



# Rethinking Teaching for Inclusive Education in a Postmigrant Society<sup>1</sup>

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**Abstract.** This study analyses educators' perceptions of their adaptive capacity in postmigrant classrooms across three domains: culture, multilingualism, and equality. Using a mixed-methods analysis of focus group data from 36 in-service teachers in Madrid (Spain), findings highlight the general perception among teachers of moderate levels of adaptive capacity with significant domain-specific variation. Equality and social inclusion are the most emphasised domains, while bilingualism is the least addressed. The teacher-level correlation between the number of adaptive practices themes, registered in the transcriptions of the focus groups, and the number of system critique themes was non-significant, suggesting that these two factors function as partially independent dimensions of professional development. Teachers' narratives revealed an extended perception of systemic inequities — including resource disparities between public and semi-public schools, limited institutional support, and disengagement among vocational students. Despite these challenges, teachers frequently relied on improvisation and relational engagement to mitigate standardised curricular limitations. Findings challenge neutralist models of universal education that may perpetuate exclusion for migrant students with limited economic capital. Relational universalism is proposed as a framework to foster inclusive education, contingent upon systemic reforms including enhanced funding, professional development, and socially responsive policy interventions.

**Keywords:** Teacher Professional Development, Inclusive Education, Post-migrant Society, Relational Universalism, Systemic Inequities, Teacher Adaptability.

## 1 Introduction

The growing mobility of populations challenges education systems in addressing migration, cultural diversity, and social inequalities (Bruel et al., 2021; Semião et al., 2023). Such challenges are reflected in heterogeneous schooling experiences and in the

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tension between global standards and local priorities (Angana et al., 2025). In contemporary scholarship, the term postmigrant refers not merely to individuals who have migrated, but to the broader societal condition in which migration — and its cultural, linguistic, and structural consequences — becomes a permanent feature of social life, shaping institutions, identities, and everyday interactions beyond the initial act of migration (Bruehl et al., 2021; Semião et al., 2023). The Universal Declaration of Human Rights states that “Education shall be directed to the full development of the human personality” (United Nations, 1948, p. 26). Achieving this goal requires educators to integrate cultural, familial, societal, and pedagogical factors into curriculum design and instruction (Ausubel, 1952, 1958, 1968, 2002; Gay, 2018).

Empirical evidence indicates that instructor involvement — defined as active teaching through dynamic lesson design, student interaction, and supportive feedback — depends on variables such as teachers’ self-perceptions, time availability, and student motivation (Ayllón et al., 2019; Burić & Kim, 2020; Fong et al., 2019; Öqvist & Malmström, 2018; Shin & Bolkan, 2021; Thanasi-Boçe, 2021). This involvement appears most effective when factors are well aligned. Other variables influencing teacher involvement, and thus student learning, encompass “social class, ethnicity, religion and nationality [...]. Therefore, one of the biggest challenges that educational systems face internationally is the effective inclusion of all children and young people in schools” (Semião et al., 2023, p. 1). These dynamics call for an analytical lens that goes over individualistic notions of teacher competence. The framework of *relational universalism* — as of care, dialogue, and recognition of students’ socio-cultural identities as foundational to equitable education — offers a promising conceptual orientation for understanding how teachers meet the structural and interpersonal demands of postmigrant classrooms (Öqvist & Malmström, 2018; Thanasi-Boçe, 2021).

Thus, the present study explores in-service teachers’ perceptions of the Spanish education system (Madrid region) in the advanced stages of compulsory Secondary Education, Baccalaureate, and Vocational Training. Through the analysis of qualitative data from discussion groups with educators across diverse socio-economic settings, the study examines how teacher involvement and pedagogical practices relate to socio-economic inequalities, cultural diversity and language, and the integration of information and communication technologies (ICT) in students’ lives. The research aims to identify strategies that promote inclusion, equity, and student engagement — thereby contributing to the broader debate on how education does support social mobility and equal opportunities in a postmigrant and digital society.

## 1.1 Indicators of Teacher Professional Development in a Postmigrant Society

Socio-economic inequalities shape students’ academic performance, engagement, and educational trajectories, reinforcing the need for teaching practices that address structural disparities (Castaño, 2013). Research consistently shows that students from less advantaged backgrounds are more likely to experience early school leaving (including both excused and unexcused absenteeism), lower academic achievement, and limited access to further vocational opportunities (Castaño, 2013; Figueroa et al., 2024).

