

# Beyond Educational Policies: Intercultural Bilingual Education Teachers and the Use of Multimedia Content in Indigenous Languages

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**Abstract**—Communication across countries has become increasingly accessible through the widespread adoption of global languages. Nevertheless, this drive toward linguistic standardization marginalizes Indigenous cultures and languages, depriving them of opportunities to thrive and to have their cultural and linguistic heritage acknowledged and respected. Accordingly, it is imperative to foster their social inclusion through education in intercultural bilingual schools. The primary objective of this study was to examine the working conditions, qualifications, and attitudes of teachers in intercultural bilingual schools in Northern Peru regarding the use of multimedia in Indigenous languages as a pedagogical resource to enhance learning. This research employed a mixed-methods approach with a sequential exploratory design. Data collection instruments included an experiential workshop (n = 30) for qualitative insights and an online questionnaire (n = 95) featuring Likert-scale items for quantitative analysis. Both instruments were validated through expert review and administered to teachers from intercultural bilingual schools in northern Peru. Findings were conclusive. Considering the participants' working conditions, qualifications, and attitudes, integrating multimedia in Indigenous languages as an educational tool is feasible and promising for fostering meaningful and inclusive learning environments.

**Index Terms**—Indigenous languages, multimedia instruction, intercultural education, teacher qualifications, working conditions

## I. INTRODUCTION

Languages are fundamental to human society, embodying the identities of individuals and communities alike. In their absence, communities would face significant barriers in transmitting cultural heritage and belief systems. Furthermore, the advancement of nations in areas such as technology, the economy, and social equity would be severely hindered (Nnajiolor & Enyimba, 2024; Tyson, 2024). Despite their crucial role in human progress, minority languages have long been marginalized and, in many cases, driven to extinction as a result of colonization, globalization, political pressures, or the perceived need to modernize to avoid marginalization by dominant cultures (Funk & Woodroffe, 2024; Homai & Torabi, 2023).

According to UNESCO, approximately 8,324 languages exist worldwide, yet only 65 are considered safe. The loss of languages has become a pressing global concern, with around 85% of them classified at some level of endangerment. Experts estimate that nearly 3,000 languages could disappear before the end of the century, at an alarming rate of one every two weeks (UNESCO, 2021), with Indigenous languages facing the greatest risk. Indigenous communities serve as custodians of ancestral knowledge, traditionally transmitted from generation to generation. Elders have historically conveyed cultural elements, aspects of ontology, and the cosmovision of their communities through fables, narratives, songs (Zapata, 2024), and other forms of oral communication. They have also imparted practical wisdom related to medicine, ecology, agriculture, and daily life—knowledge that constitutes part of the intangible cultural heritage (UNESCO, 2022). However, over the past century, a communicative generational gap has emerged within Indigenous communities and has accelerated rapidly in recent decades.

Young people no longer speak the languages of their ancestors. Instead, they tend to adopt the colonizing language, as they attend schools where the vernacular language is not taught. Consequently, they gradually forget and neglect their ancestral language. In some cases, this detachment stems from feelings of shame, as minority languages are often perceived as inferior by their peers, leading them to avoid using them in public (Huang, 2023; Durazzo, 2022). Regardless of the cause, the number of Indigenous language speakers continues to decline, and these languages are disappearing

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along with the passing of tribal elders (Sánchez & Porras, 2023). This critical issue concerns all of humanity, as preserving languages is essential to safeguarding invaluable cultural heritage (Santamarina, 2023). In response to this challenge, governments across Latin America have introduced various social and educational initiatives, notably the implementation of intercultural bilingual education (UNICEF, 2021). These public schools aim to provide quality education to children and adolescents from Indigenous communities, incorporating both the colonizing language, usually Spanish, and the native language of the community. In doing so, they strive to reinforce cultural heritage and foster inclusive learning environments (Porter & Morrison, 2024; Cardani, 2024; Becerra-Lubies et al., 2024).

