic services in Indigenous territories, the proletarianization of many Indigenous families and the patriarchal culture that persists in the society (Perreault 2003; Méndez Torres 2009). Education in the region has been overseen by religious missions not only during the colonial period, but also since independence. State involvement began only in the second half of the twentieth century (Ruiz 2000). While in Quito the first public university was founded in 1786, based on universities previously run by religious convents since the colonial era in the sixteenth century (Primicias.ec 2022), in the Ecuadorian Amazonian region, the establishment of the first public university, the Universidad Estatal Amazónica (UEA), occurred only on October 18, 2002 (UEA 2022).

Even scientific research has only marginally affected the region. Most research in the Ecuadorian Amazonia has been conducted by outsiders, not involving local researchers, and has mainly focused on biology, flora and fauna inventories, and conservation, with only a minor interest in anthropological and political ecology studies. Education studies and pedagogical projects, in particular, have lagged behind and have employed methods and content alien to the Amazon reality, adhering to models more adapted for cities and that have encouraged rural and Indigenous marginalization and rural–urban migration (Ruiz 2000; Veintie et al. 2022).

It is also relevant to consider the role of international cooperation in education. In the field of IBE, the project Educación Intercultural Bilingüe para la Amazonía (EIBAMAZ) funded by UNICEF and Finland until 2012, produced textbooks for primary grades (UNICEF 2012) and supported pedagogical research at the University of Cuenca on Amazonian ancestral wisdom and on tools for IBE curricular development in Kichwa, Shuar, Achuar, Shiwiar, Siona, Secoya, Kofan, Waodani and Sapara Indigenous areas (UNICEF 2013). Other studies have addressed IBE implementation issues mainly at the national level, with marginal consideration for the Amazonian context (Krainer and Guerra Bustillos

2012), or presented reflections on the potential of intercultural environmental education that integrates the ancestral knowledge of Amazonian Indigenous peoples within the theoretical framework of Latin American liberation theology (Prieto Cruz 2021). Other works that have particularly inspired this book include those exploring the relationship between extractivism and education, such as Miriam Lang's (2017) study revealing how mining extractivism has uprooted native populations, relocating them to newly urbanized mining and oil areas where the educational offer, comprising Millennium Schools, does not follow the IBE model and, on the contrary, is completely estranged from the localities.

If IBE has received pedagogical attention in the Amazonian school context, in higher education it has been largely lacking, with the exception of a recent study on the experience of interculturality at the UEA (Arias-Gutiérrez and Minoia 2023), and a previous article by Wilson and Bayón (2017) which views the establishment of the Ikiam University based in Tena (Napo province) as an instrument of the neoliberal economy of knowledge, commodifying the genetic wealth and the Indigenous knowledge of the Amazon, thus legitimizing the expansion of oil and mining frontiers.

In fact, universities located in the Amazonian region still have a low Indigenous student presence. Responding to the demand for student enrollment from the communities, promoting equity, fostering culturally pertinent education, ensuring equal opportunities, and improving the quality and scope of public education, are formidable challenges for the educational system and for universities tasked with generating science and deepening our understanding of societies to preserve their values, assets, resources and rights. Universities uphold the right to higher education as a path of civic, responsible growth, in competent community engagement, where the relationality with the territory still needs to be expanded, and social and cultural fabric strengthened, to overcome the marginalization of certain knowledge and honor the pluriversity in which the country is immersed. The path is hard, since a vision of an alternative decolonizing education that contributes to the development of an intercultural and plurinational state, as promised in the Ecuadorian constitution, is still lacking.

Topics Addressed in this Book

In addition to theoretical and political discussions framing the cultural negotiation between the central government and Indigenous organizations, the book presents concrete cases regarding the spatiality of access to education, the pedagogical challenges faced by schools and teaching staff, and various other conditions experienced by students from the Amazonian communities when accessing higher education. The first chapters contextualize the educational situation from a historical-political and socioeconomic perspective, while those following provide local perspectives and solidarity actions through extracurricular activities.

Chapter 2, "Public education policies and the struggle of the Indigenous movement for a decolonial interculturality", discusses intercultural education, the political and historical situation of its creation and operation in the late twentieth century, current challenges, and the fragile relationships between a discourse that recognizes a pluricultural, intercultural, multilingual country in the legal system, and its weak application. Decoloniality, interculturality and plurinationality can be conceived in different ways by various actors, but in practice, bureaucratic tendencies prevail, generating conflicts. The chapter conceptually discusses the state of the art on interculturality and decoloniality, and contextualizes IBE implementation, in its peak and decline, and the struggles of Indigenous organizations to maintain it as a vital project.

The third chapter, "Characteristics of the inclusion of Indigenous peoples in the school system", investigates the problems faced by students who self-identify as belonging to Indigenous Peoples and Nationalities, regarding enrollment and academic performance for grade promotion, amidst the regional and national socioeconomic context. It diagnoses the socioeconomic changes of Amazonian Indigenous nationalities, and their integration into the capitalist market economy driven by oil exploitation and other productive sectors. In addition, it analyzes the inclusion of Indigenous youth in the school system, considering the net attendance rate in early childhood, primary and secondary education, school drop-out and failure rates, based on tests by the Instituto Nacional de Educación Evaluativa in a prospective analysis to show trends in access to tertiary-level education.

"From discourse to structure: interculturality in Amazonian universities" presents some institutional perspectives on intercultural education within public universities operating near Indigenous territories in the

Amazon region. It briefly presents the Regional Amazonian University Ikiam, the revived Amawtay Wasi Intercultural University, and focuses more specifically on the experience of the Universidad Estatal Amazónica (UEA), based on the analysis of the territory in which it is located. Enrollment data are observed in relation to public goals regarding regional student access to higher public education.

Chapter 5, "Intercultural education and agency of Indigenous communities: a view from the Sapara territory", presents an ethnographic analysis of the education of this Indigenous nationality, which is the smallest recognized in Ecuador. It examines the problems and opportunities for educational access faced by populations living in remote areas and their strategies to build better quality education, supplementing the lack of public investment within their territory through other sources. Among other deficiencies, the fact that there is no possibility of including official instruction in the Sapara language poses a serious threat to the survival of this language and culture.

The field research presented in Chapter 6, "Indigenous young people's access to schools in the province of Pastaza", studies the situation in several schools in Kichwa and Shuar areas. First, it examines how high-school students travel to schools in terms of means of transport, distances and travel times, considering gender differences (and related domestic tasks), and differences between Indigenous and mestizo students. In addition, it explores how students experience their school journeys in different environments and the challenges of the forest territory, including route changes due to weather and flooding, and group travel experiences.

Chapter 7, "Educational experiential calendars: creating links between Indigenous communities and high school", proposes the adoption of calendars based on the cosmovisions and experiences of Indigenous communities in the IBE units, which respect the cycles of the seasons, farming, harvest and traditional festivals. The elaboration of calendars should be carried out by each educational unit involving parents, wise elders and other community members. In practice, however, there are many difficulties in achieving the ambitious goal of preparing school calendars, especially from the perspective of teachers overloaded with other teaching obligations, and often unfamiliar with the territories in which they work.

Chapter 8, "Interculturality in the classroom: accompanying students from minority cultures in Pastaza", reports experiences from the university classroom environment of UEA. The introduction of methodologically active and critical tools, such as supporting the *Retomando Raíces* Collective, and forms of community therapy composed of "binding wheels" and "caring for the educator", known as the pedagogy of being, has been necessary for establishing environments conducive to reflective learning. In the same way, teachers recognize the need to respond to their students' personal and community needs in the midst of interactions in a territory into which they move from different regions and come together supporting each other beyond the scope of learning goals in specific subjects.

Finally, "Participatory design interventions: supporting university student care networks in times of Covid" aims to evaluate and monitor the effect of the Covid-19 pandemic on the access to education and wellbeing of Amazonian students, and support university responses to the emergency. In particular, the chapter presents a participatory design project that involved UEA students and students from Quito, who established contact through a mobile application, allowing them to get to know each other and exchange life and study experiences during the isolation period.

Final Reflections

Certainly, many questions remain open and unresolved. The pandemic has blocked many initiatives that were still planned for this research. The possibility offered by the Internet has allowed the continuation of communications, albeit limited to privileged individuals equipped with computers, electricity and a functioning network. However, we hope to have opened a window onto an educational reality for which there is still much work to be done, in support of the knowledge, creativity and aspirations expressed by the territory, families, wise individuals, Indigenous organizations and representatives of Amazonian peoples, in dialogue with the world of school and higher education.

The presence of an IBE program and public universities like the UEA in the Amazonian territory is crucial for an area of extraordinary biodiversity and cultures that can shape research and learning through various ways of knowing, connecting and preserving. Therefore, it will

be necessary to deepen land-based education, increase interconnectedness and coexistence with local communities, use local languages and integrate ancestral knowledge into the science curricula at all levels. The current model of education repeated year after year, following centralized curriculum development formulated on capitalist and neoliberal models, is not sustainable. The need for a radical change is not only local, but also global. We are in a situation of accelerated mass extinction caused by the persistent model of intensive environmental exploitation that is still taught in the classroom as a strategy for wealth production. Indigenous students are experiencing in person the marginalization of their knowledge and life experiences, judged as primitive and not functional to the modernization of the country. Our text has shown that the single curricular model produces deep anxieties in student communities. These anxieties cannot be considered as individual problems but as structurally related to the colonial pedagogical and cultural models proposed in academia.

Educational institutions must, on the contrary, maintain a focus on cultural restitution objectives. Therefore, they must recognize Indigenous peoples as guardians of the forest, and learn from their respectful and convivial practices among human and non-human beings, recognizing the role of offerings and spiritual relationships with Mother Earth, which Western culture, having only functional relationships with the so-called natural capital, does not appreciate. Therefore, academia must become pluriversal, making space for ancestral knowledge, practices and cosmologies in both academic subjects and research. Educational institutions must recognize and learn from the bearers of this knowledge who, though they may not have academic degrees, have knowledge and practices transmitted through generations. They must offer these epistemic possibilities to younger generations from any identity background, so they can recognize the processes of critical changes, and address them. Epistemic justice is necessary if we want to build a new civilization and save our planet.

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References

Almeida, I. and Figueroa, J. A. (2016). La interculturalidad y la Universidad. En C. Cielo, P. Ospina y C. Vega (eds), *Reforma y renacimiento: Conversaciones docentes sobre la reforma universitaria en Ecuador*. Corporación Editora Nacional.

Arias-Gutiérrez, R. and Minoia, P. (2023). Decoloniality and critical interculturality in higher education: experiences and challenges in Ecuadorian Amazonia. *Forum for Development Studies, 50*(1), 11–34. https://doi.org/10.1080/08039410.2023.2177562.

Bilsborrow, R. E., Barbieri, A. and Pan, W. (2004). Changes in population and land use over time in the Ecuadorian Amazon. *Acta Amazónica, 34*, 635–647.

Blaser, M. (2014). Ontology and indigeneity: on the political ontology of heterogeneous assemblages. *Cultural Geographies, 21*(1), 49–58.

Cabrero, F. (coord.) (2013). *Ciudadanía intercultural. Aportes desde la participación política de los pueblos indígenas en Latinoamérica*. PNUD.

Cabrero, F. (2019). *Soberanía indígena. Claroscuros en la construcción del Estado plurinacional e intercultural en el Ecuador.* UEA/Icones.

Castillo, R. and Andrade, J. (2016). Pobreza en Ecuador, perfiles y factores asociados 2006–2014, capítulo 3. En *Instituto Nacional de Estadísticas y Censos (INEC) 2016*. Reporte de pobreza por consumo Ecuador 2006–2014. https://www.ecuadorencifras.gob.ec.

Castro-Sotomayor, J. and Minoia, P. (2024). Cultivating postdevelopment from pluriversal transitions and radical spaces of engagement. In H. Melber, U. Kothari, L. Camfield and K. Biekart (eds), *Challenging global development: towards decoloniality and justice* (pp. 95–116). Palgrave Macmillan.

Cruz Rodríguez, E. (2013). Estado plurinacional, interculturalidad y autonomía indígena: Una reflexión sobre los casos de Bolivia y Ecuador. *Revista VIA IURIS*, (14), 55–71.

De Sousa Santos, B. (2010). *Descolonizar el saber, reinventar el poder*. Trilce.

Fanon, F. (2001). *The wretched of the earth.* Penguin Books.

Fricker, M. (2007). *Epistemic injustice: power and the ethics of knowing.* Oxford University Press.

Goldman, I. (1982). Cultural transformations and ethnicity in modern Ecuador. In Norman E. Whitten, Jr. (ed.), *American Anthropologist, 84,* 908–909. https://doi.org/10.1525/aa.1982.84.4.02a00220.

González Díez, J., Brito Román, J.C., and Gámez Ceruelo, V. (2022). Educación para la ciudadanía intercultural en Ecuador: Historia, límites y retos para el futuro. *Nullius, 3*(1), 1–23.

Instituto Nacional de Estadística y Censos (INEC). (2022). Encuesta Nacional de Empleo, Desempleo y Subempleo 2021 (ENEMDU) Indicadores de Pobreza y Desigualdad Diciembre, 2021. http://bit.ly/3JuXsa4.

Kerr, J. and Andreotti, V. (2018). Recognizing more-than-human relations in social justice research. Gesturing towards decolonial possibilities. *Issues in Teacher Education, 27*(2), 53–67.

Krainer, A. and Guerra Bustillos, M. E. (eds). (2012). *Interculturalidad: Un acercamiento desde la investigación*. FLACSO.

Lang, M. (2017). *Erradicar la pobreza o empobrecer las alternativas*. Ediciones Abya-Yala.

Maldonado-Torres, N. (2007). Sobre la colonialidad del ser: contribuciones al desarrollo de un concepto. In Castro-Gómez, S. y Grosfoguel, R. (eds), *El giro decolonial. Reflexiones para una diversidad epistémica más allá del capitalismo global* (pp. 127–167). Siglo del Hombre Editores.

Mato, D. (ed). (2008). *Diversidad cultural e interculturalidad en Educación Superior. Experiencias en América Latina*. IESALC, UNESCO.

Mato, D. (ed). (2012). *Educación superior y pueblos indígenas y afrodescendientes en América Latina. Normas, políticas y prácticas*. IESALC, UNESCO.

Méndez Torres, G. (2009). Miradas de género de las mujeres indígenas en Ecuador, Colombia y México. En Andrea Pequeño (comp.), *Participación y políticas de mujeres indígenas en contextos latinoamericanos recientes* (pp. 53–71). FLACSO.

Mignolo, W. and Walsh, C. (2018). *On decoloniality, concepts, analytics, praxis*. Duke University Press.

Minoia, P. (2020). La emergencia sanitaria COVID-19 no justifica que la educación pública pague la crisis económica. *Eco-cultural pluralism in Ecuatorian Amazonia* (blog). http://bit.ly/3Yxp0Qs.

Minoia, P., Tapia, A. and Kaukonen Lindholm, R. (2024). Epistemic territories of kawsak sacha (living forest): cosmopolitics and cosmoeducation. *Globalizations*, *21*(2), 331–348.

Nakata, N. M., Nakata, V., Keech, S. and Bolt, R. (2012). Decolonial goals and pedagogies for indigenous studies. *Decolonization: Indigeneity, Education & Society, 1*(1), 120–140.

Perreault, T. (2003). Changing places: transnational networks, ethnic politics, and community development in the Ecuadorian Amazon. *Political Geography, 22*(1), 61–88.

Prieto Cruz, O. A. (2021). La Educación Ambiental Intercultural como alternativa para la formación del pensamiento holístico: un caso de estudio en la Amazonía ecuatoriana. *Revista Andina de Educación, 4*(2), 74–82.

Primicias.ec. (2022, November 7). La primera universidad pública del Ecuador se creó en 1786. http://bit.ly/3J4V0Wt.

Quijano, A. (2000). *En la colonialidad del saber: eurocentrismo y ciencias sociales. Perspectivas latinoamericanas* (pp. 122–151). Centro de Investigaciones sociales (CIES), Lima. Edgardo Lander (comp.) Buenos Aires: CLACSO.

Quijano, A. (2007). Coloniality and modernity/rationality. *Cultural studies, 21*(2–3), 168–178.

Quijano, A. (2011). Colonialidad del poder y clasificación social. *Contextualizaciones latinoamericanas, revista semestral del Departamento de estudios ibéricos y latinoamericanos de la Universidad de Guadalajara, 3*(5), 285–327.

Radhuber, I. M. and Radcliffe, S. A. (2023). Contested sovereignties: indigenous disputes over plurinational resource governance. *Environment and Planning E: Nature and Space, 6*(1), 556–577.

Rivera Cusicanqui, S. (2012). Ch'ixinakax utxiwa: a reflection on the practices and discourses of decolonization. *South Atlantic Quarterly, 111*(1), 95–109.

Rodríguez, M. (2018). Capítulo 3, La doble demanda: tierra y plurinacionalidad. La educación intercultural bilingüe como proyecto político de la CONAIE (1988–2006). En *Educación intercultural bilingüe, interculturalidad y plurinacionalidad en el Ecuador. Luchas y experiencias del movimiento indígena: desde Dolores Cacuango hasta la Revolución Ciudadana* (Vol. 1). Abya Yala- Fundación Pueblo Unido del Ecuador—Fortalecimiento del Sistema de Educación Intercultural Bilingüe- Ministerio de Educación.

Ruiz, L. (2000). *Amazonía ecuatoriana, escenario y actores del 2000*. EcoCiencia, Comité Ecuatoriano de la Unión Internacional para la Conservación de la Naturaleza.

UNICEF. (2012). Educación Intercultural Bilingüe—EIBAMAZ una apuesta por la educación y la cultura. https://bit.ly/3ZVikfX.

UNICEF. (2013). Catálogo de publicaciones EIBAMAZ, Quito. https://bit.ly/3YDUqVe.

Universidad Estatal Amazónica (UEA). (2022). Estatuto. https://www.uea.edu.ec/.

Valdez, F. (2003). Capítulo II. Historia temprana de las sociedades amazónicas. En *Primeras sociedades de la alta Amazonia: La cultura Mayo Chinchipe-Marañón*. IRD Éditions. https://doi.org/10.4000/books.irdeditions.18189.

Veintie, T., Hohenthal, J., Betancourt Machoa, K. and Anders, S. (2022). The (im)possibilities of education in Amazonia: assessing the resilience of intercultural bilingual education in the midst of multiple crises. *Diaspora, Indigenous, and Minority Education*, *16*(4), 259–272.

Walsh, C. (2007). Interculturalidad, colonialidad y educación. *Revista Educación y pedagogía, XIX*(48), 25–35. Universidad de Antioquia, Facultad de Educación.

Walsh, C. (2008). Interculturalidad, plurinacionalidad y decolonialidad: las insurgencias político-epistémicas de refundar el Estado. *Tabula Rasa,* (9), 131–152.
Walsh, C. (2012). Interculturalidad y (de)colonialidad, perspectivas críticas y políticas. *Visão Global, Joaçaba, 15*(1–2), 61–74.
Walsh, C. (2014), ¿Interculturalidad? Fantasmas, fantasías y funcionalismos. *Revista nuestra América, 2*(4), 17–30.
Whitten, Norman E. Jr. (1978). *Amazonian Ecuador: an ethnic interface in ecological, social and ideological perspectives.* IWGIA Document 34.
Whitten, Norman E. Jr. (ed). (2003). *Millennial Ecuador, critical essays on cultural transformations and social dynamics.* University of Iowa.
Wilson, J. and Bayón, M. (2017). The nature of post-neoliberalism: building bio-socialism in the Ecuadorian Amazon. *Geoforum, 81*, 55–65.

CHAPTER 2

Public Education Policies and the Struggle of the Indigenous Movement for a Decolonial Interculturality

Paola Minoia and Andrés Tapia

Introduction

Intercultural education emerged in Latin America in the 1970s from Indigenous organizations as a cultural claim for decolonization and self-determination (López 2009). In Ecuador, intercultural bilingual education (IBE) was introduced in the 1980s thanks to the leading role of the Indigenous movement under the leadership of the Confederación

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de Nacionalidades Indígenas del Ecuador (CONAIE). Its formal recognition was strengthened by the 2008 Constitution that contextualized the intercultural principle within the conception of Ecuador as a plurinational state. Interculturality was understood as a sphere of coexistence of national languages inherent to the territories, of knowledges based on various ancestral epistemologies and worldviews, and of cultural equity.

Despite these principles, the state modernization project, based on the intensification of the extractivist economy, led to a period of conflict between the central government and Indigenous populations, weakening the implementation of intercultural education programs. The closure of thousands of bilingual intercultural community schools in rural areas to make way for state-led Millennium Educational Units is just one example of the real political intentions.

Our interest in this topic stems from the different understandings and (mis)use of the interculturality project. As Walsh (2010) well expressed it, the concept of interculturality is used in different ways, either as neoliberal functional multiculturalism, or as political reforms of superficial inclusiveness or finally as a radical project of epistemological reconstitution to decolonize and dehegemonize sociopolitical relations that are still based on racialized distinctions. The divergence of these three meanings makes the debate on interculturality quite complex, and frustrates its application.

In this chapter, we aim to analyze the process of reconstitution of IBE. Primarily, we present a historical account of negotiations on educational policies, especially during the presidencies of Rafael Correa and Lenín Moreno. Then, we analyze IBE implementation in the Ecuadorian Amazon region. In particular, we present the perspectives of some of the actors involved in the education sector: on the one hand, national state actors based in Quito, and on the other, communities from the territories of Pastaza, for whom IBE is an instrument of linguistic and cultural protection for a population of great ethnic diversity. Meanwhile, education operators are working in the territories and acting under the constraints determined by the current reform, which is oriented towards an interculturality that is functional to the central power. Since the goal of our research is to focus on education as a field in which relationships between knowledge, being and land can be strengthened (Escobar 2014), our critical analysis aims to evaluate current school practices through principles of equity between cultures and knowledge, and recognition of ancestral knowledges as valid and not as primitive or subordinate to European-based cultures.

The analysis is based on documentary materials produced by the Ministry of Education, other government-related institutions, and CONFENIAE, which collaborates with the Secretariat of the Intercultural Bilingual Education System (SESEIB), aligning the program with the needs of populations living in the Amazonian region. The research also includes qualitative interviews with different parties involved, both in Quito and in Pastaza, and participant observations, especially because one of the authors lives in Pastaza and has been a leading member of CONFENIAE.

Historical Excursus

The colonial presence in Ecuador officially came to an end in 1822, but the date does not mark the beginning of an era of liberation for the entire population living in the country. The new independent administration perpetuated a persistent social classification around the idea of racial differentiations. The subaltern status of Indigenous and Afro-descendant groups passed from the hands of the Spanish rulers to those of the white-*mestizo* administration. Ethnic and racial domination persisted in a system that treated the minoritized population to exploitation and physical abuse, denial of their identities and territorial rights, injustice and paternalistic tutelage (Lang 2012).

Formal education has been crucial in the construction of the nation-state, and in the acculturation and assimilation of ethnically diverse citizens (Dekker et al. 2003; Green 1997). Cultural imperialism has caused what De Sousa Santos calls Indigenous epistemicide (2016), that is, the destruction of a diversity of cognitive experiences. Mignolo (in Mignolo and Walsh 2018) emphasizes the importance of knowledge about the economy, politics or history, stating that "ontologies are cosmological/epistemic creations" (p. 135), meaning that their absence from a knowledge system is the denial of the very existence of these realities. In Ecuador, formal education was imposed on a wide diversity of Indigenous groups as a uniform system in Spanish; other languages and all types of cultural expressions, including traditional clothing, were prohibited. Diversity was seen as a distortion of normality that needed to be corrected. This led to the marginalization of non-*mestizo* students, shame and denial of their own origin, the breakdown of their families, migrations and ultimately the erasure of many Indigenous cultures (Espinosa 2007). At the same time, especially during the 1950s and 1960s, there

was an acceleration of oil exploration and mining exploration by foreign companies, leading to the eviction of populations from their territories.

In the early 1960s, however, Indigenous movements emerged fighting for cultural, social and territorial rights, and over the next 20 years, new organizations began to be active at the local, provincial, regional and national level. Education as a tool for epistemic reconstitution was a central theme in their agenda (López 2009). In the 1980s, the state approved that in schools in areas where Indigenous populations were predominant their respective languages could be used as the main language of instruction, alongside Spanish, maintained as the language of intercultural communication. In 1986, the Confederation of Indigenous Nationalities of Ecuador (CONAIE), the main Indigenous organization in Ecuador, was established, with a programmatic agenda aiming to enforce the plurinational state through the recognition of Indigenous and ethnic groups, the restitution of ancestral lands, the right to self-determination of Indigenous nations, to a dignified life in the territories, and to culturally-adapted education through IBE. In 1989, the Ministry of Education recognized CONAIE's responsibility for the Directorate of Intercultural Bilingual Education (DINEIB).

CONAIE convened the First Indigenous Uprising in 1990, a fundamental event of the Indigenous struggle at the continental level. In 1992, the Amazonian Indigenous peoples organized the Allpamanda, Kawsaymanda, Jatarishunchik march from Puyo to Quito (Whitten et al. 1997), which led to the legalization of 1.5 million hectares of Amazon rainforest for the seven nationalities of the province of Pastaza. Some of the demands were finally accepted, and the populations of the Amazonian region obtained recognition for areas of the forest as ancestral territories, although without administrative autonomy. The Uprising constituted a turning point in the 500 years of colonial oppression by white-*mestizo* ethnic groups over the "others", a domination that had continued with the imposition of Spanish, the Catholic religion, poverty and social injustice. The objective of the large mobilizations of the 1990s was to reverse the system of violence against original populations, reaffirm their rights to live on their ancestral lands against evictions perpetrated by oil, mines and other natural resource extraction, and counteract the epistemicide caused by the dominant assimilative culture that was erasing diverse ancestral identities and knowledge. These reasons clearly expressed the link between interculturality and decoloniality (Walsh 2010), in which proposing a new education system was fundamental to reversing centuries

of subalternity and affirming different languages, knowledge, experiences, spirituality and alternative thought to that constitutive of global capitalism and Western modernity. These historical events have a continuity in more recent uprisings and social outbreaks regarded as the largest in the country's history: the rebellion of October 2019 and the Inty Raymi Uprising of June 2022.

In 1993, after a lengthy participatory process that involved representations from 14 nationalities and the 18 Indigenous peoples of Ecuador, the curricular model of the IBE system (MOSEIB) was officially endorsed (Ministerio de Educación del Ecuador 2013). The new "ecology of knowledge" (De Sousa Santos 2010) called for a reform of the curriculum that integrated all subjects with ancestral knowledge and worldview. Also crucial was a close relationship between schools, communities, families and nature through practical teaching/learning units and through *minga* (community work), whose objective is to reinforce "knowledge about terrestrial beings" (Mignolo and Walsh 2018; Minoia et al. 2024). However, the movement did not involve non-Indigenous minorities in this project, and Afro-Ecuadorians, despite their large number in different areas of the country, are not represented in curricula.

Correísmo: The Crisis of the Intercultural Project

After its establishment in 1986 and strengthening during the 1990s, IBE faced its greatest challenges in the decade between 2007 and 2017, during the government of economist Rafael Correa Delgado. According to the testimonies of leaders and representatives of social sectors and the Indigenous movement of Ecuador, this period, known as *Correísmo,* marked a setback for the collective rights of Indigenous peoples and nationalities, among which IBE was no exception.

The situation was not immediately visible due to the government's appropriation of some Indigenous vocabulary, which confused much of the global public opinion seeking alternative political models and painted Correa's government as a political realization of environmentalism and pro-Indigenous pluralism (Iza et al. 2020).

Having overcome a severe governance crisis between 1996 and 2006, with several failed and overthrown governments through mobilizations and popular uprisings in which CONAIE played a leading role, Correa proposed a new government model through a new paradigm of development called *buen vivir* or *sumak kawsay*, accurately taken from the

foundations of Indigenous cosmology. The institutionalization within the government structure of the Secretariat and National Plans for Buen Vivir (Secretaría Nacional de Planificación y Desarrollo, SENPLADES 2009), especially the first Development Plan 2007–2010, announced "a vision of development that privileges the achievement of *buen vivir* through a break towards a just, free, democratic and sustainable society: a democratic, plurinational, megadiverse and secular state". Objective 8 of the nine strategic objectives set for all areas of state governance is: "To affirm the national identity and strengthen diverse identities and interculturality", thus integrating this principle into the national debate for the first time. The plan was written in 2007 by Fander Falconi, National Planning and Development Secretary, who later served as Minister of Education in the government of Lenín Moreno (2017–2021).

A program change occurred with the new version of the plan, called the National Plan for Buen Vivir 2009–2013. Despite the continued rhetoric about the concepts of "Buen Vivir with a view to the construction of a plurinational and intercultural state, given the deep crisis and colonial nature of the development concept", the plan represented a substantial contradiction. It incorporated within its strategic lines the "transformation of higher education and knowledge transfer through science, technology and innovation", leading in practice to a modernizing model of the Western type rather than one integrating the knowledge of ancestral communities.

The approval of the Constitution of 2008 set a new direction for the state's institutional framework and launched a new political moment for the country. However, despite recurring references to the vision of *sumak kawsay* for Indigenous peoples, concrete actions did not deviate from a modernizing exercise, constituting a practice of cultural appropriation structured under state institutionalism with a demagogic political objective that, far from leading to the "social pact" referred to in the 2008 Constitution, led from 2009 to increasing conflicts between the government and social and Indigenous movements. Despite constitutional recognition of the plurinational state principle, which implies the rights to territorial, linguistic and cultural self-determination of the Indigenous peoples in their territories (as stated in article 3 of the CONFENIAE statute), the IBE program degenerated due to a sudden political change.

Around 13,000 primary community schools and secondary IBE schools described by President Correa as "schools of poverty" were closed

in three regions of the country between 2009 and 2013 (Granda Merchán 2018, p. 298), causing significant problems of access to schooling for children living in remote communities (Martínez Novo 2018). Various consequences, such as longer journeys to school, increased travel costs, poorer nutrition of school children and discrimination against those coming from rural areas, exacerbated the situation in the Amazon region. The mountainous and rugged topography and the numerous rivers in the region posed serious challenges for travel, especially in rural areas with inadequate or poorly maintained road infrastructure (Hohenthal and Minoia 2022). In addition, the program was reformed with the objective of assimilating the IBE programs into the Western model, stripping it of its previous critical paradigm and the teaching of Indigenous languages.

At the same time, official plans kept using the narrative of interculturality. The reformed version of MOSEIB (Ministerio de Educación del Ecuador 2013) established that among the main objectives of bilingualism were the maintenance of culture, the inclusion of local knowledge and the creation of innovative Indigenous pedagogical practices. The document established that at the beginning of primary school, all teaching must be carried out exclusively in the Indigenous language in question, a percentage that then gradually decreases to 40% at the end of secondary school, while the use of Spanish should increase to 40% and another foreign language to 20%. The most used Indigenous language, however, especially in writing, is the unified *kichwa* which is different from the spoken variants of *kichwa* and especially from the idioms spoken by other nationalities. The reformed MOSEIB also maintained some principles of the Indigenous worldview that would have to be reflected in the pedagogy of IBE schools, but there was a problem of application. An example can be seen in the curriculum section named "Universe" ("The Cosmos"), which sets out the basis of the worldview and consists of different subjects: philosophies, anthropologies, sociologies, linguistics, psychologies, pedagogies, socio-politics and cultural identities (all indicated in the plural). Some examples of the principles expressed in the "Curricular Bases" of the MOSEIB (2013) are the following:

> Students should come to feel that they are part of the cosmos. IBE surpasses theocentric and anthropocentric visions and projects a cosmic vision. In this context, the Sustainable Plurinational State Plan is fundamental for the educational process and should take as a reference: a) understanding of the relationships between living beings and nature; b)

> care, conservation and preservation of nature (control of water, land and air pollution; control of erosion, deforestation and reforestation); c) sustainable use of natural resources: water, primary forests, *páramos*, mangroves, fauna and flora; d) waste processing. (Ministerio de Educación del Ecuador MOSEIB 2013, p. 39; our translation)
>
> IBE is based on the worldview and philosophy of the peoples and nationalities, which are grounded on particular ways of seeing the world, the person–nature–God relationship and the philosophical conception of time as a cyclical and not linear unit. The mythological is the basis for understanding their daily practice. The symbolic is established in archetypes that speak of their thought. The language seen from the semantics encloses the philosophical thought of the peoples and nationalities. In epistemology, from a historical retrospective, we find the root of their thought. (Ministerio de Educación del Ecuador MOSEIB 2013, p. 39; our translation)

These definitions clearly demonstrate the importance attributed to public education in shaping the diverse cultures and identities of different Indigenous groups that lie at the heart of the plurinational nature of Ecuador, as established in policy documents.

However, the lack of application of these curricular principles is a consequence of the deterioration of political relations between the government and CONAIE since 2008. By stating that the CONAIE had excessively politicized and ideologized education, the Ministry of Education diminished its influence over IBE and brought it under its direct mandate, with the support of other smaller Indigenous organizations (Martínez Novo and de la Torre 2010). A new Organic Law of Intercultural Education (LOEI) of 2011 established that interculturality remained a priority (Asamblea Nacional 2011); therefore, by placing IBE under the Ministry of Education as a separate educational system, it took power away from the very essence of Indigenous education (Martínez Novo 2014). In fact, IBE programs have remained weak compared to the ambitious objectives outlined in 1993 (Oviedo and Wildemeersch 2008; Martínez Novo and de la Torre 2010; Katz and Chumpi Nantip 2014). IBE schools lack resources, whether intercultural teachers, equipment, books or other educational materials written in Indigenous languages. At the same time, since 2007, the government has embarked on the Millennium Schools project (Educational Units of the Millennium: UEM), with the aim of improving the quality of education through the modernization and internationalization of the infrastructure:

> The Millennium Educational Units are an integral part of the government policy to improve the quality of public education. The project's objective is to enhance the quality of educational services by providing comprehensive educational infrastructure with innovative physical and technological resources. These schools are intended to serve as a benchmark for a third-millennium educational model, integrating functionality with flexible and adaptable spaces, sports and recreation, suitable furniture and technological support. (Ministerio de Educación 2016, our translation)

These new schools were intended to serve larger areas and replace the poorer rural institutes through mega academic complexes equipped with libraries, ICT networks and equipment, trained teachers, curriculum evaluation and student performance assessment. The language of instruction is Spanish, with English as a second language, aiming to facilitate students' access to universities, where instruction is in Spanish. Authors such as Miriam Lang (2017), Japhy Wilson and Manuel Bayón (2017) have shown a direct relationship between the opening of the new Millennium Schools and the relocation of communities from native territories to areas of extractive mining. The so-called Millennium Communities, such as Playas de Cuyabeno, have attracted populations leaving their communities with promises of civilization: jobs, houses and new services provided, including schools. However, these projects were soon abandoned.

These setbacks in the field of IBE and availability of schools in communities, along with the advance of pro-extractive mining and oil policies in the Andean and Amazonian region, marked a political shift from a model of collaboration with Indigenous organizations to one influenced by the Eurocentric hegemonic vision. In this model, priority is given to knowledge transfer through science, technology and innovation. This modernizing model relies on reducing investment in remote regions, causing profound social inequalities, especially for young Indigenous people. The lack of funding to improve the quality of education in rural and Indigenous areas has consequently limited young residents' access to university education. The implementation of evaluation systems based on standardized education rather than IBE subjects has exacerbated the problem.

Indigenous education continues to be perceived as a second-choice education that restricts the social mobility of Indigenous children, compared to those attending Spanish-language schools, especially the Millennium Schools. The fact that Indigenous schools are often located

in peripheral areas also contributes to this problem. Families face the dilemma of keeping young people within the ancestral territories or letting them leave to search for new life opportunities elsewhere, and those with the option often send their teenage children to study in schools in other areas far from their homes. Communities suffer as those who decide to leave are uprooted from their original land and cultures. Therefore, the main challenge in Amazonian education today is to achieve equitable educational prospects for all, providing tailored education to support minority cultures: an improved quality of education, while at the same time empowering vulnerable groups (Gutiérrez et al. 2015).

The government restrictions have affected alternative academic studies, such as those offered by the Intercultural University Amawtay Wasi. This university, which was created by CONAIE and the Instituto Científico de Culturas Indígena in 2005, was closed by government decree in 2013, based on evaluation criteria that did not consider the restorative epistemic value of this educational institution (Martín-Díaz 2017).

Post-Correísmo: New Attempts to Recover IBE

After a decade in power, Rafael Correa concluded his presidential term in May 2017. Months later, his ruling party split into two factions, one supporting Correa and another aligning with the new President Lenín Moreno. This led to a new crisis of governability and to political instability that persisted throughout the whole of 2017 and part of 2018, hindering the execution of many campaign promises and government plans, which also affected IBE. The 2010 Development Plan outlined a territorial restructuring for Ecuador by region, with Amazonian Pastaza belonging to Zone 3 along with the Andean provinces of Cotopaxi, Chimborazo and Tungurahua, which affected the configuration of educational districts in the province.

President Moreno took office following new agreements with Indigenous organizations based on promises of restitution and dialogue with representatives of all the country's nationalities. Many difficulties in this period resulted from a political cycle that had significantly weakened the struggles. The National Plan for Buen Vivir 2017–2021 (SENPLADES 2017) reaffirmed the following political objectives: ensuring plurinationality in the state's organization, exercising legal pluralism, and effectively providing for the collective rights of peoples and nationalities; promoting the rescue, recognition, research, and protection of cultural heritage,

ancestral knowledge, worldviews and cultural dynamics; and guaranteeing the preservation of traditional languages, multilingualism and the sustainability of intercultural education systems and knowledge of diversities. Therefore, at least on paper, the plan introduced a policy in favor of IBE, complemented by some advances in terms of its restitution and revitalization through the signing of Decree 445 between the government and CONAIE. However, the plan required new implementation measures to be substantially relaunched.

From the perspective of the institutions involved and the media, especially those from Quito, the IBE reconstitution project seemed to undergo an accelerated process with ambitious goals to be achieved in a very short time, despite its complexity and the situation of economic austerity that Ecuador was experiencing. There was a desire for immediate results as the government sought to demonstrate the political capacity to respond to the rights to education for everyone in different languages and in respect of diverse cultures, knowledge and worldviews of the ethnic groups and nationalities in the country. In reality, the project was not successful for multiple reasons.

The Present Status of Intercultural Bilingual Education

This section is based on a series of interviews conducted in the years 2015, 2018, 2019 and 2022, involving various institutional actors. The interviews took place both in central educational offices located in Quito and in peripheral locations in the province of Pastaza, Amazon region. In Quito, we met with representatives from the Secretaría del Sistema de Educación Intercultural Bilingüe (SESEIB), which is part of the Ministry of Education, and the Secretaría de Educación Superior, Ciencia, Tecnología e Innovación (SENESCYT), the governing body for higher education in the country. In Pastaza, we interviewed district educational directors, school principals and some teachers, whose firsthand experience is crucial for understanding the functioning and content of intercultural programs at the school level. We also met with leaders of CONAIE and CONFENIAE, respectively in Quito and Pastaza, to understand the extent of the organizations' involvement in the relaunch of IBE. Finally, we met with researchers from various universities, some of whom are directly involved in intercultural education courses, such as the Salesian University, which has a decade of experience in training teaching staff in

various Indigenous territories, and with members of the scientific council of the revived Amawtay Wasi University.

The interviews delved into the fundamental concept of IBE, exploring the interest in quality pedagogical pathways for different linguistic groups in the context of a political project for social and environmental justice within the plurinational state. In particular, the interviews aimed to investigate the ecological and territorial dimensions of the IBE program and the methodologies proposed at the central level and adopted by various educational units. Teachers had been reporting on the difficulties of implementing the MOSEIB in recent years, as well as the schools' ability to respond to the revitalization needs of languages, traditions, knowledge and the ability to respond to local problems in collaboration with communities.

The research has revealed minimal substantial investment in the intercultural education policy project, especially at the central level, despite rhetoric promising the reopening of community schools and the relaunch of IBE programs. In addition, educational marginalization in the Indigenous territories has shifted the focus to improving general school access needs, losing sight of the educational interculturality project. Both SESEIB and SENESCYT officials openly acknowledge the difficulties students face in accessing higher education, attributing them to structural issues inherent in local culture, such as the emphasis on oral expression in national languages rather than written Spanish, which is essential for passing exams, and the high dropout rates due to economic problems or, in the case of girls, due to motherhood and marriage. Institutionally, there is a resigned attitude among ministry officials. SESEIB works under austerity conditions, with a small office and limited resources. Old teaching materials created during the EIBAMAZ project, which was active in Bolivia, Ecuador and Peru from 2004 to 2012, coordinated by UNESCO and funded by the government of Finland (Ministry for Foreign Affairs of Finland 2015)—in particular, copies of primary school textbooks in national languages—are still in use in some educational units, but reprints are needed. Furthermore, there is a high dropout rate for beginners for economic and family reasons. The implementation of IBE is also encountering difficulties due to the inadequate training of teachers, who lack linguistic knowledge and intercultural pedagogy studies.

There is a recognition on the part of the central offices of the need to strengthen research in intercultural pedagogy to differentiate programs and adapt them to local characteristics. This includes both language and

program content, as well as the pedagogical methods that reflect the social reality and peculiarities of the environment in which the students live. In the previous decade, some Indigenous researchers had been trained at the University of Cuenca, but the curriculum was interrupted (Martínez Novo 2018). Similarly, the intercultural training program for teaching staff in Canelos (Veintie 2013) was downgraded to vocational training only for kindergarten teachers.

On the other hand, the director of the *Saberes Ancestrales* (Ancestral Knowledges) office of SENESCYT mentioned the investment made by the Amazon Law in higher education institutions to strengthen regional development. The problem is that these institutions, where resources are integrated, do not reflect Amazonian knowledge, nor do they prioritize the attraction and retention of Amazonian students. Additionally, interviewees complained about the lack of interest shown by CONAIE, which instead invested in the relaunch of Amawtay Wasi University (Minoia 2019); however, the latter, according to some commentators, mainly represents *mestizo* or highland culture, not the Amazonian culture at all (Sarango Macas 2019).

The ministerial contribution was to develop pedagogical guidelines for the implementation of MOSEIB (Ministerio de Educación 2017), but this increased the burden on educational units and teachers. They were tasked with creating new school programs based on educational experiential calendars and knowledge cards (see Chapter 7)—a task that, as observed in the field, is impossible for teachers who are often from outside the territories they serve.

In some cases, educational leaders of CONFENIAE who were interviewed were involved in organizing pedagogical seminars to incorporate the guidelines, following the directives published by Secretaría del Sistema de Educación Intercultural Bilingüe, SESEIB (2019). During these seminars, attempts were made to discuss the importance of decolonizing the organization of disciplines, deconstructing knowledge that needs to be integrated, and of which everyone is a co-producer. The knowledge reorganization proposed by the IBE model incorporates four areas: (a) life, land, territory and Mother Nature; (b) family, community and social life; (c) cosmovision and thought: space–time-spirituality; and (d) science, technology and production.

These pedagogical events highlight the link between intercultural education and territoriality, according to which an integration of theoretical and practical knowledge based on the land is proposed. However, the

commitment of the communities and Indigenous movements has found little fertile ground due to the lack of competence and motivation among teachers, who are already committed to respecting the tight deadlines of the main program established by the central government and disrupted by various turbulences (Hohenthal and Minoia 2022).

Conversations with the leaders of the CONAIE and CONFENIAE organizations confirmed, on the one hand, the collaboration strategy with the government in the national educational training system. On the other hand, they complained that the enhancement of Indigenous cultures, carriers of ecological and cultural knowledge suitable for the protection of life and nature, was being blocked. These cultural limitations are due to the perspective of central ministry officials, who view urban civilization as superior and necessary to overcome rural ways of life that are considered primitive and whose ecological knowledge and environmental practices are not valued. There are also structural limitations due to the encapsulation of educational activities in a bureaucratic matrix that does not value diversity, but suffocates it. In this matrix, there is no room for the temporal organization of the school calendar and, therefore, students who have to engage in productive activities on the farm or go hunting end up failing the year. Community schooling would be based instead on academic calendars composed of individual modules that could be followed or paused without compromising an entire school year or a broader curricular path. Another bureaucratic problem is the lack of officially appointed teachers able to teach cosmovision subjects. In some community schools, local experts and wise people are still involved informally to instruct on myths and traditional practices (e.g., of guayusa intake and dream interpretation), or to impart useful skills such as recognizing and tending medicinal plants, woodwork and fishing. However, since they cannot be formally recognized as teachers, in most cases the program is assigned to non-Indigenous teachers who often come from other parts of the country. Often, teachers assigned to positions in Indigenous areas of the Amazonia express a lack of motivation, as well as lack of knowledge of local languages and cultures, and seek to be reassigned elsewhere as soon as they can. While working in the area, they can only impart a standard Hispanic education, even in IBE schools, while their cultural engagement in cosmovision teaching is necessarily limited to the preparation of school activities in folklore festivals and other popular events (Häkkinen et al. 2016).

The lack of access to culturally relevant education has also increased school dropout rates due to discrimination, lack of security in a foreign learning environment and the demands of standardized education, especially in subjects like mathematics (Tuaza Castro 2016; Granda Merchán 2018; Bastidas Redin 2020).

