

## Article

# Assessing Indigenous Community Radio as Two-Way Communications Infrastructure: Communal Engagement and Political Mobilization in Ecuador

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**Abstract:** Because Indigenous peoples face unique challenges to their autonomy and lifeways from dominant media influences, Indigenous radio has been used to facilitate intra-community engagement among these groups. A small but long-standing literature reveals both strengths and vulnerabilities of Indigenous radio, though the rapidly changing communications landscape suggests new possibilities for these media sources. Our research was a community–academic collaboration that employed exploratory and mixed (survey, interview, and observational) methods across two Indigenous communities in the Central and Southern Amazon of Ecuador. The Indigenous radio station, *La Voz de la CONFENIAE* (Confederación de las Nacionalidades Indígenas de la Amazonía Ecuatoriana), sought to perform an impact assessment that would measure both the character and extent of the impact of radio programming with sensitivity to the priorities of listeners as to the purpose, function, and appropriate impact metrics for an Indigenous radio station. A total of 92 surveys and 30 interviews across two communities were conducted in July and August of 2022. Our findings reveal (a) the informational function of this radio for the Indigenous communities in its listening reach; (b) that radio programming conveys family, community, and cultural knowledge bi-directionally both from and to its listening audience; and (c) that members of the audience were, in turn, prompted to action and engagement. In our discussion, we identify opportunities to improve the assessment of community-owned radio as a bidirectional resource for communities. Our work also advances a model of self-determined and stakeholder-driven evaluation for Indigenous community radio, with particular attention to the material (e.g., behavioral) impacts of radio messages and potential for radio to support communal and collective engagements desired by the communities it serves.

**Keywords:** bi-directional communications; community radio; indigenous peoples; stakeholder-driven evaluation; Ecuadorian Amazon



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## 1. Introduction

To bolster information flows, Indigenous peoples in many parts of the world have employed community-controlled media formats to enhance their communications and visibility. Radio's benefits have been touted for Indigenous communities living in the rural and remote settings of their historic homelands, where there is greater opportunity to maintain communal interactions and priorities but for which distance from important legal, policing, medical, and informational infrastructures creates obvious vulnerabilities. Remote Indigenous communities are often absent from or invisible within the statistics collected by state offices, making them less likely to be well represented in democratic or majoritarian political processes or to receive vital support during crises like the global COVID-19 pandemic [1–7].

Because Indigenous peoples face unique challenges to retain their autonomy and lifeways from dominant society's media influence, communications infrastructure projects have grown to facilitate intra-community engagement among these groups, sometimes in ways that reach beyond aural performance alone to "reinvigorate family spaces" where radio is heard [8,9]. Indigenous radio allows for non-industrial, anti-corporate, and alternative messaging [10–12] that can provide a "decolonial" infrastructure [13–15], promoting their languages and music [8,16–18], unique knowledge of environment and sustainable living [3,19], and can allow programmers, storytellers, and singers to enact Indigenous lifeways over radio waves [8].

### 1.1. A Brief Political Overview of Indigenous Peoples in Ecuador

Roughly one-third of Ecuador's population is Indigenous, a population that tends to self-identify as nations or peoples rather than as a generalized ethnicity [10,20,21]. Historically, it was the dynamic relationships of extended family (allyu) and local to regional alliances that contextualized life in these communities [22–24]. Leadership and alliances were adapted to the shifting demands of the environment, as they continued to do in more recent periods of colonization and today's neocolonial and corporate global encroachment [25–28]. These collective alliances, or federations of multiple Indigenous nationalities, are increasingly visible on the national and international stage, such as the Confederación de Nacionalidades Indígenas del Ecuador (Confederation of Indigenous Nationalities of Ecuador, or CONAIE). They utilize both grassroots and mass media strategies to invigorate or revitalize languages and cultures [17] and to mobilize Indigenous people for political action [29]. Exemplary of the growing influence of these federations and the political mobilizations they can foment are the 2008 passage of an Ecuadorian constitution granting distinctive rights to nature and Indigenous peoples [30] and recent major reforms to the Organic Law of Communications, which returned fundamental protections to speech and protected 34% of frequencies for community media [31]. And while the democratizing effect of these federations is positive relative to the neocolonial harms of corporate extractivism in Ecuador, grassroots and local Indigenous perspectives continue to resist marginalization and homogenization by any source [28,29,32].

Well established by the close of the 20th century, Indigenous radio is a means of activism, cultural survival, and information sovereignty [33–35]. Yet the development literature, while advanced in its metricization of agricultural, economic, and biomedical interventions [36,37] is less robust in its attention to key Indigenous priorities such as consensus (non-majoritarian) decision-making and horizontal solidarity, or to collaborative models of research with these communities [38–41]. The communications field remedies some of this gap by conveying the varied forms of Indigenous connectivity [5,42–46]. Our research advances models of self-determined development and collaborative community–academic partnership to evaluate communications infrastructure—infrastructure that historically served to exploit and marginalize Indigenous needs [47–49] but is increasingly poised to promote Indigenous autonomy and cultural preservation [31].