Within this context, Peru stands as a culturally rich nation, home to a wide array of ethnic groups. According to the Peruvian Ministry of Culture, 55 distinct Indigenous ethnic groups have been identified, 51 of which are native to the Amazon and four to the Andes (Ministerio de Cultura, 2023). Additionally, data from the Instituto Nacional de Estadística e Informática indicate that 60.2% of the population identify as mestizo—reflecting varying degrees of Indigenous ancestry—while 25.7% self-identify as Indigenous (INEI, 2021). This ethnic diversity naturally results in significant linguistic variation across the country. A total of 48 native languages are spoken by Indigenous ethnic groups in Peru (Ministerio de Cultura, 2021). In these communities, more than 50% of inhabitants speak an Indigenous language as their first language and, for many, it remains their only means of communication (INEI, 2021). However, this multilingual reality is not confined to native communities. According to the most recent national census, 16% of Peruvians nationwide report an Indigenous language as their mother tongue. The most widely spoken Indigenous language is Quechua, followed by Aymara and Ashaninka.

In response to this reality, the Peruvian government has implemented various initiatives aimed at fostering the inclusion of native communities. Among these efforts are the development of educational materials in 42 native languages and six varieties of Quechua (Ministerio de Educación [MINEDU], 2024), the official recognition of intercultural bilingual education schools, and the enactment of laws requiring teachers to pass an Indigenous language proficiency assessment as a mandatory qualification (MINEDU, 2023). Despite these advances, a significant number of communities still lack educational materials translated into their native languages. Moreover, many teachers assigned to these schools are unable to communicate effectively with their students due to their limited proficiency in Indigenous languages, which severely hinders their teaching practices. Additionally, linguistic competency assessments administered to students from Indigenous language communities revealed "very unsatisfactory levels" of performance. These students face considerable challenges in both comprehension and production of oral and written texts in both their native language and Spanish (MINEDU, 2023).

In Lambayeque, a northern region of Peru, native language communities are located in the highland rural areas of the province of Ferreñafe. These ethnic groups inhabit the districts of Inkawasi, Kañaris, and Pueblo Nuevo, where they proudly preserve their culture and ancestral customs. The primary language spoken in these communities is a distinct variant of Quechua known as Northern Quechua. To support the educational needs of these communities, the government has established 234 intercultural bilingual education institutions (EIB, by its acronym in Spanish: Escuela Intercultural Bilingüe) throughout the area. These schools are tasked with ensuring that students achieve the expected learning outcomes through instruction delivered in both their native language and Spanish. Teachers in these institutions are responsible for fostering the development of bilingual students who can speak and write fluently in both languages, appreciate and preserve their ancestral culture, and simultaneously acquire the competencies needed to navigate diverse social environments as global citizens (Bedriñana & Gutiérrez, 2023; Muñoz & Portilla, 2023; Loaiza et al., 2023; Montes & Tineo, 2023).

Despite the efforts undertaken by the Peruvian state to promote the inclusion of native communities, a communication gap persists between teachers and students. Few teachers speak fluent Quechua, and most struggle to communicate effectively in the language, while students' linguistic abilities remain polarized. Academic performance is low, and teachers report significant challenges in delivering instruction due to the scarcity of multilingual and inclusive audio materials in Northern Quechua, which could otherwise support and enhance student learning. Moreover, because the majority of teachers speak only Spanish, students often lose interest in their native language upon entering the school system and gradually abandon its use. This process contributes to the progressive extinction of Northern Quechua in the short and medium term. The primary objective of this research is to examine the working conditions, qualifications, and attitudes of teachers at intercultural bilingual schools serving Indigenous communities in the rural northern area of Ferreñafe. In particular, it explores the use of multimedia content in Northern Quechua as a pedagogical tool to revitalize Indigenous languages and ancestral customs while enhancing learning in a meaningful and inclusive manner.