According to the school principals interviewed, the original intention of MOSEIB has been lost over time, and its pedagogical and political strength, which was aimed at strengthening national identity cultures, has evaporated in the pursuit of making the program work from a bureaucratic standpoint. The transformative potential of MOSEIB lay in its Pedagogical Foundation compatible with Indigenous territorialities, including a greater emphasis on experiential learning and environmental observation, outdoor classes, the involvement of local experts in teaching Indigenous cosmologies and relationships with non-human entities, agroforestry and handicrafts, closer collaboration between the school and the students' families, community life, and participation in ceremonies and festivals. In general, MOSEIB's pedagogical connection with the Indigenous ideology of *sumak kawsay*, which emphasizes holistic and relational onto-epistemologies, a harmonious relationship between humans and nature, and collective well-being (Viteri Gualinga 2002), has been overshadowed by the effort to save the minimal language lessons and relationality with culture through traditional celebrations and community service events (*mingas*) involving schools and families.

Additional Notes

The historical context in which this section is written corresponds to a period of social upheaval between 2019 and 2022, between two of the Indigenous uprisings considered to be the largest in the entire republican history of Ecuador. It is interesting to add here some brief reflections on the implications of these two actions for the issue of intercultural education.

The social outbreak known as "La Rebelión de Octubre" in Ecuador in 2019 (Iza et al. 2020) focused on repealing Decree 883, which had caused a rise in fuel prices. It began with an economic demand and found a specific solution that allowed fuel subsidies to be maintained and the International Monetary Fund (IMF) recommendations in Ecuador to be rolled back. Although it had an agenda of demands around this specific decree, the achievement had a significant positive impact on the popular

economy, preventing a dramatic increase in the cost of living for the population.

The more recent social outbreak known as the "Levantamiento Indígena del Inty Raymi" in June 2022 involved a broader agenda of demands, with ten points raised by the Indigenous movement within the CONAIE's (2022) struggle platform. Without going into the details of each point, it is worth noting that, as a result of 18 days of social mobilization, seven executive decrees were issued in response to the specific demands raised, representing approximately 1 billion dollars in subsidies for the rural and the most impoverished popular sectors.

The first and most important decree involves a 15-cent reduction in the prices of extra gasoline and diesel, representing a $340 million subsidy. Additionally, a continuation of the subsidy has been established, with a focus on specific sectors such as agricultural production in rural areas, and community land and river transportation. This program is currently in the process of implementation through technical agreements between the government and the Indigenous movement. The second decree addresses a health emergency, allocating around $200 million to provide medicines to hospitals and health centers, including community sub-centers in the territories. Other decrees relate to subsidies for agricultural inputs such as urea, a $5 increase in the human development bonus, and the debt cancellation up to $3000 credits for thousands of people, by the National Development Bank.

As for specific decrees for the Amazonian region and the Indigenous movement, the repeal of Decree 95, issued in 2021 by the President, stands out. The decree sought to double oil exploitation from 500,000 to 1 million barrels daily, expanding the extractive frontier in the Indigenous territories of central southern Amazonia. Its repeal is seen as one of the greatest environmental achievements of recent years. The other aspect is the reform of mining by Decree 151, resulting in the prohibition of metallic mining in Indigenous territories.

Finally, the decree doubling the budget for IBE is noteworthy, since it represents additional funds that had been sought for years without a concrete response. While the value of $2 million is not comparable to the needs of the education sector, it will have significant impact, at least in the short term. In an additional announcement the President also announced the elimination of the entrance exam for higher education starting in 2023. This was another of the requests within point 4 ("collective rights")

of the Uprising's agenda, which ultimately obtained a favorable response from the executive (Confirmado.net 2022).

Based on all the above, it is expected that, within the political reality of Ecuador, social pressure through mobilization will continue to be the most effective mechanism for demanding rights for Indigenous and marginalized populations of Ecuador, and the case of IBE confirms the success of this strategy.

Conclusion

This chapter has presented a historical account of IBE in Ecuador arising from the pressure of the Indigenous movement and the consequent negotiation with the state. Specifically, the case of school education in the Amazonian region is analyzed. While the IBE experimentation process in Ecuador involves a constant dynamic of reflection on how the model is envisioned, in line with the objective of this chapter some criticisms are highlighted that contribute to the current debate about the moment of experimenting with IBE in Ecuador.

In recent years, IBE has remained a promise that has been disabled by other priorities and by various bureaucratic and financial obstacles. Many families have been faced with the choice of letting their children undergo schooling close to their own culture and territorial identity, or abandoning the latter in favor of a "useful" and professionalizing education within an urban, modern and technological canon considered superior. IBE schools themselves are more oriented towards vocational training than enabling access to higher education. The question arising in the Indigenous territories is, once again, whether the intercultural program is compatible with the pursuit of educational quality.

More recently years, the promised reactivation of IBE has been blocked by various disruptions, including a financial crisis restricting social spending that has led to general strikes, environmental crises caused by oil spills in the region and devastating floods, and the health crisis of the Covid-19 pandemic (Machoa et al. 2021). The struggle for IBE has always been mentioned as part of the negotiation for the realization of the plurinational state, but it has been eclipsed by struggles for the defense of social and territorial rights. The interviews conducted focused almost exclusively on the bureaucratic structuring process, an institutional process that exerted a great deal of pressure on teachers without, however,

putting them in a position to implement pedagogies responsive to the social demands in the territories.

As a result, much of the current debate around IBE has concentrated on the formation of the functional organic structure, neglecting a deeper reflection from a critical pedagogical perspective. Indeed, current debates have focused on designing institutional tools for the IBE start-up and transition period, such as the competency matrix, management model, design/redesign of the institutional structure and organic statute.

References to discourses of epistemic decolonization are mostly left to intellectual discussions increasingly detached from everyday struggles. In IBE institutions, functional interculturality is effected against a background of persisting colonial structures and does not question the Hispanic-based educational model. This prevents genuine questioning of the reality faced by IBE—or of the traditional educational model itself—from the perspectives of students, teachers and parents, communities and their representative organizations. On the contrary, the debate on instruments and proposals for a new institutional management model aligns with the National Development Plan, even though this one, during the Correa presidency, had laid the foundations for a conflict between the Indigenous movement and the government.

In light of the above, there are numerous challenges to be addressed in the construction of a critical, transformative model of IBE. Schools should incorporate the reality and vision of local communities and grassroots organizations for an autonomous education responding to community realities and perspectives, rather than just being a mechanical adaptation—called IBE—under the same traditional structure of conventional education in Ecuador. The cosmological dimension of education must be restored, as learning and teaching of Indigenous languages are, at the same time, intellectual, political and spiritual acts of community restitution.

References

Asamblea Nacional. (2011). *Ley Orgánica de Educación Intercultural. Segundo suplemento, No. 417, 31 de Marzo*. Registro Oficial Órgano del Gobierno del Ecuador.

Bastidas Redin, M. C. (2020). Dilemmas of justice in the post-neoliberal educational policies of Ecuador and Bolivia. *Policy Futures in Education, 18*(1), 51–71.

CONAIE. (22 de junio 2022). Comunicado de la CONAIE al gobierno nacional y a la opinión pública nacional e internacional. https://bit.ly/3IZth9C.

Confirmado.net (14 de julio 2022). Lasso anuncia como logro la eliminación del examen de la Senescyt. Seguimos en retroceso. http://bit.ly/3ZCyXgZ.

Dekker H., Malova, D. and Hoogendoorn, S. (2003). Nationalism and its explanations. *Political Psychology, 24*(2), 345–376.

De Sousa Santos, B. (2010). *Descolonizar el saber, reinventar el poder*. Ediciones Trilce.

De Sousa Santos, B. (2016). *Epistemologies of the South. Justice against Epistemicide*. Routledge.

Escobar, A. (2014). *Sentipensar con la tierra: nuevas lecturas sobre desarrollo, territorio y diferencia*. Universidad Autónoma Latinoamericana UNAUL.

Espinosa, A. (2007) Aprendamos de las nacionalidades y pueblos del Ecuador. La nacionalidad kichwa de la Sierra y los pueblos indígenas de que la componen. UNICEF.

Granda Merchán, J. S. (2018). Transformaciones de la educación comunitaria en los Andes ecuatorianos. *Sophia: Colección de Filosofía de la Educación, 24*(1), 291–311.

Green, A. (1997). Education, globalization and the nation state. In *Education, globalization and the Nation State*. Palgrave Macmillan.

Gutiérrez R., López E., Llambí L., May T., Ramírez A. and Tocancipá-Falla, J. (2015). Higher education and indigenous nationalities: challenges for inclusion in the Ecuadorian Amazonian region. *Creative Education*, *6*, 847–854.

Häkkinen, A., Minoia, P. and Sirén, A. (2016) *Cultures, environment and development in the transition zone between the Andes and the Amazon of Ecuador. Field Trip 2015 Department of Geosciences and Geography C* 12. Department of Geosciences and Geography, University of Helsinki.

Hohenthal, J. and Minoia, P. (2022). Territorial and mobility justice for Indigenous youth: accessing education in Ecuadorian Amazonia. *Mobilities, 17*(6), 850–866. https://doi.org/10.1080/17450101.2021.1987154.

Iza, L., Tapia, A. and Madrid, A. (2020). *Estallido. La Rebelión de Octubre en Ecuador.* Editorial Kapari.

Katz, S. R. and Chumpi Nantip, C. L. (2014). *Recuperando la dignidad humana* (Recovering human dignity): Shuar mothers speak out on intercultural bilingual education. *Intercultural Education*, *25*(1), 29–40.

Lang, M. (2012). Presentación. En B. De Sousa Santos y A. Grijalva Jiménez (eds.), *Justicia indígena, plurinacionalidad e interculturalidad en Ecuador* (pp. 9–11). Fundación Rosa Luxemburg, Ediciones Abya-Yala.

Lang M. (2017). *Erradicar la pobreza o empobrecer las alternativas?* Ediciones Abya-Yala.

López, L. E. (2009). Interculturalidad, educación y política en América Latina: perspectivas desde el Sur. In L. E. López (ed.), *Interculturalidad, educación y ciudadanía. Perspectivas latinoamericanas* (pp. 129–218). Funproeib Andes.

Machoa, K., Veintie, T. and Hohenthal, J. (2021). La educación desde los territorios amazónicos en tiempos de pandemia. In M. Rodríguez-Cruz (ed.), *Los pueblos indígenas de Abya Yala en el siglo XXI. Un análisis multidimensional* (pp. 53–64). Ediciones Abya-Yala, Fundación Pueblo Indio del Ecuador.

Martín-Díaz, E. (2017). Are universities ready for interculturality? The case of the Intercultural University 'Amawtay Wasi' (Ecuador). *Journal of Latin American Cultural Studies, 26*(1), 73–90.

Martínez Novo, C. (2014). Managing diversity in postneoliberal Ecuador. *The Journal of Latin American and Caribbean Anthropology*, *19*(1), 103–125.

Martínez Novo, C. (2018). Ventriloquism, racism and the politics of decoloniality in Ecuador. *Cultural Studies, 32*(3), 389–413.

Martínez Novo, C. y de la Torre, C. (2010). Racial discrimination and citizenship in Ecuador's educational system. *Latin American and Caribbean Ethnic Studies, 5*(1), 1–26.

Mignolo, W. and Walsh, C. (2018). *On decoloniality. Concepts analytics praxis.* Duke Press.

Ministerio de Educación del Ecuador. (2013). *MOSEIB. Modelo del Sistema de Educación Intercultural Bilingüe*. Subsecretaría de Educación Intercultural Bilingüe, Quito.

Ministerio de Educación. (2016). Unidades Educativas del Milenio https://bit.ly/3J4r2C1.

Ministerio de Educación. (2017). Lineamientos Pedagógicos para la implementación del MOSEIB. Acuerdo ministerial 440–13.

Ministry for Foreign Affairs of Finland. (2015). Evaluation. Inclusive education in Finland's Development Cooperation in 2004–2013. https://bit.ly/3l030jF.

Minoia, P. (2019). Discussing intercultural education and the Amawtay Wasi project in Quito with indigenous and State representatives. *Ecocultural pluralism in Ecuadorian Amazonia* (blog). http://bit.ly/3YEozDS.

Minoia, P., Tapia, A. and Kaukonen Lindholm, R. (2024). Epistemic territories of kawsak sacha (living forest): Cosmopolitics and cosmoeducation. *Globalizations*, 21(2), 331–348.

Oviedo, A. and Wildemeersch, D. (2008). Intercultural education and curricular diversification: the case of the Ecuadorian Intercultural Bilingual Education Model (MOSEIB). *Compare: A Journal of Comparative and International Education*, *38*(4), 455–470.

Sarango Macas, L. F. (2019). La universidad intercultural Amawtay Wasi del Ecuador, un proyecto atrapado en la colonialidad del poder. *Revista Universitaria del Caribe, 23*(2), 31–43.

Secretaría del Sistema de Educación Intercultural Bilingüe (SESEIB). (2019). Orientaciones pedagógicas para fortalecer la implementación del MOSEIB. Quito: Secretaría del Sistema de Educación Intercultural Bilingüe (reporte técnico). https://bit.ly/3l2AnlF.

Secretaría Nacional de Planificación y Desarrollo (SENPLADES). (2009). *Plan Nacional para el Buen Vivir 2009–2013. Construyendo un Estado Plurinacional e Intercultural*. https://bit.ly/3T5q4d4.

Secretaría Nacional de Planificación y Desarrollo (SENPLADES). (2017). *Plan Nacional para el Buen Vivir 2017–2021. Planificamos para toda una vida*. https://bit.ly/3mF76Ou.

Tuaza Castro, L. A. (2016). Los impactos del cierre de escuelas el medio rural. *Ecuador Debate, 98,* 83–95.

Veintie, T. (2013). Practical learning and epistemological border crossings: drawing on indigenous knowledge in terms of educational practices. *Diaspora, Indigenous, and Minority Education: Studies of Migration, Integration, Equity, and Cultural Survival, 7*(4), 243–258.

Viteri Gualinga, C. (2002) Visión indígena del desarrollo en la Amazonía. *Polis, 3*, 1–6. http://bit.ly/3Ff7xoW.

Walsh, C. (2010) Development as Buen Vivir: Institutional arrangements and (de)colonial entanglements. *Development, 53*(1), 15–21.

Whitten, N. E., Whitten, D. S. and Chango, A. (1997). Return of the Yumbo: the indigenous Caminata from Amazonia to Andean Quito. *American Ethnologist, 24*(2), 355–391.

Wilson, J. and Bayón, M. (2017). *La selva de los elefantes blancos. Megaproyectos y extractivismos en la Amazonía ecuatoriana*. Ediciones Abya-Yala.

CHAPTER 3

Characteristics of the Inclusion of Indigenous Peoples in the School System

Tito Madrid and Ruth Arias-Gutiérrez

Introduction

This chapter examines the right to higher education for Indigenous populations in Ecuador, and particularly in the Amazon Region. It aims to dissect the challenges faced by students who self-identify as part of the Indigenous peoples and Indigenous nationalities, examining their perspectives and aspirations regarding academic and vocational pathways. These Indigenous groups, forming distinct communities or "centres", possess cultural identities that markedly differ from other segments within Ecuadorian society. They maintain unique systems of social, economic, political, and legal organization.

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The collective of ancient peoples forming these Indigenous nationalities predates the establishment of the state, boasting a historical identity, language, culture, and delineated territory. Governed by their own institutions and traditional structures, these communities represent a longstanding and integral aspect of Ecuador's social fabric (Ministerio de Telecomunicaciones y de la Sociedad de la Información MINTEL, Ministerio de Educación MINEDUC, Secretaría de Educación Superior, Ciencia, Tecnología e Innovación SENESCYT 2018, p. 16).

The initial section of this chapter analyzes the socioeconomic shifts experienced by Indigenous nationalities in the Amazon region. It scrutinizes their integration into the capitalist market economy, primarily propelled by the exploitation of oil resources and historical colonization. This exploration encompasses an investigation into the impact of extractive industries, the role of alternative production sectors, and the inclusion of Indigenous peoples and nationalities within the educational system. The analysis encompasses indicators such as the net attendance rate in primary, secondary, and high-school education, as well as dropout and repetition rates, to elucidate trends in access to tertiary education. Additionally, this diagnostic evaluation incorporates school learning performance and associated factors.

In this section, we question the centrality of the development concept and consider the capitalist mode of production as a pivotal factor disrupting the lifestyles of the Indigenous peoples in the Amazon and influencing their integration into the educational system.

The subsequent section engages in a critical analysis of regional studies, employing a comparative and explanatory approach concerning basic education and the *Ser Bachiller* (be bachelor) tests in the Amazon (Instituto Nacional de Educación Evaluativa, INEVAL 2019). It considers the factors elucidating the school learning experiences of the Indigenous peoples across four levels: (a) the influence of the socioeconomic context characterized by low income levels, high rates of child labour and malnutrition, poverty, and extreme poverty; (b) the allocation of the state budget to education, the condition of school infrastructure, and geographical institutional placement; (c) the situation of teachers, particularly those involved in intercultural bilingual education (IBE); and (d) the interrelationships among stakeholders in the educational process (Madrid 2019). Comparative demographic profiles of the Indigenous peoples in the Amazon region are juxtaposed with those within the IBE

system, considering school units, students, teachers, perceptions of school learning, and the status of Indigenous languages.

The subsequent section presents an assessment of IBE, identifying various approaches to interculturality within the educational sphere. It contrasts a conservationist vision (Heise et al. 1994) against a perspective emphasizing the conflicted and evolving nature of interculturality (Moya 2009). Drawing from Walsh's observation (2008) regarding the contradiction within the state agenda's inclusion of interculturality—where it generates recognition but also bureaucratization—the analysis critically evaluates the gap between the model of IBE and the actual functioning of IBE schools. IBE schools look into notions of schooling within the capitalist modernity paradigm, the segmentation of the school system in intercultural terms, the regulation of the population, and the bureaucratization of activists and social leaders.

Materials and Methods

The study was developed employing a triangulation approach, combining quantitative methodologies centred on the analysis and processing of databases, and secondary sources of statistical information, supplemented by qualitative methods. These qualitative methods encompassed a literature review, which facilitated the construction of the discussion, particularly concerning conventional notions regarding interculturality and IBE. The process also involved confirming observed trends derived from empirical data and developing an interpretative narrative based on interactions with knowledgeable informants in the province of Pastaza.

In examining socioeconomic and cultural transformations in the Amazon, pivotal contributions were drawn from works by Salinas et al. (2020), Ikiam (2016), and reports from the Gobierno Autónomo Descentralizado (GAD) Provincial de Orellana (2011), GAD Provincial de Pastaza (2013), GAD Provincial de Sucumbíos (2015), GAD Provincial de Napo (2018), and GAD Provincial de Zamora Chinchipe (2015). Additionally, for insights into the integration of Indigenous peoples and nationalities into the education system, the research benefited significantly from the extensive literature, particularly data provided by Ikiam (2016), Corbetta et al. (2018), Antamba (2015), Vernimmen (2019), Bustamante (2012), and Samaniego (2013).

To assess learning outcomes, empirical information was sourced from reports issued by the Oficina Regional de Educación de la UNESCO para

América Latina y el Caribe OREALC (2017), INEVAL (2019), Ministerio de Educación (2010), and UNICEF (2009a, 2009b, 2009c). These data were complemented by information on explanatory factors sourced from Abarca (2015), García (2017), Rodríguez (2018), Llorente et al. (2010), Cañete (2017), Bermúdez (2016), Murcia (2016), Luna (2012), and Rivera Cusicangui (2018).

The assessment of IBE was founded on data presented by INEVAL (2018) and Reyes (2017), further augmented by information on Indigenous peoples from OREALC (2019), CARE (2007), Instituto Nacional de Estadística y Censos INEC (2011), UNICEF (2009a), MINTEL, MINEDUC, SENESCYT (2018), and outcomes of the educational process involving Indigenous students as documented by the Universidad Estatal Amazónica UEA (2015), Ushigua and Ushigua (2014), Mayorga and Haboud (2013), Pazmiño (2013), Valeš (2013), and UNICEF (2009c).

Debates surrounding interculturality as found in Bermúdez (2016), Heise et al. (1994), Moya (2009), Walsh (2008), and Rivera Cusicangui (2018) were synthesized. Utilizing these elements, the research evaluated the guiding hypothesis, which posits that the encroachment of capitalist modernity upon the territories inhabited by Indigenous peoples disrupts their conditions of existence. This intrusion concurrently diminishes the scope and functional role of IBE institutions, aligning them with the trend towards cultural homogeneity prevailing in urban settings and the socioeconomic dispossession characteristic of the logic of capital accumulation.

Indigenous Peoples and Nationalities of the Amazon: Economic and School Inclusion

Since the initial discovery of oil in the North Amazon in 1967, significant infrastructural developments have emerged, spurred on by the construction of road networks and a deliberate push for migration, and further compounded by the enactment of the colonization law in 1973. The expansion of the agricultural frontier ensued. The construction of the second oil pipeline in 2003 reshaped the investment and intervention landscape in the northern region, instigating a surge in road development and nearly doubling the population in provinces such as Orellana (Salinas et al. 2020, pp. 85–86). In contrast, the southern part of the Amazon

has witnessed a more recent intervention by the oil and mining industries, encountering substantial resistance from both Indigenous peoples and peasant communities.

In the Amazon region, industries associated with oil production represent a staggering 95% of the gross added value (GAV), surpassed only by activities in public administration and defence. Provinces making the most significant contributions to the regional GAV are Northern Orellana and Sucumbíos, with Pastaza to a lesser extent, owing to the prevalent oil industry presence (Ikiam 2016, pp. 14–15). Excluding the oil sector, the contribution of all provinces to the regional GAV is more evenly distributed, emphasizing activities such as services, public administration, education, commerce, and construction (Ikiam 2016, p. 16).

The traditional cyclical occupation and utilization of territory by Indigenous peoples were replaced by permanent settlements or migrations toward the interior zones of the Amazon (Salinas et al. 2020, p. 89). Over time, reduced mortality rates and sustained high birth rates intensified anthropogenic pressure on natural resources, compromising both environmental and economic sustainability. This led to endogenous pressure within Indigenous communities, necessitating regulation, for instance, in hunting and fishing practices.

> In general, hunting (a common practice in Amazonian households), declined from 72% to 48% (between 2001 and 2012). The Cofán Indigenous people showed the least decline (from 80% to 71%), surely due to their need to compensate for a lack of income from tourism. … Hunting is declining due to the increased difficulty in finding animals, and because it requires more time, effort, and longer distances to hunt. Similarly, fishing declined …, generally dropping from 85% in 2001 to 68% in 2012. (Salinas et al., 2020, p. 103; our translation)

Agricultural areas dwindled, prevailing crops for family subsistence being cassava, coffee, and bananas. For commercial purposes, crops such as sugar cane, Chinese potatoes, naranjillas, pitahayas, and various fruit trees were cultivated. Despite socioeconomic changes, significant geographical areas remain under environmental protection, even in the northern subregion with heightened oil company penetration (Gobierno Autónomo Descentralizado [GAD] Provincial de Orellana 2011, pp. 11,

100; GAD Provincial de Pastaza 2013, pp. 45–60, 62–66; GAD Provincial de Sucumbíos 2015; GAD Provincial de Napo 2018; GAD Provincial de Zamora Chinchipe 2015, p. 118).

While Amazonian lands have limited agricultural potential, crops geared toward the market, like cocoa, have seen an increase. The usage of chemical fertilizers, herbicides, and pesticides increased from 6% in 2001 to 18% in 2012, except among the Cofán and Waorani, pointing to the integration of Indigenous peoples into the market economy. Livestock rearing also expanded during this period, rising from 15 to 27%, notably doubling among the Shuar while decreasing among the Siekopai (Salinas et al. 2020, pp. 103, 106).

Approximately half of the region's population is self-employed or engaged in unpaid household work (INEC 2018). Households with members working outside decreased from 57 to 51% between 2001 and 2012 at the regional level. Among ethnic groups, this trend slightly increased among the Shuar and significantly decreased among the smaller groups—Waorani, Cofán, Siekopai—while showing no change among the Kichwa (Salinas et al. 2020, p. 106).

Contrary to Viteri's perspective (2002, p. 2), stating the 'inappropriateness and danger of applying the "development" paradigm from the Western world to Indigenous societies', it is posited that the core issue lies in the gradual encroachment of the capitalist mode of production on community life. This has transformed the socioeconomic and cultural reality of communities.

Part of this assimilation into capitalism is the substantial integration of Indigenous peoples into the education system. Notably, 'the relations between the State and Indigenous peoples are characterized by controversy, struggle, and debate' (Illicachi 2015, p. 217). In the Amazon region, the net attendance rate for initial education was 89.1%, 66.1% for basic education, and 42.2% for high school by 2013—percentages lower than the national averages of 92.3%, 71.9%, and 54.8%, respectively (Ikiam 2016, p. 18).

Similar to national trends (Madrid 2019), discernible disparities in the educational trajectory between Indigenous and non-Indigenous students became evident from the age of 12, further accentuated in access to tertiary education (Corbetta et al. 2018, p. 36).

The enduring colonial legacy of excluding Indigenous peoples still impedes young individuals aspiring to access tertiary and post-graduate education. In 2013, the school dropout rate at the secondary level

Table 3.1 Secondary school dropout rates in 2013 and 2016

Causes of school dropout	*2013 (%)*	*2016 (%)*
Work	41	22
Lack of economic resources	18	47
Household chores	13	12
Lack of interest	11	8

Source Vernimmen (2019, p. 166), Corbetta et al. (2018, p. 45)

stood at 8.7%, primarily influenced by socioeconomic factors (Table 3.1). Notably, higher rates were observed during the first year of high school, particularly in the Amazon provinces—Pastaza, Orellana, and Morona Santiago (Antamba 2015, p. 16). Moreover, the repetition rate for Indigenous peoples in third and sixth grades in 2013—18% and 17%, respectively—exceeded the averages of non-Indigenous students at 14% and 12% (Corbetta et al. 2018, pp. 45–53).

The 2010 regulatory reforms introduced additional complexities by incorporating entrance exams for higher or tertiary education, unveiling glaring disparities between students from the Indigenous peoples and Indigenous nationalities and other demographics (Bustamante, 2012, p. 30). This situation escalated to the extent that 'in 2010, the Indigenous population exhibited a gross attendance rate for higher education three times lower than the national average' (Samaniego, 2013, p. 57), with these disparities notably exacerbated within the Amazon region.

> At the higher education level, the disparities are profound. While the schooling rate in the Amazon stands at 14.3%, the national average reaches 28.3%. Estimations suggest approximately 92 thousand young individuals aged between 18 and 24 in the region. Among them, 17,783 from the Amazon region pursue higher education, with 10,745 studying outside the territory, while roughly 10 thousand students graduate annually from high school. (Ikiam 2016, p. 18; our translation)

These discrepancies do not stem from governmental inactivity. Specific tertiary education institutions have actively provided preparatory training for university entrance exams or implemented affirmative action policies aiming to ensure equal opportunities, facilitate entry, and enhance the continuity of students' education (UEA 2015; Jara and Massón 2016, pp. 144–145). Curiously, it is a distinct form of state intervention that perpetuates these disparities.

Performance and School Learning Factors

As far as academic performance and factors influencing school learning are concerned, outcomes from the Second Regional Comparative and Explanatory Study (SERCE) of 2006 (Abarca 2015, p. 7) and the Third Regional Comparative and Explanatory Study (TERCE) of 2013 indicate lower performance among the Indigenous peoples and nationalities in mathematics, science, and language skills, particularly in the third and sixth years of schooling. Across all subjects and years assessed, a minimum of 90% of results fell within the lowest classification levels, I and II (Table 3.2). Additionally, male students consistently achieved lower learning outcomes than female students, a trend similarly observed when comparing scores between rural and urban areas (OREALC 2017, pp. 38–44).

The outcomes of the *Ser Bachiller* high-school graduation exam during the initial call in 2018–2019 show that nearly 85% of students failed to reach the threshold of 700 points, thus showing significantly lower scores than the national average (Table 3.3). Only a handful of educational institutions managed to consistently exceed the benchmark of 800 points on average. A substantial variation exists between the minimum and maximum scores. These findings suggest a bleak prospect wherein the majority of students from the Amazon region may encounter significant barriers in accessing higher education. This scenario shows that the so-called "filters" work.

Numerous factors exerting a notable influence on the learning process adversely affect the Indigenous peoples and nationalities in particular. Socioeconomic disparities, high rates of child labour, and consequent

Table 3.2 Learning outcomes of Indigenous students in 3rd and 6th year

Subject	*Year*	*Levels*			
		I (%)	*II (%)*	*III (%)*	*IV (%)*
Mathematics	3rd	80.0	12.6	6.4	1
	6th	80.2	17.1	2.7	0
Language	3rd	72.7	16.8	8.6	1.9
	6th	54.4	40.3	3.8	1.5

Source OREALC (2017, p. 46)

Table 3.3 Results of the *Ser Bachiller* exam evaluation in the Amazon, 2018–2019

	Average entrance exam university (out of 1000 points)	*Points below national average (708)*	*Variation*	
			Minimum	*Maximum*
Sucumbíos	654	54	573	817
Pastaza	703	5	584	831
Zamora Chinchipe	654	54	569	771
Napo	659	49	590	828
Orellana	655	53	572	818

Source INEVAL (2019)

absenteeism due to students' involvement in agricultural calendar tasks (Abarca 2015, p. 7; OREALC 2017, pp. 57–59) significantly hinder educational progress. Moreover, malnutrition, encompassing both undernutrition and overweight, collectively accounting for 34% at the national level, is especially prevalent in the rural Amazon, affecting approximately 50% of the population—second only to the rural highlands. The Indigenous peoples endure the most chronic level of malnutrition, reaching 42.3%, with a notable disparity between income quintiles (Rivera 2019, pp. 98–101).

Additionally, the prevalence of poverty and extreme poverty, measured by unmet basic needs, presents a critical situation in the region, adversely affecting schooling, literacy rates, healthcare, and unemployment (Larrea 2013, p. 29; Corbetta et al. 2018, p. 31). Correspondingly, Mato (2012, p. 30) underscores that the Indigenous population predominantly occupies manual labour positions, with lower representation in administrative, managerial, professional, or technical roles compared to non-Indigenous counterparts.

Investment in IBE fell from 1.7 to 1.2 million dollars between 2007 and 2010 (Ministerio de Educación 2010, p. 6), significantly affecting educational units frequented by the most impoverished populations (Madrid 2019). School infrastructure is generally described as having well-maintained classrooms, playgrounds, and courts; however, the furniture and teaching materials are often rated as deteriorated (ranging between 41 and 52% of cases). Moreover, sanitary facilities are deficient or non-existent in around 90% of school units, along with a lack of essential

amenities such as drinking water, electricity, internet, computers, photocopying, and printing systems. These facilities exist, albeit weakly, in small rural towns but remain absent in the rural sector's remote areas. The dearth of teaching, bibliographic, and resource materials, coupled with teacher absenteeism, tardiness, and large student numbers, exacerbates the challenges (UNICEF 2009a, pp. 88, 135). Students must walk long distances because of the geographic localization of several Indigenous communities from the educational units (Abarca 2015).

> Rural schools are often located far from cities and are therefore far from the intermediate bodies of education ministries. This would explain why directives and materials arrive late, why vacant teaching posts are filled at the wrong time and why technical-pedagogical support is significantly lacking. In these schools, the teaching staff is primarily contracted with minimal experience; moreover, the career of teachers who have just graduated from pedagogical institutes is often considered to begin in the most remote regions. (UNICEF 2009a, p. 35; our translation)

Of the 10,351 teachers in the IBE system in 2010 (corresponding to 4% of teaching staff), 62% were working at the basic education level and 18% at high-school level (García 2017, p. 57). Despite Indigenous teachers constituting approximately 82% of the workforce, with Kichwa or Shuar representation prevailing, some IBE units are dominated by *mestizo* teachers (Rodríguez 2018, p. 226). Additionally, around 60% of these teachers are male (UNICEF 2009b, pp. 23–24). Approximately 33% work in the Amazon and 34% in the Central Sierra, with 54% holding official appointments and the remaining 46% lacking job security (Ministerio de Educación 2010, pp. 9–16), presenting the teaching sector with the least favourable working conditions, remuneration, and employment stability.

The teacher evaluations carried out in 2009 by the Ministry of Education show significant differences between the results achieved by IBE teaching staff and the national average in logical-verbal reasoning and pedagogical knowledge—such as working with students with special abilities (Luna 2012, p. 60; Llorente et al. 2010, p. 37)—more than deficiencies in disciplinary knowledge (Alfonso et al. 2012, p. 21). Murcia (2016, p. 93) agrees that the main problems are deficiencies in pedagogical training and limitations in the mastery of Spanish in verbal and written forms, despite the fact that lesson planning is regularly carried out in about 85% of cases (UNICEF 2009c, pp. 29–45). The problem

is exacerbated by the fact that teacher training programmes specialized in Indigenous languages and knowledges are only available in four universities in the country (Corbetta et al. 2018, p. 81).

These disparities are compounded by challenges within the schooling process, including a lack of positive classroom experiences: only 49% of students say they feel happy in the classroom (UNICEF 2009a, p. 132); there are frequent teenage pregnancies and pervasive patriarchal violence (Cañete 2017); and the prevalence of drug use and alcoholism is growing, particularly in culturally border areas (Bermúdez 2016, p. 65; UEA 2015; Murcia 2016, pp. 42–43). The situation is aggravated by communication difficulties between school directors and supervisors, administrative workload, lack of home study supervision, and limited parental dialogue, understanding, and involvement in the education process. Families often lament mistreatment of students by certain teachers, lack of security around educational units, restricted access to rural high schools, and perceived teacher commitment issues. These concerns are highlighted in the prevalence of "Wednesday teachers", an expression suggestive of limited actual workdays in contrast to full commitment (OREALC 2017, pp. 61–63; Murcia 2016, p. 100; Bermúdez 2016, p. 68; Luna 2012, p. 60; Quishpe 2000, p. 72).

Intercultural Bilingual Education: Statistics and Realities

In the year 2017, the educational units specializing in IBE comprised 10.6% of the entire count of educational institutions nationwide (see Table 3.4). Notably, approximately 50% of these institutions were situated in the Amazon region, a statistic shared by the Central Sierra. Among the student population enrolled in these institutions, 8% were affiliated with the initial education level, 65% were part of basic education, 10% were engaged in middle education, and 16% were enrolled in adult education programmes (INEVAL 2018, p. 88).

Panama and Chile report a respective 12.3% and 11% representation of Indigenous population (OREALC 2019, p. 11). However, CARE (2007, p. 113) suggests a population proportion of between 14 and 45% for Ecuador. The national census indicates that the Indigenous peoples and nationalities constitute less than 8% of the entire population, with the Kichwa comprising 86% and the Shuar making up 9.4% of these Indigenous groups. Approximately 78.5% of these individuals dwell in rural areas

Table 3.4 Bilingual intercultural units 2008–2017

Year	*Number*
2008	1859
2009	2095
2010	2220
2011	2038
2012	2010
2013	1903
2014	1866
2017	1791

Source Reyes (2017, p. 91)

(INEC 2011, pp. 17, 55). Within Ecuador, about 58% of students from these Indigenous groups are concentrated in the Sierra, particularly in the corridor spanning from Azuay to Imbabura.

In the Amazon region, the population is geographically dispersed and is served by schools characterized by single-teacher and two-teacher setups. Within the Indigenous student cohort, 76% are Kichwa, 12% are Shuar, 5% are *mestizos*, and the remainder belong to various other Indigenous nationalities (UNICEF 2009a, p. 19). However, there is insufficient evidence indicating consistent use of native languages and cultural perspectives across educational levels. Notably, an experience from the UEA reveals a significant gap in content mastery between *mestizo* and Indigenous students, particularly evident in high school (UEA, May 22, 2015).

In Ecuador, 34.5% of the Indigenous population are monolingual in native languages, while 28.5% are bilingual (INEC, 2011, p. 83). The languages spoken by the Amazonian nationalities face a severe risk of extinction despite the existence of various development plans, language strengthening programmes, standardized alphabets, and materials in endangered languages like dictionaries, stories, myths, and music.

The decline in the use of ancestral languages is occurring due to the reduced use among younger generations, Spanish introduced through the education system, and intermarriages between members of different Indigenous groups. For example, Indigenous Sapara in Pastaza manage a vocabulary of around 150 Sapara words, can formulate sentences and express their traditional knowledge through songs and myths, but in their families, they use Kichwa (Ushigua and Ushigua 2014, pp. 25–26).

The phenomenon of language decline is more prominent in areas that are culturally close to capitalist modernity. The domains of modern institutions such as hospitals, urban spaces, and workplace dynamics are conducive to the dominance of Spanish, whereas traditional community settings, rituals, and authorities retain the use of original languages (Mayorga and Haboud 2013, pp. 142–143; Pazmiño 2013, pp. 229–230; Valeš 2013, p. 134).

> Children no longer arrive at school speaking Shuar. Because of an oppressive education and the negative experience lived by their parents, families often decide not to transmit their vernacular language to the next generation ... It is not possible to replace a language transmission through schooling. (Valeš, 2013, p. 133; our translation)

According to a study conducted by UNICEF (2009c, p. 148), among the Shuar the use of Spanish as a language of communication between students is very high (71%), while among the Kichwa nationality of the Amazon it is 33%, and among those who use both languages it is 49%. Teaching and lesson planning are conducted in Spanish for 34% and 57%, and in both languages (Spanish and the original language) for 58% and 39% of the student population. This is due to the lack of knowledge of the original language and to the complexity of its handling among teachers and, above all, among students.

In cultural border communes, children increasingly do not arrive at school speaking their native language, causing a break in the transmission of vernacular languages from one generation to the next. This shift towards Spanish in education is further emphasized by the increasing necessity of Spanish proficiency for future career prospects, leading to a linguistic disloyalty and loss of languages (see Table 3.5), traditions, and cultural legacies among Indigenous communities (Abarca, 2015, p. 4; Bermúdez, 2016, p. 64; UNICEF 2009c, pp. 52, 99, 105; Ministerio de Educación 2013).

In this context, the four distinct approaches to the role of IBE are identified by Bermúdez (2016, pp. 22–23). They are: (a) the technical-reductionist approach, which tailors education to specific demographic and linguistic contexts; (b) the romantic-folkloric approach, highlighting selected cultural aspects of students' cultures; (c) the critical-emotional approach, emphasizing the cultivation of a teaching staff devoted to

Table 3.5 Vulnerability assessment of ancestral languages

Regions	*Clearly in danger*	*Severely in danger*	*In a critical situation*
Coast	2	1	1
Sierra	1	–	–
Amazon	5	3	2
Total	8	4	3

Source MINTEL, MINEDUC, SENESCYT (2018, pp. 21–22)

cultural diversity; and (d) the intercultural approach, focusing on attitudinal shifts and values, emphasizing authentic and empathetic communication between teachers and students and their families.

Interculturality has been interpreted in various ways, from being equated to preservation in a museological sense (Heise et al., 1994, p. 17) to being viewed as a relationship between conflicting cultures converging into a single, firm power structure shaped by colonial reasoning (Moya 2009, p. 29). It embodies a process that goes beyond mere tolerance of diversity, advocating for all cultures' right to contribute to the country's construction based on their particularities and differences (Walsh 2008, p. 66). The successful development of interculturality relies on the integration of this principle into the state's agenda, as emphasized by Walsh's perspective of reconstructing the state from society (Walsh 2008, p. 42).

However, Rivera Cusicanqui's critical stance portrays 'the decolonial' as a trend, 'the postcolonial' as a desire, and 'the anticolonial' as a daily and perpetual struggle (Rivera Cusicanqui 2018). It raises pertinent questions about:

> Questioning whether IBE has transcended the archaic hierarchical educational structure entrenched with authoritarian, discriminatory, and exclusive pedagogical content, is the same as questioning whether IBE has established new social relationships that inherently encompass acknowledgement, respect for differences, and otherness. Or whether it simply re-establishes dominant educational relations, furthering broader societal control. (Sierra and Tibán 2015, p. 144; our translation)

IBE was initially envisioned as a transformative educational model characterized by community participation and a pedagogy reflective of Indigenous elders' practices (Macas, 2000). It aimed at recognizing and

addressing cultural and linguistic diversity while advocating for respect towards differences within the framework of the national curriculum (Viveros and Moreno 2014, p. 60; López and Küper 1999, p. 62); 'IBE proposes a change of mentality of society and power structures and a rethinking of the current educational system' (Comboni 1996, p. 123).

The positive outcomes of IBE include increased educational attainment for girls, gender parity in performance, enhanced family involvement in school management, improved problem-solving abilities in mathematics and reading comprehension, and a more favourable classroom environment, according to students and teachers (Viveros and Moreno 2014, p. 56; López and Küper 1999, pp. 52–53; OREALC 2017, pp. 67–81).

Nevertheless, despite its successes, critiques have emerged regarding IBE's limitations. Firstly, IBE's integration into the traditional educational system has been perceived as an inevitable historical occurrence; while educational distinction is seen as positive, schooling is seen as negative (Llorente et al. 2010, pp. 26–28), resulting in the assimilation of IBE into the capitalist-modern educational model, particularly within disciplinary mechanisms (Mashinkiash, 2012, p. 84). This has led to bureaucratic constraints for activists and social leaders, and the closure of alternative educational institutions, such as the Inka Samana school in Saraguro (Santillán and Chimba 2016, p. 109):

> I did my demonstration class on the topic of water, from the vision of school texts or from modernity, then I wanted to expose the same topic from my indigenous peasant culture, from my worldview, they did not allow me, they stated that I should give the same thing that I exposed in Spanish, but in Kichwa language. (Santillán and Chimba 2016, p. 109; our translation)

School space promotes 'the illusion of urban employment and the profession for future generations, in disregard of their ancestral wisdom' (Santillán and Chimba 2016, p. 30).

Secondly, the division of the education system into intercultural and bilingual intercultural segments has raised concerns about the creation of distinct school environments for Indigenous and non-Indigenous populations. These schools are perceived as quality institutions for non-Indigenous students from middle-to-high-income backgrounds, contrasting starkly with IBE schools that display significant deficiencies in various aspects, catering primarily to Indigenous students

from low-income families (Bermúdez 2016, p. 60; Murcia 2016, p. 86). This has raised questions about the inclusivity of interculturality in education, with Sierra and Tibán (2015, p. 145) pondering on the existence of genuine interculturality within IBE, highlighting its exclusive nature:

> It makes no sense to talk about interculturality for the Indigenous peoples and not for the so-called mestizos; one would wonder where interculturality in education lies, where is the 'inter', as the IBE system seems to be exclusive and at the same time excluding. (Sierra and Tibán 2015, p. 145; our translation)

Lastly, the dominance of the most populous nationalities, such as the Kichwa and Shuar, within the IBE system has resulted in their prevalence and potential marginalization of minority nationalities (Murcia 2016, p. 82). This trend has been exemplified by the recurring use of the Kichwa language in IBE institutions due to its weight within the teaching staff, potentially leading to the dominance of "Kichwanization" over other Indigenous nationalities (Rodríguez 2018, p. 227).

Conclusions

In addition to the natural resource exploitation, the realities of the Indigenous peoples and nationalities residing in the Amazon region witnessed a profound reconfiguration during the latter half of the twentieth century, largely instigated by the emergence and expansion of the capitalist mode of production. This one, causing alterations in environmental, social, and cultural conditions in community lives, gradually led to an integration of this population into the market dynamics. Concurrently, it facilitated its inclusion into the public school system. However, once this integration into the educational apparatus had occurred, substantial evidence emerged reflecting the distinct conditions of existence among the Indigenous peoples and nationalities, which significantly hindered their prospects of pursuing an educational trajectory culminating in tertiary education.

Educational outcomes among the Indigenous students consistently fall below the national average, underscoring the weight of factors related to school learning. Foremost among these factors is the socioeconomic disparity prevalent in the Amazon region, characterized by high rates of

poverty and extreme poverty measured by various socioeconomic indicators. Moreover, systemic issues like state underinvestment, deficiencies in infrastructure, limited resources, teacher performance, and challenges in the interaction among various stakeholders in the educational process are consistently overlooked.

In the context under examination, the presence of IBE is noteworthy, particularly due to the dispersion of the population. It serves as a cornerstone in ensuring the provision of education services, particularly among Indigenous communities residing in remote rural areas. The prominence of IBE is evident in its contributions to preserving cultural identity and safeguarding the right to education. However, inherent contradictions arise between the proposed IBE model and the norms of capitalist modernity.

The incorporation of IBE into the educational framework oscillates between its official acknowledgement as a subsystem and its assimilation into the capitalist-oriented school model. This suggests that maximizing the potential contributions of IBE hinges on continual introspection and re-evaluation of its role within the national education system.

Finally, the trajectory of universities in the Amazon region underscores the urgency of bolstering public tertiary education. Additionally, it presents compelling evidence concerning the positive influence of universities located in Indigenous territories. Moreover, local initiatives, particularly in student-led organizations, play a pivotal role in upholding the identity of the Indigenous peoples and in fostering the potential for an alternative epistemic framework within higher education.