### 1.2. Indigenous Radio as Two-Way Communications Infrastructure

With few exceptions, the utility and popularity of radio for improving communications across rural and remote communities is well established [50–54]. Yet, little empirical evidence exists on the impact of these media on traditional knowledge, communal priorities, and collective decision-making strategies in the communities they serve [55,56]. Programs in economic development have embraced metrics of economic success that perpetuate assumptions about the objectivity of numerical data [57–59], thereby instantiating capitalist and individualist ideals in ways that amount to "acoustic colonialism" [33]. It is still rare that, for example, rituals of harmonization [38], multimodal chronotypes [8], or horizontal knowledge co-production [40] are captured in empirical ways.

Twenty-first century development agendas and metrics must adjust to the substantive ideological shift in international law of the past 50 years<sup>1</sup>. Neglected communications

infrastructures create several new challenges for Indigenous audiences which, after centuries of colonial marginalization, are often (a) poorly informed and ill-equipped to acquire information about changes happening among and to their own members; (b) unable to communicate horizontally or reflect collectively about such change [60]; (c) un- or under-recognized in majoritarian politics due to the scale of capitalist, corporate, and governmental influence [22,46,61–63]; (d) preyed upon by corporate development strategies veiled as humanitarian efforts [64–66]; or (e) vulnerable to the atomized and individualizing and representational political tropes that explicitly counter core Indigenous values, including communalism, local relational obligations, and environmental symbiosis [62,66,67]. Yet, despite these challenges, Indigenous radio remains a critical resource for “creative expression of identity, self-reflection, political empowerment, cultural transmission, and the preservation of traditional knowledge” [44].

Ecuador’s Indigenous peoples have relied upon radio and social media to expand their access to information and to reach across the Amazon and state boundaries for both cultural and political purposes. For example, during widespread strikes in October 2019 and June 2022, community media supported multi-voice dialogue, planning of gatherings, and messaging from leaders to both inform and influence collective awareness [68,69]. Mobilization of thousands of Indigenous people through these media promotes a more heterogeneous dialogue of ideas. Yet, as Cárcamo-Huechante [33] and others have argued, the public media environment is nearly saturated with the influence of conglomerate and corporate interests, with deep and sophisticated systems of funding, design, and impact to influence listeners and promote trends in belief and action.

To support collective and collaborative processes desired by many Indigenous communities [70–74], new media formats may have a role in facilitating debates over community priorities and values, the development of consensus, the (re)vitalization of language, or the very enactment of cultural soundwork [8,9,22]. Radio should therefore be evaluated not as simply a one-way information delivery mechanism but for its potential as a “connective medium” that can establish “affective, linguistic, cultural, and political ties among [Indigenous people] living in urban centers, rural areas, and locations far from [their] homeland” [33].

Understanding the cultural dynamics and efficacy of radio as a tool for Indigenous communications is critical to their self-determination and basic informational equity. The politics of information flows, including diverse ideologies surrounding the adoption of radio technology, have been referred to as the “poetics of radio” [75]. While radio is relatively inexpensive, its content must be prepared, curated in ways that are locally meaningful, and adjusted to community needs and resources [55]. It can also run asynchronously through repeats, podcasts, downloads, and streaming services [76]. These traits make radio a malleable tool but nevertheless a limited connective medium in certain ways; ensuring that local stakeholders, Indigenous leaders, and communities engage with this communications platform in culturally consistent and empowering ways [77–79] will require alternative measures of success.

### *1.3. Analytical Framework for Assessing Indigenous Community Radio Impact*

Historically, empirical assessments of radio impact have been made through listener satisfaction and engagement surveys [51,53,54,73,80]. Recent improvements on these strategies take into account the diversity of reasons and ways for listening to the radio, such as Krause’s Radio Engagement Continuum Model [81], which assesses listener engagement on both a passive-active listening continuum and a general-specific timing continuum. Krause’s model addresses both frequency and timing of listening practices as well as attentiveness and purpose for listening. According to the model, while any given listening practice may have multiple motivations and outcomes, the two axes promote a conceptual understanding of the overlapping impacts and intents of listener behaviors. This model therefore improves on less complex studies of radio listener satisfaction, but it still offers

very little in terms of assessing the aesthetic impact or community engagement with an impact (back) on the radio station or programming.