## II. METHODOLOGY

Given the nature of the issue under investigation, a mixed-methods research design was employed, as it enables a comprehensive and in-depth understanding of complex problems. Mixed-methods approaches offer the statistical rigor of quantitative research and the contextual depth of qualitative research, making them particularly suitable for studies in the social and human sciences (Creswell & Creswell, 2022; Salkind, 2022; Taheri & Okumus, 2024). As Salkind (2022) highlights, this approach allows researchers to address questions that could not be fully explored using a single method or for which results obtained through only one approach would be insufficient to provide meaningful solutions.

Furthermore, mixed-methods research facilitates interdisciplinary collaboration, enriching the investigation with diverse perspectives and insights (Creswell & Creswell, 2022).

Concerning the four key factors involved in mixed-methods research: timing, weighting, mixing, and theorizing, Creswell and Creswell (2022) classify this study as a sequential exploratory design (see Figure 1), as data were collected in two distinct phases, one following the other. Initially, qualitative data were gathered through an experiential workshop and analyzed in depth. Based on the findings from this phase, a questionnaire was subsequently developed and administered during the second stage of the study to collect quantitative data. The researchers then analyzed the quantitative data obtained from the online questionnaire. Finally, the results from both phases were integrated to interpret the findings and produce the research report.

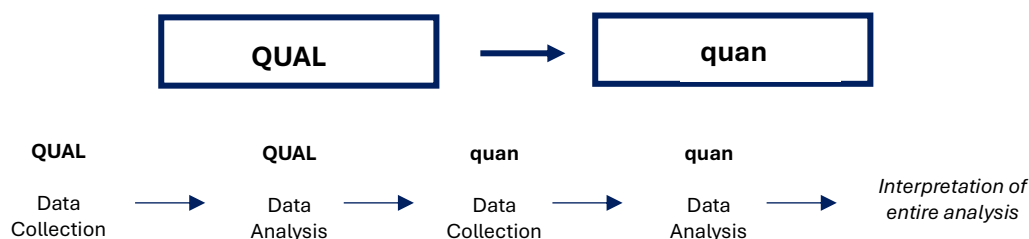


Figure 1. Sequential Exploratory Design  
Source: Adapted From Creswell and Creswell (2022).

The population of this study consisted of 125 teachers (both male and female) from intercultural bilingual education schools (EIBs) located in Ferreñafe, covering the three educational levels defined by the Peruvian education system: kindergarten, primary education, and secondary education. The participants ranged in age from 25 to 68 years, with educational backgrounds spanning from secondary education to master's degrees, and teaching experience varying from one year to over 21 years. Given the study's mixed-methods design, two separate samples were utilized, one for each research phase, following a sequential sampling strategy (Creswell & Creswell, 2022; James et al., 2024).

The sampling procedure for the qualitative stage was non-probabilistic. Specifically, snowball sampling was employed, as EIB teachers represent a hard-to-reach population. Therefore, this method was deemed the most appropriate for identifying and recruiting participants in this context (Khoury, 2022). A total of 30 EIB teachers participated in this stage, representing a sample that reflected the key characteristics of the broader population. In contrast, the sampling for the quantitative stage followed a simple random probability approach. A sample size calculator was used with a 95% confidence level, which resulted in a sample of 95 EIB teachers. This sample was also selected to reflect the principal characteristics of the overall population.

The first phase of data collection involved the implementation of an experiential workshop, a qualitative technique designed to gather insights into participants' opinions, perceptions, and contributions regarding working conditions, qualifications, and attitudes toward multimedia technology as a pedagogical tool. The workshop was conducted in Chiclayo and facilitated by a multidisciplinary team comprising a psycho-pedagogical specialist, two language professors, and an information technology specialist. For the second phase, an online questionnaire was administered. This instrument included twenty closed-ended, Likert-type items organized into three dimensions: working conditions, qualifications, and attitudes toward the use of multimedia content in Northern Quechua as a pedagogical resource.

