

INTERCULTURAL EDUCATION AND BILINGUALISM IN INDIGENOUS STUDENTS OF THE UNIVERSIDAD NACIONAL INTERCULTURAL DE LA AMAZONÍA, 2024

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ABSTRACT: The objective of this research was to determine the relationship between intercultural education and bilingualism among indigenous students of the Faculty of Intercultural Education and Humanities at the Universidad Nacional Intercultural de la Amazonía (UNIA), Yarinacocha, during 2024. The study used a mixed-methods approach with a non-experimental, cross-sectional, correlational design. The quantitative sample consisted of 245 indigenous students selected through stratified random sampling across native peoples, who completed Likert-scale questionnaires. The qualitative component included semi-structured interviews with 10 professors and 5 key administrative officers. Instruments demonstrated high content validity (89%) and internal consistency (Cronbach's Alpha $\alpha = 0.855$ and $\alpha = 0.856$). Quantitative results (Spearman's Rho = 0.095; $p = 0.138$) showed no statistically significant relationship due to a ceiling effect. However, qualitative analysis revealed a key structural limitation: a scarcity of faculty fluent in Amazonian native languages, which limits the transition from an intercultural curriculum to effective bilingual classroom practices.

Keywords: Intercultural education, additive bilingualism, indigenous students, intercultural university, Amazonia.

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INTRODUCTION

Peru's cultural and linguistic diversity is one of its greatest assets and, at the same time, one of the ongoing challenges facing its educational system. In the Amazon region, where peoples with their own worldviews, languages, and traditions coexist, the intercultural university was conceived as a space for the convergence of knowledge that values Indigenous students' cultural identity while preparing them for the demands of the academic world. However, tensions persist in practice: although indigenous students express pride in their roots, they often feel insecure about using their native language in the university setting, while Spanish is becoming firmly established as the dominant academic language.

In Peru, four universities are officially recognized as intercultural, all located east of the Andes in transitional areas leading to the Amazon, underscoring the importance of studying their functioning and cultural relevance at the higher education level (Consejo Nacional de Educación [CNE], 2023). Regarding intercultural bilingual education, Decreto Supremo N.º 006-2016 (2016) approved the Sectoral Policy on Intercultural Education and Intercultural Bilingual Education as a guiding framework for the education sector. However, evidence of its implementation at the university level remains more limited than for basic education, which justifies a specific examination of intercultural and bilingual dynamics in intercultural universities.

In light of this gap, this study analyzed the relationship between intercultural education and bilingualism among Indigenous students in the School of Intercultural Education and Humanities at an Amazonian intercultural university in 2024. The study formulated three specific hypotheses to examine the association between the intercultural curriculum and the development of competencies in Indigenous languages; between intercultural teaching practices and proficiency in academic Spanish; and between intercultural coexistence and the functional use of bilingualism.

The study is theoretically grounded in critical interculturalism (Walsh, 2009, 2005), Cummins's hypothesis of linguistic interdependence (1981, 2021), and the theory of biliteracy proposed by Hornberger (2003) and Hornberger and Link (2012), in dialogue with previous research on EIB in Andean, Amazonian, and international contexts. The mixed-

methods approach—quantitative, through a survey of 245 students, and qualitative, through interviews with teachers and administrators—allowed us not only to measure the statistical strength of the relationship between the variables but also to understand the institutional meanings and tensions underlying the numerical results, thus offering a more comprehensive understanding of a phenomenon that inferential statistics alone cannot fully capture.

THEORETICAL FOUNDATIONS

Intercultural Education versus Bilingualism: A Conceptual Distinction

Interculturality has been defined in various ways depending on the historical context and the actors who articulate it, which explains the absence of a single, consensus-based conceptual framework (Tubino & Zariquiey, 2005; Walsh, 2005). In Peru, two major approaches are distinguished: functional interculturalism, which incorporates superficial aspects of indigenous cultures (festivities, symbols, artistic expressions) without questioning the power relations between cultures, and critical interculturalism, advocated by Walsh (2009) and Tubino and Flores (2020), which conceives of intercultural education as a political-pedagogical project aimed at transforming social and academic relationships, recognizing indigenous languages and worldviews as legitimate sources of knowledge.

It is essential to draw an explicit conceptual distinction between Intercultural Education and Bilingualism, categories that are often mistakenly assumed to be synonymous. Intercultural Education is a systemic, political-pedagogical, and epistemological dimension that refers to the recognition, appreciation, and horizontal dialogue among diverse worldviews, forms of knowledge, and cultural frameworks within the socio-educational environment. Bilingualism (indigenous language / Spanish, or the majority language), by contrast, refers specifically to the sociolinguistic and communicative dimension: competencies in comprehension and production—both oral and written—and the functional, academic, and interactive use of two distinct linguistic systems within a given university community. In the Amazonian context, intercultural education is not limited to bilingual instruction but involves incorporating Indigenous epistemologies into the curriculum. López (2016) argues that, given the region's

great linguistic diversity—more than forty languages—EIB processes are particularly complex and require flexible policies and differentiated programs.