References

Abarca, G. (2015). Educación Intercultural Bilingüe: Educación y Diversidad. *Apuntes 9*. https://bit.ly/2VGEEMN.

Alfonso, M., Bos, M., Duarte, J. and Rondón, C. (2012). Panorama general de la educación en América Latina y el Caribe. In Marcelo Cabrol and Miguel Székely (eds). *Educación para la transformación* (pp. 1–49). Banco Interamericano de Desarrollo. https://bit.ly/3aaqQxY.

Antamba, L. (2015). Desagregación Socio-Demográfica de la Tasa de Abandono a Primer Año del Bachillerato. *Contexto 1* (1), 15–29. https://bit.ly/2uH0KU3.

Bermúdez, V. (2016). *Análisis de la práctica y concepción educativa del profesorado ante la interculturalidad: la experiencia en unidades educativas interculturales bilingües en la provincia de Pastaza (Puyo, Pastaza–Ecuador)* (tesis de maestría). Málaga: Universidad de Málaga.

Bustamante, J. (2012). Aportes para la construcción del país que queremos – intercultural, bilingüe y garante de los derechos de los niños y niñas. En Juan Llorente y Unai Sacona (eds). *Investigación aplicada a la educación intercultural bilingüe. Algunas reflexiones epistemológicas*, 21–41. Helsinki: Universidad de Helsinki.

Cañete, M. (2017). *Mujeres: cultura, familia y vida. Estudio sobre la influencia de la educación cultural y formal de las mujeres sobre su desarrollo vital en el contexto de Pastaza (Ecuador)* (tesis de maestría). Córdoba: Universidad de Córdoba.

CARE. (2007). *Avances y Desafíos de la Educación Intercultural Bilingüe en Bolivia, Ecuador y Perú*. Lima: CARE/ IBIS.

Comboni Salinas, S. (1996). La Educación intercultural bilingüe. Una perspectiva para el siglo XXI. *Nueva Sociedad, 146*, 122–135.

Corbetta, S., C. Bonetti, F. Bustamante and A. Vergara. (2018). *Educación intercultural bilingüe y enfoque de interculturalidad en los sistemas educativos latinoamericanos. Avances y desafíos*. Santiago de Chile: Naciones Unidas.

GAD [Gobierno Autónomo Descentralizado] Provincial de Napo. (2018). *Plan de Desarrollo y Ordenamiento Territorial Provincial de Napo (2019–2023)*. https://bit.ly/2Tv5ftb.

GAD [Gobierno Autónomo Descentralizado] Provincial de Orellana. (2011). *Plan de Desarrollo de la Provincia de Orellana*. https://bit.ly/2VzduqY.

GAD [Gobierno Autónomo Descentralizado] Provincial de Pastaza. (2013). *Plan vial de la provincia de Pastaza 2013–2025*. Puyo: GAD Provincial de Pastaza. https://bit.ly/3cmoBt8.

GAD [Gobierno Autónomo Descentralizado] Provincial de Sucumbíos. (2015). *Plan de Desarrollo y Ordenamiento Territorial*. Nueva Loja: GAD Provincial de Sucumbíos. https://bit.ly/2vlhGjx.

GAD [Gobierno Autónomo Descentralizado Provincial] de Zamora Chinchipe. (2015). *Plan de Desarrollo y Ordenamiento Territorial 2015–2019*. Zamora Chinchipe: GAD Provincial Zamora Chinchipe. https://bit.ly/2wgcy0a.

García, G. (2017). *La educación intercultural bilingüe como fenómeno sociológico en las realidades indígenas de América Latina: el caso de Ecuador* (tesis de maestría). Bilbao: Universidad del País Vasco. https://bit.ly/32CCm2A.

Heise, M., F. Tubino and W. Ardito. (1994). *Interculturalidad, un desafío*. 7–22. Lima: CAAP.

Ikiam [Universidad Regional Amazónica Ikiam]. (2016). *Plan Estratégico Sistema Ikiam 2016–2020*. Tena: Ikiam. https://bit.ly/2TtJ9az.

Illicachi, J. (2015). La educación intercultural bilingüe como proyecto epistémico de los movimientos indígenas en el Ecuador. *Sophia* 18, 212–229. Quito: Universidad Politécnica Salesiana. https://bit.ly/2VABhXm.

Instituto Nacional de Estadística y Censos INEC. (2011). *Las cifras del pueblo indígena. Una mirada desde el Censo de Población y Vivienda 2010*. Quito: INEC.

Instituto Nacional de Estadística y Censos INEC. (2018). Base de datos Encuesta Nacional de Empleo, Subempleo y Desempleo (ENEMDU).

Instituto Nacional de Evaluación Educativa INEVAL. (2018). *La educación en Ecuador: logros alcanzados y nuevos desafíos. Resultados educativos 2017–2018*. Quito: INEVAL. https://bit.ly/32G6HNR.

Instituto Nacional de Evaluación Educativa INEVAL. (2019). *Informe de resultados Ser Bachiller 2018–2019*. https://bit.ly/32Dtr0V.

Jara, R. and R. Massón. (2016). Política de acción afirmativa, su repercusión en la Universidad Politécnica Salesiana. Caso: indígenas de Quilloac. *Revista Cubana de Educación Superior 2*, 139–153. https://bit.ly/3atIcpR.

Larrea, C. (2013). Desarrollo social, desigualdad y pobreza. En SENPLADES. *Atlas de las desigualdades socioeconómicas del Ecuador*, 22–48. Quito: SENPLADES.

Llorente, J., K. Kantasalmi and J. Simón. (2010). Aproximado El conocimiento indígena. Complejidades de los procesos de investigación. Finlandia: Universidad de Helsinki.

López, L. and W. Küper. (1999). La educación intercultural bilingüe en América Latina: balance y perspectivas. *Revista Iberoamericana de Educación 20*, 17–85.

Luna, M. (2012). En busca del sentido de la educación ecuatoriana. En *Educación y buen vivir: reflexiones sobre su construcción*, 55–61. Quito: Contrato Social por la Educación.

Macas, L. (2000). ¿Cómo se forjó la Universidad Intercultural? *Boletín ICCI-ARY Rimay 19*. https://bit.ly/2TaQOf6.

Madrid, T. (2019). El sistema educativo de Ecuador: un sistema, dos mundos. En *Revista Andina de Educación 2* (1), 8–17. https://bit.ly/2Tu2MPH.

Mashinkiash, J. (2012). Etnoeducación Shuar y Aplicación del Modelo de Educación Intercultural Bilingüe en la Nacionalidad Shuar. Cuenca: Universidad de Cuenca. https://bit.ly/2PFBV2i.

Mato, D. (2012). Educación superior y pueblos indígenas y afrodescendientes en América Latina. Constituciones, leyes, políticas públicas y prácticas institucionales. In Daniel Mato (ed.). *Educación Superior y Pueblos Indígenas y Afrodescendientes en América Latina. Normas, Políticas y Prácticas*, 17–98. Caracas: IESALC.

Mayorga, O. and M. Haboud. (2013). Geolingüística Ecuador: un estudio interdisciplinario sobre la vitalidad de las lenguas ancestrales del Ecuador.

In Marleen Haboud and Nicholas Ostler (eds). *Voces e imágenes de las lenguas en peligro*, 137–144. Quito: Ediciones Abya-Yala, Universidad Politécnica Salesiana, Pontificia Universidad Católica del Ecuador, Foundation for Endangered Languages.

Ministerio de Educación. (2010). *Proyecto Fortalecimiento de la Educación Intercultural Bilingüe 2011–2014*.

Ministerio de Educación MINEDUC. (2013). MOSEIB. Modelo del Sistema de Educación Intercultural Bilingüe. Quito: Ministerio de Educación.

MINTEL, MINEDUC, SENESCYT. (2018). *Ecuador Intercultural. Programa TIC de formación ciudadana en pueblos y nacionalidades e interculturalidad*. https://bit.ly/2TtGe1B.

Moya, R. (2009). La interculturalidad para todo en América Latina. En Luis López (Ed.). *Interculturalidad, educación y ciudadanía. Perspectivas latinoamericanas*, 21–56. La Paz: Plural Editores.

Murcia, M. (2016). *Percepción en la comunidad educativa sobre interculturalidad, igualdad de género y estereotipos sociales hacia colectivos tradicionalmente excluidos: un estudio pedagógico en cuatro unidades educativas de la provincia de Pastaza (Ecuador)* (tesis de maestría). Málaga: Universidad de Málaga. https://bit.ly/2Tz4pvQ.

Oficina Regional de Educación de la UNESCO para América Latina y el Caribe OREALC. (2017). *Inequidad en los logros de aprendizaje entre estudiantes indígenas en América Latina: ¿Qué nos dice TERCE?* OREALC. https://bit.ly/2uEHKWe.

Oficina Regional de Educación de la UNESCO para América Latina y el Caribe OREALC. (2019). *Conocimientos indígenas. Hacia un diálogo de saberes. Segundo informe*. OREALC, Ministerio de Educación Chile. https://bit.ly/2VwFlIl.

Pazmiño, A. (2013). Sondeo de vitalidad de la lengua kichwa en comunidades serranas. In Marleen Haboud and Nicholas Ostler (eds). *Voces e imágenes de las lenguas en peligro*, (pp. 227–231). Quito: Ediciones Abya-Yala, Universidad Politécnica Salesiana, Pontificia Universidad Católica del Ecuador, Foundation for Endangered Languages.

Quishpe, C. (2000). *Ciencia, conocimiento y producción en educación intercultural bilingüe. Perspectivas al año 2025*. Quito: Instituto de Altos Estudios Nacionales.

Reyes, C. (2017). *Fortalecimiento del Estado. Educación y conflicto durante la Revolución Ciudadana (2007–2014)* (tesis de maestría). Quito: FLACSO Ecuador. https://bit.ly/2x0HYbc.

Rivera Cusicangui, S. (2018). Ponencia en la XVIII Feria Internacional del Libro. In Rivera, S. and S. Federici. Parte1. Conversatorio Silvia Rivera Cusicanqui y Silvia Federici. FIL Zócalo CDMX 14Oct18. https://bit.ly/3cosQ7s.

Rivera, J. (2019). La malnutrición infantil en Ecuador: Una mirada desde las políticas públicas. *Revista de Estudios de Políticas Públicas 5* (1), 89–107. Santiago de Chile: Universidad de Chile. https://bit.ly/2wegvSV.

Rodríguez, M. (2018). Construir la interculturalidad. Políticas educativas, diversidad cultural y desigualdad en Ecuador. *Íconos 60*, 217–236. Quito: FLACSO. https://bit.ly/2TspuYB.

Salinas, V., R. Bilsborrow and C. Gray. (2020). Cambios socioeconómicos en el siglo XXI en poblaciones indígenas amazónicas: retos actuales. *Estudios Demográficos y Urbanos 103* (35), 83–116. https://bit.ly/2VzneS3.

Samaniego, J. (2013). Educación. In SENPLADES. *Atlas de las desigualdades socioeconómicas del Ecuador*, 54–68 Quito: SENPLADES.

Santillán, M. and L. Chimba. (2016*). Ishkay Yachay. Propuesta de educación intercultural bilingüe para vigorizar los saberes ancestrales andinos en equivalencia con la modernidad*. Quito: Yachay Wasi/ Fundación Pakarina Sisari.

Sierra, N. and A. Tibán. (2015). *La educación intercultural bilingüe en el Ecuador: historia, balance y perspectivas*. https://bit.ly/3ckQVw7.

Universidad Estatal Amazónica UEA. (2015). *Reunión con las nacionalidades indígenas*, viernes 22 de mayo del 2015. Puyo: UEA.

UNICEF [Fondo de las Naciones Unidas para la Infancia]. (2009a). *Enfoque pedagógico del aula unidocente en las nacionalidades amazónicas del Ecuador*. Quito: UNICEF.

UNICEF. (2009b). *Estado del Arte: La Producción de Material Educativo para la Educación Intercultural Bilingüe en Bolivia, Ecuador y Perú*. Lima: UNICEF.

UNICEF. (2009c). *La Formación Inicial y la Capacitación de Docentes en Servicio para la Educación Intercultural Bilingüe en Bolivia, Ecuador y Perú*. Lima: UNICEF.

Ushigua, L. and J. Ushigua. (2014). *Repercusiones del nuevo modelo de gestión educativa del ministerio de educación en la dirección de educación de la nacionalidad sapara* (tesis de licenciatura). Cuenca: Universidad de Cuenca. https://bit.ly/3ckQVw7.

Valeš, M. (2013). Vitalidad de la lengua shuar y actitud de los hablantes hacia su lengua vernácula. In Marleen Haboud and Nicholas Ostler (eds). *Voces e imágenes de las lenguas en peligro* (129–136). Quito: Ediciones Abya-Yala, Universidad Politécnica Salesiana, Pontificia Universidad Católica del Ecuador, Foundation for Endangered Languages.

Vernimmen, G. (2019). Educación Intercultural Bilingüe en Ecuador: Una revisión conceptual. *Alteridad*, *14* (2), 162–171. https://bit.ly/2TwER28.

Viteri, C. (2002). Visión indígena del desarrollo en la Amazonía. *Polis 3*. https://bit.ly/2TchGeD.

Viveros, J. and T. Moreno. (2014). El enfoque intercultural bilingüe y su impacto en la calidad de la educación indígena: estudio de caso. *Ra Ximhai, 3* (10),

55–73. El Fuerte: Universidad Autónoma Indígena de México. https://bit.ly/2Tq9Mxf.

Walsh, C. (2008). Interculturalidad y Plurinacionalidad: Elementos para el debate constituyente. En *Revista Yachaykuna, 8*, 36–71. Quito: Instituto Científico de Culturas Indígenas.

CHAPTER 4

From Discourse to Structure: Interculturality in Amazonian Universities

Ruth Arias-Gutiérrez, Manuel Pérez-Quintana, and Paola Pozo

Introduction: The Challenge of Interculturality in Inequitable Societies

This chapter analyses the recent emergence of higher education institutions in the Ecuadorian Amazon from the perspective of interculturality as a dynamic and multifaceted process integral to educational, historical,

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alternative, and political decolonization efforts. It examines in particular the enhanced prospects for young individuals from marginalized cultures to access university education. The primary focus is experiences aimed at fostering interculturality within the context of the Universidad Estatal Amazónica (UEA).

Interculturality, as articulated in the Constitution of the Republic of Ecuador, extends beyond the domain of Indigenous peoples, representing a pivotal axis of a pluricultural state. However, despite its central positioning, the actualization of interculturality remains a challenge (Ramón 2019), manifesting within the dynamic interplay of cultures engaging in dialogue, identity formation, and mutual acknowledgement. This framework must acknowledge and embrace cultural pluralism as an inherent reality, seeking to foster societies founded on the principles of equality and mutual rights recognition among diverse groups within the societal framework (Albó and Anaya 2004; Escarbajal Frutos 2011; Ortiz Tirado 2019; Walsh 2014).

Notably, interculturality permeates national planning documents and aligns with the objectives of the UEA, as per its statutes (UEA 2022, art. 8, 187). It features prominently within institutional narratives, echoing the demand for cultural diversity recognition, equality, acceptance, and harmony across society. This vision encompasses an understanding and appreciation of differing worldviews, mutual learning, and horizons for anthropological decolonization, both academically and within the realm of daily life (Guerrero 2019, p. 146).

The Confederation of Indigenous Nationalities of Ecuador (CONAIE) has long advocated for the reinforcement of interculturality and the promotion of intercultural bilingual education (IBE). These advocacies persist within the contemporary socio-political landscape, as evidenced by the demands expressed during the Inti Raymi uprising in June 2022 (Confederación de Nacionalidades Indígenas del Ecuador CONAIE 2022). These demands encompass socioeconomic and infrastructural reforms, alongside ensuring youth access to higher education. The Indigenous perspective on interculturality extends beyond the scope of education, seeking a societal transformation that accommodates diverse ways of conceiving and constructing social and political structures (Walsh 2008, p. 19).

The historical legacy of inequity and exploitation, rooted in complex, stratified, and asymmetric structures, continues to exert its influence on Indigenous peoples and nationalities (Tubino 2019). These populations,

despite retaining their cultural identity, grapple with enduring social injustices (Ayala Mora et al. 2008, pp. 9–71). Intercultural processes necessitate the creation of less inequitable socioeconomic structures, particularly addressing the plight of rural, Indigenous, and Amazonian populations. The aspiration of young individuals to access higher education faces multiple obstacles, ranging from economic barriers to incomplete educational achievements or limited access to basic and high school education. The failure to overcome these challenges contributes significantly to multidimensional poverty rates consisting of education (25%), work and social security (25%), health, water and social food (25%), and habitat, housing and healthy environment (25%) (Instituto Nacional de Estadística y Censos INEC 2022, pp. 22–23). Indicators for education include non-attendance at basic and high school education between the ages of 5 and 17, no access to higher education for economic reasons between the ages of 18 and 29, and incomplete educational achievement between the ages of 18 and 64 (INEC 2022, p. 23).

Poverty indicators, encompassing income poverty, extreme poverty, and poverty due to unsatisfied basic needs, depict a pervasive disparity between urban and rural areas, disproportionately affecting peripheral regions like the Amazon. Notably, areas with higher concentrations of Indigenous peoples and nationalities often contend with challenges within IBE, and face various contradictions regarding culturally relevant and quality education (Hohenthal and Minoia 2022). Higher education shows less progress in interculturality than other levels of training; Indigenous and Afro-descendant students access and complete their studies under alarmingly inequitable conditions (Mato 2008). 'Income poverty' implies lack and deprivation, and means that a person does not achieve a minimum standard of living. An income-related poor person is one whose family income is less than USD 85.60 per month (calculated for December 2021); extreme poverty is classified as receiving less than USD 48.24. In Ecuador, the income poverty average has reached 27.7% and extreme poverty 10.5%; at the rural level it has reached 42.4%, while extreme poverty is 20.3%. (INEC 2022, pp. 4–6).

Unsatisfied basic needs means that a person living in poor conditions is unable to satisfy at least one of these five components: (i) quality of housing, (ii) minimum living space, (iii) access to basic services, (iv) access to education, and (v) economic capacity. Each dimension has an associated deprivation indicator which is identified at the household level and

analyzed at the individual level. In December 2021, poverty due to unsatisfied basic needs was 33.2% at the national level; 22.0% in urban areas, and 57.0% in rural areas (INEC 2022, pp. 18, 20). Higher education, relative to other educational tiers, has exhibited limited progress in terms of interculturality. Indigenous and Afro-descendant students encounter severe inequities in accessing and completing their education. Reformative policies targeting monocultural higher education must address the structural impediments faced by the population they aim to serve (Cuji 2012).

The principal governing body for higher education policy in the country, the Secretariat of Higher Education, Science, Technology and Innovation (Secretaría de Educación Superior, Ciencia, Tecnología e Innovación SENESCYT), in collaboration with UNESCO, advocates for greater equity in higher education through an intercultural lens. This advocacy encompasses a comprehensive set of guidelines aimed at mainstreaming equality and environmental considerations within higher education institutions. These guidelines emphasize research, training, community engagement, and affirmative actions to enhance access, retention, and completion rates among Indigenous populations (SENESCYT and UNESCO 2015).

Nevertheless, a substantial disparity persists between the aspirational discourse of interculturality and the entrenched socioeconomic inequalities prevalent within public institutions. Consequently, this chapter seeks to evaluate the access of marginalized peoples and nationalities to higher education in the Amazon. It aims to scrutinize: (1) the demand for higher education access among these groups, (2) the landscape of higher education supply within the Ecuadorian Amazon, and (3) the evolution of enrollment patterns based on ethnic self-identification, coupled with local endeavours to foster intercultural processes at the UEA.

Materials and Methods

The study comprises several key components. Firstly, a documentary analysis is conducted utilizing national information from SENESCYT and UNESCO (2015), primarily sourced from the Levelling Directorate (SENESCYT, Dirección de Nivelación 2020). The data, dating from the second semester of 2017 to the second semester of 2019, are derived from the administrative records of the National Admission and Levelling System managed by SENESCYT's Undersecretary for Access to Higher

Education (SENESCYT, Subsecretaría de Acceso a la Educación Superior 2020). These records, which were updated until February 2020, were accessed through the coordination of ancestral knowledge at SENESCYT in response to the researchers' request. The analysis, juxtaposed with local and bibliographic information from previous periods, as well as data published by the National Levelling and Admission System of SENESCYT (2022), sheds light on the landscape of higher education, with a particular focus on the Ecuadorian Amazon region.

Secondly, the study involves an examination of enrollment trends based on ethnic self-identification, utilizing data retrieved from the academic teaching information system of the UEA.

Thirdly, the research incorporates direct and participant observation techniques to analyse local initiatives aimed at fostering intercultural processes within the UEA. These processes unfold within a culturally and naturally intricate context, shaped by a diverse demographic comprising Indigenous, rural, and suburban populations affected by historical colonization processes. The study involves an analysis of intercultural dynamics, social interactions during data collection, and an exploration of perceptions and realities constructed by each participant within the study framework. This approach aligns with established methodologies acknowledging subjectivity in data collection and analysis (Yin 1994; Arzaluz 2005; Díaz et al. 2011; Jiménez-Chaves 2012).

Participant observation serves as a key method, enabling researchers to deeply engage with the analysis group's experiences, fostering an immersive understanding and direct engagement with the phenomenon under study. This methodology aims to augment the observer's perceptions by integrating those of the participating subjects, thereby mitigating the limitations of a single-point subjective perspective (Vitorelli et al. 2014, pp. 75–79).

Results of the Analysis

The quest for access to public higher education among marginalized peoples and nationalities is unfolding on a national scale. This pursuit is initially detailed in this chapter at the broader level, encompassing the dynamics of public institutions offering academic programmes within the Amazon region. The roles of these institutions are scrutinized in terms of their geographical placement within a diverse cultural landscape, providing a potential milieu for fostering intercultural exchanges

among peers. Subsequently, the analysis zooms in on the enrollment trends of students hailing from marginalized backgrounds within the UEA, before examining the endeavours of these students, within their respective spheres, to cultivate intercultural dialogue.

Demand for and Access to Higher Education by Marginalized Peoples and Nationalities

Higher education in the country is disseminated through various avenues, including 31 public universities and polytechnics, 26 private universities, 85 public technical, technological, and conservatory higher institutes, and 92 private counterparts, offering a comprehensive array of 2159 course programmes. Each institution determines its own admission criteria, modalities, scheduling, and reference scores, among other institutional frameworks. While there are no geographical constraints on admission, the scheduling of the first semester primarily caters to high school graduates in the Coast region, allowing them to commence higher studies in March, April, or May of each year. Conversely, the second semester is tailored to graduates from the Sierra and Amazon regions, facilitating the initiation of higher education in September, October or November each year on completion of high school (SENESCYT 2022). Given that a substantial proportion of individuals identifying as Indigenous primarily reside in the Sierra and Amazon regions, their demand for enrollment places peaks during the second semester. Similarly, individuals self-identifying as Afro-descendants and Montubios, predominantly concentrated in the Coast region, exhibit heightened demand for places during the first semester (Table 4.1).

Entry to higher education is a multi-step process involving applications, allocations of places by the governing body SENESCYT, and subsequent acceptance of candidates. Between 2017 and 2019, a noticeable surge in the number of applicants hailing from various peoples and nationalities seeking admission to higher education has been observed. This increase amounts to 8.5% of the total 247,682 candidates registered nationwide in the second semester of 2019, marking a substantial rise compared to the 97,818 candidates who applied during the second semester of 2012, coinciding with the initiation of the application system for places accompanied by an examination (SENESCYT, Dirección de Nivelación 2020). Notably, in 2019, 60% of candidates nationwide secured a place within

Table 4.1 Applicants for the *Ser Bachiller* exam in first and second semesters as planned by the SENESCYT Admission System, by peoples and nationalities, 2017–2020

Total applicants from Peoples and Nationalities	*Semester 2, 2017 (September 2017–February 2018)*	*Semester 1, 2018 (March–August 2018)*	*Semester 2, 2018 (September 2018–February 2019)*	*Semester 1, 2019 (March–August 2019)*	*Semester 2, 2019 (September 2019–February 2020)*
	16,310 (100%)	*23,259 (100%)*	*22,872 (100%)*	*24,708 (100%)*	*21,098 (100%)*
Afro-descendant	3495 (21.43%)	9958 (42.81%)	8040 (35.15%)	9583 (38.79%)	6344 (30.07%)
Indigenous	7901 (48.44%)	4396 (18.90%)	9068 (39.65%)	4957 (20.06%)	8496 (40.27%)
Montubio	4214 (25.84%)	8135 (34.98%)	5155 (22.54%)	9.466 (38.31%)	5759 (27.30%)
Other	700 (4.29%)	770 (3.31%)	609 (2.66%)	702 (2.84%)	499 (2.37%)

Source SENESCYT, Subsecretaría de Acceso a la Educación Superior, Coordinación de Saberes Ancestrales (2020)

the country's public higher education system (SENESCYT, Dirección de Nivelación 2020).

A demographic breakdown of self-identified individuals from diverse peoples and nationalities reveals that 29% represent Afro-Ecuadorians, 41% identify as Indigenous, and 30% as Montubios (SENESCYT, Subsecretaría de Acceso a la Educación Superior, Coordinación de Saberes Ancestrales 2020). Further scrutiny in the second semester of 2019 establishes that among Indigenous candidates, 78% belong to the Kichwa nationality of the Sierra region, 14% to the Kichwa nationality of the Amazon, 6% to the Shuar nationality, and the remaining 2% to other nationalities spanning the Amazon and Coast regions. Places are allocated to 76% of Kichwa candidates from the Sierra, 16% to Kichwa individuals from the Amazon, 6% to Shuar candidates, and the remaining 2% between the Tsáchila and Chachi nationalities. Impressively, 74% of the total number of individuals affiliated with Indigenous peoples and nationalities accepted the places offered.

The Offer of Higher Education in the Ecuadorian Amazon: Universities in Intercultural Territories

The academic provision at the tertiary level within the six provinces of the Ecuadorian Amazon region is overseen by a total of 13 higher education institutions, as outlined in the data provided by SENESCYT (2022) (see Table 4.2). Of these institutions, three are public universities, two are private universities, six are public higher institutes, and two are private higher institutes. Notably, the institutes include the UEA and the Ikiam Regional University, both of which are established within provinces located in the Amazon region. However, the remaining universities offer academic programmes in Amazon provinces while operating from their primary headquarters situated in the Sierra region.

Not included in Table 4.2 is the Universidad Intercultural de las Nacionalidades y Pueblos Indígenas Amawtay Wasi, situated in Quito, which is of significant importance in the Amazon region. Representing an initiative by Indigenous peoples and nationalities under the CONAIE umbrella (Amawtay Wasi 2001), it stands as an 'epistemic project of the indigenous movements' in the country (Illicachi 2015, p. 218). Amawtay Wasi was established in 1996 and legally approved in 2004, but in 2011 the Council of Evaluation, Accreditation and Assurance of the Quality of Higher Education found low quality standards and it was closed in 2013 (García 2017; Krainer et al. 2017). Following the reform of the Organic Law of Higher Eeducation in August 2018, it was reopened with an initial period of institutionalization, commencing operations from 2022. Amawtay Wasi encapsulates an intercultural epistemological project, integrating study modalities within communities and incorporating academic figures as wise educators.

Established in 2013, Ikiam University reports serving approximately 1400 students as of 2022 at its primary campus in Napo, with an initial plan to maintain campuses in multiple provinces. Of its enrolled students, 44.24% hail from the Amazon region, with 61% focusing on degrees in water sciences and biotechnology, while the remainder is distributed across six other disciplines (Ikiam 2022). The UEA, founded in 2002, boasts an enrollment of over 4000 students in seven undergraduate degrees by the conclusion of the 2021–2022 academic year, as well as numerous master's students in five authorized postgraduate programmes; notably, 80% of these students originate from the Amazon region.

Table 4.2 Higher education provision in the Amazon provinces (2019)

Amazon Provinces	*Public Universities*	*Private and Co-financed Universities*	*Public Higher Institutes*	*Private Higher Institutes*
Morona Santiago	Escuela Superior Politécnica de Chimborazo (four courses)	Universidad Católica de Cuenca (five courses)	Instituto Superior Tecnológico Limón (two courses) Instituto Superior Tecnológico Sucúa (two courses)	
Napo	Universidad Regional Amazónica Ikiam (seven courses)		Instituto Superior Tecnológico Tena (three courses)	
Orellana	Escuela Superior Politécnica de Chimborazo (four courses)			Instituto Superior Tecnológico Oriente (seven courses)
Pastaza	Universidad Estatal Amazónica (seven courses)	Universidad Regional Autónoma de los Andes (four courses)	Instituto Superior Pedagógico Canelos-Bilingüe Intercultural (one course) Instituto Superior Tecnológico Francisco de Orellana (three courses)	
Sucumbíos	Universidad Estatal Amazónica (two courses)			Instituto Superior Tecnológico Crecermas (four courses)
Zamora Chinchipe	Universidad Estatal Amazónica (two courses)		Instituto Superior Tecnológico Primero de Mayo (two courses)	

Source SENESCYT (2022)

Examining the relationship between universities and their respective territories reveals distinctive characteristics. Amawtay Wasi, conceptualized for intercultural practice, maintains its headquarters in Quito, the capital city of Ecuador. While intending to establish campuses in various regions, including the Amazon, to directly engage with local populations, it predominantly operates within the urban landscape. Conversely, Ikiam University and the UEA are ingrained in territorialities that house rich natural and cultural diversity influenced by diverse colonization flows. Initially founded as conventional public universities without strict intercultural practices, they have adapted to the intercultural milieu fostered by various actors within and outside the Amazon region, responding to societal mandates from the rural territorial context of the Amazon province, which is positioned as peripheral.

Furthermore, certain public universities like FLACSO and specific programmes within the Universidad Politécnica Salesiana, University of Cuenca, and the Pontificia Universidad Católica del Ecuador have adapted their structures to embrace intercultural currents spurred by societal consciousness. Its territorial position is enabling the UEA to gradually establish an institutional environment that is conducive to interculturality.

While territoriality remains intrinsic to Indigenous nationalities, students moving from diverse corners of Ecuador for admission to higher education is increasing interaction and necessitating the reaffirmation or re-signification of culture and identity. In urban or metropolitan-based universities, cultural identities often tend to assimilate or diminish, emphasizing the need for a methodical, epistemological, and sociological approach to construct "laboratories" that address interculturality. In contrast, interculturality is part of everyday life in the Amazon province, resulting in an experiential evolution and spontaneous generation of new epistemes shaped by the territory.

UEA: Enrollment by Ethnic Self-Identification and Challenges for an Institutional Structure That Supports Intercultural Dialogue

Many students identify as the first in their families to pursue higher education. The establishment of universities within a specific geographic region has invigorated local access to educational facilities, facilitating the enrollment of individuals—particularly those self-identifying with distinct

ethnic groups or nationalities—at higher rates within regional universities. However, compared to other territories, gaining access to these institutions poses challenges associated with transport, housing, and living costs, even though the public universities offer free tuition. The student demographic at the UEA primarily hails from Pastaza and the wider Amazon region (see Fig. 4.1). The Covid-19 lockdown which commenced in March 2020 mandated staying at home, the adoption of virtual learning platforms, and alterations in the start and end dates of the regular academic calendar.

According to the Undersecretary for Access to Higher Education, 35.76% of students enrolled at UEA during the second half of the academic year 2020 originate from the poorest quintile, with 58.33% coming from quintiles 1 and 2. This underlines the necessity of preserving accessible public education within the Amazon territory. While there is some discussion of discrimination, the more prominent efforts within the university community are focused on genuine intercultural understanding and respect among peers.

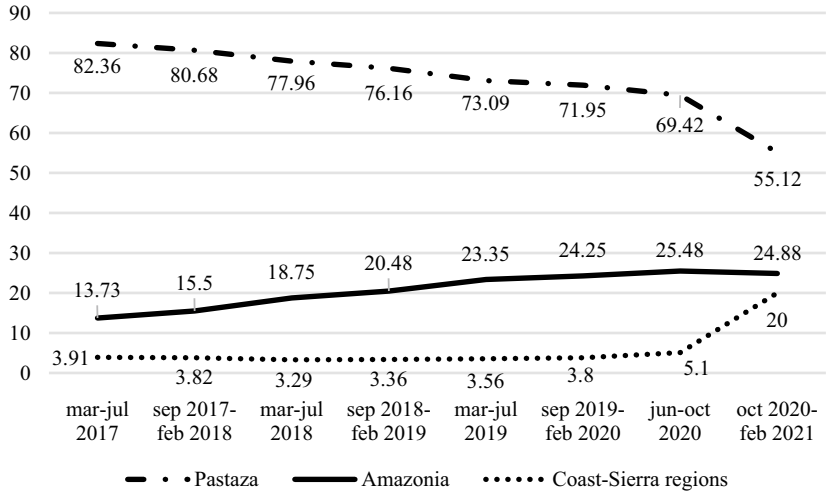

Fig. 4.1 Enrollments in percentage by students' place of residence, March 2017–February 2021 (*Source* Sistema de Información Académico Docente de la UEA 2022)

Enrollment by ethnic self-identification for the period March–July 2017 to October 2020–February 2021 (Fig. 4.2) shows a prevalence of people self-identifying as white-mestizo. Mostly from the coastal region, self-identified Montubio people register barely perceptible percentages of 0.15% to 0.09% and self-identified Afro-descendants, black and mulatto people register enrollment percentages between 1.25% and 1.43%. Students self-identifying as Indigenous maintain an average of 16.9%, with enrollment falling from 19. 57% in March 2018–July 2018 to 14.64% in October 2020–February 2021, when the Covid-19 pandemic forced closure of facilities and teaching became virtual in a region with poor roads infrastructure, internet, and monetary resources. This is despite the fact that extractive activities in the Amazon region, mainly oil, have been a source of income for the Ecuadorian state since 1972.

Despite a general acknowledgement of the cultural and natural diversity prevalent in the region, often perceived merely as folklore, local wisdom or eco-cultural knowledge are not consistently included within formal university curricula.

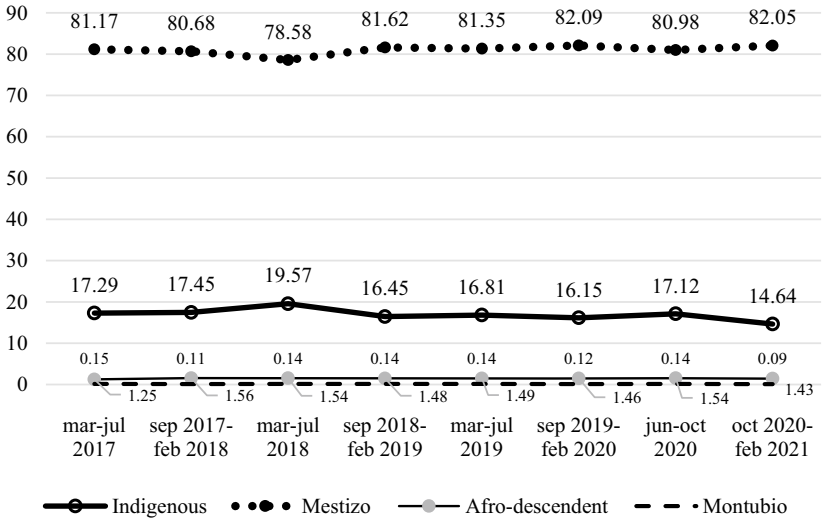

Fig. 4.2 Enrollments by self-identification, March–July 2017 to October 2020–February 2021 (*Source* Sistema de Información Académico Docente de la UEA 2022)

Formal public institutional structures pose constraints on the effective recognition of knowledge and contributions from original nations. For instance, the state is officially prohibited from remunerating individuals possessing significant knowledge, information, or pertinent experience recognized by their communities, if they lack official public status or an accredited academic degree. Efforts to combine territoriality and interculturality within the Amazon region are fostered through specific curricular and extracurricular activities.

Social Structuring at the UEA: The Interaction of Territoriality and Interculturality

Initiatives promoting inclusivity, mutual respect, and comprehension of the original nations, their cultures, territories, and campaigns against extractivist processes are emerging from various parts of the UEA academic community. UEA aligns with 27 of the 38 guidelines proposed by SENESCYT and UNESCO (2015) outlined in the document 'Building Equality in Higher Education, Rationale and Guidelines to Mainstream the Axes of Equality and Environment.' These guidelines underscore an understanding of interculturality and a commitment to safeguarding the integrity of the Amazon territory and its inhabitants.

For example, the institution has initiated statistical data collection to identify the ethnic and socioeconomic landscape of its student body. It has undertaken efforts to diagnose disparities in opportunities among students, faculty, and administrative personnel. Research initiatives focused on plurinationality and ancestral knowledge continue, aiming to integrate Indigenous wisdom into subjects and programmes. Subjects such as Ancestral Knowledge, Anthropology, and Indigenous Languages are integral to these initiatives, together with other collaborative agreements with representative organizations of original nations.

Furthermore, the UEA hosts the Anthropological Festival, recognized as a model of good practice in intercultural education by the Regional Office of UNESCO in Quito. Since 2016, this festival has served as a platform for students to present their work, elevating awareness and appreciation of Indigenous nationalities, ancestral knowledge, and Amazonian popular culture.

The Retomando Raíces Collective has emerged as an extracurricular initiative aiming to combat cultural assimilation among students identifying with Indigenous peoples and nationalities and to preserve ancestral

knowledge within urban spaces. Initially established in 2015 by four students, this collective has expanded its activities, gaining recognition from SENESCYT and UNESCO for its proactive stance. The group engages in diverse intercultural experiences, from re-enactments of traditional practices to discussions on culture, sexual and reproductive health, and offering alternative therapy sessions addressing sexual violence. With a commitment to inclusivity, the Retomando Raíces Collective fosters a culture of peace and resilience against discrimination, and endeavours to welcome young individuals entering the university from diverse rural backgrounds.

The collective regularly organizes events celebrating cultural diversity, inviting discussions with community leaders, promoting life and culture. Prior to the Covid-19 pandemic, the Retomando Raíces Collective had grown to include around 50 Indigenous members representing various original nations from the Amazon, alongside non-Indigenous students from different regions of the country, contributing to the collective's ethos of solidarity, respect, and cultural exchange.

A communal ritual frequently practised within the group is the *guayusa upina* ceremony, also known as the 'taking of guayusa,' a significant social rite deeply rooted in the spiritual traditions of Amazonian peoples. This ritual serves to foster stronger bonds among participants.

Presently, the collective operates as a cohesive and self-organized entity, maintaining a horizontal structure and fostering an organic development toward intercultural coexistence among students. The continued existence and progression of the Retomando Raíces Collective serves as compelling evidence highlighting the inadequacy and limitations of official mechanisms aimed at integrating interculturality within higher education. The fact that these institutional instruments fail to acknowledge this type of organization and incorporate it within their frameworks renders it effectively invisible.

Indigenous People's Access to Universities: Aspirations and Realities

At the national level, increasing demand among recent high school graduates to secure enrollment in public higher education institutions managed by SENESCYT can be observed. Conversely, admission to private institutions is contingent upon each institution's policies, costs, and autonomy. Although the absolute number of applications from marginalized peoples

and nationalities seeking access to public higher education has risen, there has been a decrease in the percentage of Indigenous applicants. While 6.3% of the general population holds a higher education degree, only 1.5% of Indigenous professionals possess an academic degree, as indicated by the latest national census (INEC 2010, 2022). This figure remained at 1.5% for university and polytechnic degrees registered with Indigenous ethnic identification in 2020 (SENESCYT 2020). This statistic underscores the limited opportunities available to Indigenous peoples to access higher education and, consequently, better-paid jobs.

University programmes were first introduced in the Amazon territory in 2002 with the establishment of the UEA, and expanded in 2013 with the initiation of Ikiam. However, an intercultural university, namely Amawtay Wasi, was not established until 2022. Despite this, there is a consistent demand for university places, programmes, and infrastructure. While students, families, and territories exist physically, the state's response to the demands of the population is lacking, with funding for universities apparently being withdrawn rather than augmented. The interculturality that exists in the Amazon territory due to its cultural diversity can be seen in the development of interinstitutional relationships that inherently appreciate diversity, both cultural and territorial, engaging with the traditional, flexible, and multifaceted aspects of culture, which are functional, symbolic, and intrinsic to the region (Ortiz Tirado 2019).

The continuous and historical processes of colonization in the Amazon have led to a cultural amalgamation resulting from the diversity of languages. Higher education institutions embedded in this context allow educators to directly engage with diverse knowledge through students' testimonies, encouraging the interaction of young individuals representing the country's cultural diversity. Each student embodies their own unique heritage, adapting and assimilating within the academic sphere and its environs over time and through interaction. Indigenous students and those from remote rural areas may initially encounter challenges in adapting to the higher education system, due to limited proficiency in Spanish. However, these difficulties are typically overcome in environments within conducive relationships.

While the UEA was not explicitly established as an intercultural institution, its location in the most diverse region of the country bears witness to ongoing intercultural processes (Arias-Gutiérrez and Minoia 2023). Expectations from communities and Indigenous nationalities persist, albeit unresolved, for a greater representation of local Indigenous groups

in academic programming. This is envisioned to academically facilitate the decolonization of knowledge, gradually integrating eco-cultural pluralism, and addressing prevailing inequalities within scientific education by incorporating aspects such as awareness, attitudes, sensitivity, and behaviours of educational stakeholders (Tubino 2019; Zárate Pérez 2014). Despite the current dynamics at UEA lacking a decolonial perspective, its incorporation of Indigenous professionals and attentive acknowledgement of the diverse and intercultural reality posed by grassroots Indigenous organizations could contribute to the intercultural process. This approach considers territoriality and aims to foster alternative ways of relationship enhancement, as 'interculturality, more than a normative aspect, is a lived process' (Hernández 2018, p. 189). The local, territorial character of the university allows for interaction among individuals from diverse origins. However, merely being located in a culturally diverse territory is insufficient to adhere to the repetitive discourse of interculturality in the region and the country.

The discourse is a belief, practice, or knowledge that constructs a common way of understanding the world in the different social contexts in which it was formulated (Urra et al. 2013); the discourse of interculturality, adopted in the Republic's Constitution, has not presented evidence of changes in power structures or decolonization (Quijano 2011), which remains a demand of the peoples. Within the university context, the discourse of interculturality is reproduced without addressing inherited colonial power structures. It necessitates academic and experiential efforts, along with a critical stance, to acknowledge the coloniality inherent in power, knowledge, and existence (Guerrero 2019).

Numerous processes at the UEA require steadfast progress, including the respectful acknowledgement of the ancestral, symbolic, and practical wisdom of Indigenous and Amazonian inhabitants, who have preserved natural ecosystems based on their lifestyles and worldviews. Incorporating culturally relevant knowledge into the educational curriculum of undergraduate and graduate programmes, particularly those pertinent to the environment and coexistence among diverse peoples threatened by industrialized extractive activities, is crucial.

Despite advocating university autonomy, practical constraints imposed by state regulations can hinder or enable various actions. For instance, the university might face restrictions in hiring an expert or funding a methodological facilitation process if the individual lacks formal recognition by regulatory bodies.

Inequities among students are evident, evidenced by justifications from those unable to devote themselves fully to their studies due to the necessity of employment to sustain themselves in the city. Families from rural environments may struggle to provide adequate economic support for their children staying in urban areas. The historical disintegration of the social fabric among original peoples, persistent since the conquest era, has led to symbolic power structures, influencing epistemological bases and present intercultural relationships. These 'marks' perpetuate inequities, perverse asymmetries, and historical social hierarchies, stigmatizing individuals (Tubino 2019). Consequently, university applicants may conceal their identity, claiming mestizo heritage to avoid social prejudices.

To advance equity and interculturality within higher education, there is a recognized need for not only conceptual, technical, managerial, and evaluative tools but also a shared adherence to ethical values, solidarity, continual communal efforts, and a fundamental shift in cognitive frameworks to encompass an inclusive pedagogy (Rodríguez-Cruz 2018). The administration of an educational system demands a comprehensive structure that orchestrates the execution of an exceedingly intricate process, fraught with unresolved pedagogical challenges within the realm of interculturality. Tubino (2019) underscores the critical aspects that remain non-functional in interculturality, while Hernández (2018, p. 163) clarifies that 'the functional or critical nature of interculturality doesn't manifest merely by decree or through the assumption of a discourse, but rather hinges upon the concrete practices it generates'.

If interculturality is to transcend from mere discourse to an institutional structure, it must be built through the accumulation of diverse experiences and knowledge, not solely governed by norms or ideal constructions but rather fostered by the inventive uniqueness of students, educators, administrators, janitorial staff, and researchers who foster an open-minded receptivity to learning and mutual respect. Krainer and Guerra (2016, p. 53) analyze specific teaching practices that challenge educational norms, positing novel solutions aligned with the horizon of *sumak kawsay* (good living). This concept transcends mere Indigenous discourse, encapsulating a national ethos, as articulated in Article 27 of the Constitution (Asamblea Nacional 2008). Hence, the role of teaching stands as pivotal and indispensable for nurturing the progress of the intercultural process, aiming to integrate into the pedagogical model: (a) respect for diverse learning rhythms; (b) consideration of psychosocial aspects; (c) fostering creative capabilities; (d) recognition

of ancestral knowledge; and (e) incorporation of supplementary knowledge contributing to the holistic development of humans and their environment.