Both the experiential workshop and the questionnaire underwent expert validation. A panel of five field specialists assessed the instruments, evaluating their construct, content, and criterion validity. Based on their evaluations, both instruments were deemed valid. The judges' ratings were further analyzed using Aiken's V coefficient, which yielded a value of 0.99, indicating a very high level of validity. In addition, the reliability of the questionnaire was assessed using Cronbach's alpha, as the instrument consisted of Likert-type items. The analysis produced a Cronbach's alpha value of  $\alpha = 0.85$ , demonstrating that the instrument exhibited high reliability (Malkewitz et al., 2023; Gómez et al., 2023; Mateus et al., 2024).

A consent form was administered to ensure that participants were fully informed of their right to withdraw from the project at any time, should they deem it necessary. Furthermore, none of the instruments included questions that could potentially cause discomfort or harm, thereby upholding the principle of non-maleficence. Following the principle of beneficence, participants also received training through a series of workshops related to the variables under study. Additionally, the research findings were shared with participants at the conclusion of the project.

### III. RESULTS

The results are presented in an integrated manner, as recommended for mixed-methods research (Tashakkori & Teddlie, 2021) and reflect the findings from both stages of the study. It is important to note that the data presented in this article were translated from Spanish, as the original instruments and results were produced in that language.

#### A. Working Conditions

Data gathered through the online questionnaire (see Table 1) revealed the distribution of teachers across districts. Specifically, 4.2% of teachers work in the district of Salas, located approximately one hour from the city; 84.2% are based in Inkawasi, about four hours away; and 11.6% work in Kañaris, which is roughly seven hours from the city. Insights from the experiential workshop further highlighted the geographic and transportation challenges faced by teachers. Most intercultural bilingual education schools (EIBs) are located approximately 100 kilometers deep in the highlands. Transportation to these remote areas is extremely limited, particularly in Inkawasi and Kañaris. Vehicles cannot access many of the surrounding communities due to the lack of paved roads; instead, only walking trails, locally referred to as trochas, connect these areas. Consequently, vans, along with lorries, which often carry cargo, serve as the primary means of transportation. However, vans only reach nearby towns two to three times per week. From these drop-off points, teachers must walk an additional two to four hours to reach their schools. Some teachers resort to traveling in cargo lorries due to the low frequency of public transport and the absence of alternative options.

TABLE 1  
DISTRICTS WHERE EIB SURVEYED TEACHERS WORK

District	Frequency	Percentage
Pueblo Nuevo	4	4,2
Inkawasi	80	84,2
Kañaris	11	11,6
Total	95	100,0

In line with these challenges, the schools where participants work are typically constructed from brick with tiled roofs and include basic facilities such as classrooms, a principal's office, IT laboratories, a schoolyard, and restrooms. Some schools are also equipped with additional spaces, including a nursing station, a psychology department, and school canteens. However, essential services such as water, soap, and electricity are not consistently available. In the absence of water service, teachers and staff collect water in buckets, which are then stored in steel barrels for daily use. While most schools have internet access, Wi-Fi connectivity, and sound systems with Bluetooth functionality in every classroom, power outages significantly hinder their use. Although the Ministry of Education has distributed tablets to both teachers and students, these devices become unusable during power failures.

Participants reported that teachers in intercultural bilingual education (EIB) schools located in larger towns are assigned based on their area of specialization and are responsible for teaching specific grades within a single educational level (kindergarten, primary, or secondary). In contrast, in smaller and more remote communities, a single teacher is often assigned to cover all grades at the school. In such cases, the same individual may be responsible for teaching all subjects across multiple grade levels and simultaneously fulfilling administrative duties as the school principal.

According to participants, this situation arises because few individuals are willing to travel to and work in these challenging conditions, leaving one teacher to assume multiple roles. This scenario applies to 3.2% of the intercultural bilingual teachers surveyed (see Table 2).