Our study employed a stakeholder-driven evaluative model for Indigenous community radio by combining anthropological and communications perspectives in a pilot impact assessment of *La Voz de la CONFENIAE* radio station. We used both survey and exploratory interview methods to explore two research questions: (i) what is the perceived utility and impacts of radio programs among the rural Indigenous community of Unión Base (Kichwa-speaking, current listeners); and (ii) what are the reactions and first impressions of radio programs among a new audience (not yet receiving the radio's signal) in the Indigenous community of Yukutais (Shuar-speaking), both in the central and southern part of the Amazonian Ecuadorian region. Research, which involved collaborative design and conduct of all methods with community members, was led by the authors in consultation with the Council of CONFENIAE, which includes 8 leaders of different groups representing the 11 Indigenous nationalities living in the Amazonian Ecuadorian region. Decisions in local organizations are adopted collectively; thus, the project was proposed to the council and accepted by its members. CONFENIAE's President during 2020–2023, Marlon Vargas, explained that the work of the radio must be strengthened and that the proposed work to understand listener perspectives is useful to accomplish the station's objective.

Our analytical framework is, therefore, informed partly by traditional metrics of program evaluation and partly by subaltern metrics of the global Indigenous movement [4,20,58] and Indigenous calls for the decolonization of research [82–84]. Historically, communications development literature treated without question the capitalist or democratic change agenda, despite ample criticism of such narrow views [55,85,86]. In recent years, a number of analytical perspectives have been proposed that contest these views, including those that question the role and impact of the state in community (and Indigenous) radio [64,87,88]. A growing body of ethnographic and Indigenous literature reveals how Indigenous community-owned radio stations provide more than information delivery to their communities; they can facilitate two-way information sharing that is anchored in community values [8,34,75]. In so doing, radio programming changes the context of transmitted, local-language narratives from the close familial settings to broader audiences. Thus, while radio introduces local voices and needs, a way to denounce problems and threats, and a channel to convey and bolster aspects of the communitarian way of life [76], the media itself remains only a tool for Indigenous people, who must remain cautious stewards of these stations and their content. Finally, Belotti and Siales [89] describe community radio as a way of enacting communalism by collaboratively constructing a community media outlet and airing community-created content. Such mechanisms of communalism<sup>2</sup> are particularly relevant for Indigenous radio, yet vulnerable to cooperation as information and ideals from external sources that are so dominant in the media. Indeed, any failure in development science to account for this priority is itself part of that cooperation and erasure. We therefore conducted this impact assessment to better understand how Indigenous radio serves information flows, creates space for voices that are local and which may contest dominant culture, and provides bi-directional communications support to communities for individual and communal purposes.

## 2. Materials and Methods

### 2.1. Study Site and Context

This study was conducted in two Indigenous communities in the catchment area served by CONFENIAE: Unión Base in the province of Pastaza in the Central Amazon and Yukutais in the province of Morona Santiago in the Southern Amazon, both being rural communities in the Ecuadorian Amazon (see Figure 1).

Radio programming such as *La Voz de la CONFENIAE* offers news and public health announcements, dispersing both the flow and control of information. *La Voz* does this through broadcasting radio programs in Spanish and in the local languages with contents adapted to the communities' realities, such as narratives of women and youth; news with

relevant information of the assemblies and congresses of the confederations; updated news regarding the political moment of the country and the region; health information, such as infection rates and advisories during the COVID-19 pandemic; and others.



**Figure 1.** A map of the study site.

## 2.2. Subjects and Sampling

All Indigenous residents in the Unión Base listening area were eligible to complete the survey. From the pool of people who had listened to a *La Voz* program, either via radio in Unión Base or via our playing of a pre-recorded broadcast in Yukuteis (see below), we identified 15 adult volunteers in each community for brief (20-min) interviews on the topics of radio program content, its meaning, and its value in their lives. In each community, a sample stratified by gender was selected by the community member/native research assistant for their ability to understand the research objectives and their rights as a human subject (individual consent), community support for their engagement (collective consent), and their willingness to engage via narrative [90].

## 2.3. Instruments and Procedures

Following the methodology described by Yahaya and Badiri [54], participants responded to 12 statements about the value of the radio programs on a 5-point Likert scale, yielding a maximum score of 60 (see Table 1). The survey was translated to Spanish, Kichwa, and Shuar, then pre-tested and revised with two native speakers of each language for clarity. Surveys were then administered orally by research assistants in locations around Unión Base, primarily outside of participants' homes, with survey responses recorded on tablets using the Qualtrics app [91]. Interviews were conducted in Spanish, Kichwa, or Shuar by the PIs or trained research assistants fluent in each language and Spanish. Interviews were audio-recorded, later transcribed, and systematically coded for analysis. All those who completed interviews provided individual consent (in addition to the community invitation secured before recruitment began).