The diversification of student populations, including cultural, linguistic, and socio-economic differences, presents complex demands for inclusive pedagogy (Baches Gómez & Sierra Huedo, 2019; Essomba, 2008). Contemporary classrooms increasingly bring together students from varied national, ethnic, and linguistic backgrounds, requiring instructional approaches that respond to different learning needs. These dynamics are further shaped by the digital divide, which may lead to additional forms of inequality. Students from economically disadvantaged backgrounds often face restricted access to stable internet connections, digital devices, or the digital literacy skills required in current learning environments (UNESCO, 2017). Thus, digital inequality goes beyond physical access to the quality of digital experiences and support. While some students benefit from consistent connectivity, multiple devices, and family support for digital learning, others encounter limited access, shared resources, or insufficient technical assistance. Such differences may affect students' engagement with digital curricula, completion of online tasks, and development of the competencies increasingly required for academic progression and future employment (Thanasi-Boçe, 2021).

Teachers' awareness of these socio-economic conditions may contribute to reducing the effects of educational disadvantage (Cernadas Ríos et al., 2013; Sornoza-Delgado, 2024). Responding to student heterogeneity in the classroom requires flexible curricula, differentiated instruction, and culturally responsive pedagogical practices that engage diverse learners while addressing digital inequities. Teachers are, therefore, confronted not only with traditional instructional challenges but also with the responsibility of ensuring equitable participation in digital learning contexts. Integrating students' prior experiences and identities into classroom practices — both digital and non-digital — can strengthen engagement and support a sense of belonging, which remains central to inclusive education. At the same time, teachers are often required to develop practical strategies to mitigate digital disadvantage using available technologies, digital literacy instruction, and encouragement for improved technological resources within their institutions (Gay, 2018; Jiménez Vargas, 2014; Sornoza-Delgado, 2025).

Based on this literature, the present study operationalises teacher adaptive capacity through five indicators organised into two categories:  $Ti_x$  and  $Pi_x$ . Three *thematic indicators* capture the substantive domains in which postmigrant diversity manifests in the classroom. Bilingualism/Multilingualism ( $Ti_1$ ) addresses teachers' engagement with linguistic diversity, including the use of mediation strategies, translanguaging, and support for students with limited proficiency in the language of instruction — a domain consistently identified as central to inclusive postmigrant education (Bruehl et al., 2021; Figueroa et al., 2024; Gay, 2018). Culture ( $Ti_2$ ) captures teachers' recognition of and responsiveness to cultural differences among students, including awareness of ethnic, religious, and national backgrounds and their implications for classroom dynamics (Baches Gómez & Sierra Huedo, 2019; Essomba, 2008; Semão et al., 2023). Equality/Socialisation ( $Ti_3$ ) reflects teachers' attention to socio-economic disparities, social inclusion, and the structural conditions that shape students' educational opportunities — encompassing issues such as absenteeism, family disengagement, and unequal access to resources (Castaño, 2013; Jiménez Vargas, 2014; Sornoza-Delgado, 2025).

Two *practical indicators* capture cross-cutting pedagogical dimensions that operate across all three thematic domains. Adaptation ( $Pi_1$ ) measures the degree to which teachers report adjusting their instructional practices — including materials, assessment methods, and classroom organisation — to accommodate diverse learner needs (Burić & Kim, 2020; Shin & Bolkan, 2021). System Critique ( $Pi_2$ ) captures teachers' critical awareness of structural and institutional barriers to inclusive education, including resource allocation, policy design, and the organisation of the education system itself (Bruel et al., 2021; Castaño, 2013; Semião et al., 2023). These two practical indicators are based in the relational-universalist framework, which states that effective inclusive education requires both micro-level pedagogical flexibility and macro-level critical engagement with the systemic conditions that restrict classroom practice (Öqvist & Malmström, 2018; Thanasi-Boçe, 2021).

## 1.2 Research Questions

The five indicators described above provide the analytical framework for examining how teachers in postmigrant classrooms perceive and respond to diversity. By distinguishing between thematic domains (what teachers address) and practical dimensions (how they address it), the framework enables a nuanced assessment of whether adaptive capacity is domain-general or domain-specific, and whether pedagogical flexibility and systemic critique develop in tandem or as partially independent professional competencies. Consequently, the study addresses two research questions: (RQ<sub>1</sub>) To what extent do in-service teachers exhibit adaptive capacity across the domains of bilingualism, culture, and equality/socialisation? (RQ<sub>2</sub>) What is the relationship between teachers' adaptive practices and their critical awareness of systemic educational inequities?