TABLE 2  
EDUCATIONAL LEVELS EIB TEACHERS OVERSEE

	Frequency	Percentage
Kindergarten	8	8.4
Primary School	59	62.1
Secondary School	25	26.3
All levels	3	3.2
Total	95	100.0

### B. Qualifications

Regarding their qualifications in the use of technology, participants indicated that they had received training from the Ministry of Education on the use of technological devices. They reported that, since the implementation of technology in at least one laboratory, and, in some cases, in every classroom, most teachers now use these tools at least once a week for instructional purposes.

Furthermore, survey responses revealed that the majority of participants considered themselves qualified users of information and communication technology (ICT) tools (see Table 3). Fewer than 10% of respondents reported being very unqualified, while most identified themselves as either somewhat qualified or qualified users of these devices.

TABLE 3  
QUALIFICATION OF EIB TEACHERS IN THE USE OF TECHNOLOGY IN PERCENTAGE

Level of Qualification	Smartphones	Tablets	Wi-Fi	Bluetooth
Very unqualified	7.4	7.4	3.2	5.3
Unqualified	1.1	6.3	3.2	7.4
Somewhat qualified	23.2	27.4	21.1	21.1
Qualified	46.3	51.6	52.6	47.4
Very qualified	22.1	7.4	20.0	18.9
Total	100.0	100.0	100.0	100.0

Regarding their educational background, participants in the workshop explained that, due to the scarcity of professionals willing to work in rural areas, some teachers do not meet the minimum qualification requirements established by the Ministry of Education. They noted that, if hiring policies were enforced strictly, many schools would be left without a teacher.

Similarly, the questionnaire results indicated that 7.4% of respondents had never attended university and, to date, do not hold a degree, having completed only secondary education. Nevertheless, most participants (72.6%) reported having graduated from university, specifically from faculties of education (see Table 4).

TABLE 4  
INSTRUCTION LEVEL OF EIB TEACHERS

	Frequency	Percentage
Secondary	7	7,4
Graduate	69	72,6
Master's degree	19	20,0
Total	95	100,0

Another essential requirement for working in an intercultural bilingual education (EIB) school is proficiency in the Indigenous language spoken in the local community. During the experiential workshop, only two participants demonstrated fluency in Northern Quechua, while the remaining teachers reported struggling with the language and experiencing difficulties communicating with both students and parents. Nevertheless, all participants expressed interest in improving their proficiency in Northern Quechua. However, they noted the absence of available training programs at the time when the language was formally taught. Survey data further illustrated this challenge. Of all teachers surveyed, 58.9% reported having either no proficiency or only basic knowledge of Northern Quechua, while only 21% met the Ministry of Education’s proficiency requirements (see Table 5).

TABLE 5  
NORTHERN QUECHUA PROFICIENCY OF EIB TEACHERS

	Frequency	Percentage
None	23	24.2
Basic	33	34.7
Intermediate	19	20.0
Proficient	20	21.1
Total	95	100.0

Concerning the use of the Indigenous language among their students, teachers reported during the workshop that, although most students are fluent in Northern Quechua, they tend to be shy and reluctant to speak aloud or participate in class using the language. Instead, they often prefer to remain silent and simply listen. In some cases, students claim to have forgotten Quechua, yet they are observed speaking it informally after class.

While many students choose to participate in Spanish, they are not fully proficient in that language either. As a result, classroom interaction is often limited and less dynamic than teachers expect. Participants noted that although most students understand the instructions and content delivered in Northern Quechua, they frequently struggle to find the words needed to respond or express themselves.

Furthermore, a minority of students do not understand Northern Quechua at all. These students not only face comprehension difficulties but also exhibit resistance or disinterest in learning the language, often disengaging from activities when Quechua is used.