Bilingualism and Its Models

Bilingualism has many definitions, ranging from an individual's ability to use two languages in different contexts to the social processes by which two or more languages coexist within a community. Baker and Wright (2021) distinguish between additive bilingualism, in which learning a second language is added to the native language, reinforcing both, and subtractive bilingualism, in which the second language displaces the native language and leads to language loss. In Indigenous educational contexts, the recommended model is additive, as it strengthens the mother tongue while simultaneously developing proficiency in the dominant language.

Cummins' (1981, 2021) hypothesis of linguistic interdependence posits that first-language development facilitates second-language learning because both share a common cognitive foundation. Accordingly, Indigenous students with strong proficiency in their native language would be better positioned to achieve academic proficiency in Spanish, provided active pedagogical mediation facilitates this transfer. Complementarily, Hornberger (2003) and Hornberger and Link (2012) developed the theory of biliteracy, which emphasizes fostering reading and writing skills in both languages, since purely oral bilingualism is insufficient for academic performance in college. This author also introduces the notion of ideological and implementational spaces: an institution can open an ideological space by discursively recognizing the value of the native language, but this does not guarantee that the implementational space—the actual opportunities to read and write academically in that language—is equally open.

Previous Research

At the international level, Arias-Ortega et al. (2023) found, through a mixed-methods study in La Araucanía (Chile), instances of explicit and implicit discrimination perceived by Mapuche stakeholders in the educational relationship between mentor teachers and traditional educators during the implementation of intercultural education. At the national

level, Velasquez (2024) reported, in a correlational study on Quechua-Spanish bilingualism and written production, a very weak and non-significant positive correlation ($r = 0.154$; $p = 0.284$), while Llaique (2023) found a significant relationship between bilingualism and academic performance among students in elementary and middle school. At the higher education level, the CNE (2023) has highlighted the need to strengthen the cultural relevance and educational offerings of intercultural universities. This background information constitutes the direct comparative framework for the present study.

METHODOLOGY

The study adopted a mixed-methods (quantitative and qualitative) approach, with an applied, correlational scope and a non-experimental, cross-sectional design. The population consisted of students enrolled in the School of Intercultural Education and Humanities, and a stratified probability sample of 245 indigenous students belonging to 17 indigenous peoples was obtained (notably Shipibo-Konibo at 31.4%, Awajún at 15.1%, and Wampis at 7.8%), in accordance with the integration of quantitative and qualitative approaches proposed by Hernández-Sampieri and Mendoza (2018).

Table 1

Distribution of the sample by indigenous group of origin

Indigenous people	n	%
Shipibo-Konibo	77	31.4 %
Awajún	37	15.1 %
Wampis	19	7.8 %
Quechua	16	6.5 %
Kakataibo	14	5.7 %
Asháninka	13	5.3 %

Indigenous people	n	%
Others (11 indigenous peoples)	69	28.2 %

To collect quantitative data, two questionnaires were administered; experts validated them (89% applicability), and reliability was measured using Cronbach's alpha ($\alpha = 0.855$ for Intercultural Education and $\alpha = 0.856$ for Bilingualism). The qualitative component used semi-structured interviews with 10 teachers and 5 key administrators.

Qualitative Instrument Specification: To gain deeper insight into pedagogical perceptions and interactions, the study used a semi-structured interview guide validated through expert judgment. The key interview questions were organized around three fundamental themes: 1) Curriculum and Interculturality: What specific content related to indigenous languages and the indigenous worldview is formally incorporated into the college's curriculum (e.g., courses such as Indigenous Language I through VI, EIB, and Amazonian Worldview)? 2) Pedagogical Practices and Bilingualism: How do faculty members promote the development of oral proficiency and academic writing skills in both the indigenous language and Spanish in the classroom? 3) Institutional Challenges: What are the main pedagogical and structural limitations that hinder effective bilingual instruction and intercultural coexistence at the university?

Content validity was established through the judgment of three experts in EIB and research methodology, with an average of 89% for both instruments. Reliability was determined using Cronbach's alpha coefficient in a pilot test with 30 students, yielding $\alpha = 0.855$ for intercultural education and $\alpha = 0.856$ for bilingualism—values considered acceptable according to George and Mallery (2019).