## 2 Method

### 2.1 Research Design

This study uses a mixed-methods design that integrates both qualitative (original data) and quantitative (coded from original) approaches. Data were collected from focus groups conducted with teachers from different education levels and types of institutions within the Madrid region. Initial data were collected by the *Centro de Investigaciones Sociológicas* (CIS) through conversation-based, ad hoc focus groups involving stratified samples of teachers across Madrid's education system. This qualitative design relied on open and anonymous group discussions with secondary and vocational education teachers, allowing for the collection of diverse perspectives on educational challenges, social inequalities, and perceived changes in student behaviour and broader social dynamics.

The CIS approach aimed to generate rich and contextualised data that could inform educational policy and practice, while ensuring ethical standards and the anonymity of participants. Upon this qualitative dataset, the present study incorporates an additional quantitative layer derived from the systematic coding of focus group material. This

procedure enables statistical exploration of patterns and relationships that complement the qualitative analysis. The quantitative layer is exploratory in nature, intended to identify patterns for further investigation rather than to test pre-specified hypotheses. The integration of qualitative interpretation and quantitative examination broadens the analytical scope of the study and supports a more detailed understanding of the dynamics determining education in socio-economically diverse and multicultural contexts.

## 2.2 Research Ethics

This study is based on a secondary analysis of focus group transcripts provided by Spanish Centro de Investigaciones Sociológicas (CIS, 2025). The *Centro de Investigaciones Sociológicas* (CIS) ensures that all transcripts accurately reflect participants' own words and perspectives, and that no identifiable information is disclosed or published. The analytical procedures followed internationally recognised ethical principles, with particular attention to the Declaration of Helsinki established by the World Medical Association (2013). These principles emphasise the protection of participant dignity, autonomy, and welfare throughout the research process, as well as the importance of transparency, confidentiality, and informed consent.

## 2.3 Participants

The sample comprised 36 teachers (19 males; 17 females) from the Autonomous Region of Madrid, who took part in Estudio 11008 conducted by the CIS (2025). Participants taught the final years of Compulsory Secondary Education, Baccalaureate, and basic and intermediate Vocational Training in both public and private-subsidised (*concertado*) institutions. They were purposively stratified by the socio-economic area of influence of each institution: 12 (33.3%) worked in schools located in the first (lowest) income quartile and 24 (66.7%) in the fourth (highest) income quartile. Participants' ages ranged from 26 to 61 ( $M = 43.1$ ;  $SD = 4.6$ ). Two registered female participants did not attend their assigned sessions; attendance across four focus groups was nevertheless high ( $G_1 = 9$ ;  $G_2 = 10$ ;  $G_3 = 9$ ;  $G_4 = 8$  [ $N = 36$ ]). Within the sample, 47.2% of participants had five or more years' teaching experience; the remainder had fewer years of experience or held interim positions.

## 2.4 Measures and Coding Procedure

Original data for Estudio 11008 were collected through four focus groups conducted by the Spanish CIS. Each group consisted of 8 to 10 participants, and sessions lasted between 90 and 120 minutes. Discussion topics encompassed teachers' perceptions of socio-economic and cultural diversity, educational challenges, technology use, and institutional support. All sessions were recorded, transcribed verbatim, and anonymised according to CIS protocol.

Thematic analysis was applied to the transcripts to identify key patterns and recurring ideas across participants' narratives. For the quantitative layer, two authors independently coded selected transcript segments using a 4-point ordinal scale (0 = *not at*

*all inclusive/equitable*; 1 = *somewhat inclusive/equitable*; 2 = *moderately inclusive/equitable*; 3 = *highly inclusive/equitable*) to capture perceptions of classroom inclusivity and systemic equity. A preliminary codebook was developed deductively from the three thematic domains and refined iteratively after pilot coding of two transcripts. Segments were selected on the basis of thematic relevance to the three domains under study, with each segment comprising a single speaker turn or a thematically coherent sequence of turns. Initial inter-rater agreement was 84.7% (Cohen's  $\kappa = 0.78$ ), indicating substantial agreement; discrepancies were resolved through consensus discussion. Inclusivity and equity scores were strongly correlated ( $r = 0.87$ ,  $p < 0.01$ ), indicating convergence between the two scoring dimensions.