Educators who embrace and experiment with this proposal assert: 'It is not an easy feat to achieve […] It must not linger as an ideological discourse but should translate into classroom activities' (Krainer and Guerra 2016, p. 62). Conversely, educators entrenched in conventional systems highlight substantial issues following a review of curricular frameworks, emphasizing the lack of emphasis on 'topics like gender, citizenship, and interculturality [which] are not topics that are addressed in teacher training' (Krainer and Guerra 2016, p. 62). The teaching responsibility is paramount as the lynchpin of the intercultural process. Therefore, the creation of appropriate pedagogical tools is an urgent priority: 'it is the teachers who ultimately decide what is learned or not, within the classroom…the curriculum proposes, and the teacher disposes.' Consequently, the implications of interculturality in the teaching and learning process are condensed into 'a brief analysis of the country's cultural diversity' or 'superficial references to ancestral knowledge', while critical content remains overlooked. Typically, course programmes and teaching materials merely espouse a peripheral vision of interculturality (Granda 2018, p. 162).

Although the conceptualization of interculturality in higher education in Ecuador purports to align with an inclusive approach, experiences suggest that the professionalization of Indigenous students may pave the way for future professionals harbouring a critical version of interculturality (Hernández 2018). Since its inception, the UEA system has witnessed the organic emergence of key stakeholders who have discerned the pivotal plurinational convergence constituting its landscape. The Retomando Raíces Collective, established by students, received strong support from the Amauta Ñanpi Intercultural Bilingual Educational Unit and its pioneering educators in fostering the identity of various peoples and nationalities (Martínez and Gutiérrez-Valerio 2018).

It remains imperative to persist in the perpetual endeavour of educating within diversity, fostering encounters among students to generate a role in intercultural education, and nurturing a productive intercultural coexistence as a pedagogical and socio-community process, despite the dearth of pedagogical contributions aimed specifically at university settings (Leiva-Olivencia and Gutiérrez-Valerio 2018). The transition from functional to critical hinges upon the transformation from a compliant or demanding

attitude to a liberated mode of relating and constructively building from differences, driven by motivation, enthusiasm, and the need to engage actively. For instance, the collective represents not only the collaborative endeavours of the UEA academic community for new official instruments from an alternative perspective but also signifies the inception of a trajectory towards critical interculturality in higher education within the Amazon.

To transform academic premises into spaces revitalizing the identity of various peoples and nationalities necessitates the promotion of and respect for their organizational processes. This endeavour may potentially influence the intercultural configuration of tertiary-level institutions (Martínez and Gutiérrez 2018).

Conclusions

This chapter examines the imperative for increased access to higher education by youth from the Amazon region, the available educational provision, the enrollment trends of Indigenous youth in UEA, and the interculturality initiatives fostered by students. Despite a burgeoning demand for access to higher education among youth from diverse peoples and nationalities, they constitute a mere 8.5% of aspirants nationally across all self-identifications. Notably, the number of Indigenous aspirants for higher education places in the period between the second semester of 2017 and the second semester of 2019 parallels the aspirant numbers from Montubio and Afro-descendant/mulatto/black backgrounds. No qualitative differentiation has been reported in the national evaluation processes regarding the cultural relevance, regional nuances, or linguistic aspects through which young individuals gain entry into public higher education. However, the allocation of places in higher education is proportionately lower for aspirants from various peoples and nationalities.

The report underscores the need to bolster regional universities by augmenting their budgetary allocations, and enhancing their system and territorial presence, thereby accommodating the burgeoning demand for higher education across the coastal and Sierra-Amazon educational regions. Despite a somewhat limited spectrum of higher education offerings in the Amazon region, each province hosts some higher education institution functioning within its territory. This includes higher institutes and three public universities, two of which have their administrative hubs

established within the region. While these institutions have not explicitly established themselves as intercultural universities in a similar way to the implementation process witnessed in the Amawtay Wasi University of the Indigenous Peoples, being situated in the Amazon territory necessitates a responsibility to generate knowledge and engender openness to the cultural diversity and natural environment that defines the Amazonian landscape.

Generating a pluralistic, intercultural, fortified academic framework fostering spaces for conviviality represents a significant challenge. However, this is distinct from merely establishing new institutions in response to personal or clientelistic interests. At UEA, the enrollment of Amazonian students has witnessed a surge from 13.73% in the first semester of 2017 to 24.88% in the second semester of 2020. Conversely, the enrollment rates of Montubios and Afro-descendants remain considerably low at averages of 0.13% and 1.47%, respectively, in a region far removed from their native environments. However, places are allocated at a national level. On average, mestizo students represent 81.06%, while Indigenous students constitute 16.9%. However, their representation has dwindled from 19.57% in the first semester of 2018 to 14.64% in the second semester of 2020, notably during the pandemic and the subsequent transition to virtual classes. The socioeconomic disparities among self-identified Indigenous students hailing from rural areas, whose resources in respect of internet access, virtual class participation, and the cost of living are limited, form a structural barrier impeding greater access to university education. Nevertheless, the enrollment, retention, and graduation statistics at UEA, juxtaposed with 2010 census data, suggest improved opportunities for students from diverse backgrounds to access higher education in the Amazonian landscape.

The strenuous efforts of marginalized youth to persist in university studies sheds a brighter light on interculturality, accentuating the need for recognition and participation, and sowing the seeds for a pluralistic framework within the university. However, structural socioeconomic differences prevalent at a national level persist within the territory. Initiatives from students and other stakeholders within the higher education system underscore efforts to forge closer ties in pluralistic, intercultural environments in the Amazonian territory. However, there remains a pressing need to enhance critical academic discourse that can reveal intracultural power dynamics, expose active and reactive discrimination, and deconstruct them.

While the UEA ostensibly endeavours to comply with the norms of equal transversalization in higher education across academic, research, collaboration, and managerial spheres, performance in the training and administrative arenas seems to lag. The principal lacuna lies in the absence of a mechanism for the integration of inter-knowledge into the pedagogical structure, necessitating a curricular overhaul to truly embed interculturality. Sustained efforts are required to foster long-term networks in intercultural studies and decolonial practices.

References

Albó, X., and Anaya, A. (2004). La audacia de la educación intercultural y bilingüe en Bolivia. *Revista andina*, (38), 281.

Amawtay Wasi (Universidad Intercultural de las Nacionalidad y Pueblos Indígenas Amawtay Wasi). (2001). Amawtay Wasi. *Boletín ICCI-ARY Rimay* 33. https://bit.ly/32DPWCM.

Arias-Gutiérrez, R., and Minoia, P. (2023). Decoloniality and critical interculturality in higher education: experiences and challenges in Ecuadorian Amazonia. *Forum for Development Studies, 50*(1), 11–34.

Arzaluz, S. (2005). La utilización del estudio de caso en el análisis local. *Revista región y sociedad, 17*(32), 108–143.

Asamblea Nacional. (2008). *Constitución de la República del Ecuador 2008*. Quito-Ecuador: Asamblea Nacional.

Ayala Mora, E., Moreno, S., Bustos, G., Terán, R., and Landázuri, C. (eds) (2008). *Manual de Historia del Ecuador, tomo I, épocas aborigen y colonial, independencia*. Universidad Andina Simón Bolívar, sede Ecuador, Corporación Editora Nacional.

Confederación de Nacionalidades Indígenas del Ecuador, CONAIE. (2022). https://bit.ly/3yEI05a.

Cuji, L. (2012). Decisiones, omisiones y contradicciones. Interculturalidad y políticas públicas en educación superior en Ecuador. In Daniel Mato (ed.), *Educación Superior y Pueblos Indígenas y Afrodescendientes en América Latina. Normas, Políticas y Prácticas* (pp. 211–240). Caracas. UNESCO: IESALC.

Díaz, S., Mendoza, V., and Porras, C. (2011). Una guía para la elaboración de estudios de caso. *Revista razón y palabra*, febrero-abril, (75), 1–25. http://bit.ly/3JCICP0.

Escarbajal Frutos, A. (2011). Hacia la Educación Intercultural Pedagogía Social. *Revista Interuniversitaria, 18*, 131–149. Sociedad Iberoamericana de Pedagogía Social Sevilla.

García, G. (2017). *La educación intercultural bilingüe como fenómeno sociológico en las realidades indígenas de América Latina: el caso de Ecuador*. (Tesis de maestría). Universidad del País Vasco. https://bit.ly/32CCm2A.

Granda, S. (2018). La Revolución Ciudadana y la apuesta por una educación intercultural y bilingüe para todos. In *Pueblos Indígenas y Educación* (pp. 153–173). Quito-Ecuador: Ediciones Abya-Yala.

Guerrero, P. (2019). Después de mi tiempo otro tiempo vendrá y ustedes cogerán leña de otro tiempo: Corazonando las insurgencias runas, los procesos políticos, la universidad y la interculturalidad. In Fernando Garcés and Rubén Bravo (eds), *Interculturalidad, problemáticas y perspectivas diversas*, Ediciones Abya-Yala, Universidad Politécnica Salesiana. http://bit.ly/42gzE1g.

Hernández, S. E. (2018). *Los diversos sentidos de lo intercultural en las experiencias de Educación Superior en Ecuador*. http://bit.ly/3LoxVRj.

Hohenthal, J., and Minoia, P. (2022). Territorial and mobility justice for Indigenous youth: accessing education in Ecuadorian Amazonia. *Mobilities, 17* (6), 850–866. https://doi.org/10.1080/17450101.2021.1987154.

Ikiam. (2022). *Información general, población universitaria-Ikiam*. https://bit.ly/3YNQn8U.

Illicachi, J. (2015). La educación intercultural bilingüe como proyecto epistémico de los movimientos indígenas en el Ecuador. *Sophia*, 18, 212–229. Universidad Politécnica Salesiana. https://bit.ly/2VABhXm.

Instituto Nacional de Estadística y Censos, INEC. (2010). Base de datos de resultados del censo de población y vivienda 2010 en el software Redatam. INEC: CPV Ecuador 2010-Aplicación de R+SP xPlan (CELADE-CEPAL).

Instituto Nacional de Estadística y Censos, INEC. (2022). Encuesta Nacional de Empleo, Desempleo y Subempleo 2021 (ENEMDU) Indicadores de Pobreza y Desigualdad Diciembre, 2021. https://bit.ly/3JuXsa4.

Jiménez-Chaves, V. (2012). El estudio de caso y su implementación en la investigación. *Revista internacional de investigación en ciencias sociales, 8*(1), 141–150.

Krainer, A., and Guerra, M. (2016). *Interculturalidad, educación, educación intercultural, formación de docentes y políticas públicas*. ECUADOR. 306-CDD.

Krainer, A., Aguirre, D., Guerra, M., and Meiser, A. (2017). Educación superior intercultural y diálogo de saberes: el caso de la Amawtay Wasi en Ecuador. *Revista de la educación superior, 46*(184), 55–76.

Leiva-Olivencia, J., and Gutiérrez-Valerio, R. (eds). (2018). *Prácticas pedagógicas para el fomento de la interculturalidad en el contexto universitario: la experiencia de la Universidad Estatal Amazónica en convenio con la Universidad de Málaga*. Universidad Estatal Amazónica.

Martínez, R., and Gutiérrez-Valerio, R. (2018). Interculturalidad e inclusión y su desarrollo social y educativo. In Juan J. Leiva Olivencia, Rosaura Gutiérrez

Valerio (eds), *Prácticas pedagógicas para el fomento de la interculturalidad en el contexto universitario: la experiencia de la Universidad Estatal Amazónica en convenio con la Universidad de Málaga*. Puyo, Ecuador.

Mato, D. (ed.). (2008). *Diversidad cultural e interculturalidad en educación superior. Experiencias en América Latina*. UNESCO, IESALC.

Ortiz Tirado, P. (2019). Interculturalidad, territorio y conflictos: apuntes en torno al desencuentro entre Estado y nacionalidades indígenas a partir del caso de Pastaza. In *Territorio, identidad e interculturalidad* (pp. 47–102). Quito-Ecuador: Ediciones Abya-Yala.

Quijano, A. (2011). Colonialidad del poder y clasificación social. *Contextualizaciones latinoamericanas, revista semestral del Departamento de estudios ibéricos y latinoamericanos de la Universidad de Guadalajara, 3*(5), julio-diciembre. http://bit.ly/3Tdvjrq.

Ramón, G. (2019). Territorio, identidad e interculturalidad. Serie Territorios. *Debate 10* (pp. 17–24). CONGOPE, Ediciones Abya-Yala, Incidencia Pública.

Rodríguez-Cruz, M. (2018). Construir la interculturalidad. Políticas educativas, diversidad cultural y desigualdad en Ecuador. *Íconos. Revista de Ciencias Sociales*, (60), 217–236.

SENESCYT (Secretaría de Educación Superior, Ciencia, Tecnología e Innovación). (2020). Boletín anual- SENESCYT/Versión N.- 2/Agosto 2020/ Quito-Ecuador/Análisis anual de los principales indicadores de educación superior, ciencia, tecnología e innovación (SENESCYT).

SENESCYT and UNESCO. (2015). Construyendo Igualdad en la Educación Superior. Fundamentación y lineamientos para transversalizar los ejes de igualdad y ambiente. Quito, Ecuador.

SENESCYT, Dirección de Nivelación. (2020). Ficha informativa de proyecto 2019: K001 IE-ES-SENESCYT- Sistema Nacional de Nivelación y Admisión. https://www.educacionsuperior.gob.ec.

SENESCYT, Subsecretaría de Acceso a la Educación Superior, Coordinación de Saberes Ancestrales. (2020). Información de demanda y acceso a la educación superior de pueblos y nacionalidades, II semestre 2017–II semestre 2019.

SENESCYT. (2022). Oferta Académica de las instituciones de educación superior, segundo semestre 2019. http://bit.ly/42deqRM.

Tubino, F. (2019). La interculturalidad crítica latinoamericana como proyecto de justicia. *Forum Historiae Iuris*. Alemania. http://bit.ly/3TdxgEd.

UEA. (2022). Estatuto Universidad Estatal Amazónica, codificado 04 marzo 2022. Puyo.

Urra, E., Muñoz, A., and Peña, J. (2013). El análisis del discurso como perspectiva metodológica para investigadores de salud. *Enfermería universitaria, 10*(2), 50–57. http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S1665-70632013000200004&lng=es&tlng=es.

Vitorelli Diniz Lima Fagundes, K., Almeida Magalhães, A. de, dos Santos Campos, C. C., Garcia Lopes Alves, C., Mônica Ribeiro, P., and Mendes, M. A. (2014). Hablando de la Observación Participante en la investigación cualitativa en el proceso salud-enfermedad. *Index de Enfermería, 23*(1–2), 75–79. https://doi.org/10.4321/S1132-12962014000100016.

Walsh, C. (2008). *Interculturalidad y plurinacionalidad: Elementos para el debate constituyente*. Universidad Andina Simón Bolívar. https://bit.ly/3YO9Vde.

Walsh, C. (2014). ¿Interculturalidad? Fantasmas, fantasías y funcionalismos. *Revista Nuestra América, 2*(4), 17–30.

Yin, R. (1994). *Case Study Research: Design and Methods*. Thousand Oaks, CA: Sage Publications.

Zárate Pérez, A. (2014). Interculturalidad y decolonialidad. *Tabula Rasa, 20*, 91–107.

CHAPTER 5

Intercultural Education and Agency of Indigenous Communities: A View from the Sapara Territory

Riikka Kaukonen Lindholm and Mariano Ushigua

Introduction

In this chapter, we provide an ethnographic analysis of the education of Indigenous peoples in Ecuador by investigating how education is organized in the territory of the Sapara people, the smallest of the 15 Indigenous groups recognized under the plurinational state of Ecuador (Confederación de Nacionalidades Indígenas del Ecuador [CONAIE], 2022). We analyze the challenges and opportunities surrounding educational access and the negotiations between Indigenous and Western knowledge systems in education, with a focus on small Indigenous communities that live in the remote regions of the Ecuadorian Amazon.

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In this chapter, we also discuss the experiences of the Sapara communities with whom we worked regarding primary schools and their limited access to higher education within the Sapara territory.

This differs from the rest of the book, which focuses on university and high school education. Furthermore, as the Sapara education in its current form also includes schools outside the IBE curriculum, here we will concentrate on illustrating the agency of community members in their attempt to construct better-quality education for themselves despite substantial problems prevalent throughout the school system. Agency is the political, social, and inter-institutional capacity for action realized by the Sapara people through actions carried out by themselves and their leaders, based on their concerns, demands and interests regarding their lives and territories. Despite the overall investment in education in Ecuador, the state is not adequately investing in the promotion of quality education inside the Sapara territory. This is evidenced by the absence of an option to attend schools that offer official teaching in the Sapara language. This poses a serious threat to the survival of their language and culture.

Saparas face disadvantages due to their small population and sparsely populated territory. They have been most appropriately served by small community schools, but these have faced cuts in the education budget which have instead promoted development of larger school units, despite the insufficient number of students within the Sapara territory (Mignolo and Walsh, 2018). Currently, the Sapara language is taught throughout schooling, but this occurs unofficially as a result of active community investment. We exemplify this below, along with other initiatives developed by Sapara community members to promote interculturality and epistemic equality in education. While this chapter is not solely focused on IBE, the problems and community projects analyzed here could provide guidelines for its further development with greater respect for the agency of community members. This is especially important given the hopes of the Sapara people to have state-funded education and to introduce their own curriculum, which would differ from the current form of IBE and aim to respond to their specific need as Sapara people.

The challenges of functional interculturality (see Chapter 1 in this book, and also Mignolo and Walsh, 2018) become evident in the education of Sapara students: the current education system fails to integrate their worldview. Access to education, particularly beyond primary school, is problematic, as leaving one's community at a young age to pursue

higher education endangers the continuity of Indigenous knowledge passed down through generations in everyday life. Moreover, the project lacks proper funding to transform functional interculturality into critical interculturality, as advocated by Indigenous activists. To truly achieve this goal would require a profound respect for the agency of Sapara people in the development of their own education.

Indigenous Knowledge, Relationality, and Agency

While in Ecuador IBE theoretically aspires to combine Indigenous and Western knowledge systems in a respectful and equal manner, in practice, the educational model represents a way of relating, knowing, and being that is completely different to the worldview and lived reality of the Sapara people. Community members are forced to find ways to negotiate and adjust to this ambiguity. The implementation of interculturality in IBE has remained superficial, as it has neglected to transform education and rather upholds the epistemological superiority of the Western knowledge system.

For the purposes of this chapter, we define Indigenous knowledge not merely as a collection of information, but as "a complete knowledge system with its own languages, with its own concepts of epistemology, philosophy, and scientific and logical validity" (Battiste, 2008: 500). Furthermore, Indigenous knowledge is often described as relational, a crucial concept in our work, since it questions basic Euro-American assumptions about what constitutes knowledge and how Western conceptualization differs from Indigenous knowledges. We draw upon the concept of relationality, as described by Wilson (2008), who emphasizes how relations, in fact, are constitutive of reality in Indigenous epistemologies and ontologies. This relationality is also applied to understand characteristics of Indigenous knowledge, as highlighted by Reascos (2009). Reascos emphasizes the importance of relations in Indigenous epistemology, where things derive meaning from their connections to the totality of the universe and its parts, such as society. Knowledge is subjective in the sense that it exists in relation to the person who possesses it. This relationality questions common Euro-American assumptions of knowledge identified by Strathern, such as the belief that knowledge can be separated from its holders and its value depends on "the correctness of its correlation with apparently independently occurring phenomena (epistemic relations)" (2018: 34) rather than its impact on relations

between persons. From an ontological perspective, this type of epistemology of knowledge can be explained through what Escobar calls "relational ontology" (2016: 18), where the world is brought into existence through relations experienced between different beings and life forms, and these relations are enacted and constitute reality in interactions, whether between humans or non-humans. This perspective signifies that knowledge cannot be separated from the network of relations that constitute it.

This brings us to the issues of the agency of marginalized peoples and its recognition in development, which, as McEwan (2014) argues, should be an integral part of postcolonial or decolonial projects. People who have been historically subjects of developmental projects have often been depicted as "objects" of development interventions without proper attention to their needs or actions. By focusing on agency, defined here as the multiple ways in which people reciprocally participate in the creation and development of their lived realities through their relations, we aim to redress this imbalance, acknowledging and providing space for voices and criticisms of local people, representing them as active agents. This approach offers alternatives to developmental models that have in the past uncritically endorsed Western hegemonic ideals and have led to the (re)creation of colonial structures.

Moreover, this chapter advances and documents the critical agency practiced by the Sapara, with whom we collaborated, in their struggle to establish quality education on their own terms. Our aim is to illustrate the projects on education initiated by our Sapara collaborators, supporting their agency in achieving better education as defined by their own standards. The topic of agency also encompasses the entire research process, as this study resulted from a collaboration between Kaukonen, a master's student involved in the research project "Ecocultural Pluralism in Quality Education in the Amazon", and Ushigua, a native member of Cuyacocha, now living in Puyo while fulfilling his duties as the leader of education of the Sapara People of Ecuador, NASE. Following on from an educational assembly organized by the Indigenous nations of Pastaza, the authors visited the Sapara communities and developed plans to advance their school system. We do not claim to present the Sapara view on education here in its totality, acknowledging the impossibility of speaking for others or the "subaltern", as critiqued by Spivak (1988). Rather, this chapter presents the dialog between the authors, as well as between the authors and the community members, outlining a path for how small Indigenous

groups can advance their agency in collaboration with researchers. As a dialog, our conversations remain a victim of equivocation, but as Viveiros de Castro (2004) suggests, this does not have to be treated as an unfortunate limit of a successful communication. Instead, it should be opened up and explored to create space for culturally different perspectives of participants.

A Historical Analysis of the Sapara Territory, Education, and Language

To comprehend the Sapara people's struggle for improved education, it is crucial to examine the recent history of the Sapara people and their endeavor to establish an education system that responds to their specific needs. Asserting their identity as an Indigenous nationality in Ecuador is inherently political, demanding a resolute determination from the Sapara people. Being recognized as an Indigenous nationality grants certain rights to Indigenous groups, with the ability to proclaim their own territory standing out as the most significant.

The Sapara are the smallest Indigenous nationality in Ecuador, estimates of their population ranging from under 200 to just over 300, although historically their numbers were much larger (Viatori and Ushigua, 2007). At one time, their population was in tens of thousands of people, but it was decimated as a result of disease, assimilation into other Indigenous communities, enslavement and forced migration (Viatori and Ushigua, 2007: 8–10). The war between Ecuador and Peru in 1941 further devastated Sapara communities, which became separated by the new border between the countries (Bilhaut, 2011: 44). The effects were so severe that Ecuadorian anthropologists declared the Sapara extinct until the Sapara people began their project to revive their culture and identity (Viatori and Ushigua, 2007: 8–10).

The first significant step towards their legitimization as an Indigenous nationality occurred in 1998, when the first Sapara organization was established. It represented the communities at the headwaters of the Pindoyacu and Conambo rivers and its goal was to revive the language, shamanism, territory and history (Viatori and Ushigua, 2007; Bilhaut, 2011). This organization evolved into the current Sapara organization, NASE, uniting all Sapara communities previously represented by two different organizations (Viatori and Ushigua, 2007). The key to gaining

recognition as an Indigenous nationality was demonstrating their possession of a distinct language, because the concept of Indigenous nationality in Ecuador is based on language, among other fundamental aspects. Although the Sapara language is not commonly spoken today, with fewer than ten people fluent in Sapara, and Kichwa being the vernacular language, it serves as the principal tool for Saparas to distinguish themselves from other Indigenous peoples in the region (Viatori and Ushigua, 2007). Thus, the Sapara people simultaneously advanced rejuvenation of their language together with their struggle to be recognized as a nationality. As a result of this effort, they were recognized by the Amazonian and national Indigenous federations, the Confederación de Nacionalidades Indígenas de la Amazonía Ecuatoriana (CONFENIAE) and the CONAIE, and in 2001 UNESCO recognized their language and oral culture as intangible cultural heritage of humanity (Bilhaut, 2011). It has been included in the List of Intangible Cultural Heritage in the binational form Ecuador–Peru since 2008. Consequently, the Sapara were recognized at the state level as a separate Indigenous nationality, which has made it possible to claim their territory (Radcliffe, 2012; Viatori and Ushigua, 2007). This highlights how language is strategically crucial for accessing rights, including territorial claims that only an Indigenous nationality can claim, hence linking territory to language.

Gaining an official status of Indigenous nationality also enabled Saparas to properly plan education for themselves as a part of IBE. Historically, there had been a few missionary schools available for Sapara children in the 1970s, but it was only during the IBE program that the first school was established in Llanchamacocha, in the mid-1980s. The school faced challenges during its early years, as teachers frequently left their jobs after the first holidays (Bilhaut, 2011). However, after gaining recognition as a nationality, the Sapara people leveraged the opportunity provided by the IBE under the jurisdiction of the National Directorate of the IBE (DINEIB), which allows each nationality to integrate their own language and knowledge into the curriculum. This enabled them to create their own model of trilingual education (Moya, 2007; Oviedo and Wildemeersch, 2008). Their previous trilingual system combined Sapara, Spanish and Kichwa and aimed to facilitate learning for students whose mother tongue is Kichwa and who learn Spanish as a second language, while emphasizing the importance of rejuvenating the Sapara language. In comparison, IBE currently endorses Kichwa, in addition to Spanish,

while other Indigenous languages are not substantially used in educational materials (Rodríguez Cruz, 2018).

However, during the presidency of Rafael Correa (2007–2017), IBE was transformed after the autonomy of DINEIB was annulled in 2009, and changes were introduced in Sapara education (Veintie, 2018). This meant that the Sapara people largely lost their self-determination over the education system. Rural education suffered during 2013–2014, when more than 10,000 community schools were closed nationwide, and funds were reassigned to larger educational units called millennial schools (Mignolo and Walsh, 2018). In terms of educational policy, this violated the collective right to "socioculturally and linguistically appropriate schooling" that had been agreed since 1988, because the closure of community schools limited access to education (Mignolo and Walsh, 2018: 67). The resulting political and cultural fracture combined with increased pressure to relocate closer to schools, poses a threat to these communities (ibid.). According to Bilhaut (2011), the Sapara people originally used dispersal as a political strategy to claim control over their territory. They delimited their territory in the legalization process and decided to divide Llanchamacocha, giving rise to the new communities of Masaramu and Jandia Yacu during the early years of the 1990s. This allowed them to assert a wider territorial space, and they had at least one individual who spoke Sapara in every community, which helped to consolidate their spatial claim. Thus, community dispersal has since the beginning of the Saparas' territorial project been an essential strategy for claiming territory and is threatened by the lack of access to education throughout the territory.

In one of the most influential cases to threaten their territory, the Sapara nationality in Ecuador, represented by NASE and the People's Defenders Office (Defensoría del Pueblo del Ecuador DPE, 2021) won a legal case against the Ministry of Agriculture and Livestock. The ministry, without any consultation, had allocated over 50% of Sapara territory to an organization claiming to represent the communities of the area. As a result of this judicial victory, NASE regained control over their entire territory.

Data and Methods

Ethnographic fieldwork was carried out from September 15, 2018, to November 31, 2018 in the province of Pastaza, and involved a three-week journey to communities located in the Sapara territory (Fig. 5.1). The research material consisted of 27 semi-structured interviews and participant observation. With a focus on an individual nationality, our goal is to overcome what Rodríguez Cruz (2018) calls a simplistic understanding of the complexity of Indigenous realities that serves as a foundation for IBE. Our case study highlights complexities that require attention in the planning and implementation of IBE. The Sapara experience is reflected in multiple similar cases among other Indigenous groups in Ecuador.

We visited four communities: Llanchamacocha and Jandia Yacu on the river Conambo, as well as Atatakuinjia and Cuyacocha on the Pindoyacu River (Fig. 5.1). During the time of our visit, Llanchamacocha, Jandia Yacu, and Cuyacocha had primary schools, while children from Naruka Matsakau and Akachiña, other communities close to Llanchamacocha, walked approximately 30–45 minutes each day to attend school. In Atatakuinjia, there were no schools within a reasonable distance. All

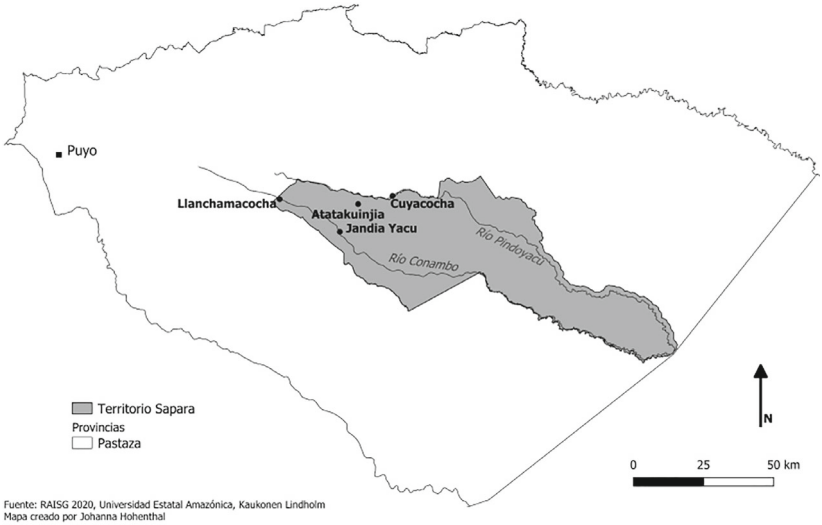

Fig. 5.1 The Sapara territory

Table 5.1 Educational establishments of the Sapara territory and their funding

Schools	*Community*	*Number of teachers*	*Funds*	*Curriculum*
Colegio Tsitsanu (secondary and high school)	Llanchamacocha	1	Private	General (intercultural education)
Primary school	Llanchamacocha	1	Public	IBE
Primary school	Jandia Yacu	2	Public	IBE
Primary school	Cuyacocha	1	Public	IBE

schools had approximately 20 to 30 students. Table 5.1 shows the number of teachers and the source of funding.

Llanchamacocha differed from other communities, as it was the only one with a high school, Colegio Tsitsanu, where a single teacher instructed all grades from upper basic school to high school. The school was established with support from the Naku tourist project that operates in the community. Operating as a distance education center called 15 de Noviembre in the city of Shell, the high school did not follow the IBE curriculum, but the general intercultural curriculum in Ecuador. Members of the Llanchamacocha community expressed the hope that the local high school would eventually be funded by the state and operate with a curriculum respectful of Sapara knowledge and language.

Ethnographic Analysis: Problems and Solutions

The communities we visited follow the typical pattern of settlement within the Sapara territory, characterized by dispersed small communities with an average size of approximately 40 residents (Viatori and Ushigua, 2007). This settlement structure in permanent communities is a relatively recent development that has evolved over the last few decades in the hope of gaining access to state services such as education (Andrade Pallares, 2001).

In these communities, life revolves around key subsistence activities, including the cultivation of horticultural gardens (*chakras*), hunting, fishing, and gathering various forest products. Women play a primary role in the *chakras*, which provide staple foods, especially plantains and yucca, for the communities. Women also prepare a fermented drink from yucca, known as *chicha* in Spanish and *ashwa* in Kichwa, which is consumed

throughout the day. Hunting and fishing are the responsibilities of men. Medicinal plants are cultivated or gathered from the forest. The forest provides most of the materials required in daily life, such as palm trees and other resources needed for the construction of blowpipes, canoes, and shelters. Other common activities involve participation in *mingas*, collaborative efforts where people work for the benefit of the entire community.

Life in the communities also includes assemblies, which serve as egalitarian spaces for discussion and decision-making on community issues. Assemblies constitute the most fundamental level of decision-making, where everyone has an equal opportunity to engage in debate, facilitated by individuals holding rotating positions of trust. No one in the communities holds power over others, but decisions are reached through communal deliberation. The Sapara people also gather in larger assemblies involving all Sapara communities to address major decisions, such as selecting new leaders for NASE. NASE members are expected to seek input from their communities in their work. We actively participated in these assemblies, organized to share opinions on education, and these meetings provided a significant part of the statements and opinions that we share here.

Decision-making is also informed by dreaming, an important part of Sapara cultural knowledge that helps the Sapara people to dwell in their environment. Families start their day around 4 a.m. by sharing their dreams, which guide them to plan the day ahead. The importance of dreaming extends to official decisions, as highlighted by Bilhaut (2011). When the Saparas decided to become organized as an Indigenous nationality, they recognized dreaming as a principal tool guiding action in all important matters, whether mundane, social, or political. This emphasizes the intercultural dimensions of the political processes among the Sapara people.

From the assemblies we gathered the collective view that education is perceived as a key component for the future of the Sapara people. The continuity of Sapara culture depends on education, which, if implemented appropriately, can revitalize their culture and prepare them for challenges, including those related to the exercise of territorial autonomy. Fernando, a former teacher and member of the Llanchamacocha community, expressed his hope for the future of his children, envisioning their ability to preserve the Sapara knowledge that guides them on how to live sustainably in the forest, preserving it for future generations. To

realize this, he believed that the Saparas would need to integrate their own knowledge as part of the school curriculum.

The following section describes the most pressing issues, shared with us by community members, which they perceived as obstacles to achieving their educational goals, followed by an account of the solutions proposed by them to address these problems.

Access to education

Poor access to education, especially beyond primary school (seventh grade), emerged as the most frequent complaint about the current state of education. This issue is underscored by the fact that only a small number of Sapara people have completed high school. Children from villages outside the immediate vicinity of Llanchamaocha are faced with difficult choices: either migrate to Puyo or Llanchamacocha to continue their studies after the age of 12, or drop out of school.

The Sapara territory spans long distances, making movement within the territory time-consuming and challenging. Students from Jandia Yacu and other communities downstream of Conambo cannot easily access the school in Llanchamacocha, which is a day's journey from Jandia Yacu, even with access to a motorized canoe. Consequently, students are forced to relocate to Llanchamacocha, leading to further problems, as children are separated from their family and community. In Jandia Yacu, Santiago, a father of a student studying in Llanchamacocha, explained how he often accompanied his son to Llanchamacocha during school days, but this arrangement made him unhappy: he could not produce food for sustenance and was especially sorry about not having *chicha* upon returning home, as it symbolized the agony of being an outsider far from his family and wife. For communities along the Pindo Yacu river, attending the school in Llanchamacocha was practically impossible. Alternatively, students could migrate to the city of Puyo for schooling, but this was perceived as equally problematic, if not worse, despite being more common, as the high school in Llanchamacocha had only recently become an option.

The majority of the Sapara people also lack regular access to money. They do not depend on the monetary economy to meet their daily needs, but neither do they describe themselves as poor. However, financing studies in the city, where money is necessary, was very painful for the Sapara people that we encountered. At an assembly in Jandia Yacu,

a community member provoked collective laughter by remarking that one cannot even urinate in Puyo without money. To continue studies, the student's family had to increase their dependence on the monetary economy. Moreover, migrant students could rarely rely on a stable supply of money, meaning that some days they would have to go without food. Parents we met feared that being poor and a stranger in a city would predispose their children to threats such as abuse, alcohol and drug problems, or prostitution.

In general, leaving the Sapara territory to study elsewhere was a concern, as people felt that migrants no longer returned. Community members feared losing contact with their children and for the future of their territory if there was no one in the communities defending it. In Llanchamacocha, several people shared their experiences of spending time outside the territory. They had encountered significant cultural differences while living in a city, where they did not feel connected to their community. They could rarely visit their community, since travel was difficult and expensive. Thus, they slowly became accustomed to city life and, when they decided to return, they felt alienated, having forgotten how to live there, and the forest seemed strange upon their return. In summary, migration represented a threat to the survival of the nationality, as Sapara people who left the territory often felt alienated from their identity, and many who emigrated were gone forever.

Hence, educating people locally was recognized as important by community members because it supported the territorial dispersal that was helping to claim territorial control. People feared that migration would undermine the strategic dispersal, because its success depended on the viability of small communities. The loss of young people, therefore, was perceived as a significant threat.

Structural Problems in Education

The infrastructural problems suffered by the schools we visited ranged from a lack of funds for building repairs to pedagogical issues. Teachers mentioned multiple problems they had observed within the school environments. For example, André, a young university-educated professor at Tsitsanu, lamented that the classroom resembled a prison. Classrooms in the high school were confined spaces that heated up and filled with

mosquitoes during the day. The buildings easily deteriorated in the rainforest, with the leaking roof of the high school preventing classes being held there on rainy days.

The state did not adequately support the maintenance of the buildings, as we were also told in Cuyacocha, where, although materials had been allocated to the school, there were no funds to transport them to the community. A lack of funding meant teachers could not be paid adequate salaries. Potential teachers from outside the territory were discouraged because the low salaries do not cover the cost of traveling back home. André, the current teacher, was very capable, but had only signed a short-term contract, posing a continuity problem for the high school.

Infrastructural arrangements are also connected to pedagogical issues. Veintie (2013) has observed the cultural dimension of spatial arrangements in IBE. This includes promoting egalitarianism, important for the Indigenous worldview, where a teacher sits among students seated in a semicircle instead of in rows. All the classrooms we visited in the Sapara territory followed a semicircular seating arrangement, although the teachers' desks were still at the front. Therefore, they did not completely escape from reinforcing the authoritative figure of a teacher. This type of spatiotemporal arrangement also implies a certain type of discipline.

Fernando criticized education for similar problems. For example, he commented on how the school forced children to sit through repetitive days. Fernando thought that this rigor was not suited to the free-spirited Sapara children. He compared this model with an earlier form of Indigenous education during the days prior to official schooling. Fernando described this alternative schedule in the following manner: "First (day) walking, second fishing and swimming, third gathering fruits, fourth gathering insects, fifth preparing yucca, sixth minga, where all families are invited to help and are offered food and drink in exchange." Schools in communities, however, structured time differently, with each day of the week required to be the same as yesterday. Fernando criticized schools for enforcing these changes, and had a negative view of how education currently disciplined children to these new concepts of time and authority through its spatiotemporal arrangements.

Indigenous Knowledge and Learning

Education also suffered from a lack of deep integration with Sapara knowledge and language. The Sapara people with whom we conducted

research take deep pride in their culture and knowledge. It is crucial to recognize forms of education that have existed in Indigenous communities beyond state education. Fernando's statement illustrated the relationality of Sapara knowledge and their learning practices, and described the Saparas' own system of learning and knowing, different from its Western counterpart in its practicality. Sapara people learned through practices such as walking and dreaming, studying the forest by walking and working, and consequently learning, for example, to recognize plants. Fernando felt that their lives could flourish through connections with the surrounding environment. Other community members similarly criticized education for the lack of attention to their own knowledge, pointing out that it was completely missing in the official school curriculum.

In primary schools, people also perceived the role of Indigenous knowledge as superficial. Nor is Indigenous knowledge incorporated into the curriculum holistically in other IBE schools. Rodríguez Cruz's (2018) analysis of the materials used in IBE concludes that the representation of Indigenous peoples and their knowledge remains one-dimensional, depicting them mostly through stereotypical traditional imagery. This bypasses elements such as historical and contemporary Indigenous intellectuals and political movements.

The clearest manifestation of Sapara knowledge is their language, and its teaching demonstrates the unique needs they have regarding education. The situation with languages is further complicated because the materials written in Kichwa represent the unified Kichwa that is far from the quotidian Kichwa used by the Sapara (Limerick, 2018). In fact, books written in Spanish were easier for students to understand, even though they also had some difficulties with Spanish.

Agency at the Community Level

Despite the substantial problems that the Sapara communities faced with their education, their agency prevailed in their own community schooling solutions, especially in the Tsitsanu high school. The school itself was opened recently to provide access to education after primary school within the Sapara territory. Furthermore, community events such as *mingas* were incorporated as part of the school to promote Indigenous knowledge, culture, and decision-making practices.

The opening of the Tsitsanu high school with private funds from the tourism project was a source of pride in Llanchamacocha. This improvement significantly enhanced the chances of educating youth about Sapara knowledge alongside the sciences taught by the school. People from Llanchamacocha and nearby communities could organize their own teaching about the Sapara language and culture to complement the curriculum followed at the school, which did not include the teaching of Indigenous languages. The school regularly dedicated time to the teaching of the Sapara language, led by a grandmother, a respected elder and one of the last Sapara speakers, who had the most knowledge of the subject. The classes took place in the communal house, which was built using traditional methods.

Encouraging the learning of Indigenous knowledge and languages within formal education also counteracted the possible cultural loss that could result from the introduction of state education, as observed by Rival (1996) among the Waorani. The community education we witnessed facilitated the learning of the Sapara language and knowledge through immersive practices in the everyday context of Sapara reality. It allowed different types of learning and communication that respected the relationality of Indigenous knowledge.

As the young people did not have to migrate, they were better equipped to learn Sapara knowledge also outside school, crucial to the preservation of Indigenous knowledge (Battiste, 2008). Many of the community members expressed to us the opinion that only living within the territory could teach Sapara knowledge. Julio, a former teacher and active volunteer at the school, explained this in the following way:

> Here you reflect life again, as you live that life yourself. For example, when you connect to dreams, converse with people here, with experienced people and elders, with women, you talk and say, look, this happened like this, I dreamed this. That's how here it is more about dreams. You dream. And this activity may be negative or positive, but you connect with it.

André also touched on the same theme, explaining how he observed Indigenous knowledge being brought into the school because it was an actual part of students' everyday realities and they reflected on the subject during classes. He observed daily how people used plants for cures and lived in their environment using knowledge that was new to him. André aspired to develop an education that could help students reflect on and

act upon the reality in which they were living, but he felt that truly understanding it required them to live and study in the territory. Many Sapara individuals we spoke with expressed the view that promoting the possibility of living within the territory by offering suitable education there would be the best strategy to revitalize and maintain their knowledge and their language.

Addressing relational knowledge in the curriculum was also promoted by cultivating the school's own garden, another example of community agency. This project not only promoted economic opportunities but also facilitated learning about both new and traditional agricultural practices as students became familiar with medicinal plants and new food plants that could diversify their diet or be sold, for example, to the Naku project. Rodríguez Cruz (2018) also emphasized how Indigenous groups highlight the incorporation of learning that occurs outside school into education. This approach supports a holistic vision of knowledge and aims to incorporate a variety of learning practices into the education system.

Community members hoped that by initiating these types of projects, they could increase their self-determination by reducing the need to migrate and by increasing economic and productive opportunities locally. Education, in this context, could teach students how local resources could be employed in new ways. Looking ahead, education could support other options, ranging from tourism to scientific research, for the community's future prospects.

Furthermore, members of several communities suggested that developing Sapara education could involve intercultural knowledge exchange at national and international levels. Especially in Llanchamacocha, community members passionately discussed their plans to create a student exchange program with universities to share their knowledge. In other communities, members expressed a more modest desire to impart their knowledge, either independently or through tourism, to visitors to their territory. These projects could promote intercultural learning that would profoundly address Indigenous knowledge and advance its inclusion in state education, given that Indigenous knowledge remains currently devalued in relation to Western sciences, even within IBE (Rodríguez Cruz, 2018).

Conclusion

Having illustrated the reality of Sapara education through ethnographic description, we can discuss the extent to which it achieves critical interculturality. The principal, partly overlapping, problems in formal education within the territory include difficult access, inadequate funding, and a low-level integration of Sapara knowledge and language into the official curriculum. Community agency, such as establishing tourist projects to finance schools, has helped overcome some of these challenges and its recognition should be fundamental in any future development of Sapara education. The majority of the Sapara students lack easy access to higher education, which is not funded by the state that allocates resources according to the utilitarian principle of the number of possible students. This does not consider the disadvantaged situation of the Sapara people, its small size a legacy of colonial history. The future of the Sapara people depends on access to education that is respectful of their agency to revitalize their knowledge and language.

For education to attain critical interculturality, the strategic needs of Indigenous peoples for cultural survival should be incorporated into the principles that determining the level of funding for education. Due to the lack of organization and government funding for education in the territory, communities must actively work to ensure these basic functions for their youth, creating competition, division, and inequality within the territory. Extractive companies are accumulating power over Indigenous peoples, dividing communities by offering scholarships and services in exchange for the sale of land. Other opportunities, such as tourism, also create divisions, as only active communities with relationships with the outside world can obtain financial support of this type.

Currently, education predominantly emphasizes Western science, with little epistemic space for Sapara knowledge. This situation is best described as 'functional interculturality'. Adequate integration of Indigenous knowledge, however, requires the recognition of its relational nature, encompassing appropriate pedagogical practices. Acknowledging community agency could contribute to the inclusion of relational knowledge within school curricula. The active involvement of the community in education has facilitated the establishment of the school and the incorporation of the teaching of the Sapara language and culture in a manner that respects local relational networks that are more than just human.

Therefore, education could regard people holding Indigenous knowledge, such as the Sapara people, as active agents rather than objects of knowledge, integrating their agency as part of the teaching process. It is worth noting that the Sapara individuals we met also suggest possibilities for how their knowledge could influence other segments of Ecuadorian society. Currently, interculturality is considered important for Indigenous peoples, but not the other way around (Rodríguez Cruz, 2018). Critical interculturality would demand that Indigenous knowledge has an impact on the whole of society.