A sample of 15 was interviewed in each of Unión Base, the station's location, and Yukuteis, where CONFENIAE's radio signal does not reach. In Yukuteis, following the town hall forum to review the project and answer questions, we played a pre-recorded radio broadcast of *La Voz* weekly news recap program for a large group ( $n =$  approximately 40) seated in a central area of the community. We also distributed five small USB radios to allow additional Yukuteis community members who wished to listen to a recorded program in a private setting.

**Table 1.** Instruments: survey and interview.

<b>Research Instruments</b>
<b>Survey Questions</b>
1. Regularly listening to CONFENIAE INFORMS on the radio gives me important news on the world around me.
2. The content of the programs CONFENIAE INFORMS and ALLÍ PUNCHA AMAZONIA are easy to utilize in my daily affairs.
3. The content in the programs CONFENIAE INFORMS and ALLÍ PUNCHA AMAZONIA is difficult to understand.
4. I have <u>not</u> learned any new safety measures or community-building ideas from either CONFENIAE INFORMS or ALLÍ PUNCHA AMAZONIA.
5. The program ALLÍ PUNCHA AMAZONIA can be easily used by nonliterate listeners.
6. Radio broadcasts in the form of CONFENIAE INFORMS are useful only for elite or wealthy community members.
7. A listener's religion may influence listening to CONFENIAE INFORMS or ALLÍ PUNCHA AMAZONIA.
8. A listener's social and economic status in the community determines whether they listen to CONFENIAE INFORMS or ALLÍ PUNCHA AMAZONIA.
9. Information in CONFENIAE INFORMS and ALLÍ PUNCHA AMAZONIA motivates my listening to the program.
10. Musical sections of CONFENIAE INFORMS and ALLÍ PUNCHA AMAZONIA make the program less useful.
11. A community member is easily convinced to help their community by listening to CONFENIAE INFORMS and ALLÍ PUNCHA AMAZONIA.
12. To obtain relevant information from CONFENIAE INFORMS and ALLÍ PUNCHA AMAZONIA is easier and more affordable than other sources.
13. The programs CONFENIAE INFORMA and ALLÍ PUNCHA AMAZONIA have social and cultural relevance to me.
14. The programs CONFENIAE INFORMA and ALLÍ PUNCHA AMAZONIA were important sources of information during the health crisis of COVID-19.
<b>Interview Prompts</b>
Are there any other people or groups (outside of this area/immediate neighborhood) you would like to connect with? If so, why would you like to connect to them? How could the radio help you connect?
What would it mean to connect with people beyond your family or the people in your home? What does this sense of connection mean to you?
Did you hear the news about the recent strike? Many indigenous leaders were active during and after the strike. Do you feel well represented by or connected to your leaders?
What topics or programs would you like to hear on the radio? Are there other things the radio can do to support this community?

#### 2.4. Data Analysis

Surveys were analyzed for descriptive, univariate statistics on demographic variables.

Interview transcripts were systematically coded in two steps using a codebook designed by the two PIs, in consultation with the literature. In step one, interviews were initially coded by the interviewer for recurrent, explanatory, or descriptive themes. In step two, a PI and the research assistant discussed each of the first 5 transcripts, discussing code discrepancies resolved through consensus [92]. Thematic results were determined through triangulating code frequencies, distribution across the dataset, and relevance to the research questions.

### 3. Results

While the survey results provided evidence of interest in *La Voz* programming by respondents, the semi-structured interviews explored community and individual priorities in greater detail. After a brief description of the sample demographics and surveyed listening practices, we report the two major themes identified through systematic coding of the interview narratives: (1) radio as a tool for conveying information to Indigenous communities and (2) a high value placed on communicating with others who share their culture, history, and worldview. A more detailed discussion of the survey responses is available elsewhere.

Ninety percent of survey participants were under the age of 45, and we sampled evenly across two genders (i.e., male and female). The majority of participants identified as Kichwa Amazonica (73%), with Shuar making up the second largest Indigenous group (13%). We asked participants to briefly characterize their living circumstances by describing the people in their household and whether or not they had a cell or smart phone, and internet at home. Demographic information from our sample is summarized in Table 2.

**Table 2.** Unión Base radio listeners' survey: sample demographics.

		Survey Sample (n = 92)	Interview Sample (n = 30)
<b>Age</b>	18–25	22%	8
	26–30	18%	3
	31–35	12%	4
	36–40	14%	3
	41–45	12%	0
	46–50	11%	1
	51–55	5%	5
	56–60	2%	2
	61+	3%	3
	Unknown	0	1
<b>Gender</b>	Female	50%	15
	Male	50%	15
	Other	0%	1
<b>Cell Phone</b>	Yes	33%	23
	Smart phone	93%	15
	Home internet yes	89%	21
<b>Nationality</b>	Achuar	4%	not collected
	Kichwa Amazonica	73%	not collected
	Secoya	4%	not collected
	Shiwiar	4%	not collected
	Shuar	13%	not collected
	Waorani	3%	not collected
	Kichwa de Sierra	1%	not collected
<b>Live with</b>	Alone	11%	not collected
	Non-family roommate	3%	not collected
	Spouse + children	60%	not collected
	Parents and/or extended family	26%	not collected