The coded data were organised into the five indicators defined in Section 1.1. Three thematic indicators ( $Ti_1$  Bilingualism,  $Ti_2$  Culture,  $Ti_3$  Equality/Socialisation) captured domain-specific adaptive capacity, and two practical indicators ( $Pi_1$  Adaptation,  $Pi_2$  System Critique) captured cross-cutting pedagogical dimensions. To illustrate the coding procedure, a segment scored 3 on  $Ti_1$  (Bilingualism) corresponded to a teacher who described active multilingual mediation strategies, such as simultaneously using French and pictograms to support a newly arrived student with no knowledge of Spanish. A score of 1 on the same indicator reflected passive acknowledgement of linguistic diversity without concrete pedagogical action (e.g., noting that "some students don't speak Spanish" without describing any response). For  $Pi_2$  (System Critique), a score of 3 indicated explicit identification of structural barriers and policy failures (e.g., criticising the dual vocational training law as impractical for Spain's service-sector economy), while a score of 1 reflected general dissatisfaction without assigning causes to systemic factors.

Each indicator represents the mean score across all coded segments assigned to that domain for a given participant, resulting in one collected score per teacher per indicator. The number of coded segments per teacher varied across domains (Bilingualism range 0–4; Culture range 0–5; and Equality/Socialisation range 1–7), reflecting differences in discussion salience across focus groups. This variation arises because the CIS moderator's questions elicited different amounts of domain-relevant content across groups. For example, bilingualism was extensively discussed in Group 1 (*ESO/Bachillerato*), where the bilingual programme structure was a salient topic, but received minimal attention in Group 4 (*concertado FP*). This aggregation procedure ensures that the unit of analysis is the teacher, avoiding pseudoreplication that would arise from treating segments as independent observations. Where a teacher's focus-group contributions contained no codable segment for a particular domain, the indicator was treated as missing. Such absence reflects the discussion context (i.e., the moderator's questions did not elicit domain-relevant content from that participant) rather than an assessed absence of the construct in the teacher's practice; complete-case analysis was therefore conducted on the subset of participants with valid scores across all three thematic indicators.

Because the three thematic indicators were measured within the same participants, a repeated-measures design was adopted. The Friedman test (non-parametric analogue of repeated-measures ANOVA) was used to compare the distributions of the three thematic indicators, and *post-hoc* pairwise comparisons were conducted with Wilcoxon

signed-rank tests. Bonferroni correction was applied across the three pairwise comparisons (adjusted  $\alpha = 0.05/3 = 0.017$ ). For the two practical indicators, which likewise represent paired scores from the same teachers, a Wilcoxon signed-rank test was used. Non-parametric procedures were selected because the aggregated scores remain bounded on an ordinal-origin scale (0–3) and the sample size is modest. Effect sizes for pairwise within-subject comparisons are reported as Cohen's  $d_z$ , computed from the standardised mean difference of paired scores. Because the underlying scale is ordinal (0–3) rather than strictly interval, these effect sizes should be interpreted as approximations. Spearman's rank-order correlation ( $\rho$ ) was used to assess the association between the two practical indicators.

### 3 Results

Before presenting the statistical findings, the following verbatim excerpts from the focus group transcripts illustrate how each indicator manifested in teachers' discourse:

- i. Bilingualism ( $Ti_1$ ): A teacher in Group 3 described creating pictogram-based examinations for a Chinese student who spoke neither Spanish nor English: "I ended up making a maths exam with pictograms [...] it was the only way to assess what they actually knew" (G3-M3). In Group 1, a participant discussed the segregating effects of bilingual programme structures: "The *Sección* creates a gap [...] students who don't enter the bilingual track get left behind from the start" (G1-M6). Culture ( $Ti_2$ ): A participant in Group 3 noted the persistence of ethnic self-segregation: "In class they are all mixed together, but during break time each group stays with their own" (G3-H6). In Group 4, a teacher observed cultural differences in the teacher–student relationship: "My Latin American students call me *profe* with a respect that my Spanish students rarely show" (G4-M6). Equality/Socialisation ( $Ti_3$ ): In Group 3, a teacher described how socio-economic inequality operates at both extremes: "Children of top executives are alone at home just as much as those from low-income families [...] it is not just about money, it is about time" (G3-H2). A vocational training teacher in Group 4 observed: "The ones who come from humble families work harder [...] they know that nobody is going to place them in a friend's company" (G4-M6).
- ii. Adaptation ( $Pi_1$ ). A Group 3 teacher explained his approach to universal design: "I already make exams adapted for everyone [...] bigger letters, separated sections, because in the end it benefits all students" (G3-H2). Another described using ChatGPT to simulate immigrant perspectives for empathy-building projects (G3-H2). System Critique ( $Pi_2$ ): A vocational training teacher in Group 4 criticised the dual training legislation: "It is a fantastic idea, but the implementation falls apart [...] it is designed from an office, not from a classroom" (G4-M3). In Group 1, a participant argued that the education system replicates inequality: "When a child arrives in