*C. Attitudes Towards Multimedia*

Regarding attitudes toward multimedia materials, teachers participating in the workshop issued a call to action directed at the government, urging improved conditions for their students. Although the Ministry of Culture prepares annual educational materials for EIB schools in both Northern Quechua and Spanish, participants reported that these books often do not arrive on time, resulting in students spending half of the academic year, or more, without access to textbooks. While tablets have been distributed to schools, participants noted a lack of multimedia resources, particularly videos and audio materials in Northern Quechua. Although the schools have Wi-Fi connectivity and teachers frequently search online for materials, most of the available content is in Southern Quechua, which is linguistically distinct from the variety spoken locally.

Table 6 presents data on three key aspects: (1) the frequency with which participants search for multimedia content in Northern Quechua, (2) how often they can find such content, and (3) the frequency of its use in their classrooms. Results indicate that 83.1% of participants are interested in and actively search for multimedia content in Northern Quechua to incorporate into their lessons. However, 45.2% reported that they rarely or never find relevant materials, and only 8.4% indicated that they always use such content in their teaching practice.

TABLE 6  
TEACHERS SEARCH, FIND, AND USE MULTIMEDIA CONTENT IN NORTHERN QUECHUA

Frequency	Web Search	Web Finding	Use in Class
Never	8.4	6.3	9.5
Rarely	8.4	38.9	18.9
Sometimes	37.9	36.8	36.8
Often	32.6	17.9	26.3
Always	12.6	0.0	8.4
Total	100.0	100.0	100.0

Participants expressed interest in creating multimedia materials in Northern Quechua, viewing them as potentially valuable pedagogical tools capable of motivating students and enhancing their learning experiences. When invited to join a workshop program aimed at developing skills to produce such materials, all participants immediately enrolled and demonstrated a strong commitment to attending. When asked in the survey about their attitudes toward the feasibility of using multimedia content in Quechua as a didactic resource in their classes (see Table 7), 80% of teachers indicated that they considered it feasible or very feasible, considering both the conditions of their schools and their qualifications. However, 13% of respondents remained neutral on the matter. Notably, none of the surveyed teachers regarded the use of multimedia content in Quechua as infeasible.

TABLE 7  
ATTITUDES TOWARDS USE FEASIBILITY OF USING MULTIMEDIA AS A DIDACTIC RESOURCE IN CLASSES

Feasibility	Frequency	Percentage
Very infeasible	0	0
Infeasible	7	7.4
Neutral	12	12.6
Feasible	60	63.2
Very feasible	16	16.8
Total	95	100.0

When asked whether they would be willing to use multimedia content in Quechua during their lessons, only 10.5% of participants indicated that it would be unlikely or very unlikely. In contrast, 59% expressed a positive attitude toward incorporating such materials into their classes. Furthermore, when questioned about their willingness to produce multimedia content themselves, 49.4% of respondents stated that they would likely or very likely engage in its production (see Table 8).

TABLE 8  
ATTITUDES TOWARDS USE AND PRODUCTION OF MULTIMEDIA CONTENT IN NORTHERN QUECHUA

Likelihood	Use	Production
Very unlikely	2.1%	2.1%
Unlikely	8.4%	13.7%
Neutral	30.5%	34.7%
Likely	43.2%	38.9%
Very likely	15.8%	10.5%
Total	100.0%	100.0%

#### IV. DISCUSSION AND CONCLUSION

The findings of this study contribute to advancing knowledge in what has historically been an underexplored area, offering valuable insights into the current situation of teachers at intercultural bilingual schools, particularly regarding their working conditions, qualifications, and attitudes toward the use of multimedia content in Northern Quechua as a pedagogical tool.

One of the main challenges faced during the study was accessing the target population. Given that participants live in remote rural areas located several hours from urban centers, and where transportation options are limited, contacting them proved difficult. For future research focused on Indigenous communities, it is recommended that researchers travel directly to these locations. Doing so not only facilitates access but also demonstrates respect for the community and reinforces the significance of the study and the involvement of its participants.