For the survey, participants were invited to report their listening practices via a number of “select all that apply” prompts. Thus, response totals are often greater than the total number of participants. Participants reported listening to *La Voz* primarily for news (n = 65 or 39.63%), communications from Indigenous organizations or communities (n = 50 or 30.49%), and music (n = 40 or 24.39%). However, all participants were fairly similar in their listening practices. Thus, there was not enough evidence to claim any association between any demographic variable and listening practices.

Finally, listening to the radio often prompted participants to take action. Of the 88 responding to this prompt, participants were most likely to: tell another person about *La Voz* (n = 57), most likely a friend (n = 40), spouse or partner (n = 32), parent or coworker (each n = 21); travel away from home for an advertised event (n = 49); or participate in a protest or demonstration (n = 35).

### 3.1. Radio as a Tool for Information and Mobilization

Interview results are presented in two thematic groups that were identified through the triangulated analysis method described above, namely radio as an informational tool and radio as a transmitter of family, community, and cultural knowledge<sup>3</sup>. In this section, we discuss the first major theme, radio as a tool for information and communication. In parentheses, we provide numerical information about the results, typically the number of participants expressing a shared idea. We also indicate where interview data and survey results can be compared for greater contextual understanding.

Seventeen participants (17) identified the radio as a valuable tool for communication, but as expected, knowledge of *La Voz* programming varied between the two communities sampled. Of those who identified the radio as valuable, nearly 1/2 (8 of the 17) highlighted the utility of radio during disasters or other crises. For example, in Yukutais, the mountainous geography and intense rainfall often cause natural disasters, such as landslides and floods. For example,

“This Yukutais river has a culture that every five years makes landslides . . . it’s [a] natural [occurrence] that we can [attribute to the] Pachamama . . . in that sense, the radio extension is very important to be able to inform the authorities.” (a 26-year-old woman from Yukutais).

“There was a big landslide here. Sure, they recorded [it], but it was published and nothing happened . . . there was a lot of destruction . . . for this reason, the means of communication [the radio] is very important.” (a 23-year-old man from Yukutais).

Since these interviews were conducted shortly after an 18-day, nationwide protest, we were not surprised when 18 of 30 participants told us the radio was a primary source of information during the strikes. But notably, nine (9) participants expressed the idea that “government media” was not trustworthy and often portrayed Indigenous people (“the pueblo”) as perpetrators of violence, omitting reports of harm inflicted to protestors.

“During this strike, especially the government press, they never told the truth . . . what was happening in the pueblo was never heard.” (a 23-year-old man from Yukutais).

“Community communication is the only communication that was telling the reality of the pueblo.” (a 32-year-old man from Unión Base).

The Indigenous community radio was viewed as one of the few, if not the only, reliable news sources during the strike:

“From there it has also been very important, because with it we have recently undergone the national strike. Of course, then with this [radio] we were able to know the reality that was happening, something that was not listened to with the national media—they lied about false things.” (a 32-year-old woman from Unión Base).

Evidence of an immediate and tangible effect of this information source on many Indigenous listener behaviors was also captured in our survey results. Recall that 65 of our survey’s 90 participants reported listening to *La Voz* primarily for news, while 50 said they listened for communications from Indigenous organizations like the main national confederation, CONAIE. Forty-nine (49) participants were likely to tell another person about information they had heard on *La Voz* or to travel away from home for an advertised



event (n = 49 or 28.32%). Moreover, 35 said that what they heard on the radio had influenced them to participate in a protest or demonstration. In short, shared information supported collective perspectives, which may also have contributed to the collective action of the strike. Unión Base respondents emphasized the importance of the radio in the national strike:

“That’s why the Indigenous peoples have already stood up. Everyone communicated and everything so that the marches come out . . . Why? To be well prepared, to be well put together.” (a 65-year-old woman from Unión Base).

“Poor people inside [the forest] don’t have a phone. By means of radio you can listen to those who have a radio. They then tune in and come to know that there is a meeting, there is a problem . . . [or if] there is education.” (a 60-year-old man from Unión Base).

Beyond the strike of 2022, community radio was described as capacity-building for youth (n = 5), particularly in communities that are cut off from communications (n = 8):

“Be uniting. Helping all communities so they can communicate. Sometimes some [other communities] don’t have a way to communicate and sometimes they don’t, they can’t go out to a march or sometimes to an assembly meeting.” (a 24-year-old man from Unión Base).