*cuarto de la ESO* from Venezuela with a first-year level, the system says ‘do what you can’ — that is not inclusion, that is abandonment” (G1-H5).

**Table 1.** Summary of statistical findings across thematic and practical indicators.

| Section                       | Indicator                                    | Results                                                                                                             |
|-------------------------------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| <b>Descriptive Statistics</b> | $Ti_1$ (Bilingualism)                        | $M = 1.950, SD = 0.759, n = 20^a$                                                                                   |
|                               | $Ti_2$ (Culture)                             | $M = 2.118, SD = 0.478, n = 34^a$                                                                                   |
|                               | $Ti_3$ (Equality)                            | $M = 2.500, SD = 0.507, n = 36^a$                                                                                   |
|                               | $Pi_1$ (Adaptation)                          | $M = 2.333, SD = 0.478, n = 36$                                                                                     |
|                               | $Pi_2$ (System Critique)                     | $M = 2.583, SD = 0.500, n = 36$                                                                                     |
| <b>Comparative Analysis</b>   | Friedman<br>( $Ti_1, Ti_2, Ti_3$ )           | $\chi^2(2) = 11.585, p = 0.003, W = 0.290$                                                                          |
|                               | Wilcoxon signed-rank<br>( $Pi_1$ vs $Pi_2$ ) | $T = 24.0, p = 0.020$                                                                                               |
| <b>Pairwise Comparisons</b>   | $Ti_1$ vs $Ti_2$                             | $d_z = 0.470$ (small); $T = 21.0, p \text{ bonf.} = 0.157$                                                          |
|                               | $Ti_1$ vs $Ti_3$                             | $d_z = 0.800$ (large); $T = 14.0, p \text{ bonf.} = 0.014^*$                                                        |
|                               | $Ti_2$ vs $Ti_3$                             | $d_z = 0.525$ (medium); $T = 4.5, p \text{ bonf.} = 0.102$                                                          |
|                               | $Pi_1$ vs $Pi_2$                             | $d_z = 0.414$ (small)                                                                                               |
| <b>Correlation</b>            | $Pi_1 \times Pi_2$                           | $\rho = 0.239, p = 0.160$                                                                                           |
|                               | <b>Interpretation</b>                        | Teachers with higher adaptation scores did not systematically report stronger system critique at the teacher level. |

*Note.* Not statistically significant (ns); thematic indicator ( $Ti$ );  $Pi$  = practical indicator;  $d_z$  = Cohen’s  $d_z$  (paired-sample effect size);  $W$  = Kendall’s  $W$ ;  $T$  = Wilcoxon signed-rank statistic;  $p \text{ bonf.}$  = Bonferroni-corrected  $p$ -value;  $\rho$  = Spearman’s rho. \* $p < .05$  (Bonferroni-corrected). <sup>a</sup>Number of teachers who produced codable content for that domain. The Friedman test was conducted on the  $n = 20$  teachers with valid scores across all three  $Ti$  indicators).

The Friedman test, conducted on the 20 teachers with valid aggregated scores across all three thematic domains, revealed a statistically significant difference ( $\chi^2(2) = 11.585, p = 0.003$ , Kendall’s  $W = 0.290$ ). Post-hoc pairwise Wilcoxon signed-rank tests with Bonferroni correction indicated a significant difference between bilingualism and equality ( $p = 0.014$ ), but not between bilingualism and culture ( $p = 0.157$ ) or culture and equality ( $p = 0.102$ ). Within-subject effect sizes (Cohen’s  $d_z$ ) are reported in Table 1. Given the complete-case sample of 20, the analysis was powered to detect approximately medium-to-large effects (Cohen’s  $d_z \geq 0.65$  at  $\alpha = 0.05$ , power = 0.80); smaller effects may be undetected, and effect-size estimates should be interpreted with caution. The Wilcoxon signed-rank test comparing the two practical indicators revealed a significant difference ( $T = 24.0, p = 0.020, d_z = 0.414$ ), with system critique scores exceeding adaptation scores.