Data analysis was conducted at two levels. Descriptive statistics were used to organize and synthesize the data through tables and figures (Bernal Torres, 2016). Inferential statistics were used to test the hypotheses: the Kolmogorov-Smirnov test was applied to assess data

normality, and because this assumption was not met, Spearman's rho correlation coefficient was used at a significance level of $\alpha = 0.05$.

RESULTS

The descriptive analysis revealed predominantly high levels for both variables. 64.9% of the students were classified at the High level of Intercultural Education, and 80.4% at the High level of Bilingualism. However, when analyzing the dimensions, Teaching Practices received the lowest scores (only 34.7% at the High level and 17.6% at the Low level).

Table 2

Levels of the Intercultural Education variable and the Bilingualism variable (n=245)

Variable / Dimension	Low (%)	Average (%)	High (%)
Intercultural Education (General)	2.0	33.1	64.9
Intercultural Curriculum	6.1	35.5	58.4
Teaching Practices	17.6	47.8	34.7
Intercultural Coexistence	1.6	20.4	78.0
Bilingualism (General)	0.4	19.2	80.4
Indigenous Language	5.3	27.3	67.3
Academic Spanish	2.9	20.0	77.1
Functional Use of Bilingualism	5.3	31.8	62.9

Note. By dimension, intercultural teaching practices have the lowest rate in the study (34.7%), suggesting that although the formal curriculum incorporates intercultural content (58.4%), its translation into specific classroom practices is perceived as weaker.

Table 3*Testing the General Hypothesis and the Specific Hypotheses*

Hypotheses / Variables Under Study	Spearman's Rho	p-value	Statistical Decision
HG: Intercultural Education and Bilingualism	0.095	0.1378	H0 is not rejected
HE1: Intercultural Curriculum and Indigenous Languages	0.034	0.5953	H0 is not rejected
HE2: Pedagogical Practices and Academic Spanish	0.016	0.8039	H0 is not rejected
HE3: Intercultural Coexistence and the Functional Use of Bilingualism	0.018	0.7798	H0 is not rejected

Note. n = 245 across all four contrasts.

In the inferential hypothesis testing using Spearman's Rho test, no statistically significant relationship was found between Intercultural Education and Bilingualism ($Rho = 0.095$; $p = 0.138 > 0.05$); therefore, the null hypotheses were accepted at both the general and specific levels.

Qualitative Findings

Interviews with 10 teachers and administrators, analyzed using thematic content analysis, revealed converging patterns across three categories structured directly based on the questions asked:

1. Curriculum and Interculturalism: Regarding intercultural education, the informants agree in defining it as a process of knowledge exchange based on respect, incorporated into the curriculum through a series of specific courses (Indigenous Language I through VI, Bilingual Intercultural Education, Amazonian Worldview); the most frequently cited limitation (9 out of 10 informants) is the absence of a clear institutional policy and, above all, the fact that most of the teachers themselves are not fluent in any Amazonian indigenous language.

2. Area: Pedagogical Practices and Bilingualism: Regarding bilingualism, there is a consensus that Indigenous students are proficient in their native language primarily in spoken form, with notable difficulties in writing it (8 out of 10 informants); their proficiency in academic Spanish is perceived as average, with difficulties in fluency and textual cohesion.
3. Institutional Challenges and Impact: In terms of experiences and perceptions, all interviewees believe that intercultural education positively strengthens students' cultural identity, while opinions are divided regarding the impact of bilingualism on academic performance (5 out of 10 consider it positive; 5 out of 10 note that, in practice, it is not fully implemented because instruction is provided almost exclusively in Spanish).

DISCUSSION OF RESULTS

Triangulating quantitative and qualitative results reveals significant tension between the theory and practice of intercultural bilingual education at the higher education level. On the one hand, the statistical analysis found no significant relationship between intercultural education and bilingualism, neither in general terms ($Rho = 0.095$; $p = 0.138$) nor in any of its three specific relationships. In contrast, the qualitative analysis shows that educational stakeholders consistently perceive intercultural education as strengthening bilingualism and cultural identity. This apparent contradiction allows for complementary interpretations: the descriptive data themselves reveal a ceiling effect, since between 65% and 80% of students fall into the high range on both variables, which artificially restricts the variance available for detecting correlations (range restriction).

This finding is consistent with Velasquez (2024), who, in a correlational study on Quechua-Spanish bilingualism and written production, found a very weak and nonsignificant positive correlation ($r = 0.154$; $p = 0.284$). In contrast, Llaique (2023) found a significant relationship between bilingualism and academic performance in elementary education, suggesting that the strength of this relationship may vary by educational level and how the variables are operationalized. The qualitative finding regarding the limited availability of teachers in indigenous languages is also consistent with Arias-Ortega et al. (2023), who document

tensions and practices of linguistic exclusion in the teacher-Indigenous student relationship in EIB contexts.