“Now that you are tuning the radio so that the bases [can] listen too. This is about training, training each nationality.” (a 60-year-old man from Unión Base).

“Our leaders take steps to train young people, and by not having information or access to information, we are blind to everything . . . so here the people can say . . . motivate the young.” (a man from Yukutais, age unspecified).

Within the thirty interviews, 23 people spoke directly about how they have witnessed Indigenous people uniting across Indigenous nationalities to form a single movement for the benefit of all.

“[Un pueblo] refers to everyone fighting for a good, because at that moment when they have to fight for a brother, we are not a nationality, we are not a community, but we are a pueblo. Because I think that the community is based on this, on the camaraderie and the help that is given to the brother.” (a 21-year-old Unión Base woman)

“We are all united, of the indigenous nationality. This strike was . . . well, everything is how we are united and we should all die [united] like this. And as the common national and indigenous [people] that we are, to be together and nothing [can cause us] to separate. [We are] all the same.” (a 58-year-old man from Yukutais)

“[Interview: Does this always happen?] When it bothers us, when they rob us, when they get in our way, when they come, there we are gathered, we are there. . . . It’s like, I mean, there’s a wasp . . . but you hit [it], you’re like this. \*swatting motion\* You go a centimeter, you don’t hit it, it doesn’t do anything to you, it doesn’t do anything. But touch it, cover it up a little bit. It bothers you, it itches, they pile up, they are from one and there are about 100, 200. They come and run. It’s tiny, but they make you run.” (a 60-year-old man from Unión Base).

Several participants (n = 11) expressed similar desires for connection extending to other nationalities. In their remarks, they viewed the radio as allowing reciprocal cultural exchange or pragmatic collaboration:

“It is what we most want to communicate between nationalities of others, from other places, from other provinces.” (a 55-year-old man from Yukutais).

“To spread the word about what we are doing within the territory about territorial defense . . . it would be good to share with other nationalities in another part of

our country, since we also [have] had some meetings [with them].” (a 37-year-old man from Unión Base).

Four participants (n = 4) explicitly named the desire to better connect with mestizo populations or the general Ecuadorian population, both Indigenous and mestizo, and even globally, in order to exchange culture and to broaden worldview.

“As we are Indigenous, we can communicate with mestizo people, as it could be said that they [would] know more about our culture or we [could] also know about them. And it would be like adapting, or going to know beyond what you can see, right?” (a 21-year-old woman from Unión Base).

“We, with our knowledge and with the territory and with many other things, with wisdom, can contribute to the world, because the world needs that.” (a 32-year-old man from Unión Base).

In sum, community radio provided both information and a tool for cooperation across cultural and geographic distances and during a time of crisis or across social and cultural differences. Due to its coverage area and its location in a strategic site within the Amazon, La Voz de la CONFENIAE radio station (and CONFENIAE headquarters in the same area) share a multicultural, integrative purpose. The character of this regional, multicultural organization therefore impacts programming to transcend a solely rural audience and project outwards to other urban and peri-urban audiences around the cities of Puyo and Baños. Shared radio information thereby supports and creates new communities of collective capacity, knowledge, and shared activities and events through which to connect with others who share their beliefs and values.

### 3.2. Radio as Community Infrastructure—Family, Health, and Culture

The second emergent theme was the most prominent code in the dataset, coded in 24 of the 30 interviews: “shared culture, history, worldview”. This code marked passages that indicate a desire to communicate with others about these topics and which were rich with details from the lives of participants. The principal sub-category in these excerpts, identified in 8 of the 24 interviews, was the value of staying in contact with distant family:

“It would be good to be able to communicate with family members who are far away. We have some relatives who are far away, [so] to be able to be more in contact with them, to know what is happening, how they are, and [to] spend more [time] peacefully communicating with them [would be good].” (a 60-year-old man from Unión Base).

“My community, the Shuar Yukutais Center is located in a very distant place. I would very much like to be able to communicate with my family, with my families who are in other places . . . to share my daily events.” (an 18-year-old woman from Yukutais).

An additional four participants—all women who had attended a territorial preservation workshop in Unión Base—highlighted the role of *La Voz* radio in monitoring the health of people in and out of the community and in coordinating treatment practices.

“Some are sick inside the forest, that’s why they communicate [using the HF radio at La Voz]. . . . They ask for help so that they can leave and get to the city to go to the hospital.” (a 65-year-old woman from Unión Base).

“I would like to communicate to be able to help . . . direct [treatment] or give [them] an idea so that they can support themselves with natural medicines, because there are no clinics there. It is very, very far away in the Kichwa territories.” (a 54-year-old woman from Unión Base).

A third sub-category of these excerpts, cited by seven participants (n = 7), was the radio’s value as a way to learn and preserve language, culture, and traditions. Some

participants saw the potential of their local youth to fortify or regain their local language through listening to and actively participating in radio broadcasts.