Spearman’s rank-order correlation between adaptation and system critique, at the teacher level ( $n = 36$ ), was weak and non-significant ( $\rho = 0.239, p = 0.160$ ). A supplementary analysis at the segment level (treating each coded segment as an independent observation) showed a stronger correlation ( $\rho = 0.791, p < 0.001$ ), but this estimate is



inflated by pseudoreplication, as multiple segments from the same teacher are not independent. The teacher-level analysis reported here provides the methodologically appropriate estimate. The Friedman test result, rather than the correlation, constitutes the central quantitative finding, where teachers expressed a higher adaptive capacity in terms of equality/socialisation than in bilingualism — which supports the idea of a domain-specific rather than uniform pattern of inclusivity.

Qualitative analysis of the coded transcript segments reveals these statistical patterns in participants' lived professional experiences. Teachers in public schools serving low-income communities reported frequent improvisation to compensate for limited resources. One participant noted that adapting lessons for multilingual students often meant working without official materials or institutional guidance, relying instead on personal initiative and peer collaboration. Vocational training participants described particular challenges with student disengagement, attributing it to a perceived disconnect between curricular content and students' socio-economic realities. Several teachers emphasised the contrast between public schools and semi-public ones, observing that resource disparities systematically disadvantaged students in the public sector. These qualitative insights contextualise the significant Friedman result. To say, the domain in which teachers showed the greatest adaptive capacity — regarding equality and socialisation — was also the domain most directly connected to the systemic barriers they described. Teachers who improvised addressing inequality were simultaneously articulating a critique of the structural conditions that necessitated such improvisation.

## 4 Discussion

Regarding RQ<sub>1</sub> participants displayed moderate adaptability across the three thematic domains, with equality and social inclusion emerging as the most emphasised — a finding that aligns with previous research highlighting teachers' central role in fostering participation and reducing social exclusion in diverse classrooms (Baches Gómez & Sierra Huedo, 2019; Essomba, 2008). In the complete-case subsample, the Friedman test on teacher-level aggregated scores ( $\chi^2(2) = 11.585, p = 0.003$ , Kendall's  $W = 0.290$ ) revealed a significant difference across thematic domains, with equality/socialisation rated highest and bilingualism lowest. Post-hoc comparisons indicated a significant bilingualism–equality difference ( $p = 0.014$ ). This pattern suggests that, while adaptability is embedded within broader professional dispositions, it manifests unevenly across domains — a finding that challenges the assumption of a single, domain-general adaptive capacity and warrants further investigation with larger and more regionally diverse samples. This interpretation aligns with evidence that adaptive teaching capacity is shaped by professional identity and pedagogical values (Burić & Kim, 2020; Shin & Bolkan, 2021).

Regarding RQ<sub>2</sub> when analysed at the teacher level, the correlation between adaptive teaching practices and system critique was not statistically significant ( $\rho = 0.239, p = 0.160$ ). When the same data are analysed at the segment level rather than the teacher level, the correlation is larger ( $\rho = 0.791$ ), illustrating how pseudoreplication — treating multiple coded segments from the same teacher as independent observations — can

inflate effect estimates. This methodological observation displays the importance of specifying the correct unit of analysis in mixed-methods research that quantifies qualitative data. Yet, the Wilcoxon signed-rank test revealed that system critique scores were significantly higher than adaptation ones ( $p = 0.020$ ), suggesting that participating teachers were more vocal about structural barriers than they were flexible in their classroom practices. This result is consistent with prior evidence showing that effective inclusive education requires both micro-level pedagogical improvisation and macro-level critical reflection on structural barriers (Bruel et al., 2021; Semião et al., 2023). Participants described systemic inequities, including resource disparities between public and private-subsidised schools, limited institutional support, and disengagement among vocational students — issues likewise identified by Castaño (2013) and Sornoza-Delgado (2024, 2025).

Despite these challenges, teachers relied on relational engagement, improvisation, and culturally responsive practices to mitigate curricular limitations. Such practices align with the framework of relational universalism, which prioritises dialogue, care, and recognition of students' socio-cultural identities as preconditions for equitable education (Öqvist & Malmström, 2018; Thanasi-Boçe, 2021). In doing so, participants implicitly questioned neutralist models of universal education, often criticised for reinforcing inequalities by overlooking cultural and socio-economic differences (Figuerola et al., 2024; Jiménez Vargas, 2014). Addressing the digital divide does also remain essential, as unequal access to technology and digital literacy can further intensify socio-economic inequalities (Sornoza-Delgado, 2024; Thanasi-Boçe, 2021).