The Sapara people envision the inclusion of their knowledge and language transforming education, as we have illustrated. Beyond strengthening the Sapara culture and language, the promotion of Indigenous knowledge in the education system contributes to political emancipation and territorial self-determination, as territorial rights can be claimed through language, a constitutive element for recognition as an Indigenous nationality in Ecuador. The most pressing issue is that education must be implemented locally to counteract emigration, a major threat to the revitalization and survival of Indigenous peoples and their languages. Having access to education locally can also support gender equality. Traditionally, the roles of women and men have been complementary, but with sedentary lives and larger families, it is far more common to provide support for the education of boys, especially if it means sending children out of the community.

The Sapara people practice their agency in multiple ways, planning and organizing complementary strategies to achieve a higher level of equality and interculturality in the education system. They actively seek non-state sources of funding for local education and invite researchers to listen and discuss the problems and potential solutions they perceive in education. This agency challenges IBE to engage more deeply with the decolonial ideals advocated by the Indigenous movement. The future of IBE envisioned by community members goes beyond the state-funded IBE system; it involves a partnership between schools and communities participating in equal discussions, as observed during our fieldwork.

References

Andrade Pallares, C. (2001). *Kwatupama Sapara: Palabra Zápara*. Abya-Yala.

Battiste, M. (2008). Research Ethics for Protecting Indigenous Knowledge and Heritage: Institutional and Researcher Responsibilities. In Norman Denzin,

Yvonna Lincoln Linda Smith (eds), *Handbook of Critical and Indigenous Methodologies* (pp. 497–510). SAGE.

Bilhaut, A. (2011). *El sueño de los záparas. El patrimonio onírico de un pueblo de la Alta Amazonía*. Abya-Yala Editions, FLACSO.

Confederation of Indigenous Nationalities of Ecuador, CONAIE. (2022). Quienes somos. https://conaie.org/quienes-somos/

Defensoría del Pueblo del Ecuador, DPE. (November 28, 2021). La nación Sapara y la defensoría del pueblo ganan acción de protección en contra del MAGAP por afectación de derechos colectivos del territorio. https://bit.ly/3JfKJHa

Escobar, A. (2016). Thinking-Feeling with the Earth: Territorial Struggles and the Ontological Dimension of the Epistemologies of the South. *AIBR, Revista de Antropología Iberoamericana*, *11*, 11–32.

Limerick, N. (2018). Attaining Multicultural Citizenship Through Indigenous-Language Instruction: Successful Kichwa Misfires and the Modeling of Modernist Language Ideologies in Ecuador. *Journal of Linguistic Anthropology, 28*(3), 313–331.

McEwan, C. (2014). Postcolonialism. In V. Desai, R. Potter (eds), *The companion to development studies*. Routledge.

Mignolo, W. and Walsh, C. (2018). *On decoloniality: concepts, analytics, praxis*. Duke University Press.

Moya, A. (2007). *Sapara: Los aritiakus, hijos e hijas del mono colorado*. UNESCO.

Oviedo, A., and D. Wildemeersch (2008). Intercultural Education and Curricular Diversification: The Case of the Ecuadorian Intercultural Bilingual Education Model (MOSEIB). *Compare: A Journal of Comparative and International Education, 38*(4), 455–470.

Radcliffe, S. (2012). Development for a postneoliberal era? Sumak Kawsay, Living Well and the limits to decolonisation in Ecuador. *Geoforum, 43* (2), 240–249.

Reascos, N. (2009). Encuentros y desencuentros entre la epistemología occidental y la epistemología de los pueblos Indígenas. *El Vuelo de la Luciérnaga, 2,* 20–45.

Rival, L. (1996). Formal Schooling and the Production of Modern Citizens in the Ecuadorian Amazon. In B. A. Levinson, D. E. Foley, D.C. Holland (eds), *The Cultural Production of the Educated Person: Critical Ethnographies of Schooling and Local Practice* (pp. 153–168). SUNY Press.

Rodríguez Cruz, M. (2018). *Educación Intercultural Bilingüe, interculturalidad y plurinacionalidad en el Ecuador. Políticas educativas de la Revolución Ciudadana: teorías y realidades. Escuelas Comunitarias y Unidades del Milenio.* Vol. 2. Ediciones Abya-Yala, Fundación Pueblo Indio del Ecuador, Ministerio de Educación-DINEIB.

Spivak, G. (1988). Can the Subaltern Speak?' In L. Grossberg, C. Nelson (eds), *Marxism and the Interpretation of Culture*. Macmillan Education.

Strathern, M. (2018). Opening Up Relations. In M. de la Cadena, M. Blaser (eds), *A World of Many Worlds*. Duke University Press.
Veintie, T. (2013). Coloniality and Cognitive Justice: Reinterpreting Formal Education for the Indigenous Peoples in Ecuador. *International Journal of Multicultural Education, 15*(3), 45–60.
Veintie, T. (2018). *Revival and Regeneration of Indigenous Knowledge in Intercultural Bilingual Teacher Education: A Study in the Ecuadorian Amazon*. University of Helsinki, Faculty of Educational Sciences.
Viatori, M. S. and Ushigua, G. (2007). Speaking Sovereignty: Indigenous Languages and Self-determination. *Wicazo Sa Review, 22*(2), 7–21.
Viveiros de Castro, E. (2004). Perspectival Anthropology and the Method of Controlled Equivocation. *Tipití: Journal of the Society for the Anthropology of Lowland South America, 2*(1).
Wilson, S. (2008). *Research is Ceremony: Indigenous Research Methods*. Fernwood Publishing.

CHAPTER 6

Indigenous Young People's Access to Schools in the Province of Pastaza

Johanna Hohenthal and Ruth Arias-Gutiérrez

Introduction

Opportunities for young people to educate themselves are influenced by social and geographical factors, and by the availability and quality (academic attractiveness) of schools (Wells et al., 2018). In this chapter, we consider an intersectional approach—articulated specifically in ethnic self-identification, gender, and geographical location—to analyze the different conditions of school access for students in Ecuadorian Amazonia, which not only depends on the distance, but also on other social and environmental conditions that constitute daily challenges.

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Previous studies have found that, in Ecuador, the Indigenous population has long been marginalized in education in terms of accessibility and culturally pertinent educational content (Almeida, 2008; Arcos Cabrera, 2008; Rodríguez Caguana, 2011).

According to the 2010 census, the school attendance rate of members of the Indigenous groups was 92.4% for basic education and 67.3% at upper secondary level. However, especially at the upper secondary school level, there was a clear difference between males (71.3%) and females (63.3%) in school attendance. The results of the latest census indicate that only 1.5% of the population with a degree is Indigenous. The percentage varies from 1.9% in males to 1.1% in females, while among the majority population, the figure is 6.3% (Instituto Nacional de Estadística y Censo (INEC), 2011; CONEPIA (Comisión Nacional de Estadística de los Pueblos Indígenas, Afroecuatoriano y Montubio), n.d.). In 2019, the enrollment record of universities and polytechnics showed that 71.37% self-identified as mestizo, 5.01% as Afro-Ecuadorian, 2.61% as Indigenous, 1.69% as white, and 1.51% as mulatto. The rest did not register self-identification. In 2020, 1.5% of university and polytechnic degree holders (1901 out of 126,466 degrees) self-identified as Indigenous, compared to 89.7% with mestizo self-identification, 1.2% Afro-Ecuadorian, 0.9% white, 1.2% mulatto, and 5.5% unidentified (Secretaría de Educación Superior, Ciencia, Tecnología e Innovación (SENESCYT), 2020).

Remote areas in the Amazonian region offer fewer educational opportunities than urban areas, and lack technological facilities. Electricity could allow distance learning, but it is not regularly available in remote areas in the rainforest. Because of this, many Indigenous young people from remote areas have to travel long distances daily to school or leave their communities and move to the city specifically to attend secondary or higher education. According to the constitution, children and adolescents in Ecuador have the right to receive culturally pertinent education (Asamblea Constituyente, 2008, art. 45) and, therefore, many Indigenous young people would like to study in schools of the intercultural bilingual educational (IBE) system which also offer teaching in their Indigenous language. Recently, the modernization and centralization of education has reduced the number of IBE schools and increased the need for mobility to reach Millennium Schools, usually located in large towns and cities

(Rodríguez Cruz, 2018). Geographic mobility is a challenge for marginalized families who have few economic resources. Thus, there is potentially a tension between local "driving" factors and the "limitations created by the geographical structure of opportunities" (Wells et al., 2018, p. 460).

Access to education has been analyzed from different perspectives, including proximity to schools that offer culturally pertinent education that respects the knowledge and worldview of the communities as well as aspects of social and territorial justice (Hohenthal and Minoia, 2022). However, in this study, we focus particularly on the spatial and temporal dimensions of accessibility which is, of course, affected by various socioeconomic and environmental factors. By adapting the generalized definition from transport geography (van Wee, 2016), we can define access to education as follows: the more options there are to participate in the desired level and type of education, and the lower the resistance to travel measured as time, financial cost, and effort, the higher is the level of accessibility. This study particularly considers the differences in accessibility between Indigenous and non-Indigenous students, and between genders.

Study Approach

In this study, we focus on access by young people to education at the upper secondary level in the province of Pastaza in the Amazonian region. Seven Indigenous nationalities live in Pastaza and together they make up 36.87% of the provincial population (Zambrano et al., 2019, p. 11). The majority Indigenous nationalities are the Kichwa and the Shuar (21% and 7% of the provincial population). In 2010, the school attendance rate of the Indigenous population at the upper secondary level in Pastaza was between 65.8% and 70.3% (INEC, 2011). Upper secondary education is barely available in rural areas and Indigenous territories, evidence that historically, non-Hispanic populations are generally excluded from education. This is despite the fact that from the late 1980s until the first decade of the twenty-first century, Indigenous education developed and gained state recognition, and teachers could rely on a salary as public-sector employees (Flores, 2016). The obstacle to access to upper secondary education in Amazonian Indigenous communities is illustrated by the fact that, in the 2018–2019 academic year, of the 369 schools in

Pastaza, 59 had some type of offer of upper secondary education (face-to-face, distance, state-funded, private, or subsidized/*fiscomisional*), 34 are in the rural area, and 19 offer intercultural bilingual education in two educational districts and four cantons. Of 37,092 students, 3342 are registered to schools that offer upper secondary education and follow the IBE system (Ministerio de Educación, 2020). In a previous study it was observed that many children and young people at primary level have difficult and often dangerous routes to schools, especially in the rural areas of Pastaza (Hagström et al., 2016). Therefore, it is important to expand the research at the upper secondary level.

According to Ministry of Education records, in 2018, in the province of Pastaza, there were 56 schools that offered education at the upper secondary level (Ministerio de Educación, 2020); 21 of them were IBE schools and the others were regular schools. The difference between them is that the curriculum of the IBE schools follows the Model of the Intercultural Bilingual Education System (*Modelo del Sistema de Educación Intercultural Bilingüe*, MOSEIB), offering teaching in Spanish and in Indigenous language, and offering, for example, lessons in cosmovision (Ministerio de Educación, 2013). Regular schools only teach in Spanish and offer culturally less pertinent learning content. Both types of schools were included in this study (see Fig. 6.1).

Objectives

This study has four objectives. First, we examine how upper secondary school students travel to school. Second, we analyze the differences in the duration of school journeys and whether there are differences between schools, between genders, and between Indigenous and mestizo students. In addition, we examine the spatial distribution of the students' communities of origin and the duration of their journeys to school. Third, we study how students experience their school journeys in different environments. Finally, we analyze whether there are differences in waking-up times on school days between genders and between Indigenous and mestizo students, and whether this is related to the duration of the school journeys and the need to do household chores in the morning before going to school.

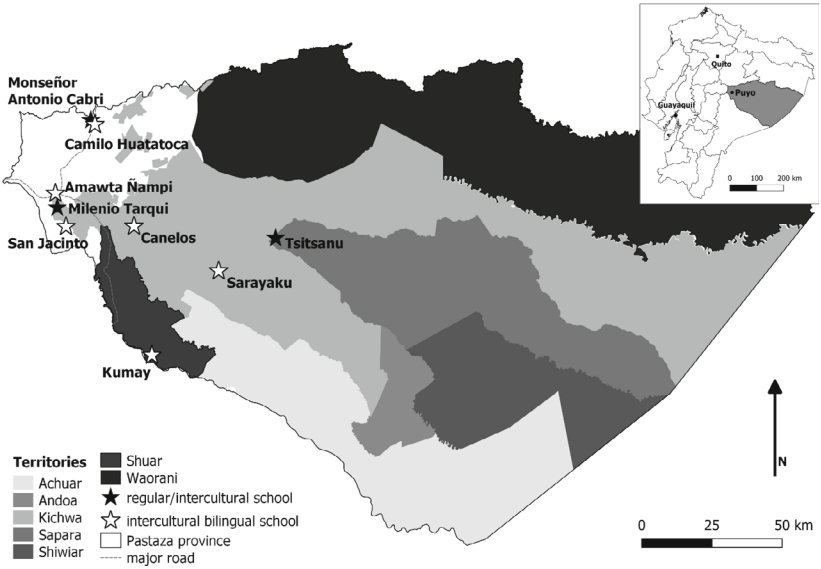

Fig. 6.1 Province of Pastaza, territories of the nationalities and schools included in the study. Source of the GIS data: Red Amazónica de Información Socioambiental Georreferenciada, RAISG (2020) and Universidad Estatal Amazónica

Materials and Methods

The data for the study were collected by questionnaires in six IBE schools and in three other schools, termed here 'regular' schools, between June 2018 and October 2019 (Table 6.1). Permission for the questionnaire survey was requested from the school principals, who also signed their informed consent to participation in the study (TENK, 2019). Before questionnaires were distributed, students were also informed that their participation was voluntary and that they had the right to withdraw from the study at any time if they wish. The questionnaires contained questions about the student's place of origin, their housing, migration for education, motivation for choosing the school, the cost of the school journey, the experience of the school journey, and about their daily schedules.

In total, 480 upper secondary school students aged over 15 from nine schools responded to the questionnaire (Table 6.2). The proportion of students who responded to the questionnaires varied from 38%

Table 6.1 Schools included in the study

Name	*Educational system*	*Location*	*Major cultural group*	*Other cultural groups*
Amawta Ñampi	Intercultural bilingual	Puyo	Kichwa	Mestizos
Camilo Huatatoca	Intercultural bilingual	Santa Clara	Kichwa	Mestizos
Canelos	Intercultural bilingual	Canelos	Kichwa	Mestizos
Kumay	Intercultural bilingual	Kumay	Shuar	Mestizos
Milenio Tarqui	Regular	Tarqui	Mestizos	Kichwa
Monseñor Antonio Cabri	Regular	Santa Clara	Mestizos	Kichwa
San Jacinto	Intercultural bilingual	Nueva Vida	Kichwa	Mestizos
Sarayaku	Intercultural bilingual	Sarayaku	Kichwa	Mestizos
15 de Noviembre ext. "Tsitsanu"	Regular	Llanchamacoha	Sapara	-

at Monseñor Antonio Cabri to 96% at the Milenio Tarqui. 65.4% of the students who responded to the questionnaire self-identified as Indigenous, 32.1% as mestizos and 2.5% as other groups. In the IBE schools, the majority of the students were Indigenous, while at Monseñor Antonio Cabri and Milenio Tarqui, the majority of the students were mestizos. However, at the Tsitsanu—which is an extension of the 15 de Noviembre (based in the Achuar center in Copataza) in the Sapara territory—all the students were Indigenous. The majority of the Indigenous students in the schools belonged to the Kichwa nationality. Only at Kumay were the majority Shuar, and at the Tsitsanu all were Sapara. A higher percentage of Indigenous students identified themselves as men (54.8%) than as women (39.8%). Of the non-Indigenous respondents, a higher proportion identified as women (51.3%) than men (47.4%).

The questionnaire data was validated and supplemented with material from semi-structured interviews with students of Amawta Ñampi (ten interviews), Monseñor Antonio Cabri (five interviews), Camilo Huatatoca (nine interviews), Kumay (eight interviews) and Sarayaku (ten interviews), as well as with the principals of these schools. The interviewed students

Table 6.2 Number of students who responded to the questionnaires

	School	*Indigenous*				*Mestizos*				*Other groups*				*Total*	*% of the students*
		w	*m*	–	*Total*	*w*	*m*	–	*Total*	*w*	*m*	–	*Total*		
IBE schools	Amawta Ñampi	20	23	10	53	7	7	1	15	0	0	0	0	68	76%
	Camilo Huatatoca	23	36	4	63	16	15	0	31	4	1	0	5	99	72%+ 21%*
	Canelos	18	19	0	37	0	2	0	2	1	0	0	1	40	83%
	Kumay	14	32	2	48	2	0	0	2	0	0	0	0	50	~88**
	San Jacinto	4	11	1	16	1	0	0	1	0	0	0	0	17	85%
	Sarayaku	13	22	0	35	0	2	0	2	0	0	0	0	37	~62%**
Regular schools	Antonio Cabri	14	14	0	28	31	16	1	48	0	1	0	1	77	38%
	Milenio Tarqui	14	7	0	21	22	31	0	53	1	3	0	4	78	96%
	Tsitsanu	5	7	0	12	0	0	0	0	0	0	0	0	12	N/A
	Total	125	172	17	**314**	79	73	2	**154**	7	5	0	**12**	**480**	

Note *w* = Women, *m* = Men

*In Camilo Huatatoca, the data were collected over two different semesters in years 2018 and 2019

**The exact total number of students is not available, and this is an estimated proportion based on the number of students in previous school years and the number of questionnaires collected

were first, second, and third year upper secondary school students. The interview questions addressed the students' studies in general (these data were used for other purposes) but also contained questions about their school journeys and daily schedules that are relevant to the present study. In addition, we traveled together with some students to their homes from school, interviewed them on the way, made observations, and measured the distance and travel time between the school and students' homes with GPS devices and watches.

Data Analysis

The data analysis combined quantitative statistical methods and qualitative content analysis. The processing and statistical analysis of the data were carried out with MS Excel and IBM SPSS Statistics. Students' *modes*

of travel were analyzed by calculating the percentages of the different modes of travel at each school. *The durations of the school journeys* were compared between schools, between genders, and between Indigenous and mestizo students. The comparison between genders was not carried out at Tsitsanu, because it had a small number of students and responses. The comparison between cultural groups of students was only carried out for the Amawta Ñampi, Camilo Huatatoca, Antonio Cabri, and Milenio Tarqui schools because the others had only a few or zero mestizo students. The non-parametric Mann–Whitney U test (e.g., Sheskin, 2000) was used to evaluate the statistical significance of the difference between the groups. The Mann–Whitney U test was considered appropriate because the duration of the school journeys did not follow a normal distribution and the data had some outlier values. Because the shapes of the distributions of the journey durations were not similar in different groups, the Mann–Whitney U test was used to compare the mean ranks and not the medians (Hart, 2001). Because the data sets were relatively small, the exact value of p was calculated for each comparison and the statistical significance was established at 0.05 (5% significance level).

Additionally, we used equidistant maps created in the QGIS 2.18 program to illustrate the spatial access to schools with respect to the students' home communities or to communities where they live during the week.

The analysis of *how students experience their daily school journeys* included calculating the proportion of students at each school who think their school journeys are pleasant and the proportion of those who feel there is something dangerous or scary on their journey. The reasons for these experiences were analyzed based on the contents of the students' descriptions of their journeys and the analysis was complemented with the researchers' observations.

The waking-up times of the students were analyzed in a similar way to the duration of the school journeys by making comparisons between schools, between genders, and between Indigenous and mestizo students. The proportions of students who need to do some household chores before the school day were also calculated.

Results

Modes of Travel

The first objective of the study was to explore how upper secondary students travel to school. As expected, the results show that most students from schools in or near urban areas of Puyo or Santa Clara travel to school by bus or car, while students in more remote areas usually walk to school (Fig. 6.2). In Sarayaku and Kumay, some students use a canoe to travel to school. Relatively few students use bicycles: only at the Milenio Tarqui and at Kumay. This is probably because families cannot afford to buy bicycles and to cover their maintenance. Biking may also not be safe, because there are no specific paths for bicycles and traffic is sometimes congested and, at times, stray dogs attack cyclists. Some years ago, the provincial council donated bicycles to almost 25 students at Kumay who usually need to walk one or two hours from distant communities, such as Kuakash, San José, Nanki, and Kawa to school. However, not everyone who needed the bicycles received them. The bicycles also broke soon and there was no possibility of fixing them. In the interview, one student said that even though his friends had bicycles, they preferred to walk with him, because he did not receive a bicycle. Another student said that the bicycle did not really shorten the journey much, because it needs to be carried over a large river and it is easier to walk.

Although education is free, some parents may not be able to provide education for all their children, particularly in large families and at upper secondary level. The expense can be high due to daily travel costs. For example, in Kumay, the one-way bus journey costs 25 cents. For students in Amawta Ñampi and Camilo Huatatoca, the cost can even be 60–75 cents from distant parishes. At Milenio Tarqui, free school transport is offered to students who come from the community schools that were closed when Milenio Tarqui was established, but it does not cover all destinations. At San Jacinto there is school transport but some students live outside the route it covers. Some students need to work to finance their studies.

Temporal Distance Between Home and School

The duration of students' daily one-way school journeys varies from a few minutes to almost two hours (Fig. 6.3). On average, travel times are longest in Sarayaku, followed by San Jacinto and Kumay. However,

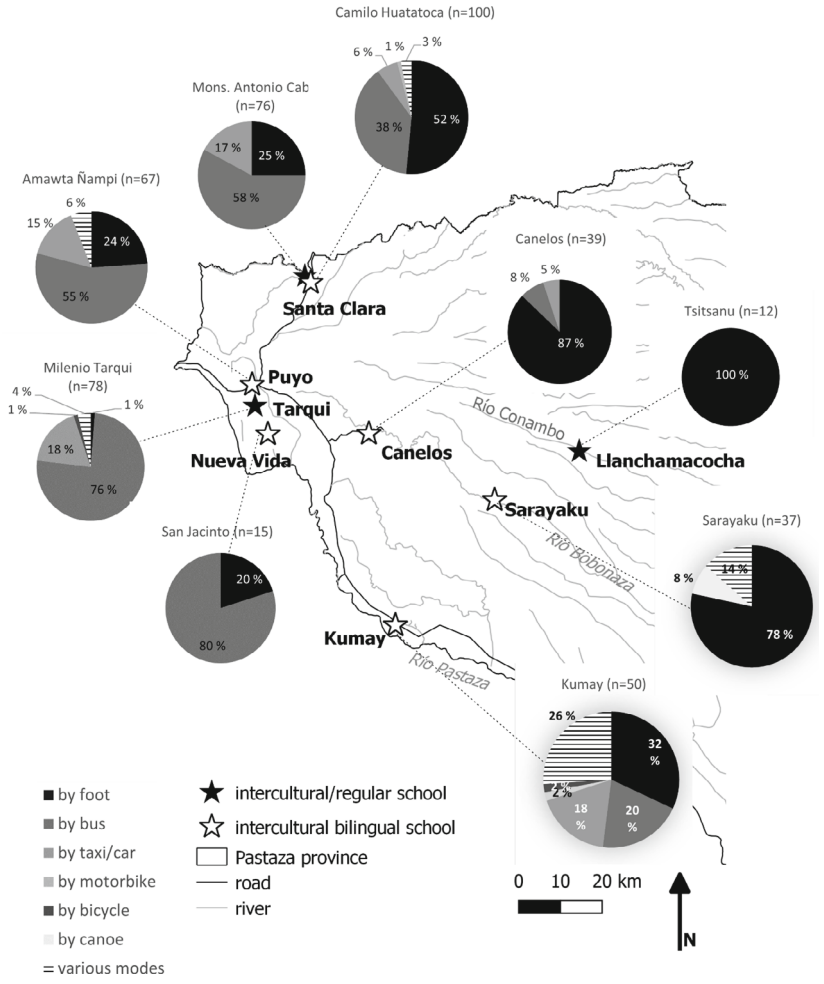

Fig. 6.2 Modes of travel to school

Fig. 6.3 does not show the complete picture, as in some areas, students have had to move closer to the school. For example, in Kumay, students who come from remote places, such as Yampis by the Oso river and Mamayak in the neighboring province of Morona Santiago, on the other side of the Pastaza river, need to live in the school dormitory in the

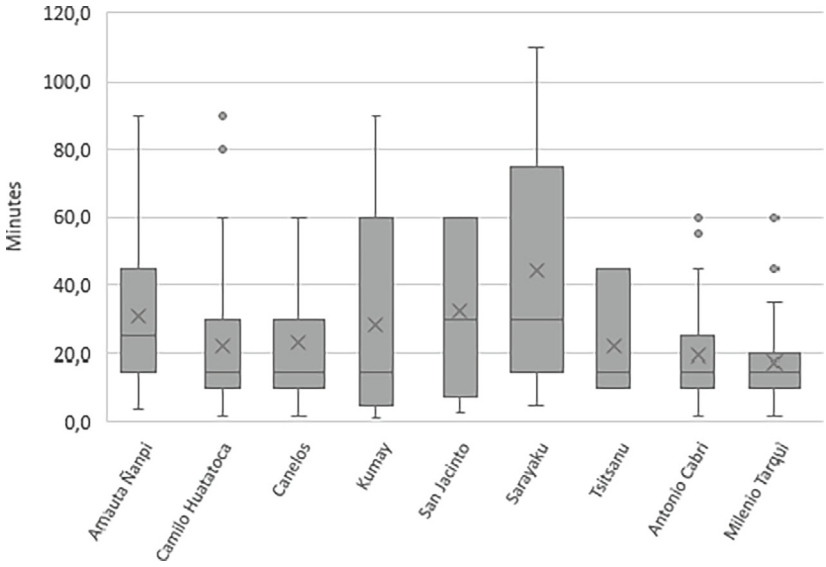

Fig. 6.3 Duration of students' daily journeys between home and school (*Note* The rectangles show the variation between the first (the 25% mark) and the third (the 75% mark) quartiles of the data from each school, and contain the middle portion (50%) of the journey durations. The average duration is represented by "×" and the median by a horizontal line inside the rectangle. The lines below and above each rectangle indicate the minimum and maximum durations in the data. In the data sets that have exceptionally long school journeys (outliers), the line on the outlier side is drawn at 1.5 * interquartile scale instead of at the maximum duration. The points indicate the outliers)

center of Kumay. They can only return to their home community at weekends. These journeys take several hours and can be very difficult because they need to cross many rivers and may encounter dangerous animals on the way. In Puyo and Santa Clara, some students at Amawta Ñampi and Camilo Huatatoca come from far away; some need to leave their home communities, move to the city to study, rent a place, or stay with relatives during the months of study.

In most schools, there is no statistically significant difference in the duration of school journeys between genders (Table 6.3). Only in Camilo Huatatoca and in Canelos do women generally have longer journeys.

Table 6.3 Difference in the duration of school journeys between women (w) and men (m)

	School	*n*		*Mean rank*		*U*	*p*
		w	*m*	*w*	*m*		
IBE schools	Amawta Ñampi	25	27	26.20	26.78	330.0	0.894
	Camilo Huatatoca	39	53	55.49	39.89	683.0	**0.004**
	Canelos	19	21	26.05	15.48	94.0	**0.003**
	Kumay	16	32	24.59	24.45	254.5	0.978
	San Jacinto	4	8	4.75	7.38	9.0	0.287
	Sarayaku	12	23	22.5	15.65	84.0	0.059
Regular schools	Antonio Cabri	42	31	37.56	36.24	627.5	0.794
	Milenio Tarqui	36	39	35.28	40.51	604.0	0.296

Note "N" is the number of responses. The "mean rank" refers to the average of the ranks of the journey durations. *U* is the result of the Mann–Whitney *U* test. The results show that the differences between the groups of women and men are statistically significant only in Camilo Huatatoca and in Canelos at the 1% significance level ($p < 0.01$). In these schools, in general, there are longer journeys among women than among men (the mean rank of women is higher)

Although it is difficult to explain this result and it may be just a coincidence, it could also be that in these areas, women's education is especially supported even when they live far away.

However, in Amawta Ñampi and in Milenio Tarqui, the Indigenous students' journeys take longer than the mestizo students' (Table 6.4). This is probably because many Indigenous students come from rural communities, while the majority of mestizos live closer to the school in the neighborhoods of Puyo or Tarqui (Fig. 6.4). For example, there are Indigenous youths who travel every day from 30 to 80 minutes by car or bus from the parishes of Madre Tierra, Veracruz, Pomona, Diez de Agosto, and Teniente Hugo Ortiz to study at Amawta Ñampi. Milenio Tarqui has fewer Indigenous students, but some of them come from relatively distant parts of the Madre Tierra parish (travel time of 30 to 60 minutes by car or bus). Especially at Amawta Ñampi, there are Indigenous students from distant communities such as Sarayaku, Curaray, and Montalvo. They visit their home communities only during vacations (once or twice a year) or less often. At the Milenio Tarqui, there are no Indigenous students who would have moved from remote parts of Pastaza because of their studies, but there are some students who are originally from other provinces of Ecuador.

Table 6.4 Difference in the duration of school journeys between Indigenous (I) and mestizo (M) students

	Colegio	*n*		*Mean rank*		*U*	*p*
		I	*M*	*I*	*M*		
IBE schools	Amawta Ñampi	49	13	34.21	21.27	185.5	**0.019**
	Camilo Huatatoca	61	30	45.48	47.07	883.0	0.785
Reg.	Antonio Cabri	27	47	37.91	37.27	623.5	0.903
	Milenio Tarqui	20	51	47.28	31.58	284.5	**0.003**

Note "N" is the number of responses. The mean rank refers to the average of the ranks of the journey durations. *U* is the result of the Mann–Whitney *U* test. The results show that the difference between the groups of Indigenous and mestizo students is statistically significant in Milenio Tarqui at the 1% significance level ($p < 0.01$) and in Amawta Ñampi at the 5% significance level ($p < 0.05$). In these schools, in general, there are longer journeys among Indigenous students than among mestizos (the mean rank of Indigenous students is higher)

When students were asked why they had chosen to study at their current school, many responded that the reason was the short distance between home and school. However, students at Amawta Ñampi also expressed that they value the intercultural bilingual education that the school offers.

Experiences of Traveling to School

Most students assessed their journeys to school as pleasant (Fig. 6.5). Many of them did not give any reason, but some expressed that it is because they travel with their friends or because they can observe nature on the way. However, in Kumay and Sarayaku, almost 40% of the respondents feel that there is something dangerous or scary on their journey to school. The fears of the students in Kumay were often related to animals, especially predators, such as jaguars and pumas (the students call them "tigers" and "lions"), and snakes that are a danger to those who walk to school. The road leading to the school is also in poor condition, so some experience the bus ride as terrifying. The road is quite narrow and rocky and, especially when it rains, it is muddy and slippery. There is also a part where a river crosses the road and there is no bridge. Students who walk need to cross this river and get wet. In Sarayaku, students sometimes experience difficulties when they need to cross the small tributaries that flood when it rains and the water rises in the Bobonaza River.

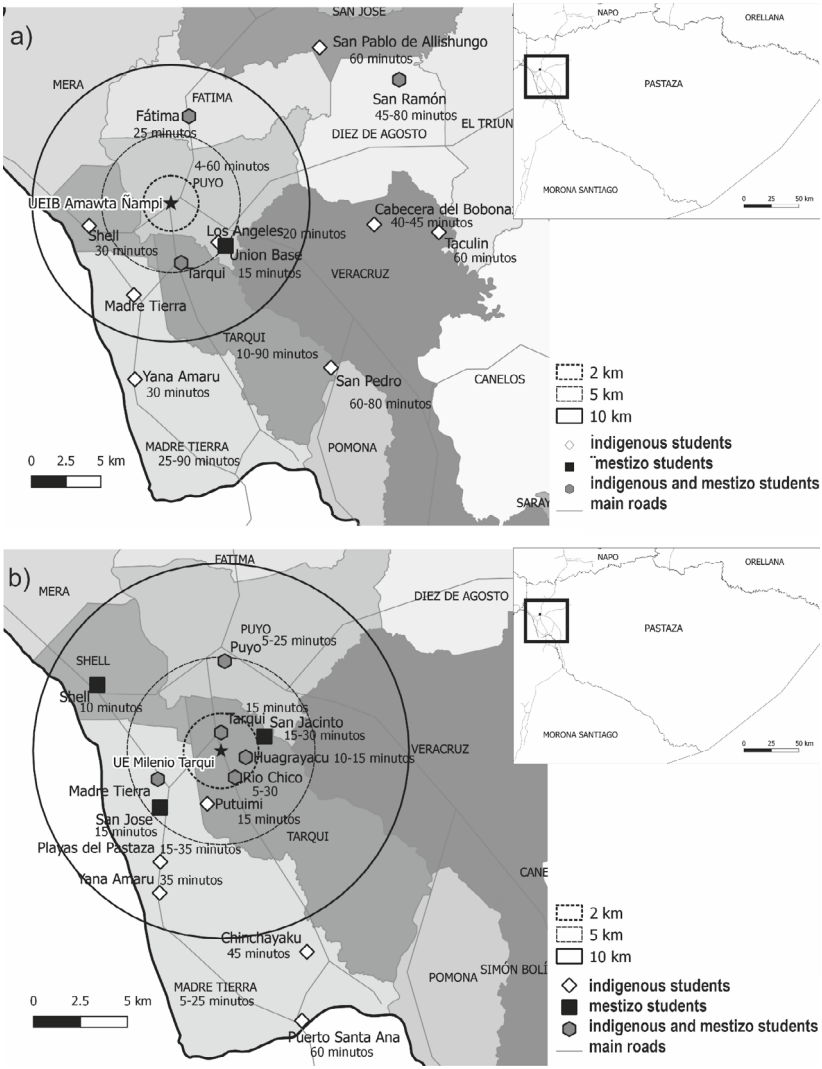

Fig. 6.4 Home location of upper secondary school students of **a** Amawta Ñampi and **b** Milenio Tarqui and their reported one-way travel times

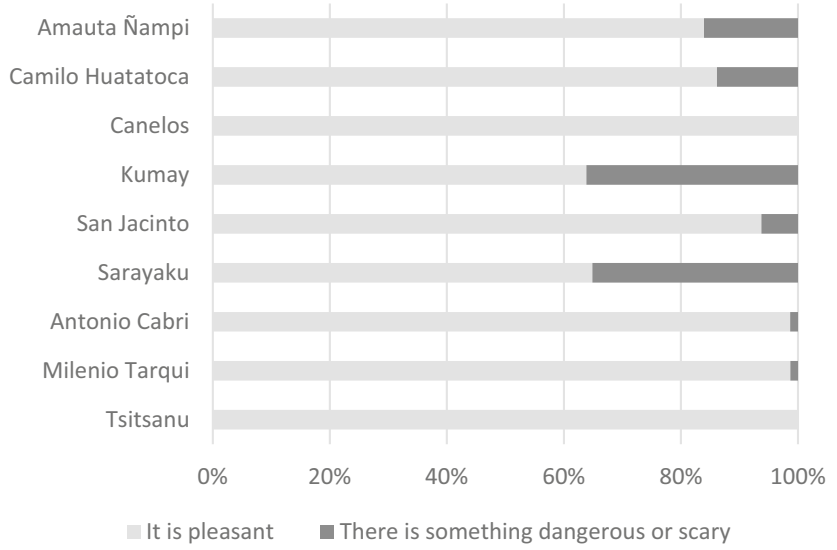

Fig. 6.5 Students' experiences of their school journeys

The bridges are often in poor condition. Many also mentioned that they fear snake bites. In the more urban areas, in Puyo and Santa Clara, some students mention that the buses are often very full and drive fast, which is both inconvenient and terrifying. In the interviews, some students also said they fear violence and rape, especially when walking alone on certain roads.

Students' Daily Schedules

In most schools, the school day begins between 0700 and 0730. Only in Tsitsanu does the school day begin at 0800. However, the survey results indicate that there are some students in almost every school who wake up very early on school days (Fig. 6.6). In many schools, on average, the women seem to wake up earlier than the men, but the differences between women and men are statistically significant only in Camilo Huatatoca and in Canelos (Table 6.5). In these schools, the duration of the women's school journey is also generally longer (Table 6.3), which may explain at least in part their earlier waking-up times.

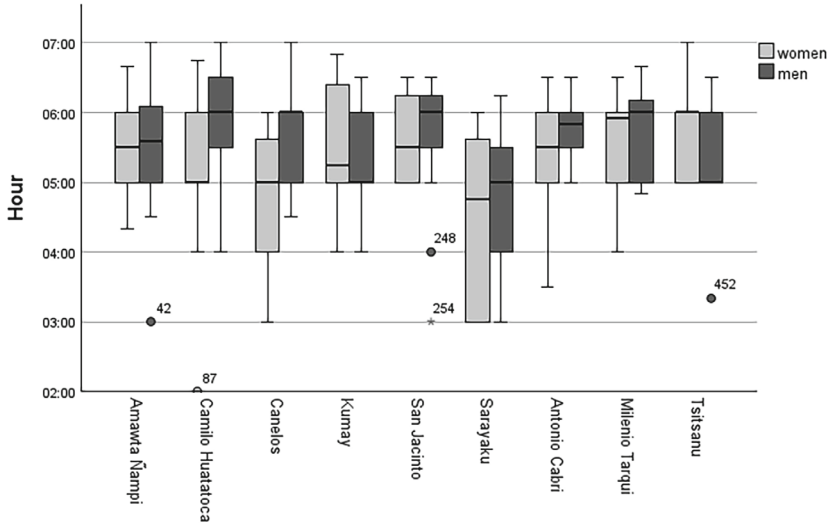

Fig. 6.6 Students' waking-up times in different schools (*Note* The rectangles show the variation between the first (the 25% mark) and the third (the 75% mark) quartile of the data from each school. This range contains the middle portion (50%) of the waking-up times. The lines below and above each rectangle indicate the minimum and maximum times in the data. In the data sets, which contain exceptionally early hours (outliers), the line on the outlier side is drawn at 1.5 * interquartile scale instead of the maximum. The points indicate the atypical values, and the asterisks are extreme values (the value more than three times the height of the rectangle))

The differences in waking-up times are also statistically significant between Indigenous and mestizo students in Amawta Ñampi, Camilo Huatatoca, and Milenio Tarqui (Table 6.6). The difference can be explained at least in part in Amawta Ñampi and in Milenio Tarqui by the longer duration of school journeys (Table 6.4), but in Camilo Hutatatoca, there is no statistically significant difference in the travel times between these groups.

Another factor, in addition to the duration of the school journey, that can affect the waking-up time is that students have to do household chores, such as cleaning, cooking, or feeding animals, before the start of the school day. Furthermore, in many Indigenous Kichwa communities, students wake up early in the morning to drink *guayusa* with

Table 6.5 Differences in waking-up times between women (w) and men (m)

	School	*n*		*Mean rank*		*U*	*p*
		w	*m*	*w*	*m*		
IBE schools	Amawta Ñampi	27	30	26.44	31.30	336.0	0.266
	Camilo Huatatoca	43	52	38.37	55.96	704.0	**0.002**
	Canelos	18	21	15.08	24.21	100.5	**0.009**
	Kumay	16	31	26.31	22.81	211.0	0.404
	San Jacinto	4	11	7.50	8.18	20.0	0.886
	Sarayaku	12	22	15.63	18.52	109.5	0.423
	Antonio Cabri	44	31	34.61	42.81	533.0	0.102
	Milenio Tarqui	37	41	37.89	40.95	699.0	0.549

Note "n" is the number of responses. The mean rank refers to the average of the ranks of waking times. *U* is the result of the Mann–Whitney *U* test. The results show that the differences between the groups of women and men are statistically significant in Camilo Huatatoca and in UEIB Canelos at the 1% significance level ($p < 0.01$). In these schools, women generally wake up earlier than men (the mean rank for women is lower)

Table 6.6 Differences in waking-up times between Indigenous (I) and mestizo (M) students

Colegio		*n*		*Mean rank*		*U*	*p*
		I	*M*	*I*	*M*		
EIB schools	Amawta Ñampi	53	15	31.42	45.40	234.0	**0.013**
	Camilo Huatatoca	58	30	40.64	51.97	646.0	**0.046**
	Antonio Cabri	29	46	39.43	37.10	625.5	0.648
	Milenio Tarqui	21	53	27.19	41.58	340.0	**0.008**

Note "n" is the number of responses. The mean rank refers to the average of the ranks of waking-up times. *U* is the result of the Mann–Whitney *U* test. The results show that the difference between the Indigenous and mestizo student groups is statistically significant in Milenio Tarqui at the 1% significance level ($p < 0.01$) and, in Amawta Ñampiand Camilo Huatatoca at the 5% significance level ($p < 0.05$). In these schools in general, Indigenous students wake up earlier than mestizo students (the mean rank of Indigenous students is lower)

their families. Some students mentioned this in interviews, but it was not mentioned in the questionnaires. In many schools, women report more household chores in the morning than men (Fig. 6.7). For example, in Camilo Huatatoca, both Indigenous women and mestizo women have more household chores (56% and 50% respectively) than Indigenous men

and mestizo men (28% and 20% respectively). In Canelos, 67% of Indigenous women and 27% of Indigenous men do household chores before their school day. This may explain the differences in waking-up times between genders (Table 6.5). Only in Amawta Ñampi and San Jacinto do Indigenous and mestizo women report fewer household chores than Indigenous men, and in Milenio Tarqui, women mestizas have fewer chores than men mestizos.

Between all Indigenous and mestizo students, the biggest difference is in Milenio Tarqui, where 42% of Indigenous students, but only 17% of mestizo students, do household chores before the school day (Fig. 6.8). This may partly explain the early waking-up times of Indigenous students in Milenio Tarqui (Table 6.6). However, proportionally, most chores are done by Indigenous women and, in fact, a smaller proportion of Indigenous men (14%) than mestizo men (24%) report household chores (Fig. 6.7). In Camilo Huatatoca, almost the same proportion of all Indigenous (40%) and mestizo (37%) students perform household chores in the morning (Fig. 6.8). In Amawta Ñampi and Antonio Cabri, there is a slightly higher proportion of mestizo students who do household chores in the morning, compared to Indigenous students. Therefore, it is likely that the difference in the duration of school journeys explains the differences in waking-up times between the groups in Amawta Ñampi and Camilo Huatatoca.

Discussion

In this study, we have shown that, in the urban areas of Pastaza, upper secondary school students' journeys to school depend on motorized transport, mainly public buses, while in more remote areas, the most common mode of travel is walking. Especially in urban areas, accessibility to education can be impeded by the cost of travel. The average monthly income of Indigenous families is lower than that of non-Indigenous families, being 35.57% of the cost of the shopping basket established at the national level, and 39.09% of the average monthly income of rural families at the national level (Arias-Gutiérrez et al., 2016).