“The youth is already losing a part [of our culture] and it would be important to strengthen it in some way with some [radio] program.” (a man from Yukutais, age unspecified).

“It helps to communicate between the Indigenous brothers . . . they help to strengthen our culture and worldview. Because many of the young people who live in the city are no longer interested in culture.” (a 26-year-old man from Unión Base)

“[I would like to communicate] as a plurinational. Sharing without selfishness and much more [allows you to reach] the children, transmit to [that] generation so that they grow up informed.” (a 26-year-old woman from Yukutais).

Thus, the delivery of radio programming in multiple languages conveys cultural lessons and traits while supporting language literacy in both mobile and isolated communities. For example, Ai’Kofán communities were once consulted by *La Voz* for radio content:

“We can understand a little bit about the reality of each community, of each nationality . . . to be able to integrate people, women, children, young people, even the elderly . . . they are not going to come to you . . . we must go and look for them and work with them. If we have to sit down to talk at three [in the morning], we have to do it.” (a 32-year-old man, working as radio staff in Unión Base).

Recognizing this interaction and community engagement is described in the purpose of the radio station<sup>4</sup>. Several community members also affirmed regular engagement between radio staff and community members as a vital component of effective community radio.

“Young people who have been in the process walking jointly with CONFENIAE . . . they find themselves forming part of the radio. But nevertheless, that is a fight that is for all parties. The process is open to all nationalities. For all young professionals or young people who want to be part of it . . . Through this . . . of these media. Now it is already being generated, that sense of belonging in our roots.” (a 36-year-old woman from Unión Base).

“I think it is very feasible that the work they are doing [at the radio]. I mean, we identify ourselves with this.” (a 33-year-old woman from Unión Base).

Radio’s multivalent presence within the community and between communities can be viewed as a source of interconnection. The radio has fortified links between localities for both pragmatic and sentimental purposes, aiding emic initiatives and connecting those inside the forest to urban resources. For those concerned with the continuity of cultural expression, radio has emerged as a steward of preservation, involving the youth in established tradition through accessible media [93,94]. These benefits transcend linguistic and spatial boundaries, reaching audiences in multiple languages, allowing simultaneously greater self-determination and involvement of community members in shared activities and action.

#### 4. Discussion and Conclusions

As a stakeholder-driven impact assessment, the radio station leadership and host organization, CONFENIAE, considered the implications of these results for future radio priorities. First, the assessment demonstrates that the programming fosters information flows to communities. The role of the programs to support horizontal communications within communities appeared in two ways: through content that inspired listeners to engage with others in their communities; and (for Unión Base residents) through use of the high-frequency radio for direct (if rare, usually emergency) communications. Second, participant narratives suggest that the radio does provide an alternative to majority-rule politics in its provision of Indigenous language content and locally meaningful cultural

or musical programs. In this regard, results from our survey (discussed in Tapia et al., 2024 and forthcoming) showed a predilection of listeners for the informative content of the *Alli Puncha Amazonia* newscast, which suggests their interest in reports on the social and political context for the Amazon region and Ecuador. However, participants also discussed appreciation for pan-Indigenous content, including political information that reached beyond the community level [22]. Third, evidence of the radio's impact on collective and communal values in the communities served was not clear. Further targeted research to understand the radio's capacity for countering the atomizing, individualizing influences of dominant culture will require targeted and longitudinal study.

To radically revitalize the public sphere [55,60] for a diversity of Indigenous communities, Indigenous radio can provide valuable information and communication transparency to listeners in the Ecuadorian Amazon. Its capacity to create a "connective medium [of] . . . affective, linguistic, cultural, and political ties" across listeners [33] is high but still limited by the reach of the radio signal and by the station's ability to produce meaningful content in multiple languages. While the radio's content created a participative space for the preservation of Indigenous cultural expression and some material support for extended or distant family and community members, more study is needed to understand how best to foster community ideals and communications.

Several limitations to this study warrant attention. First, the survey sample was small and potentially biased. We surveyed only one community where the radio station is based. There is a clear risk of sampling bias in this strategy since radio employees reside in this area as well as members of the community organization that sponsors the station. A survey of a more distant listening community in the interview methods helped but did not completely compensate for this limitation. Our sample is also imbalanced for age, with elder (55+) representation being quite low. Also, the exploratory nature of measuring communal engagement via radio yields only preliminary but nevertheless valuable information. Communalism was assessed primarily through interview questions about the value and roles of community to speakers and via survey questions about engaging with others in a community project or sharing information. Greater precision and depth in measures of communalism is warranted, particularly in the way that communal and collective priorities are expressed in radio content and listener engagement (Simpson et al., 2024). Such studies may improve upon traditional "empowerment" models, which could potentiate individualistic results that fit poorly with Indigenous self-determination. Finally, Cortes and others have pointed to the down sides of Indigenous radio, including economic burdens for communities already at the economic margins of society and the dangers of undermining "horizontal communication methods" or of altering extant power dynamics within these communities" [55]. Further research is warranted to provide more robust and locally meaningful metrics for Indigenous community-owned radio.