On the basis of these findings, several actionable recommendations can be advanced. First, regional education authorities should increase targeted funding for public schools in low-income areas to reduce the resource gap with private-subsidised institutions. Second, pre-service and in-service teacher training programmes should include structured modules on critical pedagogy, diversity-responsive instruction, and socio-emotional competencies, moving beyond one-off workshops towards sustained professional development trajectories; prior reviews of emotional education programmes have documented that fewer than a quarter of participating teachers receive specific preparation in this area, underscoring the magnitude of the gap (Muñoz-Oliver et al., 2022). Third, vocational training curricula should be redesigned in consultation with teachers and students to better reflect the socio-economic realities of learners, thereby reducing disengagement. Fourth, given that bilingualism emerged as the domain with the lowest adaptive capacity and the highest rate of missing data (only 20 of 36 teachers produced codable content), targeted multilingual support programmes — including language mediation resources, co-teaching with bilingual educators, and structured professional development in translanguaging pedagogy — should be prioritised, particularly in schools serving recently arrived migrant populations. Fifth, institutional support structures — including mentoring networks and time allocated for collaborative planning — should be strengthened to enable the relational and adaptive practices that teachers already employ informally.

In conclusion, the study suggests that teacher adaptability in postmigrant classrooms is domain-specific rather than uniform, where equality and socialisation elicited the strongest adaptive responses, while bilingualism received comparatively less attention

— a finding with implications for how teacher training programmes allocate resources across competence areas. The non-significant teacher-level correlation between adaptation and system critique ( $\rho = 0.239$ ) is consistent with the possibility that these dimensions are only partially related. Critical awareness of structural barriers does not automatically translate into flexible classroom practice, nor does pedagogical improvisation necessarily entail systemic reflection. Both capacities are necessary for sustainable inclusion, but they may require distinct professional development pathways. While the participating teachers demonstrated creativity and commitment, their capacity to enact lasting inclusion was constrained by persistent systemic inequalities that individual agency alone cannot overcome.

## 5 Limitations

In this study, limitations should be acknowledged. First, the sample of 36 teachers, while purposively stratified, was drawn exclusively from the Madrid region, which limits the generalisability of the findings. Second, the quantitative coding of qualitative transcripts inevitably involves a degree of interpretive subjectivity; although inter-rater reliability was substantial ( $\kappa = 0.78$ ), the ordinal scale captures broad perceptual tendencies rather than precise measurement. Third, focus group dynamics may have influenced responses. For example, social desirability effects or dominant voices within groups could have shaped the narratives recorded. Fourth, the cross-sectional design precludes causal claims about the relationship between adaptability and system critique; longitudinal or experimental designs would be needed to establish directionality. Fifth, the Friedman test required complete cases across all three thematic indicators, and listwise deletion reduced the effective sample from 36 to 20 teachers (44% attrition). This loss of power means the analysis could reliably detect only medium-to-large effects. Moreover, missingness was likely not at random; thus, teachers who did not produce codable bilingualism content (predominantly those in vocational training groups, where bilingual programme structures were not discussed) may systematically differ from those who did. The Friedman results should therefore be interpreted as applying to the subset of teachers who engaged with all three domains, and generalisation to the full sample requires caution.

Future studies should use larger, balanced cohorts and consider multilevel modelling (segments nested within teachers) to accommodate unequal measurement precision across participants without requiring listwise deletion. Also, the aggregation of multiple coded segments into a single teacher-level score assumes that each segment contributes equally to the indicator, regardless of segment length or conversational context; teachers who produced more segments had more data points averaged, but this does not necessarily yield more precise estimates if segments vary in informativeness. Although the qualitative findings are rooted in thematic coding, the inclusion of verbatim transcript excerpts would further strengthen the evidentiary basis of the mixed-methods design; CIS data-access restrictions limited the extent to which individual utterances could be reproduced.