Among the various aspects of working conditions, teacher mobility emerged as a critical issue. This challenge is not exclusive to EIB teachers in Ferreñafe but is shared by rural teachers across Peru and throughout Latin America. However, it remains a relatively underexplored topic, as transport-related difficulties are seldom highlighted in studies concerning EIB or rural schools.

Teachers from diverse rural regions in Peru (Chumbes Amaro, 2022; Quispe, 2021) and across Latin America (Imbaquingo, 2022; Hecht et al., 2021) often face significant hardships commuting to their schools. Although seemingly straightforward, the reality involves venturing into remote highland areas, frequently remaining in these communities for extended periods due to the scarcity of transportation. Teachers may be required to walk for hours or travel in cargo lorries—often alongside goods such as farm animals, fruits, and vegetables—under uncomfortable conditions. Upon arrival, they must conduct their classes despite fatigue, which inevitably affects their teaching performance.

Concerning infrastructure and facilities, participants in this study reported being in better conditions than most EIB schools in Peru. They belong to a minority that regularly has access to adequate facilities and essential services (Serrano & Quispe, 2023; Oliveros, 2022). Although occasional power and water outages do occur, these interruptions are temporary and do not significantly disrupt daily activities. While technological devices cannot be used consistently, teachers have adapted to these challenges. They are accustomed to conducting lessons without relying on technology or electricity, given that the integration of digital tools into Peruvian educational services is relatively recent. As a result, such limitations do not critically affect their teaching practices.

Another notable aspect of working conditions is the prevalence of multigrade classrooms. This situation is common in rural schools worldwide (Msimanga, 2020; Urzúa et al., 2024; Ávila-Méndez, 2023) and is not exclusive to developing countries, as previous research has demonstrated (Fernández-Morante, 2023; Barbeta et al., 2023; Weidmann & Fiechter, 2023). However, the literature remains inconclusive regarding whether multigrade settings are beneficial or detrimental to student learning. On the one hand, students may benefit from interactions with older classmates and from greater curricular flexibility. On the other hand, teachers often face difficulties fulfilling their roles effectively, as they must simultaneously guide students at varying academic levels. Managing multigrade classrooms requires specific training, which is not always provided (Arias & Sánchez, 2022).

The challenge is compounded when a single teacher is responsible for both administrative duties as principal and instructional responsibilities as classroom teacher. Despite the increased workload, participants who found themselves in this situation did not express complaints. On the contrary, they showed dedication to their mission. In Peru, this practice is not uncommon and is institutionalized through the concept of the *Escuela Unidocente*, referring to schools managed entirely by one teacher (Reátegui, 2021).

With respect to rural teachers' qualifications in the use of ICT tools, this remains a sensitive and debated topic in the literature. Some scholars argue that rural teachers face distinct challenges compared to their urban counterparts, largely due to insufficient government support for training and resources. Prem (2023) and Muremela et al. (2023) have noted that many rural teachers struggle not only to use ICT tools for pedagogical purposes but also for basic communication. Nevertheless, the findings of this study align with those of Zhao (2024) and Guillén-Gámez et al. (2023), who suggest that rural teachers, despite facing geographical and infrastructural challenges, possess adequate proficiency in ICT. They are thus capable of integrating technology into their teaching practices to support and enhance student learning.

Regarding teachers' educational backgrounds, it is important to note that, as Rodríguez (2020) and Rodríguez and Petitti (2022) have observed, education in rural areas has historically been neglected. Many inhabitants of small communities either did not attend school or dropped out during the early years of primary education, contributing to high levels of illiteracy in Indigenous populations. Until recently, it was uncommon for students to complete secondary education. As a result, individuals who managed to graduate from high school were often appointed as teachers within their communities. Although this practice has diminished in recent years, it continues to impact on the quality of education offered in these contexts. As García (2023), Lema and Parra (2020), and Lopez (2021) emphasize, it is unjust to disregard Indigenous students' educational needs simply because they belong to a minority group.