## 5. Conclusions

As the number of Indigenous radio stations worldwide grows [56], scholar-advocate collaboratives have an important role in providing information and documentation about the impacts of these communicative media [95,96]. Indigenous community radio stations aim not solely to bolster information flows but to counter the dominant media content with community voices on local political and cultural priorities and can help revitalize local languages, knowledge, and practices through sound and the actions that particular sounds or messages can promote [8,16,97]. Historically a service subsidized by government intervention, many community radio stations simply replicated dominant cultural and governmental propaganda. Indigenous community radio stations increasingly resist these pressures, contributing to a strengthening of local and counter-hegemonic communications agenda sustained for several years by community, popular, and alternative media in the context of vast amounts of competing media content.

A key contribution of this work is its collaborative design and execution using diverse datasets (i.e., both traditional metrics as well as Indigenous co-design and contextual

narrative). According to the Radio Engagement Continuum Model [81], our results suggest *La Voz* listeners to be high on the active (focused) listening axis. This outcome conforms to the current programming schedule of *La Voz*, which has a regular schedule of news, education, and entertainment. However, only our interviews captured critical details about listener purpose and suggested distinctively communal reasons for their behavioral and material responses (e.g., sharing information learned on the radio with another person or participating in a community event because of a radio message). Engagement, therefore, changed over time partly in response to the content of radio programming (i.e., the urgency of a national strike or the scheduling of a women's workshop). Our comparative analysis of survey, interview, and literature methods helped contextualize each dataset to provide a more robust understanding of the radio's impact and suggested that a continuum model is only partially useful and temporally restricted. Instead, reliance on the radio's mission<sup>5</sup> to serve community needs inspired an assessment not solely of listener satisfaction but a study of the two-way communication capacity this radio could foster. Although limited, this pilot study provided clarity for future research and programming directions for the radio.

The timing of our research on the heels of a national strike that engaged Indigenous people from wide regions of Ecuador exposed ways the radio can have material and behavioral impacts and bi-directional functions. Most importantly, our findings included metrics of communal engagement (i.e., listening to establish a shared understanding and purpose) and political mobilization (i.e., contrasting Indigenous to non-Indigenous sources of information and being motivated to share radio content or engage in a protest). In sum, we were able to document both one-way and bi-directional communications in reaction to this radio's programming. The future of Indigenous radio will be informed by the degree to which it achieves local, autonomous communications and employs those capacities in ways that reflect and strengthen Indigenous lifeways. Empowered Indigenous communities will have the tools to enact and measure their communications infrastructure in ways that suit both their communal needs and methods.

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**Conflicts of Interest:** Tapia is employed by the radio station subject of the reported research. The remaining authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## Notes

- <sup>1</sup> This is not always the case. See Muratorio, 1981; Uzendoski, 2018; O'Connor, 2006.
- <sup>2</sup> Principles among these are the International Labor Organization's Convention #169 and the 2007 U.N. Declaration on the Rights of Indigenous Peoples.
- <sup>3</sup> We draw on Smith-Morris' 2020 perspective on Indigenous communalism as requiring 4 key elements. First is belonging, the sense of being part of a unique, internally sovereign community with a shared history of colonization, traditional lands, and internationally recognized rights of autonomy, continuity, and cultural life. Second is the idea of generation—to create, raise, and enculturate members of their community. Third is representation, including both authoritative and non-authoritative, alienable and inalienable representations of the group, its members (and their bodies), and community knowledge. And fourth is hybridity, the universal human capacity to blend contradictory virtues into a meaningful but complex self-identity.
- <sup>4</sup> A codebook was established collaboratively by all authors. Two coders worked independently over three complete narratives and discussed to consensus until an inter-rater reliability score of 0.74 was achieved. Final coding of the entire dataset was performed by Simpson with spot checks and discussion thereafter by Smith-Morris at approximately every seventh interview.
- <sup>5</sup> The mission of La Voz de la CONFENIAE reads as follows: "Ser un medio de comunicación comunitario que ofrece espacios para difundir, socializar y promocionar la realidad de las comunidades, organizaciones y territorios indígenas de la región amazónica del Ecuador para dar a conocer con veracidad la actualidad noticiosa de las mismas y canalizar sus necesidades y demandas hacia instituciones, autoridades y diversas entidades a través de programas diversos, incluyentes e interculturales para que desde sus propias voces expresen sus demandas".

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