In general, school journeys are longer for Indigenous students who live in communities far from schools. Some also choose to live near schools during school days and only return to their home communities at weekends. Young people who move to cities for their studies may experience distancing from their communities and their original cultures (Tuaza

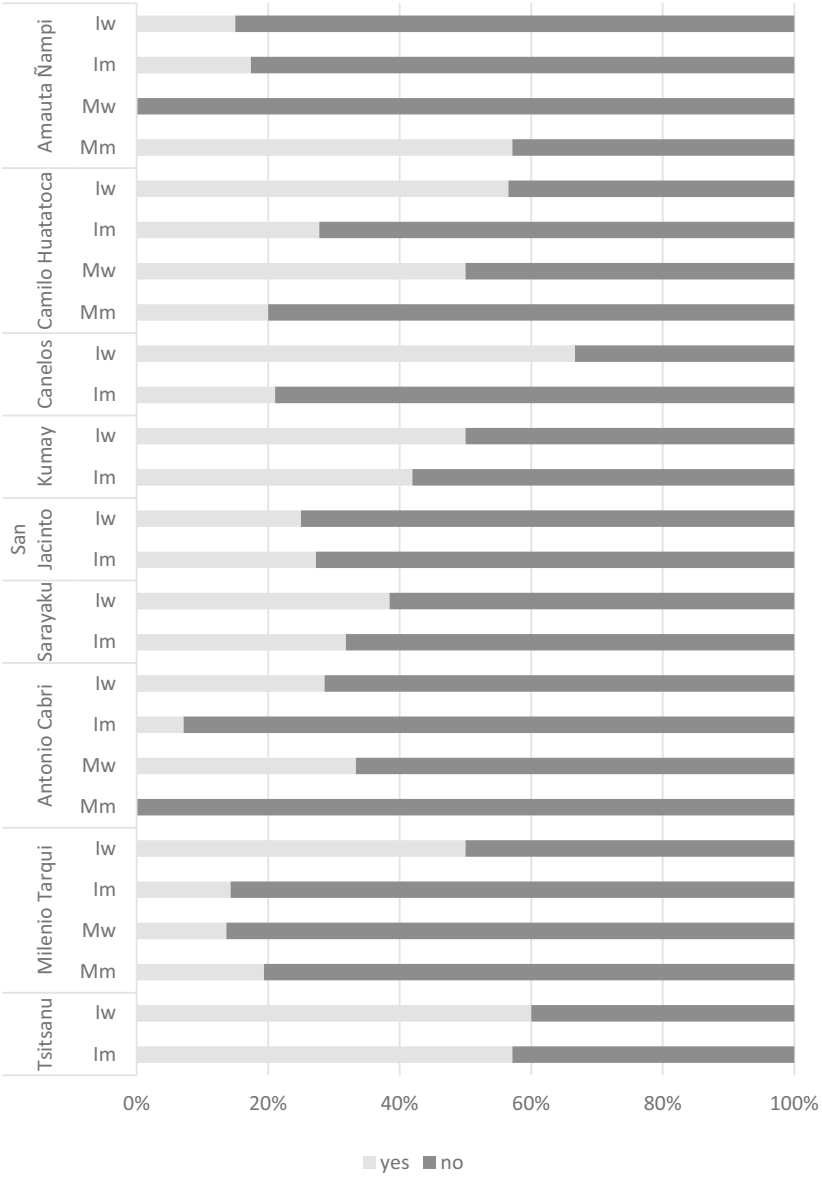

Fig. 6.7 Indigenous women's (Iw), Indigenous men's (Im), mestizo women's (Mw), and mestizo men's (Mm) morning household chores before the school day

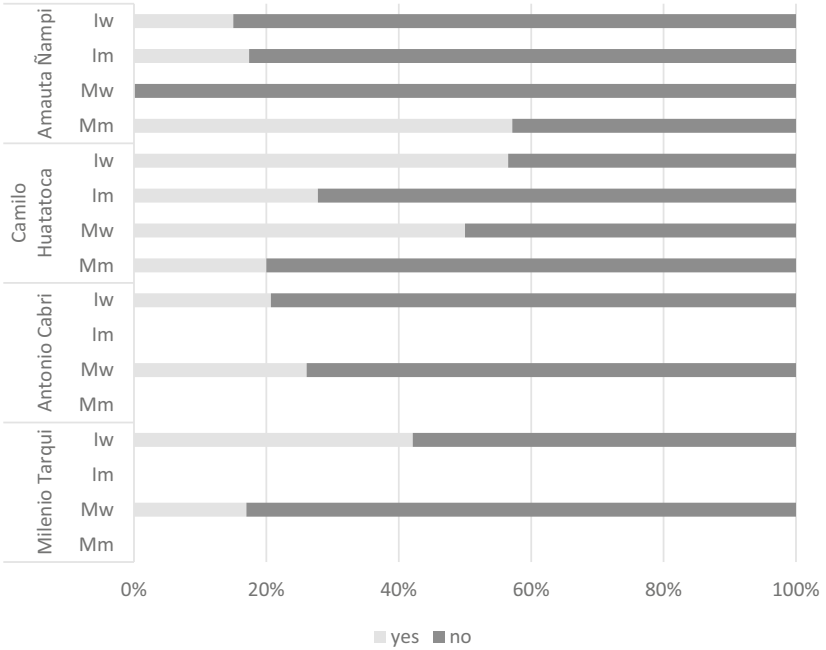

Fig. 6.8 Household chores of Indigenous (I) and mestizo (M) students before the school day

Castro, 2016). The increase in migration and mobility between Indigenous communities and settlements, along with better virtual connections with the outside world through the Internet, also undermine the social structures of the territory and the identities embedded in the place (Cook and Butz, 2019). At national level, 89 out of every 100 Indigenous people have access to upper secondary education but only three out of every 100 have a higher education degree (CONEPIA, n.d.). In the Amazonian region, however, with few upper secondary schools in the Indigenous territories, and with access roads only near the cities, there is not enough culturally pertinent education available, and therefore, students must migrate to access education.

In all the schools studied, most students think their school journeys are enjoyable. This is related to socializing with friends and the possibility of observing nature. However, especially in the forested areas of Kumay

and Sarayaku, some students are afraid of dangerous animals. In Kumay, traveling by bus can increase some students' confidence in the face of dangerous animals, but the poor conditions of the roads make traveling by bus unsafe. Also in urban areas, buses are sometimes very full and drive fast, which makes the journey at best uncomfortable.

In almost all schools, there are some students who get up very early in the morning. In part, this can be explained by the long duration of school journeys, but it is also affected by various tasks and activities in the morning before the school day. On average, women report waking up earlier than men, with significant differences in Camilo Huatatoca and Canelos, where women's travel times to school are also longer. In the questionnaires, students could freely report what tasks they perform in the morning. In Camilo Huatatoca and Canelos, the students' responses referred to a variety of domestic tasks, but they did not explicitly mention the cultural aspects related to the early morning, with drinking *guayusa* and discussing dreams as a form of day planning. Only in the interviews did some students mention that they drink *guayusa* in the early morning. These cultural aspects could also explain why Indigenous students report waking up earlier than mestizos, with statistically significant differences between groups in Amawta Ñampi, Camilo Huatatoca, and Milenio Tarqui. However, in general, women have more responsibility in the kitchen and for other domestic tasks (Consejo Nacional de Igualdad de Género, 2014; ECLAC/UNICEF, 2016), which may explain why women reported more domestic tasks in the morning.

It can be assumed that the early waking times and the long school journeys are tiring for Indigenous women and could have a negative effect on their studies. Scientific studies suggest that biologically the sleep need of young people is more than nine hours (with some individual variation) (Mercer et al., 1998; Wolfson and Carskadon, 1998) and that sleeping less increases learning difficulties (Dewald et al., 2010; Gillen-O'Neel et al., 2013). However, in the questionnaires we did not ask students what time they go to bed or how many hours they sleep. In addition to sleep duration, sleep quality also affects study success (Dewald et al., 2010), as do many other factors, such as socioeconomic and psychological characteristics, and the quality of teaching (Areepattamannil, 2018; Muelle, 2019), but the analysis of this relationship was beyond the scope of our study and should be addressed in future studies.

During the educational reform of Rafael Correa's government, upper secondary schools were not closed in Pastaza. Nevertheless, it seems that

some upper secondary school students have long school journeys. This study also did not reach young people who do not attend upper secondary education, so it is difficult to assess how the travel time has actually affected their decision not to attend secondary education. Also in the current situation, it would not be very realistic to ask the government to increase the number of small schools, because it is already difficult to find trained teachers capable of teaching at upper secondary level; only three out of every 1000 Indigenous people have postgraduate education, which is important given that the state's labor management model is based on a meritocratic system (CONEPIA, n.d.).

Conclusions

Access to upper secondary education implies changes in families' standards of living and expenditure. In the most remote areas of Pastaza, upper secondary school students walk daily to the school located nearby in the Indigenous territory. Students who live far away need to migrate or live in the vicinity of the school during the school semesters. Some students who attend schools in urban areas access them by bus and car, paying a daily fare that is a significant expense for the family.

In the remote areas in Pastaza, journeys to school are long and in general there is no significant difference in travel times between genders. The greatest difference in travel times is between Indigenous students and mestizo students, which reflects the fact that Indigenous communities are located further away from schools. The limited coverage of upper secondary education in the Indigenous territories of the rainforest has led to families sending their children to the city or to the closest school available. Therefore, the daily travel time between home and school in this study does not reflect the duration and distance between the community of origin and the school, as exemplified by the case of Kumay, with students coming from Yampis and Mamayak, province of Morona Santiago.

In general, students find their school journeys pleasant. The only mention of caution is fear or dangerous conditions en route in less than 40% of the responses and only in two of the nine schools investigated. Access to upper secondary education is perceived as a greater possibility and guarantee of exercising rights than was enjoyed by previous generations, who were subjected to worse inequalities, exclusion, and

discrimination. However, it is concerning that many young people experience and have to fear violence in the school environment. In 2019, INEC reported that 25.4% of women (over 15 years old) in Pastaza have suffered violence in the educational environment.

The study also indicates that Indigenous women do more household chores in the morning than men. Getting up early, along with long and potentially dangerous school journeys, can have a negative impact on their studies and increase the risk of school drop-out and abuse, which should be further studied.

References

Almeida, I. (2008). *El Estado plurinacional: valor histórico y libertad política para los indígenas ecuatorianos*. Quito: Abya-Yala.

Arcos Cabrera, C. (2008). Política pública y reforma educativa en el Ecuador. En Arcos Cabrera, C. y B. Espinosa (ed.): *Desafíos para la educación en el Ecuador: calidad y equidad*, 29–63. Quito: Serie Foro FLACSO.

Areepattamannil, S., Freeman, J.G., & Klinger, D.A. (2018). A qualitative study of Indian and Indian immigrant adolescents' perceptions of the factors affecting their engagement and performance in school. *Social Psychology of Education* 21, 383–407.

Arias-Gutiérrez, R., Herrera, H., & González, R. (2016). Poblamiento indígena amazónico y desarrollo local en Pastaza, Ecuador. *Rev. Novedades de población* 12(23). http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1817-40782016000100003 [Accessed 23 March 2020].

Asamblea Constituyente. (2008). *Constitución de la República del Ecuador 2008*. Asamblea Nacional.

CONEPIA (Comisión Nacional de Estadística de los Pueblos Indígenas, Afroecuatoriano y Montubio) (n.d.). Atlas "Las Cifras de las Nacionalidades y Pueblos Indígenas: una mirada desde el Censo de Población y Vivienda 2010". https://www.academia.edu/11296235 [Accessed 21 March 2020].

Consejo Nacional de Igualdad de Género (2014). *Agenda Nacional de las Mujeres y la Igualdad de Género 2014–2017*. Quito: Comisión de Transición para la definición de la Institucionalidad Pública que Garantice la Igualdad entre Hombres y Mujeres.

Cook, N., & Butz, D. (2019). Moving toward mobility justice. In: Cook, N. & D. Butz (eds) *Mobilities, mobility justice and social justice*. London: Routledge.

Dewald, J.F., Meijer, A.M., Oort, F.J., Kerkhof, G.A., & Bögels, S.M. (2010). The influence of sleep quality, sleep duration and sleepiness on school performance in children and adolescents: A meta-analytic review. *Sleep Medicine Reviews* 14(3), 179–189.

ECLAC/UNICEF (Economic Commission for Latin America and the Caribbean/United Nations Children's Fund) (2016). The right to free time in childhood and adolescence. *Challenges*, No. 19, Santiago, August.

Flores, E. (2016). Las instituciones educativas indígenas en el Ecuador y su dialéctica con el estado. *ReHuSo: Revista de Ciencias Humanísticas y Sociales*. Pontificia Universidad Católica del Ecuador. https://dialnet.unirioja.es/servlet/articulo?codigo=7047183 [Accessed 23 March 2020].

Gillen-O'Neel, C., Huynh, V.W., & Fuligni, A.J. (2013). To study or to sleep? The academic costs of extra studying at the expense of sleep. *Child Development* 84(1), 133–142.

Hagström, O., Ropponen, A., Rönnberg, M., & Saari, E. (2016). Accessibility to schools for Kichwa pupils of Santa Clara, Ahuano and Sarayaku in Ecuadorian Amazonia. In Häkkinen, A., P. Minoia, A. Sirén (eds), *Cultures, environment and development in the transition zone between the Andes and the Amazon of Ecuador*. Field trip 2015. Department of Geosciences and Geography C 12. Helsinki: Department of Geosciences and Geography, University of Helsinki.

Hart, A. (2001). Mann-Whitney test is not just a test of medians: Differences in spread can be important. *BMJ* 323 (7309), 391.

Hohenthal, J., & Minoia, P. (2022). Territorial and mobility justice for Indigenous youth: Accessing education in Ecuadorian Amazonia. *Mobilities, 17*(6), 850–866.

Instituto Nacional de Estadística y Censo [INEC]. (2011). Resultados del censo 2010 de población y vivienda en el Ecuador. https://www.ecuadorencifras.gob.ec/ [Accessed 21 March 2020]

Instituto Nacional de Estadística y Censo [INEC]. (2019). Encuesta Nacional sobre Relaciones Familiares y Violencia de Género contra las Mujeres—ENVIGMU. https://www.ecuadorencifras.gob.ec/documentos/web-inec/Estadisticas_Sociales/Violencia_de_genero_2019/Principales%20resultados%20ENVIGMU%202019.pdf [Accessed 20 October 2022].

Mercer, P.W., Merritt, S.L., & Cowell, J.M. (1998). Differences in reported sleep need among adolescents. *Journal of Adolescent Health*, 23, 259–263.

Ministerio de Educación (2013). *Modelo del Sistema de Educación Intercultural Bilingüe, MOSEIB*. Quito: Ministerio de Educación del Ecuador.

Ministerio de Educación (2020). Archivo Maestro de Instituciones Educativas, Estadísticas educativas a partir de 2009–2010. https://educacion.gob.ec/amie/ [Accessed 5 March 2020]

Muelle, L. (2019). Factores socioeconómicos y contextuales asociados al bajo rendimiento académico de alumnos peruanos en PISA 2015. *Apuntes. Revista De Ciencias Sociales*, 47(86).

Red Amazónica de Información Socioambiental Georreferenciada, RAISG (2020). https://www.amazoniasocioambiental.org/es/mapas/#api-anchor-home

República del Ecuador (2008). Constitución de la República del Ecuador 2008. Quito: Asamblea Nacional.

Rodríguez Caguana, A. (2011). El derecho a la educación intercultural bilingüe en el Ecuador. C*iencia Unemi,* septiembre 54–61.

Rodríguez Cruz, M. (2018). *Educación intercultural bilingue, interculturalidad y plurinacionalidad en el Ecuador*. Vol. 1. Abya Yala, Quito.

Secretaría de Educación Superior, Ciencia, Tecnología e Innovación (SENESCYT). (2020). Boletín anual-SENESCYT/Versión N.-2/agosto 2020/Quito-Ecuador/Análisis anual de los principales indicadores de educación superior, ciencia, tecnología e innovación (SENESCYT).

Sheskin, D.J. (2000). *Handbook of parametric and nonparametric statistical procedures*. 2nd ed. London: Chapman & Hall/CRC.

TENK. (2019). The ethical principles of research with human participants and ethical review in the human sciences in Finland. *Tutkimuseettisen neuvottelukunnan julkaisuja* 3.

Tuaza Castro, L.A. (2016). *Los impactos del cierre de escuelas el medio rural*. Ecuador Debate 98, 83–95.

van Wee, B. (2016). Accessible accessibility research challenges. *Journal of Transport Geography* 51, 916.

Wells, R., Cuenca, R., Blanco Ramírez, G., & Aragón, J. (2018). Geographic mobility and social inequality among Peruvian university students. *Higher Education* 75, 449–469.

Wolfson, A. R., & Carskadon, M. A. (1998). Sleep schedules and daytime functioning in adolescents. *Child Development* 69, 875–887.

Zambrano, M., Robles, M., Izurieta S., Torres, B., Bravo, C., & Martínez, C. (2019). *Atlas geográfico de la Provincia de Pastaza*. Gobierno Provincial de Pastaza, The Nature Conservancy, Universidad Estatal Amazónica y Conservación Internacional Ecuador. Puyo, Ecuador.

CHAPTER 7

Educational Experiential Calendars: Creating Links Between Indigenous Communities and High School

Tuija Veintie, Anders Sirén, and Paola Minoia

Introduction

In Ecuador, within the framework of intercultural bilingual education (IBE), it is argued that one of the factors creating conflict between the Indigenous population and the national school education system is the imposition of inappropriate schedules and calendars. Therefore, the ministerial agreement that officially instigated the IBE model in 1993

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stipulates that in IBE establishments a social calendar and a class schedule are established according to the socio-cultural and economic situation of the communities of the highlands, the coast and the Amazon (Ministry of Education and Culture 1993). The clash between calendars has long roots in the colonial history of the Latin American continent.

In much of Latin America, including the territories now known as Ecuador, the Gregorian calendar was adopted in 1584 by order of King Philip II of Spain (Ortiz Garcia 2012). The Gregorian calendar, named in honor of Pope Gregory XIII in 1582, is the most widely used calendar in the world today (Gutiérrez 2008). However, the standardized Gregorian calendar is just one way of organizing units of time, while various cultures have developed systems to mark and organize time based on their own interests and needs (Davenport 2007). In Latin America, the Maya, Mexica (Aztec) and Inca are known to have developed systems of measuring and organizing time based on their rigorous observation of natural phenomena and vast knowledge in the fields of mathematics and astronomy. The Inca, with greater transcendence to the contemporary Andean Indigenous cultures, developed an intimate relationship between agricultural and religious ceremonies with the stars, especially the sun, and elaborated an agricultural and festive calendar based on their astronomical knowledge (Ortiz Garcia 2012).

Although contemporary Latin American society currently uses the Gregorian calendar, there is interest among Indigenous peoples and nationalities in calendars based on the worldviews and experiences of Indigenous communities. This interest is notable within bilingual intercultural education. Paz y esperanza (2012), for example, describe an experience in Andahuaylas, Peruvian highlands, where several schools, teachers, students, parents and wise community members were involved in producing an Andean agro-festive and ritual calendar to better align school activities with the organization of local Indigenous time and space. They affirm that the latest generations no longer practice or know the Andean calendar and its strong link with the sun, the moon and the stars. Therefore, it is necessary to involve parents and wise men and women in the process of elaborating the calendar (Paz y esperanza 2012).

Similarly, based on experiences of intercultural education in Chiapas, Mexico, Sartorello (2016) highlights that a socio-natural calendar of activities should be developed in each school with teachers, students and community members, as it is an important pedagogical tool that manifests the intimate relationship between society and nature. It is worth noting

that such relationality, important among the peoples of Chiapas, is one of the fundamental epistemic characteristics in the thinking of many Indigenous peoples and nationalities of the Americas (Battiste and Henderson 2000; Reascos 2009).

Moreover, relationality goes beyond human beings and nature. For example, according to studies in Ecuador, the intimate relationship between the world of human beings and the spiritual world below and above is fundamental in the thinking of the Kichwa and Shuar of the Amazon (Andy Alvarado et al. 2012; Chiriap Tsenkush et al. 2012). Therefore, it is important to include the spiritual aspect within the system for organizing time. Additionally, in the holistic and relational ontology of the Kichwa and Shuar peoples, time and space tend to be conceptualized in a circular or spiral form (Chacón 2012; Cornejo 1993; Pari Rodriguez 2009; Yañez 2009), in contrast to the linear conceptualization of time that dominates thinking in Christian religion, historiography, and sciences (Marcus 1961; Santos 2004; Yañez 2009).

Consequently, community calendars promote ontological and epistemological pluralism: the possibility of thinking from another perspective and conceptualizing time, space and the relationships between the beings that cohabit the cosmos. In this way, it is possible to challenge onto-epistemological hegemonies and promote an interculturality that understands epistemological diversity (Walsh 2012; Quintriqueo et al. 2019).

Community Educational Experiential Calendars: The Case of Pastaza

Although within the IBE in Ecuador, the socio-cultural calendar was introduced in the early 1990s, it has not always been a high priority in the country's IBE policy. For example, the 2010 update of the model of the intercultural bilingual education system (MOSEIB) does not emphasize calendars and schedules. However, the 2013 update reinstates the idea of the social calendar according to local needs, mentioning a community educational calendar, as well as an experiential calendar of the nationalities, and also an agro-ecological and festive calendar (MinEduc 2010, 2013). More recently, as part of the process of relaunching the IBE, the Ministry of Education published a set of guidelines for the implementation of MOSEIB (hereinafter referred to as "the guidelines") (MinEduc 2017). The guidelines highlight that each intercultural bilingual community education center (CECIB) and intercultural bilingual community

education unit (UECIB) should organize their respective community educational experiential calendar (hereinafter referred to as "calendar"). This calendar is seen as an essential element in supporting students to maintain the link between their cultural experiences and formal schooling (MinEduc 2017, p. 14).

According to the guidelines, the development of the calendar plays a fundamental role in identifying and revitalizing the knowledge and wisdom of each nationality or people, generating proximity between the educational community and the local culture and context, and incorporating original content from the local socio-cultural environment into the process of teaching and learning (MinEduc 2017). Therefore, the calendar is seen as a pedagogical tool that helps to generate culturally relevant learnings from the epistemic relationality and the different activities carried out by the inhabitants of an Indigenous community in each season of the year in their territory (Sartorello 2016).

The development of the calendar is also the first phase in the development of knowledge cards, pedagogical materials written in the language of the nationality and in Spanish, with explanations about the essential elements of the experiences indicated in the calendar (MinEduc 2017). Based on the calendar developed by CECIB or UECIB and the National Intercultural Bilingual Curriculum, each educational institute must also develop institutional curricular planning, a document that reflects the institution's educational aims and objectives, and guides the teaching and learning processes (MinEduc 2017, p. 18).

The objective of this chapter is to examine the local and Indigenous content in the calendars developed in intercultural bilingual schools in the province of Pastaza in the Ecuadorian Amazon. Since the calendars were in the process of preparation at the time of collecting the data for this study, we find it useful to also examine the calendar development process. The first results section will therefore examine the elements of the calendars developed and consider how they represent the epistemology, and the ecological and cultural knowledge of the Amazonian nationalities. The second results section will focus on the strengths and challenges in the process of developing and using the calendars.

Methods and Materials

This qualitative study focused on intercultural bilingual schools in the province of Pastaza. We sought information from the offices of the two education districts of the province of Pastaza, as well as from the IBE provincial technical team, to identify schools that have made progress with the elaboration of the calendars. We conducted interviews about the calendars in nine IBE centers (Table 7.1). We did not cover community education centers that provide elementary schooling, but we focused on schools that provide elementary, middle and high-school level education. Based on the information from the provincial and district education offices, as well as the data collection in the schools, most of the schools in Pastaza had not developed a calendar at the time of the data collection.

In three of the Educational Units (EUs) visited (EU7, EU1 and EU3) the teachers had developed a draft calendar that we observed. One of these (EU1) is a handwritten first draft drawn up by two teachers, while

Table 7.1 Calendars in intercultural bilingual educational centers

Code	*Name of the educational unit*	*Parish*	*Majority Indigenous nationality*	*Unified general high-school program (BGU)*	*Interviewees*	*Status of the calendar*
EU1	Canelos	Canelos	Kichwa	Sciences	E1, E2, E3	Draft
EU2	Camilo Huatatoca	Santa Clara	Kichwa	Sciences and Technical	E4, E5	In development
EU3	Gabriel López	Arajuno	Kichwa	Sciences	E6, E7	Draft
EU4	Palati	Curaray	Kichwa	Sciences	E8	In development
EU5	Monte Sinai	Curaray	Kichwa	Sciences	E9	In development
EU6	Kumay	Simón Bolivar	Shuar	Sciences	E10, E11, E12	No
EU7	Amawta Ñanpi	Puyo	Kichwa	Sciences and Technical	E13, E14	Draft
EU8	San Jacinto	Madre Tierra	Kichwa	Technical	E15, E16, E17	In development
EU9	Sarayaku	Sarayaku	Kichwa	Technical	E18, E19	No

two (EU7 and EU3) are more advanced and were elaborated over a longer time with several actors involved. In each case, we interviewed at least the school principal and one or two teachers who had been actively involved in the process of developing the calendar. In the interviews, the teachers explained each element of the calendar in detail.

In four schools (EU2, EU5, EU4 and EU8) we conducted interviews with school representatives who reported on the development of the calendar, but for various reasons they could not show us any drafts. In two of the schools (EU6 and EU9) the development of the calendar was not in the planning stage at the time of the interviews, but the principals and teachers at these schools shared their reflections on the calendars. Therefore, we first analyze the elements of the calendars or drafts already developed, and then we focus on the process of development. Knowledge cards are not included in this study because at this stage none of the schools had developed them.

Results

Elements of the Calendars

According to the Ministry of Education guidelines, the calendar is designed as a circle divided into 12 sectors. Each sector of the circle represents one month, with the months following each other counterclockwise (Fig. 7.1). In addition, the circle is divided from center to circumference into different sections, representing different aspects, such as seasons, productive and economic activities, socio-cultural experiences, spiritual practices, signs of nature and educational activities (MinEduc 2017, annex 7).

The calendars we observed in schools were designed in the form of a circle or a spider's web. In one school (EU1) we observed an initial draft, produced by two teachers, which focused on the activities of the education center itself, and on national holidays. At this stage of development, the calendar contains few references to the cycles of nature and agriculture and production in the community. In two schools (EU3 and EU7) we observed advanced drafts, developed by a larger number of teachers. These drafts include various aspects of the community's life cycles, in accordance with the ministry's guidelines. However, the sectors of the calendar were filled mainly with words, not with pictures as in the example

Fig. 7.1 Model of a community educational experiential calendar (*Source* MinEduc 2017, annex 7)

in Fig. 7.1. Next, we observe the content of the different parts of the calendars.

Months of the Year

In two calendars (EU7 and EU1) the months of the year go in a counterclockwise direction, while in one (EU3) they go clockwise. In all three calendars the names of the months are included both in Spanish and Kichwa. Different variants of the Kichwa language are used in the calendars, so that one of the calendars (EU3) applies the local variant of Kichwa, while two calendars (EU7 and EU1) use unified Kichwa, the standardized version of the language. The differences between unified

Kichwa and local variants are notable. For instance, January is *kulla* in unified Kichwa and *puyu* in the local variant. October in unified Kichwa is *wayru* and *ukuy* in the local variant. *Puyu* means cloud, and January is cloudy and rainy in the Amazon region (E7), while *ukuy* are edible ants that abound in Pastaza in October (E7 and E3). That is, for a Kichwa person from Pastaza, the names of the months in the local variant of Kichwa reflect local experiences, while the names in unified Kichwa have no other meaning than the foreign name of the month. However, in colloquial speech we observed that Kichwa speakers tend to use the Spanish names of the month rather than the names in local or unified Kichwa.

One of the interviewees (E3) acknowledged that unified Kichwa has its origin in the highlands and is foreign to the Amazonians. He stated that his reason for incorporating unified Kichwa into the calendar is that students must learn the names of the months in both unified Kichwa and the local variant of Kichwa.

Productive and Economic Activities

One of the calendars (EU3) includes a section called agricultural activities, which indicates the times of planting, maturation and harvest of cassava, corn, chonta, peanuts and various fruits. Evidently this part of the calendar reflects important productive activities in the communities. However, due to their location very close to the equatorial line, seasonal changes in the communities in question are not always very marked, and thus many agricultural and productive activities are carried out throughout the year.

In one of the schools (EU7), the calendar contains a section for productive and economic activities, which represent activities that are carried out within the education center itself, such as planting bromeliads or a project to make hammocks. These activities, carried out at the school, do not follow the agricultural or productive cycle of the communities. Nevertheless, the bromeliads, native to the Americas, are part of the Amazonian biodiversity, just as hammocks are part of local life in the Amazon.

Socio-Cultural Experiences

In the calendars, the section for socio-cultural experiences includes national holidays, such as the carnival or "water games" in February (EU1 and EU3), or the Day of the Dead in November (EU7, EU1 and EU3), as well as local celebrations such as the parish festival (EU1) or the Indigenous Organizations festival (EU3). These are popular festivals celebrated in the communities with their particular local features. One of the calendars (EU3) also incorporates the celebration of the family festival, when students and their parents come to school to sell their crafts: baskets, bags, necklaces and earrings. The family craft festival is organized at the school to meet the Ministry of Education requirement to hold a school projects fair.

An interesting feature of one of the calendars (EU1) is the inclusion of the *kapak raymi, kulla raymi, inti raymi* and *pawkar raymi* festivals. These are four annual festivals relevant to the Andean calendar, which represent the Andean worldview and are widely celebrated among the peoples and nationalities of the highlands, but they have not been part of the tradition of the peoples and nationalities of the Amazon. That is, Amazonian communities have not organized festivities on these dates. Several teachers we interviewed acknowledged that these traditions come from the highlands, but that at school they have celebrated one or another of these festivals at least once (E15, E2, E3 and E8).

Another calendar (EU7) includes many socio-cultural experience activities in particular during the year celebrating languages, dances, crafts, songs, legends of the peoples and nationalities, and *minga*s. *Minga*s are communal work with the families, while in some of the other socio-cultural activities indicated in the calendar, community participation is not so prominent. The activities are not part of the life of the community, but are cultural events organized by the school for its students.

This raises the question of what socio-cultural experience means. According to Huallpa and Surco (2015, p. 65), experiencing local knowledge is understood as the direct participation of the teacher and the students in an agro-festive or ritual activity at a real moment in time, not as the theatricalization or dramatization of the community life in the school. In the case of the celebration of the Andean annual festivals, these festivals are not part of the cultural experience of the local communities in the Amazon, but a recent cultural loan from the Andean Indigenous culture. The cultural events organized by this school (EU7), according to

Huallpa and Surco (2015), are dramatizations rather than experiences of Indigenous socio-cultural realities.

Spiritual Practices

Frequently, the Christian religion, whether Catholic or Evangelical, is an integral part of the experiences of Indigenous communities. This was made particularly evident in one of the calendars (EU3), where everything that has been incorporated into spiritual practices is related to the Catholic religion, in the form of baptism, confirmation, Holy Week, Christmas and other feasts of the ecclesiastical year. In this case the calendar makes no reference to spiritual practices that originate from the Kichwa spirituality or other Amazonian nationalities.

Another calendar (EU7), in contrast, does not refer to the Christian religion in its spiritual practices section, but mentions *guayusa* for every month. Guayusa (lat. *Ilex guayusa*) is a tree from the Ecuadorian Amazon rainforest, the leaves of which are used to prepare an infusion. In the Amazonian Indigenous communities, especially among the Kichwa and Achuar, the *guayusa* infusion is traditionally prepared in the early morning, and the family gathers to drink the *guayusa*, discuss, share what they have dreamed, plan the day's activities, and purify and energize themselves ritually. The *guayusa upina*, drinking *guayusa*, is a daily custom that creates an environment for learning and knowledge transmission between generations, since on these occasions the elders relate stories and legends, talk about their ancestors, discuss current affairs and give advice to the young (Dueñas et al. 2016).

Based on our observations and interviews conducted in several communities in Pastaza, it seems evident that at present the *guayusa upina* is not widely practiced among families. However, we know that the *guayusa upina* is practiced in a communitarian way on different occasions, in communities and Indigenous organizations, as well as in educational establishments such as the Amazonian State University and some schools. In one of the schools (EU7), the *guayusa upina* is done once a month among the school's educational community.

In this school, once a year, the *guayusa* is connected to the reading festival, with cultural celebrations referring to literature, legends and theater. In this month, the image of a waterfall is incorporated into the calendar, with the explanation that it represents the spirit of the waterfall. This shows that in this school, where most of the students belong to the

Kichwa nationality, they also celebrate the spirit of the waterfall, which is part of the Shuar spirituality. In other words, the school recognizes that the presence of various nationalities and different spiritualities is part of the cultural reality in this school, as in several other schools.

Signs of Nature

In the calendars we observed, the sections for the signs of nature have different features. In one of the calendars (EU7) many of the fields that correspond to "signs of nature" are empty. This school is in the city of Puyo, where students do not have the same proximity to nature as in schools located in rural areas or small urban centers.

One of the teachers interviewed in this school claimed that the few topics in the calendar's section for signs of nature do not reflect the reality that the students live, but mainly represent the experiences of the Indigenous people who live in the rural Indigenous communities in the Amazon region.

In another school (EU3), on the other hand, the calendar indicates signs of nature that can be observed in the communities where the school's students live. In this case, among signs of nature are included, for example, hot or rainy months, times when the water level in the rivers is high, times when aquatic turtles or certain fish lay eggs, as well as times of abundance of edible ants or meat. In yet another school (EU1) the calendar does not include information about signs of nature. However, one of the teachers confirmed that they should complete the calendar with information about the times of fruit ripening, rainy and sunny months, times when the fish come down and the time of the edible ants (E3). These signs of nature have a direct relationship with the activities in the communities, such as fishing, hunting and fruit gathering.

Educational Activities

The educational activities of each school must comply with the school schedule of the Amazon region in terms of working days, exam periods and vacations. This schedule, established by the Ministry of Education, also includes dates for events such as "reading festival", "school projects fair", "children's day" or "World Environment Day". In addition, the ministry suggests that intercultural bilingual schools should include in their activities certain regional celebrations of the highlands or the

Amazon, as well as other celebrations according to local reality (Ministry of Education 2019).

An important feature within educational activities takes place in July and August when there are no classes in the school. According to the schedule from the ministry, this is the school holiday period, but within IBE schools there is a different approach. One of the teachers we interviewed explained the difference between Indigenous and non-Indigenous students during this time of the year: "For our young people there are no holidays. The mestizos go to the beach or something. We, on the other hand, move to another house, to the *purina*, to learn" (E14).

This means that in the Kichwa communities in rural areas, when school is on holiday, families usually go to the *purinas*, remote houses where they devote themselves to cultivating and harvesting (E2, E14 and E8). Families living in urban centers do not necessarily have a second house in the rural areas, which means that children and young people stay at home helping their parents in their work (E4). Therefore, in two calendars (EU1 and EU7) July and August are marked as *purina*, while in one calendar (EU2) they are marked as living together with the community. In any case, vacation time is conceptualized as a period of living and learning with the family and the community.

Development and Use of Calendars

The principals and teachers in the schools where calendars had been drafted (EU7, EU1 and EU3), said that the development of the calendar is a multi-phase project requiring teacher's time over several months or even years. In one of the schools (EU4), on the contrary, the principal mentioned that in this school they usually develop a calendar together with the teachers and parents at the beginning of every school year. Unfortunately, this year they had not developed the calendar nor had they kept the calendar from the previous year, so we were unable to observe their calendar.

We asked the interviewees about training related to the calendars and only one interviewee (E8) reported having received training on this topic in meetings organized by the education district during the school holidays. All the other interviewees claimed they had not received any training on these calendars. Consequently, in most schools, the development of the calendar is based directly on the guidelines issued by the Ministry of Education (MinEduc 2017).

Participation of Various Actors

The ministry suggests involving the educational community, Indigenous leaders and other people who are knowledgeable about wisdom and local knowledge, in a research process where information is collected through interviews and observations, as well as from libraries and documents (MinEduc 2017). When observing the participation of different actors, we must consider the plurinational reality of the Ecuadorian Amazon and the cultural diversity of schools where members of the educational community, including teachers, students and their relatives, belong to different Indigenous nationalities from the Amazon and the highlands, or are of mestizo origin. This means that the development of an experiential calendar is a very complex task.

In the schools we visited, we observed a variety of ways of approaching the development of the calendar, who is involved in the process, and in what ways. In three of the schools (EU3, EU4 and EU8), the interviewees said that all teachers participate in the development of the calendar, regardless of their nationality. In two schools (EU5 and EU1), the Kichwa teachers native to the Amazon were primarily in charge, with the intention of involving other teachers later in the process. In one of the schools (EU7), the teachers were assigned to different committees by drawing lots, and one of these committees was tasked with creating the calendar. By lottery, teachers from the Amazon and the highlands ended up participating in the development of the calendar.

The involvement of parents and other community actors is a complex issue and we do not have adequate information to analyze the participation in the case of each school in detail. However, several principals and teachers interviewed reported that they have involved or plan to involve students and parents (E8, E9, E1, E7 and E15). Nevertheless, as we observed in several schools and as one of the interviewees (E8) pointed out, only some parents attend the meetings, and many do not participate. In addition, two interviewees discussed the need to consult the elders and wise people of the communities for more information on local knowledge (E15 and E7). The challenge of involving the elders of the community in the process was illustrated by one of the interviewees (E7):

> We have to bring more elders from distant places. There are more elders in the communities. They have other knowledge. We have not gone there. Sometimes we work all afternoon and we have not had time to go. But it

> would be good to go and talk to the elders to include more about their knowledge.

Since most of the calendars are recently drafted, this material has not yet been widely used in schools. The interviewees mention several ways to use the calendar: (1) the principal and teachers can use the calendar to plan the institutional activities of the year; (2) teachers can use the calendar to plan their courses and classes; and (3) students can use the calendar to see what activities should be carried out. Most of the interviewees said that the calendar is particularly useful in certain school subjects, namely Indigenous language and worldview. One of the interviewees said that the calendar should be used in all subjects as part of cross-curricular themes.

Throughout this study, we noticed how the calendar, and the interviews around it, helped us as outsiders to the community to get an overview of the important activities and events in the community and the school. Therefore, we assume that the calendar can serve as a valuable tool that presents the community to, for example, a new teacher or a family that has come from elsewhere to work or live in the community. However, the calendar itself does not contain detailed information about the community life and experiences, which means that it needs to be accompanied by an explanation from an informed person or knowledge cards, as suggested in the guidelines (MinEduc 2017).

In addition, some centric natural phenomena change from one year to another. For example, one of the interviewees (E13) mentioned that students can consult the calendar to find out when the full moon will be, which is an opportune moment for production. However, the phases of the moon change from one year to another, meaning that to include such detailed information, the calendar will have to be updated every year. Only one of the interviewees (E8) noted that in their school the calendar is prepared each year.

Critical Reflections

The school principals told us that the Ministry of Education had sent them a document with guidelines on the preparation of the calendar. Several interviewees mentioned that the ministry document is focused on the highlands and includes a model of a calendar that represents the worldview of the highlands. Consequently, the interviewees saw a need

to modify this calendar to adapt it to the worldviews of the Amazonian peoples and nationalities and the local life and experiences. In addition, we studied the textbooks that are used in all high-school programs nationwide and observed that they mention the Andean worldview, but not that of the Amazon. Thus, we argue that it is essential to produce specific educational material for the Amazon, adapted to the local Amazonian realities.

A central motivation for developing the local calendar is the observation that "knowledge and wisdom are being lost" (E15) and that "sometimes we only come thinking about Christmas, thinking about Easter, Carnivals. That is not cultural, that is not ours" (E5). Teachers are seeing the need to rescue what is being lost, and to strengthen the link with the Indigenous community so that children and young people recognize the value of their culture (E16).

Generally, school principals and teachers did not oppose the requirement to develop a unique calendar for each school. On the contrary, several interviewees presented arguments in favor of local diversification, recognizing that although there are common features between peoples representing the same Indigenous nationality or living in the Amazon, each community has its own special characteristics. For example, each Indigenous nationality has its celebrations, but as the interviewees confirmed, at the local level each parish, community or organization has its own local festivals (E2, E4, E5 and E15). In addition, although the seasons and the agricultural cycle are similar among the communities in the Amazon, there are certain local differences, for example, in the ripening times of certain fruits and crops (E12). Moreover, the schools are located in different types of communities in terms of level of urbanization, natural environment, and the productive and economic activities that the students' families are engaged in (EU2), which also increases the diversity of experiences.

The interviewees also presented critical observations that offer us valuable points of reflection on the calendars:

> We don't have it as a written document, but we have it, let's say, in the mind of the people who live here. There it is established: when is the dry season, when is the rainy season, when is the time of abundance and when of scarcity... of fish, of everything. That is the calendar in the Shuar world. But as a written document, we don't have it, but we do have that knowledge, we know. I don't know if it's necessary to write it down. (E10)

> For example, I have never known when the year ends, it was only the time when the ceibo plants come out there. When the ceibo gives fruit again they said that it was the time of another year. (E19)

These observations question the need to develop a calendar in the form of a written or drawn document. The cultural practice of Indigenous peoples and nationalities is not to use a calendar, but to observe the signs of nature continuously, to live according to their knowledge of life cycles, and to communicate orally. In other words, the community experiential calendar is embodied in the native people of the community. Returning to the previous example of moon phases, we can ask whether it is more pertinent to mark the phases of the moon on a calendar or rather give students the task of observing the moon to define an opportune moment to sow or carry out other productive activities.

Furthermore, important events and situations occur throughout the year when conditions allow, regardless of the month. For example, during our stay at one of the schools (EU9), lessons were suspended for a day because the conditions were particularly good for fishing after a period of scarcity in the fish catch, so it was important to allow students and teachers to go fishing that day. In this case, it was not a fishing season, a condition that would occur every year at the same time, but an occasional condition. The idea of the calendar is to facilitate the connection with community life, but this example of fishing shows us that sometimes it is not a pre-established plan in a calendar, but flexibility with schedules and planning that enables the connection to be made with community life and local experiences.

Another critical point relates to the differences between high-school programs in terms of their content and connection with life cycles. The curriculum of the unified general high school (BGU) has a common core of subjects that all students must study, but some BGU programs specialize in sciences and academic education, while technical BGU programs, especially in specialties such as agricultural production, conservation and management of natural resources, have a close link to the environment and production. One of the schools visited (EU8) offers a technical program in agricultural production. Based on the curriculum of this program as well as our visit to the school, we observed that production activities are an integral part of the studies, and students are

directly involved in agricultural activities of animal breeding and cultivation of plants such as taro, cassava, corn and other crops that are typically produced in the area.

In this school (EU8) the connection between the curriculum and the life cycles of nature and agricultural production is evident, even if the experiential calendar has not been developed. Another school (EU9) offers a technical program with a specialty in conservation and management of natural resources. This school is located in a rural community without a road connection to urban areas, and almost all students inevitably have a link to productive activities in the community through their daily life. Therefore, we observe that in schools that provide technical BGU programs related to agriculture or natural resources and schools located in rural areas, the calendar may not provide as much added value in terms of learning about life cycles, compared to schools that offer BGU program in sciences or are located in or near to urban centers.

Conclusion

As we reflect on the elaboration of calendars from a decolonial perspective we should also question the domination of writing over oral communication (see for example, Hereniko 2000; Mignolo 1996). Oral communication is integral to Indigenous communities, and Indigenous knowledge is embodied in the people and their practices (Gómez and Agualongo 2006). At the same time, we must understand the profound consequences of colonialism, of the domination of the Spanish language and culture and of Western knowledge in Indigenous communities. As mentioned before, the interviewees claimed that in the most recent generations the link with Indigenous wisdom and life cycles has been lost, that often there are young people belonging to Indigenous peoples and nationalities who do not speak the Indigenous language and are unaware of the knowledge, festivities and traditional productive activities of the Indigenous community. Therefore, we cannot assume that young Indigenous people embody the experiential calendar of their locality. Additionally, in the Amazonian IBE high schools, many teachers are mestizos or Indigenous people from the highlands who are not connected with the life cycles of the local community either.

Given this reality, an experiential calendar developed in the school with community involvement can serve as the missing link with the life cycles

and a source of information about the knowledge and experiences of the communities. The development of calendars can support the revitalization of the knowledge and wisdom of the nationalities and form a visualization of the important elements of Amazonian local knowledge. In this way, the development of calendars can constitute an act exercising the right of marginalized peoples to "name the world" (Freire 2005) from another epistemology. This is particularly relevant for Amazonian nationalities, who are marginalized even within the Indigenous population and, for example, are not represented in textbooks.

With their circular or spider-web shape, the calendars we have observed fit with the circular conception of time that is typical for the Indigenous nationalities of the Amazon. These calendars visually represent the life cycles of the community, including the agricultural cycle, cycles of nature, variation according to the season, and the main festivities and rituals that occur repeatedly in the community and combine with regional and national celebrations, as well as with the Ministry of Education's requirements concerning the beginning and end of semesters, exams and national events. In this way, the calendars represent the complex reality of Indigenous communities and IBE schools, where aspects of Indigenous and colonial origin interrelate.

The visualization of this complex fabric highlights several critical points in relation to the epistemologies and wisdom of the Amazonian peoples and nationalities. For example, the fundamental influence of the Catholic religion is particularly strong in the case of one of the calendars (EU3), which only represents aspects of Christian spirituality, without mentioning Indigenous spiritualities. In another calendar (EU1) and in the interviews, we observed the influence of the Andean language and worldview in the form of the use of unified Kichwa and the celebration of the Andean festivals of *kapak raymi, kulla raymi, inti raymi and pawkar raymi* in schools in the Amazon region. Thus, in the calendars we can observe tensions both from European colonialism and from the expansion of Andean culture.

At the same time, we must not forget that the Amazon is a plurinational region, which leads us to ask: who forms the educational community in the case of each school? An Amazonian educational community can include students, parents and teachers who belong to different Indigenous nationalities and mestizos. In addition, some students travel long distances to get to school (Hohenthal and Minoia 2022), which is why students in one school can come from different communities.

Therefore, we argue that for the process of creating calendars, an intercultural dialog between various community actors is necessary to establish what is understood by the knowledge, spirituality, festivals and productive activities of each local community. Additionally, from the point of view of revitalizing local knowledge, it is crucial to involve the wise people, *yachak*, and other connoisseurs of local ecological and Indigenous knowledge in the process. Consequently, the creation of calendars requires rigorous work and a participatory investigative attitude.

We also suggest that the creation of the calendar could serve a pedagogical purpose if students were more involved in the process. Guided and advised by teachers, students could carry out tasks to gather information about local ecological and Indigenous knowledge, socio-cultural experiences, and spiritual practices of the community by consulting their parents, grandparents, farmers, elders and other wise people. In this way, along with teachers, the students themselves would study the embodied knowledge of their own community and learn through research. Based on previous studies, we believe that for Amazonian Indigenous students this would be a culturally relevant way to study and would support the investigative attitude that IBE aims to promote (Veintie 2018). In this case, the focus would not be on the final product, a developed calendar, but on the intergenerational pedagogical process of gathering and revitalizing knowledge and experiences of Indigenous communities.