Another significant challenge concerns teachers' proficiency in Indigenous languages. Porter and Morrison (2024) highlight the difficulty of finding educators fluent in minority languages, such as Northern Quechua. This issue is exacerbated by the fact that fluent speakers tend to remain within their communities, where access to higher education is limited or nonexistent. Most qualified teachers reside in urban centers, where no language institutes specialize in Northern Quechua. Consequently, while many Indigenous speakers are proficient in the language, they lack formal teaching credentials, preventing language centers from employing them. This situation underscores the urgent need for government-led initiatives to provide formal training programs aimed at certifying Indigenous language speakers as educators.

As Lema and Parra (2020) assert, the use of authentic materials in Indigenous languages is crucial for instruction in EIB schools. Ideally, these materials should incorporate multimedia content that reflects the cosmovision, traditions, and folklore of Indigenous communities, thereby strengthening ethnic identity (Serrano & Quispe, 2023; Chumbes, 2022; Bedriñana & Gutiérrez, 2023; Sullón & Arocena, 2024). However, in the case of EIB schools in Ferreñafe, this objective is particularly challenging. Despite Peru's global recognition for its cultural heritage, often associated with the Incas and Southern Quechua, few people are aware of the existence of multiple Quechua dialects and the significant differences between them. Government initiatives have primarily focused on preserving and promoting Southern Quechua, largely because of its association with Cuzco and the tourism surrounding Machu Picchu. Consequently, minority language variants, such as Northern Quechua, have been largely neglected in terms of educational resources and support.

Although EIB teachers cannot alter national language policies, they can be empowered to develop localized multimedia materials tailored to their students' linguistic and cultural realities. These resources can incorporate community-based content, ensuring greater relevance and fostering stronger cultural connections.

The potential of multimedia content to preserve and revitalize Indigenous languages has been well documented (Sanchez et al., 2023; Medina et al., 2018; Surma & Truong, 2023; Kumar et al., 2023; Sundani, 2023). Although initial skepticism is natural when adopting new methodologies, the findings of this study indicate that technological resources and teachers' digital competencies are sufficient to support the implementation of multimedia materials. For those with limited digital skills, targeted training can address existing gaps without posing a significant obstacle.

While enthusiasm for producing multimedia content was somewhat lower compared to attitudes toward its feasibility, several initiatives have emerged to train and empower teachers in content creation. Notably, a training program conducted as part of this study proved successful. By the end of the experiential workshop, participants had produced a short podcast in Northern Quechua and Spanish, demonstrating both their willingness and ability to meet the challenge and surpass expectations.

In conclusion, this study has shed light on the complex realities faced by teachers in intercultural bilingual education (EIB) schools located in remote areas of Northern Peru. While working conditions remain challenging, marked by geographical isolation, limited infrastructure, and scarce educational resources, teachers continue to demonstrate remarkable resilience and commitment to their students and communities.

Despite the difficulties, findings indicate that teachers possess, or are willing to develop, the qualifications and technological competencies necessary to integrate multimedia content into their pedagogical practices. Although proficiency in Northern Quechua remains limited among many educators, there is a clear interest in improving language skills and in producing culturally relevant materials that reflect the cosmovision and traditions of their communities.

Furthermore, the success of the experiential workshop, which culminated in the production of podcasts in Northern Quechua and Spanish, highlights the potential of teacher training initiatives to empower educators. These efforts can play a critical role in revitalizing minority Indigenous languages and strengthening students' ethnic identity while also enhancing learning outcomes.

Ultimately, the integration of multimedia resources—rooted in the linguistic and cultural realities of Indigenous communities—emerges not only as a feasible strategy but as an urgent pedagogical necessity. For this reason, ongoing support from governmental and educational institutions is essential to sustain and expand such initiatives, ensuring equity and inclusion for Indigenous students across Peru.

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