The lack of a significant relationship between the intercultural curriculum and the development of proficiency in the native language can be interpreted in light of Cummins' (1981, 2021) hypothesis of linguistic interdependence: the mechanism of transfer between languages predicted by this hypothesis requires active pedagogical mediation—that is, teachers capable of teaching through the indigenous language and not merely including it as stated curriculum content. The qualitative finding that most teachers are not fluent in any Amazonian indigenous language suggests this enabling condition is not met in practice: the formal curriculum declares interculturalism but lacks the teacher support needed to activate the transfer mechanism predicted by the theory.

The gap between strong oral proficiency in the indigenous language (67.3% at the high level) and recurring difficulties in written production finds its most relevant explanatory framework in the biliteracy theory of Hornberger (2003) and Hornberger and Link (2012): an ideological space opens up when the institution discursively recognizes and values the indigenous language, but the space for implementation—the actual opportunities to read and write academically in that language—remains closed as long as intercultural pedagogical practices are the weakest dimension of the study (34.7% at the high level). This pattern—a high-level stated curriculum, low-level pedagogical practices, without a measurable statistical correlation—is also the one that Walsh (2009, 2005) attributes to functional interculturality: a superficial incorporation of cultural elements that fails to transform power relations or concrete classroom practices, in contrast to the critical interculturality she proposes as a political-pedagogical project. Returning to Baker and Wright's (2021) distinction between additive and subtractive bilingualism, a strong oral linguistic identity, without institutionalized written development, constitutes a risk factor for drifting toward a pattern closer to the subtractive model, to the extent that academic Spanish continues to be the only language effectively developed through the school system.

Overall, the results suggest that, in the case studied, intercultural education and bilingualism coexist as highly valued institutional orientations, but with a still-weak empirical

relationship, mediated by a specific structural limitation: the lack of teaching staff competent in Amazonian indigenous languages. This reframes the research problem: rather than the mere existence or absence of a stated intercultural policy, the critical issue is the institutional capacity to translate that policy into effective bilingual pedagogical practices in the classroom.

Based on the findings and discussions presented, valuable lines and avenues of research open up for the academic community: a) Qualitative and ethnographic studies with a participatory and community-based approach that directly capture the experiences and voices of Indigenous students themselves, ensuring the principles of relationality and community representation in the university setting. b) Longitudinal studies on university biliteracy, aimed at evaluating the actual impact of accelerated literacy programs in Amazonian languages on academic performance. c) Impact assessments of co-teaching models (subject-area instructors accompanied by indigenous elders or language mentors) on the development of effective intercultural teaching practices in higher education classrooms.

CONCLUSIONS

No statistically significant relationship was found between intercultural education and bilingualism among the indigenous students studied ($Rho = 0.095$; $p = 0.138 > 0.05$); therefore, the general null hypothesis is accepted. However, the qualitative analysis showed that teachers and administrators consistently perceived a positive relationship between the two variables, placing this relationship more in the institutional-discursive sphere than in the actual practices measured.

Nor was a significant relationship found between the intercultural curriculum and the development of indigenous language skills ($Rho = 0.034$; $p = 0.595$), nor between intercultural teaching practices and proficiency in academic Spanish ($Rho = 0.016$; $p = 0.804$), nor between intercultural coexistence and the functional use of bilingualism ($Rho = 0.018$; $p = 0.780$). In all three cases, the qualitative data point to a disconnect between the stated curriculum design and its classroom implementation, explained primarily by the low

proportion of teachers proficient in an Amazonian indigenous language—cited by 9 of the 10 key informants as the most significant limitation.

The study also identified a significant asymmetry in student bilingualism: a relatively high level of oral proficiency in the indigenous language (67.3% at the advanced level) contrasted with recurring difficulties in written production. Finally, both the quantitative data and the interviews show consensus that intercultural education significantly strengthens Indigenous students' cultural identity and that the university plays a leading role in revitalizing Amazonian Indigenous languages at risk of extinction.

Limitations and Recommendations: A limitation of this study is that it did not include in-depth interviews conducted directly with Indigenous students, which would be extremely valuable for safeguarding the principles of relationality and community representation in intercultural research. We recommend that future research replicate this study using instruments with greater discriminatory power to mitigate the ceiling effect observed here and expand the analysis to include the country's other intercultural universities, incorporating the qualitative perspectives of the students themselves.

CONFLICTS OF INTEREST

The authors declare that they have no financial, academic, institutional, or personal conflicts of interest that could have influenced the development, evaluation, or publication of this manuscript.

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