References

Andy Alvarado, P., Calapucha Andy, C., Calapucha Cerda, L., López Shiguango, H., Shiguango Calapucha, K., Tanguila Andy, A., Tanguila Andy, D. and Yasacama Aranda, C. (2012). *Sabiduría de la Cultura Kichwa de la Amazonía Ecuatoriana. Tomo II. Serie Sabiduría Amazónica*. University of Cuenca.

Battiste, M. and Henderson, J. Y. (2000). *Protecting indigenous knowledge and heritage: A global challenge*. Purich Publishing, Ltd.

Chacón, H. (2012). Aproximaciones a los saberes de los Amazónicos Ecuatorianos Shuar, Achuar y A'I desde sus cotidianidades. In J. C. Llorente and U. Sacona (eds), *Investigación aplicada a la educación intercultural bilingüe: Algunas reflexiones epistemológicas* (pp. 65–80). Institute of Behavioural Sciences, University of Helsinki.

Chiriap Tsenkush, N. L., Jimbiquiti Puenchera, L., Kayap Atsut, O., Kuja Jimpikit, E. M., Mayak Chiriap, I. E., Mashinkiash Anank, X. M., Mashinkiash Chinkias, J. M., Mashu Nankitiai, P. A., Sharup Tseremp Nuserik, G., Shiki Yankur, R. E., Timias Sando, E. M., Tsunki Yampis, I. de la N., Yampik

Kajekai, R. E. and Yampik Kajekai, R. E. (2012). *Sabiduría de la Cultura Shuar de la Amazonía Ecuatoriana. Tomo II. Serie Sabiduría Amazónica*. University of Cuenca.

Cornejo, D. (1993). Prologue. In E. Gómez *et al.* (eds), *Los indios y el Estado-país: Pluriculturalidad y multietnicidad en el Ecuador* (pp. 9–20). Abya-Yala Editions.

Davenport, M. (2007). Calendar as culture: An interdisciplinary project with an indigenous community. *Journal of Cultural Research in Art Education, 25*, 79–90. https://bit.ly/40cAgTp

Dueñas, J. F., Jarrett, C., Cummins, I. and Logan-Hines, E. (2016). Amazonian Guayusa (Ilex guayusa Loes.): A historical and ethnobotanical overview. *Economic Botany, 70* (1), 85–91.

Freire, P. (2005). *Pedagogy of the oppressed*. Siglo XXI Publishers.

Gutiérrez, S. (2008). Nuestro calendario: una medida de gran precisión. *Revista Suma, 58*, 87–92.

Gómez, I. and Agualongo, J. (2006). La oralidad en la Unidad Educativa Intercultural Bilingüe "Tránsito Amaguaña". In *Historias desde el aula. Educacion Intercultural Bilingue y Etnoeducacion en Ecuador* (pp. 37–50). Abya-Yala Editions.

Hereniko, V. (2000). Indigenous knowledge and academic imperialism. In R. Borofsky (ed), *Remembrance of Pacific pasts. An invitation to remake history* (pp. 78–91). University of Hawaii Press.

Hohenthal, J. and Minoia, P. (2022). Territorial and mobility justice for indigenous youth: Accessing education in Ecuadorian Amazonia. *Mobilities*, *17* (6), 850–866.

Huallpa, F. and Surco, S. (2015). *Propuesta pedagógica de producción de textos en lengua originaria, uso del calendario de actividades vivenciales de las niñas y niños del 3° al 6° grados de la institución educativa n°56075 de Irubamba y n° 56076 de Huaroccani*. (Thesis to opt for the title of second specialty in: mention Bilingual Intercultural Education). Unit of Second Specialty of the Faculty of Education Sciences. National University of San Agustín de Arequipa. https://bit.ly/3JnBRiq

Marcus, J.T. (1961). Time and the sense of history: West and East. *Comparative Studies in Society and History, 3* (2), 123–139.

Mignolo, W. (1996). 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 & the Andes* (pp. 220–270). Duke University Press.

MinEduc (Ministry of Education). (2010). MOSEIB. Modelo del Sistema de Educación Intercultural Bilingüe. Update 2010. Ministry of Education of Ecuador.

MinEduc (Ministry of Education). (2013). MOSEIB. Modelo del Sistema de Educación Intercultural Bilingüe. Update 2013. Ministry of Education of Ecuador.

MinEduc (Ministry of Education). (2017). Lineamientos Pedagógicos para la implementación del MOSEIB (Acuerdo ministerial 440–13). Ministry of Education of Ecuador.

MinEduc (Ministry of Education). (2019). Cronograma Escolar Régimen Sierra. Año Lectivo 2019–2020. Ministry of Education of Ecuador.

Ministry of Education and Culture. (1993). Acuerdo para oficializar el Modelo de Educción Intercultural Bilingüe y el correspondiente Currículo para la educación básica. (Official letter no. 0112.) Ministry of Education and Culture of Ecuador.

Ortiz Garcia, E. (2012). Los incas y el Sol: métodos de observación solar y calendario incaicos. *Revista Española de Antropología Americana, 42* (1), 127–143.

Pari Rodriguez, A. (2009). Epistemología del conocimiento científico Andino: Yachaymanta yachay. *El Vuelo de la Luciérnaga, 2*, 46–67.

Paz y esperanza. (2012). Calendario andino agro, festivo y ritual. Andahuaylas, Apurimac, Peru. https://bit.ly/42ibmDO

Quintriqueo, S., Arias-Ortega, K. and Maheux, G. (2019). Contenidos disciplinarios del currículum escolar en el marco de un pluralismo epistemológico-intercultural en contexto indígena. In S. Quintriqueo and D. Quilaqueo (eds), *Educación e interculturalidad: Aproximación crítica y decolonial en contexto indígena* (pp. 74–92). Red Interuniversitaria de Educación e Interculturalidad (RIEDI) and Centro de Investigación en Educación en Contexto Indígena e Intercultural (CIECII). Temuco: Ediciones Universidad Católica de Temuco.

Reascos, N. (2009). Encuentros y desencuentros entre la epistemología occidental y la epistemología de los pueblos Indígenas. *El Vuelo de la Luciérnaga*, 2, 20–45.

Santos, B. de Sousa (2004). The World Social Forum: Toward a Counterhegemonic globalisation (part I). In J. Sen, A. Anand, A. Escobar & P. Waterman (eds), *World Social Forum: Challenging empires 2004* (pp. 235–245). The Viveka Foundation.

Sartorello, S.C. (2016). Política, epistemología y pedagogía: el método inductivo intercultural en una escuela Tseltal de Chiapas, México. *Revista LiminaR. Estudios Sociales y Humanísticos 14* (1), 121–143.

Veintie, T. (2018). *Revival and regeneration of Indigenous knowledge in intercultural bilingual teacher education: A study in the Ecuadorian Amazonia*. University of Helsinki. https://bit.ly/3YPQzoc

Walsh, C. (2012). "Other" knowledges, "other" critiques: Reflections on the politics and practices of philosophy and decoloniality in the "other"

America. *Transmodernity: Journal of Peripheral Cultural Production of the Luso-Hispanic World, 1* (3), 11–27.
Yañez, F. (2009). Construcción del saber matemático y mediación sociocultural. *El vuelo de la Luciérnaga, 2*, 68–93.

CHAPTER 8

Interculturality in the Classroom: Accompanying Students from Minority Cultures in Pastaza

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Introduction

Interculturality in Ecuadorian classrooms is a faithful reflection of the experience of cultural diversity in a country characterized by the presence of a wide mixture of cultures, colors, and dreams. We also refer to colors and dreams because we consider that cultural difference should not be conceived only from social and civic perspectives, but also from

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the projection of identities in the complex construction of the self (Rodríguez-Cruz 2018). The previous construction is framed in multiple experiences and accelerated processes of social, emotional, cultural, technological, and digital change being experienced by humanity today.

This was the starting point of this chapter, which aims to investigate, in a reflective and critical way and an eminently experiential dimension, the development of interculturality as a construct facilitating encounter, learning, participation, and coexistence. It is about addressing interculturality as a space of intersectionality that actively promotes accompaniment from a perspective of inclusion in education.

In this scenario, it is rational, scientific, empirical, but not aseptic or neutral proposals that are required, not proposals detached from the very essences of humanity. Essences manifested in aspirations for equality, inclusion, justice, freedom, and democracy that imply, above all, a practical exercise of active promotion of spaces that facilitate these learnings and the necessary values to be able to articulate these essential aspirations. Respect for diversity and the configuration of the self is a key essence within what we today call *intercultural education* (Leiva-Olivencia 2015).

We share with Aguado (2003) the idea that intercultural education is a pedagogical, ethical, and social proposal for positively valuing cultural difference. The key lies, in our opinion, not only in valuing what separates us from the point of view of cultural identities, but also in emphasizing the essential elements of humanity and all those values that promote all kinds of enriching and fruitful interactions.

It is true that we live in complex, even disturbing and perplexing times. The digitization of cultural meanings and the effect of technological globalization have a more than decisive influence on certain acculturation processes that can weaken and harm individual and community development of the integral identity of minority groups. Misunderstood cultural globalization can cause significant damage to the perception of human and environmental phenomena if there are no clear "anchors" in terms of the foundations and practices of inclusive and sustainable educational and sociocultural practices.

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Interculturality is linked to the processes of individual and collective empowerment that have been developing progressively in the Ecuadorian Amazon context, and, of course, with the generation of social, cultural, and psycho-pedagogical proposals that address cultural diversity from a more open, sustainable, and holistic point of view.

Planning and Development of the Foundations of Interculturality

The key to an intercultural and inclusive education that promotes equality and diversity lies in the possibility of educators and learners constructing the curriculum together; learning values of peace, solidarity, democracy, justice, freedom, and equality, because they are lived and practiced in the classroom—as a learning community. In this context, educators and learners mobilize all their existing didactic resources to generate inclusion and success for all, without exception.

The fundamental elements that define interculturality—essential for its planning and development—are diversity, culture, citizenship, and identity. This presentation helps to build an intercultural education that, starting from the recognition of cultural diversity, is capable of generating a culture of diversity, an inclusive pedagogical reference for educational institutions that seek to be inclusive and intercultural.

We start from a holistic and inclusive conception of what intercultural education could be, and the culture of diversity in the educational context. Then we propose the concept of the culture of diversity because we cannot understand diversity in school and its relationship with intercultural education except as a defining element of the current social and educational situation. That is, diversity is a social and educational concept that proposes that each person is different, and that personal, social and cultural differences should not be a reason for exclusion; on the contrary, diversity is understood as the positive valuing of personal and cultural difference. Difference enriches and impregnates interpersonal relationships, and in the educational field, diversity is more present than ever and is a priority in any pedagogical proposal. The question to ask, from our point of view, is: what are the keys to an education framed in a school reality that aims to be considered intercultural and that respects cultural diversity in school?

There are certainly many aspects that we must address in articulating, from an eminently practical perspective, a response that is functional and

valuable. However, we believe it is necessary to highlight a series of reflective keys that are attached to a true intercultural pedagogy (Aguado 2003; Díaz-Aguado 2004).

First, a coherent and rigorous reflection on education in intercultural educational contexts must start from a conscious, reflective, and complex elaboration on the concept of culture, so that the valuing of cultural diversity is considered critically. This is the foundation of the *pedagogical-intercultural epistemological coherence*.

Second, it is necessary to highlight that an education that aims to promote interculturality must promote educational practices aimed at each and every one of the members of society as a whole, and not only at students from minority cultures; that is, it must be based on an inclusive educational vision for all students and the entire educational community. This is the foundation of interculturality that we can call *community projection*.

Third, this type of education should make us reflect on elaborations and pedagogical proposals that influence all the dimensions of the educational process, since promoting cultural diversity as a positive and enriching educational value requires critical spaces for reflection—and permanent innovation—in everyday educational action. This is the foundation of *didactic-critical reflexivity*.

Fourth, a fundamental aspect of an education that aims to be truly intercultural should be to promote real and effective conditions for these spaces of cultural exchange to promote equal opportunities, as well as overcoming all those situations of racism or discrimination that may arise in multicultural educational contexts. To achieve these spaces of intercultural exchange, the acquisition of intercultural competencies—as a set of attitudes, values, and behaviors of positive receptivity towards diversity—in all members of the educational community (teachers, students, families, sociocultural community) is a fundamental element. This is the foundation of *inclusivity* as the guiding axis of any socio-pedagogical proposal that fully promotes school and educational life and where difference is positively valued as an enriching element of social and collective growth.

It should also be emphasized that the very concept of a culture of diversity, understood as a proposal for educational action that respects, accepts, and recognizes cultural difference as an educational value, makes us inquire into dimensions and variables such as curricular, organizational, school functioning, attitudinal, ethical, and emotional. These dimensions and barriers facilitate the assumption of an intercultural perspective in the

configuration of education. At this point, we agree with López Melero (2006), when he states that the culture of diversity in education is:

> The understanding of diversity and human difference in classrooms as a valuable element and as a right ... and it does not consist in the subjugation of minority cultures to the conditions imposed by the hegemonic culture, but it requires that society changes in its behaviors and attitudes towards different people, so that they are not subjected to the tyranny of normality. (p. 21)

Today's schools must be able to articulate effective proposals that allow pedagogical practices to be promoted that take up the idea of cultural diversity from an eminently interactive perspective and in permanent social change (Leiva-Olivencia 2017). Social values evolve in tandem with our perceptions of our role in the society we inhabit. Within the school environment, this evolution necessitates the imperative promotion of innovative educational practices. These practices should be inclusive, advocating for equity and providing equal learning opportunities. This becomes especially crucial in an ever more diverse, dynamic, and rapidly changing society marked by the pervasive uncertainties of the global digital age, which significantly impact the educational landscape.

Santos Rego and Lorenzo (2015) underline the enormous importance of developing principles of an intercultural citizenship within "the public and democratic school". They contend that knowledge, respect, and mutual recognition should serve as pillars for all socio-educational actions. This emphasis originates from the foundation of a respectful and fruitful coexistence, grounded in a world of enriching and constructive social values such as peace, justice, and solidarity. According to Bartolomé (2002), we find it crucial to highlight that the construction of intercultural citizenship hinges on the absolute necessity of upholding values such as respect and mutual recognition. These values are like pillars for fostering coexistence in a society where cultural diversity is increasingly regarded as a significant asset, serving as a key contributor to social wealth for all citizens.

Furthermore, it is necessary to incorporate intercultural training as a key element in the Ecuadorian educational context, not only in non-university teaching, but also clearly intertwined in all stages and levels of education (Krainer et al. 2017; Rodríguez Cruz 2017).

At this point, Sabariego (2002) makes us reflect on how valuable it would be to develop a civic identity where we learn to live together, to cooperate, and enter into democratic dialog with all members of different cultural groups. Certainly, this consideration leads us to propose that diversity is something positive that should be promoted out of respect, since "the processes of dialogue and encounter between cultures of plural societies require a critical sense of our own culture" (Bartolomé 2002, p. 47).

The approach to diversity in educational environments extends beyond a theoretical perspective. True learning emerges from the active creation of spaces that allow individuals to experience the nuances and challenges present in their context. It involves jointly reconstructing new guidelines that promote the development of skills and abilities. It is at precisely this point that *integrative community therapy* gains strength and meaning in the field of intercultural approaches. If we start from the premise that in most cases minority groups have been socially relegated, working on the recovery of their self-esteem and confidence in their own abilities is, by any standard, an unavoidable task when it comes to establishing healthy relationships. According to Barreto (2015), *integrative community therapies* advocate for engaging with the members of a human group to recover and develop personal, individual, and social skills. This approach aims to foster the restoration of self-esteem, resilience, and self-confidence, the construction of active citizenship, the rediscovery of cultural identity, and the promotion of integral health.

Untying systemic and invisible knots, a term borrowed from systemic pedagogy, refers to the importance of making visible the systemic loyalties that are perpetuated from generation to generation without being recognized. To avoid reproducing the "blind love" of clan membership, it is necessary to recognize these patterns in order to heal these transgenerational wounds (Hellinger and Olvera 2010). This involves shedding light on the significant differences that manifest in classrooms due to mass enrollment in universities, coupled with the absence of a curriculum update to effectively address such a diverse student population. It is imperative for educators to reflect on how to mediate in the face of an imposed culture, and how to navigate the constraints of an educational system that ostensibly promotes inclusion but hinders genuine participation.

Teachers are encouraged to inquire: How can we foster participation and integration within classrooms amid these challenges? To address these

concerns, a model has been developed and successfully implemented in the province of Pastaza. This model places a strong emphasis on the individuals themselves, allowing them to take center stage in the redefinition of their narratives. This process is facilitated through an inclusive, horizontal, and dialogic tool known as *binding wheels*, which leverages the supportive capabilities of community therapy.

Untying Invisible Knots for Inclusion

"Intercultural and resilience skills in the social and educational promotion of young people and women in Indigenous communities in the Ecuadorian Amazon (Pastaza, Ecuador)" was the title of one of the projects executed under an agreement between the University of Málaga (UMA), Spain and the Universidad Estatal Amazónica (UEA), Ecuador. Juan Leiva-Olivencia of the UMA and Rosaura Gutiérrez-Valerio of UEA coordinated the activities to be carried out with educational units and Indigenous communities.

Once the UEA's Comprehensive Human Development Program had been approved by the University Council, the practice of binding wheels (*ruedas vinculantes*) was launched in February 2015. The objectives of this program were to foster a space for speaking and listening between teachers and students, and to facilitate the creation of supportive networks enabling them to search for solutions together. Community therapy with impartial listening is important for the creation of supportive networks, strengthening emotional bonds and links that promote life and intercultural competencies.

Despite the fact that Amazonian and Andean cultures are known for using little open and direct communication, through the binding wheels it was and continues to be possible for young people to start talking about their personal problems, and to see that others have the same problems. As posited by Gutiérrez-Valerio et al. (2015), integrative community therapy is viewed as a relief from the burdens of the university education system. The therapy is expected to have positive effects, contributing to the overall well-being of students. This approach aims to improve academic performance and to reduce the rate of student dropout, promoting inclusion and undoubtedly generating bonds of solidarity and support (Martínez Sánchez 2016; Gutiérrez-Valerio and Leiva-Olivencia 2018). Exploring the historical and genealogical situation of the student is valuable as long as the teacher is fully aware that this is neither good

nor bad, but simply part of a human being who is surviving, through resilience to new ways of looking at life. And as Olvera (2009) points out, success then follows.

Integrative therapy is a healthy work tool to be applied in the social sphere: in schools and neighborhood communities, etc. The group itself holds the competencies of power and information, with the specialist (facilitator) being just another member. Each individual is considered the master of solving their own problems. Group members freely express their feelings, problems, and emotions without fear of being judged, which results in people entering a relaxed atmosphere, without tensions. Anyone who attends the meeting can participate and share their difficulties and solutions.

To create an optimal environment fostering absolute trust, compliance with the following rules outlined at the outset of the therapy is mandated:

- No advising: active listening is required.
- No judging: everything that is told in this space is confidential, and in a shared space, discourses and judgments prevent listening.
- No intervening: silence is a golden rule, as this allows for listening.
- No preaching, as the aim is to generate a space of horizontality, respect, and mutual aid.

One should speak of oneself. This involves talking in the first-person singular, using "I". At appropriate moments during the wheel, any participant of the group can offer a song, proverb, poem, or joke that is linked to the topic under discussion (Barreto 2015).

Once these indications are clarified, the facilitator explains the meaning of the *binding wheel*. This type of therapy lets each person discover their own nature, their usual ways of being and behaving. All of this will depend on the values of the families and the culture in which they find themselves, as well as the decisions they have made in their life. The primary objective of this type of therapy is to empower the person within their community, while at the same time creating supportive networks. These contexts allow human encounters that give rise to understanding, respect, support, equity, and love, and allow the community to act where the family and social policies have failed to provide solutions. The integrative community therapy provides social tools to promote contact between people, self-knowledge, practical experiences, and socialization (Lazarte 2011).

From the socialization of personal problems in the *binding wheels*, the therapeutic dimension of the group and the creation of supportive networks cause observable changes in the community. These include: restoration and/or improvement of self-esteem; personal and community empowerment; improvement in the quality of interpersonal communication; better family relationships; motivation and awakening of resilience; mobilization of the resources and abilities of people, families and communities; rediscovery of cultural identity; construction of active citizenship; and awareness of their rights to a life with justice and dignity.

This inclusive approach has been a pivotal factor in urging university authorities to rethink and devise new pedagogical strategies, supported by the Integral Human Development Program at UEA, coupled with community engagement initiatives. Various activities carried out within the university campus and educational centers of the region have identified the prevalence of inequality between mestizo students and those coming from some of the ethnic groups in the area. This is where an inclusion and targeted action strategy oriented towards resolution (Olvera et al. 2011) comes into play. An essential component of this strategy involved the establishment of working groups involving several Indigenous leaders to address the problems that the students from the different nationalities brought from their communities.

One of the most interesting proposals to emerge from these working group was the creation of an Interculturality Observatory. It was collectively agreed that this observatory should be more than a simple repository of information. The objectives set for the Observatory of Education and Interculturality in the Amazonian context were thus geared towards fostering social and emotional empowerment from an intercultural and inclusive framework. The intention was to raise awareness among critical and reflective students of the problems experienced by the nationalities through forums, seminars, and debates to develop intercultural competencies in the Amazonian context of the province of Pastaza, from an inclusive perspective (conclusions of the work table held on October 30, 2015).

In each of these working groups, the need to articulate actions beyond the award of academic degrees was raised. The analyses presented coincided in their general acknowledgment that local knowledge was poorly integrated into educational practice, both at the secondary and higher levels. An exception to this reality was represented by the Amauta Ñampí and San Jacinto Intercultural Bilingual Educational Units, high school

institutions located in the city of Puyo and in the Community of San Jacinto del Pindo, respectively. In these units, for example, students learned about medicinal plants in the region and their applications for human health, based on the ancestral knowledge of their communities.

Another element of particular concern for the members of the working groups was the transculturation taking place in coexistence with the urban environment, and how this exacerbated the vulnerability of the children of communities to risky behaviors, returning many young people to their origins (communities and territories) without achieving the goal of higher education. This perception corresponds with the behavior record in the high-risk group maintained by the Amauta Ñampí IBE Unit (city of Puyo). The risks identified included alcohol and drug abuse, instances of gender violence, unplanned pregnancies, and a lack of awareness regarding preventive measures. The educational models that were applied were external, not contextualized to the Amazon reality, resulting in a low level of empowerment on the part of the students of the Indigenous peoples, and a general invisibility of these cultural aspects at the academic level. These elements were in evidence in the first *binding wheels* carried out with the students, parents, and teachers of the units in which the State University maintained an inter-institutional support agreement (Gutiérrez-Valerio et al. 2016, p. 21). The education sector, specifically at higher level, but in principle at all levels, has the potential to contribute to reversing this situation of cultural, economic, linguistic, and social exclusion, through the facilitation of knowledge, skills, and abilities. However, in this same higher education sector, there are certain exclusion barriers, both to admission and after enrollment, which the young people of the original Amazon nationalities can overcome, but with difficulty (Gutiérrez-Valerio et al. 2015, 2016).

A View from the Teacher Side

The problems faced by teachers in intercultural bilingual community classrooms and in mestizo communities were revealed. The need for teacher training in an effective approach to interculturality in the classroom, in addition to other conflicts that may arise in it, requires directly addressing. The metaphorical act of removing the mask and placing it on the discussion table implies an open and transparent dialog about the preferred direction for the education of future generations, signifying a willingness to address and discuss the underlying values, principles, and aspirations

that should guide the educational journey for future generations (see Fig. 8.1). For us, the context we have described, along with our experience in the area of systemic pedagogy, allowed us to reflect on the perspective of how to teach in a multicultural environment. At the start of their careers, teachers do not consider the systemic knots that have been exposed. Some beliefs, repeated from generation to generation in deference to the system, become personal lies. Lies such as "I am not good at math", "no one at home has graduated", "to be poor but honest", "to earn bread with the sweat of the brow" are some of the phrases that proudly evidence the struggle and cognitive dissonance which many students face every day (Olvera et al. 2011). The challenges of schemas, social clashes, the fulfillment of goals and social expectations can either leave that student in the classroom or expel them, increasing dropout rates and preventing the achievement of their goals.

It is not enough to design a good syllabus or academic curriculum. It is not enough to simply define good learning outcomes for the "achievement of a good graduate profile", along with recognized pedagogical strategies. It is also necessary to empower oneself along with that graduate. Generating spaces that enable redefinition of the narratives with which young people from communities come, without this being seen as neo-colonization, is the commitment of a teacher with a holistic view, as eloquently pointed out by the Complex Educational Model (MEC) of the UEA (2012). When you move from the blackboard or projector to the lost look of many of those sitting there as learners, you can see that there is often no clear horizon, that sometimes they do not know where they

Fig. 8.1 Workshops at the UEA and at the IBE school Amauta Ñanpi (*Photos* Rosaura Gutiérrez-Valerio)

are heading or the purpose of being there. It is necessary to look beyond a socially expected response or a social request such as: "I want to graduate to be someone in life", denoting that those who do not study are nothing and, even more, do not count in society as human beings. This much misused popular saying, along with other phrases repeated with frequent reverence in the corridors of university classrooms, shows that school has to transcend the everyday if it is to deepen the joy of academic formation and contribute to a society that needs men and women who are passionate about their professional work.

Thus, by dropping the mask, the work agreement between the UEA and UMA became visible, connecting inclusive views in pedagogical work. Among the actions developed in the first project, *Intercultural and resilience competencies in the social and educational promotion of young people and women in Indigenous communities in the Ecuadorian Amazon (Pastaza, Ecuador*), one that set a precedent was the Workshop on Culture of Peace, Interculturality, and Coexistence. The 15-hour workshop was attended by teachers from the UEA, students from different areas, and teachers and students from Indigenous communities. Various techniques including binding wheels were used, and their results were reflected in a first systematization notebook. Participants valued the event as positive, as some of the feedback shows:

> The desire for strengthening to achieve true interculturality among all without distinction.
>
> Love for my community, to love and share with one and all in society. Work with motivation. Happiness in my personal work and with the others.
>
> It has sparked in me an interest to know and learn more, to train myself, everything I have learned I must share with others.
>
> More solidarity and believe even more that we can be solidary, that the positive side of the human exists 100%.
>
> This workshop has sparked in me the desire to always gain new knowledge and to know my country more deeply.
>
> Strengthen my language, culture of my people, believe and think how important we all are.

Similarly, at the end of the 15 hours, participants were prompted to reflect on the question: "What elements from the workshop have proven beneficial in my personal, work, and community life?" Some of the responses included:

> The elements or themes of interculturality, culture of peace, emotions, reflections, dynamics, have helped me to strengthen the relationship with the family, with the community and especially to look at myself, how I am and how I feel.
>
> Life reflections, moments of quietness and motivation.
>
> Emotional exercises, interaction together with the group, transmit your feelings and ideas.
>
> Promote the culture of peace, love and appreciate myself valuing my principles.
>
> It has awakened in us a feeling and a greater responsibility of how to focus our work, effort, desires to change our environment of situations, phenomena, problems (which are conflicts) in which we can work. Do activities to solve them or improve them and achieve a change for the good of these social groups. Creating and awakening in them the desire, the will and the entrepreneurship towards a better future.

Among other actions, this first jointly developed project (UMA/UEA) also enabled the concept of the culture of peace and interculturality to be reinforced, and formative and sensitizing actions to be disseminated to people and multiple groups. The idea is to connect more with the community, and to continue bringing the values of inclusive education, intercultural competences, and resilience to young people and women. The social and pedagogical exchange has enriched the project, which has a high impact if we think that these educators can lead intercultural competences in their professional contexts and in their closest social reality.

Strengthening Cultural Roots: An Inclusive Look

In addition to the strategies implemented, another of the initiatives aimed at promoting interculturality in education is the Retomando Raíces Collective, formed by a group of students, professors, and university staff at the UEA interested in inclusive work and the promotion of interculturality, whose support and collaboration have contributed to the revaluation of cultures in the original Amazonian, Andean, and coastal nationalities and mestizo community that coexist in the university environment.

Retomando Raíces is a plurinational, intercultural, and multidisciplinary collective at the Amazonian State University, which was born from the interest of four young people of Shuar, Kichwa and mestizo origin, and driven by the dialogic space of the working groups. The

collective promotes horizontal communication, the restoration of values, and the strengthening of the identity of each individual, as well as the integral development of the university community and the collective through training, educational, artistic, recreational, and cultural activities. According to the group's constitution, the objective is "to offer a comprehensive education of people, to reach the soul, to lift the spirit and to achieve happiness from within".

In the words of the collective's founders (Nantu Canelos, Efrén Merino, Darlin Kaniras and Andrés Poveda):

> We achieve this through acceptance, teaching, solidarity, selfless giving and love for others, strengthening the individual identity of the being, respecting our ancestral values created in our original peoples. The mission is to promote the moral, social, educational, identity, cultural, material and spiritual development of all people through comprehensive training activities, training, educational, artistic, recreational and professional assistance. The vision was formulated to be one of the main collectives of the province that retakes and strengthens the recognition of the origin of the person in a coherent way with their values, culture, worldview and ethical and moral principles, promoting the integral development of all, projecting their actions to the world.

This holistic and transversal approach in principle began with the worldview of the Indigenous peoples, in the performance of the Guayusa Ritual, which consists of drinking the infusion of the guayusa plant in the early hours of the morning to the accompaniment of songs and conversation. The issue of identity goes beyond the reproduction of something exotic; the focus is not on students from nationalities and Indigenous peoples, the promotion of parties and recreational activities, or an exaggerated vision of cultural diversity (Leiva-Olivencia 2015). On the contrary, it allows spaces of coexistence and the possibilities of evidencing everyday practices that promote the revaluation of the work in each of the origins; it promotes transparent and horizontal communication where the wise and ignorant do not appear, and a group of individuals who cultivate practices of good living emerges, based on respect and dialog.

Environments that prioritize cooperation and recognize the inherent value of each individual undoubtedly foster communities characterized by mutual support, self-inclusion, and the reaffirmation of individuals. In such spaces, individuals, as social entities, interact on equal terms with

others. "Students see themselves with specific responsibilities on the individual and group levels, regardless of ethnicity, age, class or gender" (Leiva-Olivencia 2015, p. 55). They are individuals who promote teamwork to enhance the diversity of knowledge, skills, and intelligences with which we are endowed. This action in communities and in the same university environment has contributed to what we have called the *pedagogy of being*, being oneself while preserving identity and the valuing of the human being.

Revaluing Self-Esteem: The Pedagogy of Being from Integrative Community Therapy

The community therapy narratives show that an individual's life is reframed within a broader context. The concept of *binding wheels* in community therapy involves working collaboratively with members of a human group to restore and enhance personal, individual, and social capacities. This approach aims to facilitate the restoration of self-esteem, resilience, and self-confidence, fostering the construction of active citizenship. It also encourages the rediscovery of cultural identity and promotes comprehensive health. It is from these elements that the *pedagogy of being* is described, where self-accompaniment takes on collective and transcendental action for life in community.

We witnessed a narrative that has the power to transform numerous lives, embodied in the person of community therapist Itaya Corina Andy Malaver, who describe herself as "at the service of life" (Fig. 8.2).

> Born on December 2 in Sarayaku, Sarayaku parish, Pastaza canton, Pastaza province, Amazon region, Ecuador country. I am an Indigenous woman, of Kichwa nationality. Married to the father of my baby, a student of a degree in Tourism, studying eighth semester at the Universidad Estatal Amazónica. I entered school "Amauta Ñampí" when I was already old, and did not speak Spanish well.
>
> My life changed when I started university and passed leveling, yay! On the first days of my career, I saw a group of Indigenous young people who came to my course to invite us to the Guayusa Upina and to integrate. The group was called Colectivo Retomando Raíces. From that encounter, it took me years of internal and external processes and work. The transformative pedagogy of being has taught me love, forgiveness, that there are no culprits or labels, prejudices. In the end, we are all humans and we are

Photo: Itaya Andy.

Foto: Itaya Andy.

Fig. 8.2 Transformation through one's own history (*Photo* Itaya Andy)

under cultural construction, and titles do not make the person; and as a human being, I can contribute from my space.

Through my transformation in the Binding Wheels, the workshops, the collective, I felt the need to reach my people and my community. Therefore, I trained in several courses parallel to my university. Today, I am a community therapist; community, cultural and integral health promoter; rainbow and territorial leader; social activist; translator of the Kichwa language. I am a lover of ornithology, and of course, because of my origin, I like to walk in the mountains and in the jungle. Everything integrates into me without tearing apart my essence. Now I carry a three-month-old baby in my womb and I am happy. At the time of writing this biography and 6 months from finishing university, we try generate spaces that allow us to resignify the self and the narratives with which we young people from the communities come, without this being seen as a neo-colonization, rather a living and learning from interculturality in depth. For me as an Indigenous person who has managed to resignify my beliefs, without losing my roots, I believe it is necessary to continue articulating, from the link, actions that have to do with different activities, and install a mechanism that continues to sustain the balance between the academic and art, music, talks, etc. Unifying the emotional and the cultural and going beyond a folkloric and carnival party to a space of re-signification of the self as people capable of interacting in a mega diverse space.

> We exist in our classrooms, in the intercultural space, in the streets, in the cities, in the houses, in the jobs representing our Being. If we empower ourselves from our origins, we will not exhibit a costume for something folkloric or for something else, but we will clothe ourselves in our origins, laden with stories and culture, honoring our roots. We will take wings to support a people, a culture, an art, a life, a true sustainable development in favor of all and with pride we will say our Roots.

Conclusions

The most enriching aspects of interculturality in Pastaza's education lie in the realm of visibility and mutual recognition. These actions have strengthened not only the educational experience, but also each individual who has been a part of this transformative journey. In this sense, inclusive practices must incorporate the perspective of the teacher, whose actions can strengthen or weaken processes. When we address colors and dreams, we do so, considering that cultural difference should be conceived not only from social and civic parameters, but also from the projection of identities in the complex construction of the self.

If each protagonist in the classroom takes ownership of their origins, they will not be displaying a costume for something, in the manner of a folkloric facade, but will clothe themselves in their origins, laden with stories and culture that honor their roots. These initiatives will take wings to support people, a culture, an art, a life, fostering sustainable development for the benefit of all. There is tangible evidence of systemic challenges and the emotional burdens carried by many Indigenous women and men. Empowering them and re-significating their narratives serve as a stimulus for nurturing potential that can only expand through attention to holistic, integral, and inclusive education. This necessitates not only institutional political guidance, but also conscious teachers committed to their own stories and their own personal and professional development. The path of interculturality is built progressively through the active promotion of diversity as a social and educational value that contributes to establishing solid foundations of democracy, inclusion, and solidarity for a free and critical citizenship. In Community Therapy Wheels, problematization is the step in which we share life experiences linked to the theme chosen by the group. The problem situation presented by someone and chosen by the group is the starting point of the ICT (Integrative Community Therapy). The therapist seeks to stimulate and favor the

sharing of experiences that facilitate the construction of social support networks, promoting a higher degree of autonomy, of social awareness and co-responsibility. The key question that triggers reflection is: "who has lived something similar and what did they do to overcome it?" From there, each person talks about their pain or suffering and the strategy they used to overcome it. The sharing of experiences enables personal interactions and creates bonds.

Recovering the valuing and humanization of the self is a live issue in universities where inclusion and attention to diversity are addressed in the curriculum. Promoting empowerment goes beyond merely delivering well-taught classes; it stems from genuine accompaniment and a belief in the inherent potentialities and circumstances of others. It involved empowering the Being not just in their actions, but in the Doing and articulating support networks to generate the synergy "of the self with the other". The integrated community therapy is a pedagogical instrument that has allowed the applicability of Paulo Freire's ideas, perceptible in a more expressive way in relation to three aspects: the circularity and horizontality of communication; problematization as a pedagogical principle; and the valorization of personal resources and cultural roots. It aspires to establish the individual as a subject within their specific time and space, acknowledging them as a vital member of a broader totality. The goal is to empower individuals to be active voices in shaping their own experiences and contributing to the collective whole.

References

Aguado, Mª. T. (2003). *Pedagogía intercultural*. Madrid: McGraw-Hill Interamericana.

Barreto, A. (2015). *Terapia Comunitaria Integrativa Paso a Paso*. Edición para Ecuador.

Bartolomé, M. (2002). *Identidad y ciudadanía: un reto a la educación intercultural*. Madrid: Narcea.

Díaz-Aguado, M. J. (2004). Educación intercultural y cooperación. Una nueva interacción educativa para un mundo que también es diferente. *Educatio, 22*, 59–89.

Gutiérrez, R., López, E., Llambí, L., May, T., Ramírez, A., and Tocancipá-Falla, J. (2015). Higher education and indigenous nationalities: Challenges for inclusion in the Ecuadorian Amazonian Region. *Creative Education, 6*(9), 847–854. https://doi.org/10.4236/ce.2015.69087

Gutiérrez-Valerio, R., de May, V., Leiva Olivencia, J., May, T., Herrera Valverde, J.M. and Llangarí Ashqui, V.A. (2016). Intercultural education in the Amazonian context: Examples from Pastaza. In Häkkinen, A., Siren, A. H., and Minoia, P. (Eds) (2016). *Cultures, environment and development in the transition zone between the Andes and the Amazon of Ecuador*. Department of Geosciences and Geography C; No. 12. Helsinki: University of Helsinki.

Gutiérrez-Valerio, R. and Leiva-Olivencia, J. (2018). EL Desarrollo pedagógico Intercultural en un Proyecto de Cooperación Internacional. *Cuestiones Pedagógicas, 26*, 11–22. https://bit.ly/3Tn7kGb

Häkkinen, A., Minoia, P., & Sirén, A. H. (2016). *Cultures, environment and development in the transition zone between the Andes and the Amazon of Ecuador*. University of Helsinki.

Hellinger, B. and Olvera, A. (2010). *Inteligencia Trasgeneracional. Sanando las heridas del pasado. Constelaciones Familiares*. México: Grupo CUDEC

Krainer, A., Aguirre, D., Guerra, M., & Meiser, A. (2017). Educación superior intercultural y diálogo de saberes: el caso de la Amawtay Wasi en Ecuador. *Revista de la educación superior, 46*(184), 55–76.

Lazarte, R. (2011). *Terapia comunitaria reflexiones*. De la gracia. http://www.delagracia.de/Terapia%20Comunitaria%20Reflexiones.pdf

Leiva-Olivencia, J. (2015). *Las esencias de la educación intercultural*. Archidona (Málaga): Aljibe.

Leiva-Olivencia, J. (2017). La Escuela Intercultural hoy: reflexiones y perspectivas pedagógicas. *Revista Complutense de Educación, 28*(1), 29–43.

López Melero, M. (2006). *Cultura de la diversidad, cultura de la inclusión: educar para construir una escuela sin exclusiones*. Actas de las XVI Jornadas Municipales de Psicopedagogía "L´Ecola que inclou". Ajuntament de Torrent, Collecció Hort de Trenor 18, 11–52.

Martínez Sánchez, R. (2016). *Impacto de la terapia comunitaria integrativa y actividades de vinculación, como espacio de inclusión en el contexto universitario: el enfoque de abordaje de la interculturalidad en la Universidad Estatal Amazónica (Puyo, Pastaza – Ecuador)*. (Máster Universitario en Cultura de Paz, Derechos Humanos, Educación y Conflicto). Universidad de Málaga.

Olvera, A. (2009). Pedagogía del Siglo XX1. *El éxito es tu historia*. México D. F.: Pedagogía Sistémica®. Centro Universitario Doctor Emilio Cárdenas.

Olvera, A., Travesset, M., & Parellada, C. (2011). *Sintonizando las miradas. Soluciones y breves a los conflictos entre escuela y familia*. México D. F.: Kreat Outsourcing.

Rodríguez Cruz, M. (2017). Interculturalidad, plurinacionalidad y sumak kawsay en Ecuador. La construcción de un nuevo modelo de Estado a través de la educación intercultural bilingüe: discurso y realidad. *Perfiles educativos, 39*(157), 70–86.

Rodríguez-Cruz, M. (2018). Construir la interculturalidad. Políticas educativas, diversidad cultural y desigualdad en Ecuador. *Íconos. Revista de Ciencias Sociales*, (60), 217–236.

Sabariego, M. (2002). *La educación intercultural ante los retos del siglo XXI*. Bilbao: Desclée de Brouwer.

Santos Rego, M. A. and Lorenzo, M. (2015). El éxito educativo desde la pedagogía intercultural: formación con valor añadido para un mundo global. In A. Escarbajal Frutos (Ed), *Comunidades interculturales y democráticas* (pp. 63–84). Madrid: Narcea.

UEA Universidad Estatal Amazónica. (2012). Modelo educativo complejo de la UEA, Puyo, Ecuador.

CHAPTER 9

Participatory Design Interventions: Supporting University Student Care Networks During Covid

Nathaly Pinto, Xavier Barriga-Abril, Katy Machoa, and Paola Minoia

Introduction

The Covid-19 pandemic exacerbated structural constraints on access to higher education and the well-being of young Amazonians in Ecuador. Pre-existing disparities between geographical area or population groups, especially in the rural areas of the Amazon, and among Indigenous

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peoples and nationalities, are significant (Secretaría Nacional de Planificación y Desarrollo, SENPLADES 2017). During the health crisis, this disparities were not considered in targeted policies, leading to a deepening of existing gaps and hindering access to public services for these disadvantaged territories and populations (Secretaría Técnica Planifica Ecuador 2020).

Following the global trend, Ecuadorian public universities shifted to virtual education as the primary response to the pandemic. This posed a double challenge for a country that, like the majority of Latin American countries, is structurally heterogeneous: undertaking the acceleration and consolidation of virtual education parallel to global education systems, while facing local realities of socioeconomic inequality. This double challenge is reflected in the Ecuadorian Amazonian territory, which is multicultural, unequal, and technologically hybrid. Official educational practices from urban contexts proved inadequate to address the region's specific challenges of territorial dispersion, intermittent connectivity, and limited access to computer devices and the internet.

This discrepancy disproportionately affected students from historically marginalized communities, who were already overcoming significant barriers to pursue their studies. The inability to use university facilities for internet access forced these students to navigate new financial burdens or risk losing their educational opportunities (Pinto et al. 2021). Throughout the pandemic, existing inequalities impacting Amazonian students were magnified, posing a substantial impact on their well-being and access to education, despite the tremendous efforts of the university community in the region.

This study presents the process, results, and insights derived from a participatory design intervention which aimed to support student care

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networks activated in response to the impact of the pandemic on student well-being. The intervention's specific aims were the formulation of strategies and activities centered around the experience of university students and local resilience processes in the Ecuadorian Amazon, with specific reference to the situation of students at the Amazon State University (UEA) during the pandemic, its impacts and community responses. This information is drawn from direct observations of UEA student communities and organized responses by the university, students, and Indigenous organizations.

Our argument on the topic of participatory design in times of crisis underlines the importance of research and action rooted in participatory design thinking from the Global South. This is a crucial component of participatory interventions during emergency situations involving historically marginalized communities. The following section describes the participatory action research methodology, emphasizing the iterative nature of our approach, the collective aspect of our design process, and the due recognition of all those involved. We then use these foundations to explain the results of the participatory design intervention, which encapsulates our insights into the preparation of the care network, student involvement, and the expansion of the process. Finally, in the reflection and conclusion section, we revisit our experience, focusing on two specific learnings, questioning limitations, and sharing some final conclusions.

The Situation of UEA Students During the Pandemic: Community Impacts and Responses

At the UEA, the largest university in the Amazon, the abrupt shift to virtual classes took place without the necessary safeguards. According to enrollment records, the university's population, predominantly mestizo or belonging to Indigenous ethnicities such as Kichwa, Achuar, and Shuar, also falls within the lowest socio-economic quintiles. These students, who are subject to a continuum of historical marginalization stemming from both population demographics and geographical location, faced heightened impacts of the pandemic. At the same time, their ability to respond to current challenges was hampered, given their historical disadvantages.

It is noteworthy that the majority of students lack essential resources such as equipment and internet access, needs that were overlooked in the wake of government-confirmed budget cuts. The widespread absence of necessary equipment forced the university to take measures to procure

tablets and connectivity devices for its students. Concurrently, efforts were directed toward providing student support, overcoming geographical dispersion by utilizing telephone lines and the institution's website to address problems in academic processes, and to facilitate the acquisition and distribution of internet devices.

In the academic realm, teachers resorted to self-managed training, which, however, failed to compensate for the lack of historical pedagogical preparation in the domain of virtual education. While some students engaged in optional training, those without access to devices were deprived of this opportunity. Extra-institutional measures and actions were taken to ensure access to free and public education during the pandemic. As explained by Ruth Arias-Gutiérrez, former Rector of the institution (Minoia 2020), these efforts included teachers delivering equipment themselves at their own expense. Additionally, the rectorate orchestrated interventions to raise funds aimed at supplying tablets and network access to students. Bus travel was arranged to take the students from Puyo (the city housing the main campuses in the Amazonian region of Ecuador) back to their respective communities.

Students persisted in challenging the objective reality they faced in pursuing their studies, but their well-being was significantly impacted. From the state's perspective, student welfare, in broad terms, is linked to improved quality of life for university students, which aims to promote and ensure their continuance in the education system, a priority for the social and educational investments made by the Ecuadorian state (Salcedo et al. 2017). Beyond the practical considerations related to enrollment, student welfare embodies a holistic concept situated at the intersection of well-being and education, and encompassing emotional, physical, economic, environmental, and social health aspects, among others.

It is crucial to emphasize that, within the context of the Amazon, the environment holds significant importance for the nationalities or for those who self-identify as part of them. The connection between the environment and local community practices of production and care is strong. These practices encompass the safeguarding of knowledge and ways of life, along with ties to collective support networks. This relationship plays a pivotal role in production and social and economic reproduction, directly influencing the emotional and physical health of the community and its members. This underscores the fundamental role of interculturality in education in the region as a key strategy for student well-being.

Interculturality, when viewed from the perspective of marginalized Indigenous communities, serves as a strategy to ensure educational guarantees and rights. It is an opportunity for enrichment that seeks to permeate knowledge and practices into society as a whole (López 2009; Walsh 2009). In collaboration with students from Amazonian nationalities and the educational leadership of the Confederation of Indigenous Nationalities of the Ecuadorian Amazon (CONFENIAE, in Spanish), we highlighted in a previous article how the mismatch between political mechanisms and local conditions, practices, and knowledge has affected student welfare, both before and during the pandemic (Pinto et al. 2021). The article was critical of the fact that in the current education system, Indigenous youth must conform to an environment that demands an exclusive social and economic capital to enter or remain in the university. This often involves relocating to centralized universities or cities in search of public health services, electricity, and education. Consequently, the educational process leads to the distancing of Indigenous youth from their languages, culture, and community life, resulting in a weakening of their ties with the networks of care and collective support that exist within their communities and an environment that is strongly connected to the territory.

As the pandemic continued, the gap between student permanence and integral well-being widened. In the first semester of 2020, UEA resumed classes in virtual mode at its Puyo, Lago Agrio, and El Pangui campuses, maintaining a high percentage of permanent regular enrollment (98%). The apparent adaptation to the emergency was sustained by students who overcame significant difficulties, making exceptional efforts to attend classes. For example, during the lockdown in the first year, many people returned to their places of origin to continue isolating, which posed significant challenges for students without financial resources. Emotional health was affected by loneliness and uncertainty about the impact of the health crisis on students' family environment. The Psychological Assistance Service of the UEA sought to address these effects, with a focus on first- and second-year students, who were the most affected. This focus also stems from the lack of resources and staff (see, for example, Unidad de Bienestar UEA 2021). However, several young people did not respond to virtual contact, generating welfare concerns. Meanwhile, the Social Work Unit provided assistance to its student community, addressing other difficulties related to the pandemic.

These measures proved to have positive effects on social support, for example, in helping some students return to their homes.

Student Care Networks as Intercultural Spaces

Students resisted by activating their intercultural practices, drawing on experience, knowledge, and local care capabilities within the university to confront the impacts of the pandemic. They reshaped their social fabric to adapt and protect themselves collectively, giving and receiving support on issues specific to their reality. This was managed through what we identify as care networks. Care, in this context, is seen as the management and daily maintenance of life and health, encompassing an affective-relational "immaterial" dimension related to emotional well-being (Pérez Orozco 2006).

In accordance with feminist studies (Haraway 1988; de la Bellacasa 2012), care is conceptualized not only as a condition where people care for each other, but also as a conscious recognition of our condition of interdependence when we conceive of ourselves as vulnerable beings. "To care about something, or someone, is inevitably to create a connection" (de la Bellacasa 2012, p. 198). In the Amazonian region, these forms of collective care for the well-being of others, to some extent brought into the university educational space, are observed as practices of strength and resilience in Indigenous communities and families, and are used to protect themselves and overcome adversity (Veintie et al. 2022).

Through the creation and maintenance of connections with others, students interested in their peers and their environment formed their own networks to learn about each other's situations, receive support in class, and understand the impacts and responses to the emergency in other places. Concerned about students in the same or more complicated situations, some students maintained contact during the pandemic through social networks, messages, calls, and WhatsApp groups (messages that were read when students connected online using borrowed or personal devices in locations with internet signal), working to self-manage a type of support that helped them handle their emotions and receive help on issues corresponding to their reality.

The activation of care networks emerged as a response to provide relief and support among students who were facing new layers of marginalization to their right to education. However, a care–inequality–exclusion nexus was created by default as a direct consequence of the absence of a

right, leaving the responsibility of maintaining it to the already vulnerable communities (Pérez Orozco and López Gil 2011). While the activation of care networks in emergencies is a positive social practice for student well-being, the pandemic posed specific needs implying particular challenges. Performing these acts of care could also overstrain an unprotected student community. The previous conditions created an urgent need for processes and infrastructures to support young people of the Amazon in finding spaces and activities that would help them stay connected.

Interventions of Indigenous Organizations

The framework of our project started from the recognition of the responses to the emergency made by the university community—students, academics, and administrative staff—along with the mobilization of resources and strategies through interventions by Indigenous organizations. Here, we highlight two interventions that are relevant to our intervention action goals, as they involved participatory approaches to designing processes and products of community communication.

Figure 9.1 illustrates the first intervention, a data repository on the exposure of the Amazonian region to the pandemic, entitled "Covid-19 monitoring platform in Indigenous Nationalities of the Amazon". Developed by CONFENIAE with support from the University of San Francisco de Quito, Amazon Watch, and Fundación ALDEA, the tool was the result of a process of dialog and collective construction with communities. Interlocutors from each nationality gathered information about cases in their territories (CONFENIAE et al. 2020).

The data expose the different reality of infections at the regional level, which was not evident from the official national data. This lack of accurate information led to the invisibility of Indigenous nationalities cases and justified the limited public intervention in the region. The alternative platform facilitated the registration and visibility of cases within the territories of each nationality, contributing to the satisfactory management of the situation.

The second intervention involved the creation of infographics for the prevention of coronavirus infection in the Indigenous communities of the Amazon. These visual materials were developed by the Sarayaku People (Sarayaku People 2020) to facilitate the transmission of essential information and decision-making. Figure 9.2 displays two infographics from this intervention. The first part of the figure, in the Kichwa language, advises

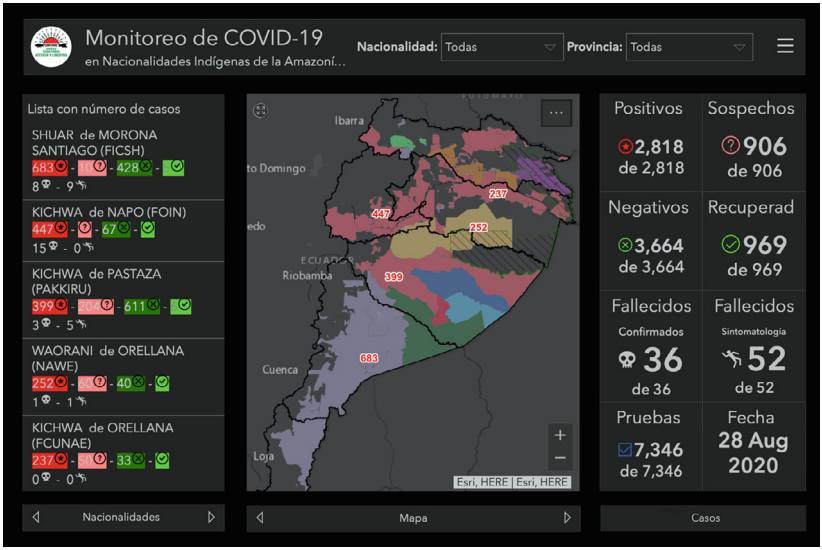

Fig. 9.1 Monitoring of COVID-19 by Indigenous nationalities of the Ecuadorian Amazon (*Source* CONFENIAE et al. [August 31, 2020]. https://confeniae.net/campana-covid-19/)

against sharing *pilche*s (containers made from a fruit of the pilche tree that are used to distribute and share local beverages like guayusa and chicha). The second part of the figure provides recommendations, also in Kichwa, for home remedies using plants available in the environment. These self-managed informational materials, rooted in the nationalities' contexts and languages, played a crucial role in facilitating informed decision-making on prevailing issues. These materials addressed the exclusionary nature of the national Covid prevention campaign, which initially overlooked experiences beyond the scope of the urban-mestizo population.

These two experiences of building own resources and strategies demonstrate how creative exercises based on participatory interventions can contribute to addressing practical problems within a community. In addition, they highlight the potential of research focused on broader design orientations to articulate practices for the development of critical, creative, and propositional tools that contribute to resilience actions and critical understanding of the local reality.

Fig. 9.2 Infographics for COVID-19 infection prevention in the Amazonian Indigenous communities (Kichwa): "Avoid drinking from the same bowl"; "Take medicinal plants" (*Source* Sarayaku People [2020]. https://sarayaku.org/multimedia/)

Participatory Design: Addressing Unequal Impacts of Crisis

The above underlines that, in the face of an emergency on a global scale, design reaches beyond its most recognized activities—those related to the development of equipment to prevent the spread of Covid-19—and is "a discipline that can quickly frame the problem, creatively shape ideas, and connect various fields of knowledge to offer viable proposals" (Rossi et al. 2020, p. 309), as well as shaping creative experiments that promote the well-being of students in higher education during the pandemic (van der Bijl-Brouwer and Price 2021). Research and design practice can contribute to providing, supporting, and making visible infrastructures for care, when—beyond the immediacy of designing objects or services for a project's duration—it focuses on collectively developing social relations through the design process (Light and Akama 2014). That is, it reflects and acts on the connection and interdependence between people, understanding the design process as a socio-technical exercise. In particular, the practical, social and political dimensions of what is known as participatory design could respond to the need to incorporate the realities and cultural contexts of students into the design of care resources, along with the inclusion of situated communicative structures. In times of crisis, participatory design can offer valuable participatory approaches that sensitize us to marginalized contexts (Noel and O'Neill 2018).

The beginnings of participatory design were driven by the Scandinavian labor movement of the 1970s. It is defined as a democratic process of social and technological design that seeks to redistribute power and improve the condition of workers (Muller and Kuhn 1993; Simonsen and Robertson 2012). Participatory design from the Global North traditionally responds to the needs of worker-citizens who are part of the state. In Latin America this experience of participatory design presents limitations, among others because in these contexts the collaborative process is commonly developed with subjects excluded from spaces of citizenship. Indeed, the global and parallel evolution of participatory practices and cultures from the Global South contrasts with the theorization of participation from the North, which embeds itself in the processes of constructing the welfare state to serve individuals who reach their potential as citizens; citizens who are already part of the state. Participatory concepts and practices rooted in Latin America, such as critical pedagogy, involve direct intervention with the oppressed during the process of their own organization, explicitly triggering transformative learning processes (Freire 2005). Similarly, in participatory action research, the researched communities also act as researchers, developing their own processes and resources to resist the reproduction of inequities (Fals-Borda and Rahman 1991). These concepts and historical experiences contribute to the theorization of participation, engaging in dialog with the ongoing development of a situated Latin American participatory design (see Reynolds-Cuéllar et al. 2022; Batista e Silva 2023). This design approach, which stems from the perspective of emancipation, aims to support individuals experiencing oppression in participating in citizenship processes, countering power structures reinforced by the state and hegemonic systems.

In connection with the above, our research design aligned with current debates on participatory design from the Global South (for example, Calderon Salazar and Huybrechts 2020; Gautam and Tatar 2020; Schultz et al. 2020) and studies that connect contemporary participatory design and its research practices with community emancipation processes (Del Gaudio et al. 2016); local knowledge systems (Charlotte Smith et al. 2020); processes that promote community activation and dialogs of knowledge in the field of intercultural education (Garcés 2020); and ethical and political commitments in the participatory practice of care (Light and Akama 2014). The research design also took into account reflections on how to revitalize the political agenda of participatory

design, focusing on its ability to develop socio-technical infrastructures with an inclusive global vision (Botero et al. 2019). Finally, we realized the need to link our process to contingent recommendations related to well-being during the pandemic, which emphasized (i) the importance of using participatory methodologies to promote the utilization of existing resources and capabilities when facing this challenge (Herrera 2020; Tsekleves et al. 2021); and (ii) the implementation of local interventions as one of the key responses for psychosocial support as a priority area in response to Covid-19 in South American countries (Antiporta and Bruni 2020). That is, we focused on developing a theoretical framework in which participatory design could offer a space where political possibilities and the challenges of designing *with* people are debated and reflected upon, articulating those practices concerned with the complexity of representation, the preservation of life, and complex processes of social change (Pinto et al. 2022).

All these background considerations led us to contemplate activities, products, and design processes as a means to support care communities where diverse realms of experience and knowledge can interact. Therefore, we directed our research towards creative experiments aimed at supporting the capacities and processes of all those involved, starting by asking ourselves: How can we support care networks, focusing on the experience of university students and the expansion of community responses through collectively developed design interventions?

Participatory Action Research Methodology

Diseñamos juntxs: redes de cuidado en tiempo de pandemia (Designing together: care networks in pandemic times) was a participatory design intervention developed over the course of a year in 2020–2021 (Pinto and Barriga-Abril 2021). The intervention was conceived as a collective process centered on the experience of students, enhanced through an extended design team (Botero 2013). By extending the design team, we sought to include students' local and experiential knowledge, enabling us to encourage participation, intervention, and action by the young people, and to expand the resilience capacity of existing student care networks, relying on experiences of subversion of a situation of marginalization. In this, we were guided by the methodological structure of participatory action research (Fals-Borda et al. 1992), generating critical pedagogy themes (Freire 2005), and experiences of participatory design from the

South (Calderon Salazar and Huybrechts 2020; Charlotte Smith et al. 2020; Del Gaudio et al. 2016; Garcés 2020), aligned with practices of data collection and analysis of Indigenous research that helped us avoid ideologies of othering (Chilisa 2012; Schneider and Kayseas 2018).

Although the process was based on the experience of the UEA and its students, in our quest to include complementary strategic alliances, we connected the research team with professors and design students from the Pontifical Catholic University of Ecuador (PUCE). Our extended design team was thus enlarged by 13 bachelor students majoring in tourism, biology and environment from the Amazon region (UEA students: Mayumi Aragón, Karen Eras, Carmen Guamo, Diego Granda, Esthela Gonzales, Slendy Morales, Tatiana Muenala, Allan Orellana, Mayra Paca, Jazmina Palacios, Allison Peñafiel, Liz Tánguila, Cristian Zumba) and 16 bachelor students majoring in design from the Andean region (PUCE students: Johann Akemi, Gabriel Argüello, Domenika Cadena, Aldahir Cautullin, Ricardo Chimarro, Galo Erazo, Monserrat Guillén, María José Larriva, Mateo Loza, Sofía Medina, Josué Pineda, Christina Revelo, Alexander Rueda, Allison Sánchez, Nicole Sotomayor, and Carlos Vilaña). The team was supported by the first author, design researcher (Aalto University, Finland; PUCE, Ecuador), the second author, design professor (PUCE, Ecuador), the third author, researcher and local Indigenous leader (Puyo, Ecuador), and the fourth author, project general director (Helsinki University, Finland), in addition to UEA professors and the Welfare Unit.

Participatory Design Intervention

The participatory design intervention focused on carrying out *interactive activities*, guided by a flexible and iterative methodology developed in three interrelated phases: (i) preparation of the care network, (ii) collaboration between students, and (iii) broadening of the process. In these three phases of continuous progress, the actors innovated as they contributed to the new knowledge of the extended design team, experimenting with the intervention and becoming involved at different times. We present this process below.

Preparation of the Care Network

The adaptation of the research to the conditions of Covid-19 social distancing and the requirements of the Amazon context guided us towards mainly using low-data messaging applications for synchronous and asynchronous communication, and as data collection tools. Through these tools, students directly shared their situation, feelings, and strengths with other students. In the first phase, the local researcher and design researcher formulated generating themes and proposed preliminary design interventions (Pinto and Machoa 2020). The generating themes were developed from data collected through situated analysis and thematic coding of semi-structured interviews with 22 students from three undergraduate programs in the Life Sciences Department at UEA (environment, tourism, and biology). This was the department with the highest number of enrolled students, which would later allowed us to reach more people with the activities that were developed. The interviews were developed in cooperation with the UEA's University Welfare Unit, in an attempt to give voice to the students and understand how media reports and university statistical data were reflected in everyday realities. Thus, the intervention proposals focused on well-being, given the vulnerability of the students shown in the data collection. It was imperative to consider the emotional and mental state of the students as a priority.

From the beginning, the proposed interventions sought to harness the skills of both the research team and the students as agents of the action. Consequently, we extended an invitation to the Amazonian students who had been interviewed to continue participating in the project. Thirteen students expressed interest and became integral members of the expanded design team. This led to the continuation of the intervention through two four-month workshops involving the students as co-researchers in the second and third phases.

Facilitating connections between students was a key element of our strategy. This meant that the responsibility for maturing the design process fell on young people who were still at the learning stage. With this recognition came an understanding of the importance of reframing design interventions not as perfect 'products' but within a situated participatory approach that fostered dialog among students—individuals who "are subjects of their own thinking, discussing their thoughts, their own worldview, manifested, implicitly or explicitly, in their suggestions and those of their peers" (Freire 2005, p. 158).

To establish the basis for creating a space of care, participation, and awareness within the team, we conducted a preliminary situated analysis. The themes generated were then consolidated into a set of thematic images, where each image included a textual quote extracted from an interview, a pictogram, and keywords related to problems that impacted the students around the pandemic, such as resistance to exclusion, presence of Covid, mobility, and pressure in class (Fig. 9.3, texts in English translated from Spanish originals). The set of images was conceived as devices to be mobilized digitally in the next phase, to generate a critical analysis of the current problem reality.

To conclude the first phase, we prepared a visual report titled *Graphic Report 001: Access to higher education in the Ecuadorian Amazon during the pandemic* (Pinto 2020). This report consisted of infographics that visually represented the initial technical report on the situation at UEA produced by the research team. The material served to visualize the information, providing communication, advocacy, and action tools related to the situation, and encouraging a reciprocal appropriation of the contents provided. These materials were shared within the university community,

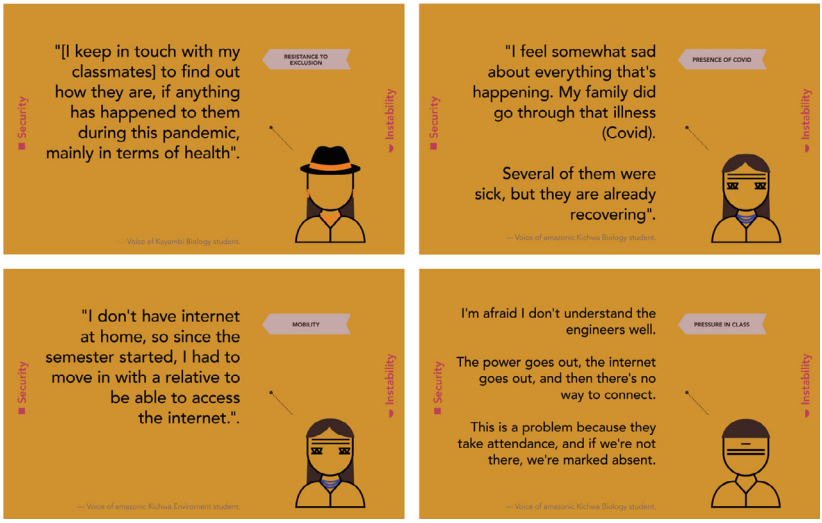

Fig. 9.3 Set of thematic images (*Source* UEA students project archive [2020])

disseminated on social networks, and featured in newsletters of social organizations advocating for the rights of Amazonian youth.

Collaboration Among Students

In the second phase, in Workshop 1, students from the Amazon and Andean regions collaborated to design virtual meeting spaces. These spaces were creatively crafted using available technologies, shared materials, and personal experiences. The design professor and researcher oriented the process towards workshops as a way for students to learn and support each other collectively, connecting through the design processes.

The first workshop took place as part of the New Media class at PUCE, where design students from the Andean region came together with UEA tourism, biology, and environment students from the Amazon region. The responses were largely positive, marking the beginning of interesting relationships and even friendships. At the start of these relationships, the set of thematic images served as didactic material, encouraging students to creatively report and discuss their own situations using photos and audio to 'show and tell'. The collection and analysis of these data informed the design solutions developed through the workshop.

While the students worked directly and independently through established relationships, support for the meetings by the extended design team was expressed in two ways. First, we created guidelines for the research, emphasizing community participation and focusing particularly on collecting culturally sensitive and contextually relevant information, continuously followed by group reflection. Second, we guided the participatory design process with human-centered methodologies, mobilizing expressions of empathy that could be developed through interactions with and through technologies, facing complex challenges (Benyon 2017). The students explored tools for understanding, specifying, designing, and evaluating, such as metaphor construction, storyboards, tours, think-aloud evaluations, and prototyping. These tools helped creating empathetic virtual meeting spaces for participation.

Following these guidelines and methodologies, the students formed groups and engaged in various *interactive activities*, exploring topics such as social isolation, resistance to exclusion, local knowledge, and alternative activities. The topics were organized into difficulties (e.g., not being able to meet with peers, loneliness) or strengths (e.g., knowledge about their territory, solidarity among students) that the students identified as

their own during the pandemic. These evaluations resulted in five types of activities during the first workshop: (1) virtual student festival; (2) system for watching movies together; (3) game to evoke university experiences; (4) safe space to reflect on exclusion; (5) home gardens group (Table 9.1).

The activities connected groups of young people in similar situations, significantly stimulating empathy and curiosity. During the collaborative design process, the young people established connections that created "a space for the voices and knowledge systems of the Other" (Chilisa 2012, p. 22) and, through this, a first approach to caring for others. In the implementation, where the interventions were shared with the entire UEA community for a week, the caring experience extended to 238 participants, allowing us to design virtual meeting spaces together, where the abilities of all participants supported recreational activities, companionship, and reflection.

Table 9.1 Types of interventions and topics

Activity	*Name*	*Topic*	*Description*
1. Virtual student festival	Unifest	Social isolation	Social media and virtual reality group where students connected through music, participating in musical activities not possible during isolation
2. System for watching movies together	Kimina	Social isolation	Social media group where students met others and watched movies together, strengthening social relationships
3. Game to evoke university experiences	cheUEAndo	Social isolation	Social media game that positively harnessed nostalgia by reactivating memories of pre-pandemic university life
4. Safe space to reflect on exclusion	Rompexclusión	Resistance to exclusion	Chat group and social media game where students created images representing exclusion and discussed them in a safe and empathetic space
5. Home gardens group	Taller de huertos Otala	Local knowledge and alternative activities	Chat group that guided the development of home gardens through infographic material and interactive activities

Expanding the Process

The design process created various opportunities for connection between the students. We further expanded these connections in a third phase by advancing Activity 5, the home gardens group, an initiative that evolved through a second and final workshop. The increased engagement and growing interest of the students in this particular activity prompted us to explore ways in which to extend its impact. Thus, the third phase unfolded through an agreement on pre-professional research internships involving students from PUCE and UEA.

In this professional collaborative space, the design researcher acted as a tutor, while the students assumed even greater responsibilities in the design research processes. This included autonomously planning the second workshop to continue the activity, proposing new guidelines to leverage the knowledge of all those involved, and preparing their own graphic reports used as tools to inform the extended design group. Consequently, Group 5 continued to innovate their *home gardens group* through infographic material and specialized activities. They began by evaluating the first workshop, identifying elements that supported acts of collectivization of care and the participation and interest of the students in their activity. Identifying these elements helped the students to critically reflect on their experience in the first workshop and plan meaningful future actions in the second workshop that could facilitate affective-relational connections among students, without overloading them. The first element they identified for closer examination was *Experiential changes on problems perceived by the students.* In this case, the generating theme expressed in the thematic image used by the group, 'pressure in class', was subverted by the students, who used it to stimulate self-management of daily pressure. Challenging the pressure in class, the students developed an alternative activity and generated interaction through dynamics based on their own studies. In particular, design students created powerful infographics based on Life Sciences knowledge shared by their peers in tourism, biology, and environment studies. Collaboratively, they creatively structured this knowledge in a series of community activities that facilitated connections with natural surroundings. These activities enabled them to engage with a broader community, learning together and accompanying each other at home during the quarantine.

The second element was the creation of virtual meeting spaces with simple technology. The students managed to make the activity accessible by proposing its execution through WhatsApp, an application widely used in the Amazonian socio-technical context. This choice enables asynchronous communication and is more cost-effective to access compared to other platforms, as, unlike others, it is included in local basic mobile phone plans. The guided interaction through WhatsApp allows knowledge and experiences to be easily shared: activities proposed in the virtual chat could facilely be carried out at home, which was not only essential, given the lockdown conditions, but also encouraged connection with the natural environment. Meanwhile, interacting around common activities nurtured conversations that motivated the affective-relational connections of the participants, expressed in photos, videos, audio, and messages. For example, participants acknowledged the group as a strong family, sharing messages of encouragement and support like *Hola familia guerrera!* (Hello warrior family!).

In the second workshop, the activities were adapted to the participants' knowledge and the elements identified, expanding their competencies and deepening connections. For example, the development of infographics of more specialized activities related to types of soil, native plants, or flora associated with local visitor sites, either in response to participants' suggestions or by inviting experts, aimed to facilitate the transfer of knowledge in biology, tourism, and environment science. The activities were also conceived as flexible exercises that continued to rely on simple technology. Such flexibility took into account connectivity issues in the region and the pressure in class, allowing responses to develop at everyone's own pace. This generated trust and relaxation in the group, as asynchronous exchanges unfolded through shared stories, knowledge, activities, and messages (Fig. 9.4, texts in English translated from originals in Spanish). As the pandemic subsided from its peak, our resilience activities and iterations concluded with the learnings gained from these experiences.

Reflection

Our reflections on the experience, including questioning its limitations, take the form of two specific learnings. The questions we propose after each learning can guide future interventions in the framework of similar contexts.

Fig. 9.4 Extract from the graphic report of Otala home gardens (*Source* UEA-PUCE students [2020]. Project archive)

First, *care networks should be meant as forms of redistribution*. In an emergency situation, networking actions are mobilized in the first instance to confront difficulties in the community, helping to alleviate individual suffering. Learning from our practice of the extension of the design team, we propose a constant redistribution of knowledge and power that allows the development of agency and strengths in the participants (Del Gaudio et al. 2016; Calderon Salazar and Huybrechts 2020; Gautam and Tatar 2020). As an organizing principle, interculturality helped us think and create conditions for a different distribution of power, in terms of both knowledge and existence (Walsh 2009). For example, in the second phase, as an extended design team, we created didactic guidelines for student encounters facilitated by researcher/teacher-student interactions; however, the students themselves took charge of managing and maintaining the exchange and learning spaces (Garcés 2020). This involved virtual meetings designed to learn about each other's situation through self-conducted interviews, mechanisms for handling asynchronous responses, and the use of graphic resources to communicate knowledge and processes.

The creative-investigative process was transferred to the students, who initially seemed insecure and shy. However, by the second phase, they confidently leveraged the knowledge transferred from researcher/teacher–students and student–student interactions to independently apply them to their activities. More importantly, this form of knowledge and power redistribution aimed at supporting care networks helps us to see the world from others' perspectives, and to understand all of us as vulnerable beings, claiming that vulnerability through finding ourselves in a situation of explicit interdependence, where we think and do with another (de la Bellacasa 2012). Thus, the design of activities was conducted in community, using the design process as a channel that helped redistribute burdens and knowledge, and to structure social relationships, allowing a broader impact of the care process through joint work for the benefit of the extended community.

Briefly, redistribution involves transfer from those who have more to those who have less. This concept and the action of redistribution underlie participatory design that is conceived and implemented from the Global South, as well as reflections on the revitalization of its political agenda. However, it is necessary to revisit and make it explicit in interventions that aim to expand participation as a means to contribute to acts of resistance

or minimization of suffering. Critical and active redistribution in participatory design, as well as in participatory action research processes, leads us to question the management of our own responsibilities in two aspects of our interactions with others. First, within the extended design team and how it collectively shares participation in knowledge, production, and burdens: How can the network facilitate the transfer of time, knowledge, and resources to those most impacted? Second, in action, embedded in a historical moment as an emergent response to structural marginalization conditions: How can we manage responsibilities for emergent care without absorbing and invisibilizing historical conditions of exclusion, inequality, and injustice supported by the abandonment of the national and global state?

The second specific learning is that *activities and processes should not reinforce asymmetric relationships*. In our practice, it was important to address existing inequalities in a timely and practical manner. Designing relationships can shape experiences, activities, and processes to subvert or avoid reinforcing situations of marginalization. In this sense, involving two groups of students from different worlds required the stablishment of sustainable and reciprocal relationships, that were rooted in infrastructurnig care, rather than fostering instrumental exchanges.

To achieve this, learning from the interventions of Indigenous organizations (see examples, CONFENIAE et al. 2020; Sarayaku People 2020), we mobilized resources and employed our own strategies with a focus on impacts throughout the community. For instance, on the one hand, we established a contribution to internet charges for those in need, to ensure that students were gathering and sharing data under similar technical conditions. On the other hand, to avoid starting from a position of deficit (Chilisa 2012), while working partly within the technologically hybrid Amazonian territory, we oriented pedagogical and motivational efforts towards the creative use of available resources. This was reflected, for example, in Group 4, who developed a safe space to talk about exclusion, in which through WhatsApp the students could play a game that allowed them to discuss experiences of exclusion through images created and shared by them.

We note that once practical inequalities are managed, others can be addressed creatively, as per the reflections on care policies in participatory design by Light and Akama (2014, p. 8): "The intervention is openly structured, and the result is a collaborative effort in a particular direction that has not been determined by the designer." In our case, this

was achieved in a first dimension when the creative-research process was transferred to the students. The process was geared towards supporting care networks by focusing and expanding responses to provide relief and support among more students. However, it is collectively that they uncover ways to channel skills, motivation, and responsibilities, drawing from a diverse array of experiences and abilities.

In this exercise of collective appropriation of their situation, they found diverse ways to respond to their environments and realities. This was evident in the themes that guided their activities: not being able to meet with their classmates; loneliness; knowledge about their territory; and solidarity among students. However, in some cases during the development of the theme through the activity, the environment and reality was not fully understood and included by all the students involved. For example, in the case of one group, the theme "not being able to meet with their classmates" was explored and appropriated by everyone; however, the platform and schedules on which part of the activity took place did not work well for the students from the Amazonian region. This situation limited access and its potential expansion, although participants reported that they enjoyed engaging in it, because "it allowed them to gather during quarantine and share something together".

This leads us to inquire, considering that the research-intervention process was new for students, and they were doing it while facing a stressful situation: How can we better infrastructure care in a more equitable manner without losing the freedom of creation among students with diverse social, cultural, and professional backgrounds in these processes?

Conclusion

In conclusion, we can highlight that the intervention format is needed as a response to the dwindling motivation and the reduction of social and economic resources caused by emergency situations, which place students belonging to historically marginalized groups at a disadvantage. We also observe that a comprehensive participatory approach enables the amplification of voices and experiences from students in diverse worlds such as the Amazonian, Andean, Indigenous, and mestizo, offering enhanced support to care networks as intercultural spaces. Here, young people can reflect on their strengths and the challenges they are encountering.

In the research and action process, and specifically through participatory design, creating conditions for an extended design group centered on

students is a strategy that allows for serious consideration of redistribution and the management of asymmetric relationships. It also supports care policies in the intervention, within and beyond the expanded experience and community. Expanding the care network allowed for the promotion of transdisciplinary exchange, improved reciprocity in the sharing of knowledge, and heightened curiosity about each other's worlds. Yet, it is essential to note that this strategy requires significant attention to mobilizing and maintaining institutional resources and alliances through collaboration. Collectively, this iterative and participatory process created an emerging space for students to design together, enabling them to build connections and share knowledge in complex contexts.

However, we acknowledge that design interventions alone are not sufficient to address intricate challenges such as promoting well-being in education during times of a pandemic (van der Bijl-Brouwer and Price 2021). It is important to note that resilience in this context serves as a response against marginalization, enabling the collective to navigate and adapt to repressive structures. Paradoxically, care networks can also obscure burdens, as marginalized communities facing inequalities communally absorb work, care, and tensions. This can create the impression that the inequalities needing to be addressed are not as so imperative. According to González Celis and González Llama (2020), while it is important to have networks that provide support to the sectors forgotten by the state in times of pandemic, it is crucial to demand and advocate for a systemic response to these problems. While organization is fundamental, there are people and stages it cannot reach, especially in relation to technological, political, and economic resources and services. In this regard, structural marginalization is not resolved through student activities. The proposed interventions aimed to counteract the effects of student marginalization by understanding them as agents of change, complementing institutional interventions, Indigenous organizations, and the students themselves.

Our efforts to support existing care networks in an emergency situation joined those of others involved in mobilizing and maintaining institutional resources and alliances. These endeavors required significant strategizing and work, but they also encountered limitations. For example, we remain concerned about the young people who have felt the effects of marginalization even more strongly during the pandemic: those who had minimal or no access to devices or the internet, and those we know have dropped out of university and remained out of reach.

References

República del Ecuador (2017). *Plan Nacional de Desarrollo 2017–2021 Toda una Vida*, September 22, 2017. https://www.planificacion.gob.ec/wp-content/uploads/downloads/2017/11/PLAN-NACIONAL-DE-DESARROLLO-2017-2021.compressed.pdf

Antiporta, D. A. and Bruni, A. (2020). Emerging Mental Health Challenges, Strategies, and Opportunities in the Context of the COVID-19 Pandemic: Perspectives from South American Decision-Makers. *Pan American Journal of Public Health, 44*, 1. https://doi.org/10.26633/RPSP.2020.154.

Batista e Silva, Sâmia. (2023). Design In and From the Periphery: Building a Praxis of Resistance Through Collective Investigations. *Revista Diseña* (22). https://doi.org/10.7764/disena.22.Article.3.

Benyon, D. (2017). *Designing User Experience* (Fourth edition). London: Pearson Education Limited.

Botero, A. (2013). *Expanding Design Space(s): Design in Communal Endeavors*. Helsinki: Aalto University School of Arts, Design and Architecture, Department of Media.

Botero, A., Karasti, H., Saad-Sulonen, J., Geirbo, H. C., Baker, K., Parmiggiani, E. and Marttila, S. (2019). *Drawing Together: Infrastructuring and Politics for Participatory Design: A Visual Collection of Cases, Issues, Questions, and Relevant Literature*. https://doi.org/10.13140/RG.2.2.32382.43849.

Calderon Salazar, P. and Huybrechts, L. (2020). PD Otherwise Will Be Pluriversal (Or It Won't Be). In Del Gaudio, C., Parra-Agudelo, L., Clarke, R. E., Saad-Sulonen, J., Botero, A., Londoño, F. C. and Escandon, P. (eds.), *Proceedings of the 16th Participatory Design Conference 2020-Participation(s) Otherwise, 1*, 107115. Association for Computing Machinery. https://doi.org/10.1145/3385010.3385027.

Charlotte Smith, R., Winschiers-Theophilus, H., Paula Kambunga, A. and Krishnamurthy, S. (2020). Decolonizing Participatory Design: Memory Making in Namibia. In *Proceedings of the 16th Participatory Design Conference 2020-Participation(s) Otherwise* (Vol. 1, pp. 96–106). Association for Computing Machinery. https://doi.org/10.1145/3385010.3385021.

Chilisa, B. (2012). *Indigenous Research Methodologies*. London: Sage.

CONFENIAE, Amazon Watch, & Universidad San Francisco de Quito. (2020). MONITOREO COVID19 – CONFENIAE [CONFENAIE]. *Monitoreo del COVID-19 en las nacionalidades de la Amazonía ecuatoriana*. https://confeniae.net/campana-covid-19/.

de la Bellacasa, M. P. (2012). 'Nothing Comes Without Its World': Thinking with Care. *The Sociological Review, 60* (2), 197–216. https://doi.org/10.1111/j.1467-954X.2012.02070.x.

Del Gaudio, C., Franzato, C. and de Oliveira, A. (2016). Sharing Design Agency with Local Partners in Participatory Design. *International Journal of Design, 10* (1). http:// bit.ly/3JJVYJ2.

Fals-Borda, O. and Rahman, M. A. (eds.). (1991). *Action and Knowledge: Breaking the Monopoly with Participatory Action-Research*. Practical Action Publishing. https://doi.org/10.3362/9781780444239.

Fals-Borda, O., Rahman, A., Lewin, K., Stavenhagen, R., Zamosc, L. and Kemmis, S. (1992). *La investigacion-accion participativa: inicios y desarrollos*. Maria Cristina Salazar (eds.). Madrid: Editorial Popular.

Freire, P. (2005). *Pedagogía del oprimido*. Siglo Veintiuno.

Garcés, A. L. (2020). Revitalización de saberes ancestrales y diseño participativo. Co–diseño de un juego comunitario. *Participación(es) Otras/Participation(s) Otherwise, 3*.

Gautam, A. and Tatar, D. (2020). P for Political: Participation Without Agency Is Not Enough. In: Del Gaudio, C., Parra-Agudelo, L., Clarke, R. E., Saad-Sulonen, J., Botero, A., Londoño, F. C. and Escandon, P. (eds.) *Proceedings of the 16th Participatory Design Conference 2020-Participation(s) Otherwise* (Vol. 2, pp. 64–68). Association for Computing Machinery. https://doi.org/10.1145/3384772.3385142

González Celis, I. and González Llama, A. (2020). Donde se sostiene la vida: Cuidados, cuerpo(s) y comunidad en tiempos de pandemia. *Inguruak. Revista Vasca de Sociología y Ciencia Política, 69*. https://doi.org/10.18543/inguruak-69-2020-art03

Haraway, D. (1988). Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. *Feminist Studies, 14* (3), 575. https://doi.org/10.2307/3178066.

Herrera, M. V. (WDC). (2020). Intervenciones recomendadas en Salud Mental y Apoyo Psicosocial (SMAPS) durante la pandemia. *Organización Panamericana de la Salud, 17*.

Light, A. and Akama, Y. (2014, October). *Structuring Future Social Relations: The Politics of Care in Participatory Practice*. PDC 2014 Conference Proceedings (Vol. 1). https://doi.org/10.1145/2661435.2661438

López, L. E. (Ed.). (2009). *Interculturalidad, educación y ciudadanía: Perspectivas latinoamericanas* (1st ed.). La Paz: Funproeib Andes.

Minoia, P. (2020, April 24). Covid-19: Consecuencias En Pastaza, Ecuador, y Derecho a La Educación Superior. *Eco-Cultural Pluralism in Ecuadorian Amazonia* (blog). https://blogs.helsinki.fi/ecocultures-ecuador/2020/04/24/covid-19-y-sus-consecuencias-en-pastaza-ecuador/.

Muller, M. J. and Kuhn, S. (1993). Participatory Design. *Communications of the ACM, 36* (6), 24–28. https://doi.org/10.1145/153571.255960.

Noel, L.-A. and O'Neill, M. M. (2018). Puerto Rico 2054: Design Pedagogy in a Time of Crisis. In *Proceedings of DRS 2018 International Conference: Catalyst 2* (Vol. 2, pp. 613–628). Limerick, Ireland: Design Research Society.

Pérez Orozco, A. (2006). Amenaza tormenta: La crisis de los cuidados y la reorganización del sistema económico. *Revista de Economía Crítica*, *5*, 7–37. https://revistaeconomiacritica.org/index.php/rec/article/view/388.

Pérez Orozco, A. and López Gil, S. (2011). *Desigualdades a flor de piel: Cadenas globales de cuidados; concreciones en el empleo de hogar y políticas públicas*. New York: ONU Mujeres.

Pinto, N. (2020). *Informe gráfico #001—Acceso a educación superior en la Amazonía ecuatoriana durante la pandemia—PEEAE (Pluralismo Eco-cultural y Educación en la Amazonía Ecuatoriana)*. UEA & UH. https://blogs.helsinki.fi/ecocultures-ecuador/files/2020/07/20.07.2020_Informe Gráfico_UEAPandemia-002-1.pdf.

Pinto, N. and Barriga-Abril, X. (2021). Design Among Students in Times of COVID: Participatory Interventions to Support Care Networks in the Amazon. In *Arts Imagining Communities to Come*. Cumulus Guayaquil.

Pinto, N. and Machoa, K. (2020, July 22). Pandemia y derechos de inclusión educativa: Intervenciones de diseño participativo frente a la marginalidad estructural y debilidades infraestructurales [Project website]. *Eco-cultural pluralism in Ecuadorian Amazonia*. https://blogs.helsinki.fi/ecocultures-ecuador/2020/07/22/pandemia-y-derechos-de-inclusion-educativa-intervenciones-de-diseno-participativo-frente-a-la-marginalidad-estructural-y-debilidades-infraestructurales/.

Pinto, N., Nango, E., Piaguaje, E., Guerrero, S., Yumbo, S., Timias, E., Mashian, J., Santi, R., Nihua, N., Wampash, Y. and Aguinda, F. (2021, October). Emergencia de educación en la Amazonía: Universitarios indígenas resisten [Education Emergency in the Amazon: Indigenous University Students Resist]. *La Voz de la Confenia*.

Pinto, N., Vertiz, B. and Botero, A. (2022). Resistance, Social Reproduction and Emerging Commitments for Collaborative Design from the Margins. DRS Digital Library. https://dl.designresearchsociety.org/cgi/viewcontent.cgi?article=3025&context=drs-conference-papers.

Reynolds-Cuéllar, P., Grisales, C., Wong-Villacrés, M., Serpa, B., Iñaki Goñi, J. and Lemus, O. A. (2022). Reviews Gone South: A Subversive Experiment on Participatory Design Canons: Dedicated to the Memory of Oscar A. Lemus. In *PDC '22: Proceedings of the Participatory Design Conference 2022* (Vol. 1, pp. 206–217). New York: Association for Computing Machinery.

Rossi, E., Di Nicolantonio, M., Ceschin, F., Mincolelli, G., Santos, A., Kohtala, C., Jacques, E., Cipolla, C. and Manzini, E. (2020). Design Contributions for the COVID-19 Global Emergency (Part 1): Empirical Approaches and First

Solutions. *Strategic Design Research Journal, 13*, 294–311. https://doi.org/10.4013/sdrj.2020.133.01.

Salcedo, V., Quezada, C., Novillo, E., Varela, G. D., Núñez, L. and Viteri, C. V. (2017). University Student Welfare in Ecuador: Case Student Welfare Units in the Universities of the Province of El Oro. *Espacios Magazine, 38* (30). https://www.revistaespacios.com/a17v38n30/17383017.html

Sarayaku People. (2020). Infographics for Prevention of Coronavirus in Indigenous Communities of the Amazon. *Original Kichwa People of Sarayaku*. https://sarayaku.org/multimedia/

Schneider, B. and Kayseas, B. (2018). Indigenous Qualitative Research. In Cassell, C., Cunliffe, A. and Grandy, G. (eds.) *The SAGE Handbook of Qualitative Business and Management Research Methods: History and Traditions* (pp. 154–172). London: SAGE Publications Ltd. https://doi.org/10.4135/9781526430212.n10.

Schultz, E., Garcia, L. S., Fernandes, L. A., Paixão, M. R., Kawasaki, F. and Pereira, R. (2020). Cultivating Creative Coexistence(s): Towards a Critical Education for Creativity Praxis to Construct Fairer Human Coexistences. In Del Gaudio, C., Parra-Agudelo, L., Clarke, R. E., Saad-Sulonen, J., Botero, A., Londoño, F. C. and Escandon, P. (eds.) *Proceedings of the 16th Participatory Design Conference 2020-Participation(s) Otherwise* (Vol. 1, pp. 33–43). New York: Association for Computing Machinery. https://doi.org/10.1145/3385010.3385019.

Secretaría Técnica Planifica Ecuador. (2020). Socioeconomic Assessment COVID-19 PDNA Ecuador. República del Ecuador.

Simonsen, J. and Robertson, T. (eds.). (2012). *Routledge International Handbook of Participatory Design* (ed.). Routledge. https://doi.org/10.4324/9780203108543

Tsekleves, E., Ghani, F., Ebikeme, C., Libanio, de S., Thomas, Y., Yongsi, B. N. and Hermansen, P. (2021). *1 Design Research Society Special Interest Group on Global Health, 57*.

UEA. (2021). Unidad de Bienestar Universitario (UBU) [Asistencia Estudiantil]. *Universidad Estatal Amazónica*. https://www.uea.edu.ec/?page_id=2366.

van der Bijl-Brouwer, M. and Price, R. (2021). *An Adaptive and Strategic Human-Centred Design Approach to Shaping Pandemic Design Education That Promotes Wellbeing*. https://doi.org/10.4013/sdrj.2020.141.XX.

Veintie, T., Hohenthal, J., Betancourt Machoa, K. and Sirén, A. (2022). The (Im)possibilities of Education in Amazonia: Assessing the Resilience of Intercultural Bilingual Education in the Midst of Multiple Crises. *Diaspora, Indigenous, and Minority Education, 16* (4), 259–272.

Walsh, C. (2009). Interculturality, Coloniality and Education. *Journal of Education and Pedagogy, 19* (48), 25–35.

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R. Arias-Gutiérrez and P. Minoia (eds.), *Plurinationality and epistemic justice*, EADI Global Development Series,
https://doi.org/10.1007/978-3-031-58860-0