## References

1. Angana, M., Orge, L., & Galigao, R. (2025). Globalising education: Impacts on policies, systems, access, and outcomes across nations. *Pantao – International Journal of the Humanities and Social Sciences*. <https://doi.org/10.69651/pijhs040103>
2. Ausubel, D. P. (1952). *Ego development and the personality disorders*. Grune & Stratton.
3. Ausubel, D. P. (1958). *Theory and problems of child development*. Grune & Stratton.
4. Ausubel, D. P. (1968). *Educational psychology: A cognitive view*. Holt, Rinehart and Winston.
5. Ausubel, D. P. (2002). *Theory and problems of adolescent development* (3rd ed.). Writers Club Press.
6. Ayllón, S., Alsina, Á., & Colomer, J. (2019). Teachers' involvement and students' self-efficacy: Keys to achievement in higher education. *PLOS ONE*, 14(1), e0216865. <https://doi.org/10.1371/journal.pone.0216865>
7. Baches Gómez, J., & Sierra Huedo, M. L. (2019). Intercultural education and the development of intercultural competence through the subject of visual, plastic and audiovisual education: Challenges and opportunities. *Profesorado*, 23(1), 161-181. <https://doi.org/10.30827/profesorado.v23i1.9149>
8. Bruel, A. L., Rigoni, I., & Armagnague, M. (2021). International migrations and the right to education: Challenges for addressing inequalities through education system policies. *Education Policy Analysis Archives*, 29, 66. <https://doi.org/10.14507/epaa.29.6795>
9. Burić, I., & Kim, L. (2020). Teacher self-efficacy, instructional quality, and student motivational beliefs: An analysis using multilevel structural equation modeling. *Learning and Instruction*, 66, 101302. <https://doi.org/10.1016/j.learninstruc.2019.101302>
10. Castaño, F. F. (2013). *Educational inequality: Immigrant students in the Andalusian education system. A case study*. Centro de Investigaciones Sociológicas.
11. Centro de Investigaciones Sociológicas. (2025). *Estudio 11008: Qualitative study on education*. <https://www.cis.es>
12. Cernadas Ríos, F. X., Santos Rego, M. Á., & Lorenzo Moledo, M. M. (2013). Teachers facing intercultural education: The challenge of field-based training. *Revista de Investigación Educativa*, 31(2), 569–585. <https://doi.org/10.6018/rie.31.2.155391>
13. Essomba, M. Á. (2008). *Managing cultural diversity in schools: 10 key ideas*. Graó.
14. Figueroa, T., Pineda, R., & Meza, N. J. (2024). The role of the teacher in inclusive education with migrant populations. *Dialéctica*, 1(23). <https://doi.org/10.56219/dialectica.v1i23.3070>
15. Fong, C., Dillard, J., & Hatcher, M. (2019). Teaching self-efficacy of graduate student instructors: Exploring faculty motivation, perceptions of autonomy support, and undergraduate student engagement. *International Journal of Educational Research*, 97, 21–31. <https://doi.org/10.1016/j.ijer.2019.08.018>
16. Gay, G. (2018). *Culturally responsive teaching: Theory, research, and practice* (3rd ed.). Teachers College Press.
17. Jiménez Vargas, F. (2014). Cultural diversity management models for the schooling of immigrant students in Chilean schools: Challenges for current interculturality. *Estudios Pedagógicos*, 40(2), 409–426. <https://doi.org/10.4067/S0718-07052014000300024>
18. Muñoz-Oliver, B., Gil-Madróna, P., & Gómez-Ramos, J. L. (2022). The development of emotional programmes in education settings during the last decade. *Children*, 9(4), 456. <https://doi.org/10.3390/children9040456>
19. Öqvist, A., & Malmström, M. (2018). What motivates students? A study on the effects of teacher leadership and students' self-efficacy. *International Journal of Leadership in Education*, 21(2), 155–175. <https://doi.org/10.1080/13603124.2017.1355480>

20. Semião, D., Mogarro, M. J., Pinto, F. B., Martins, M. J. D., Santos, N., Sousa, O., Marchão, A., Freire, I. P., Lord, L., & Tinoca, L. (2023). Teachers' perspectives on students' cultural diversity: A systematic literature review. *Education Sciences*, 13(12), 1215. <https://doi.org/10.3390/educsci13121215>
21. Shin, M., & Bolkan, S. (2021). Intellectually stimulating students' intrinsic motivation: The mediating influence of student engagement, self-efficacy, and student academic support. *Communication Education*, 70(2), 146-164. <https://doi.org/10.1080/03634523.2020.1828959>
22. Sornoza-Delgado, Y. M. (2024). The role of the teacher in culturally responsive pedagogy. *Código Científico Revista de Investigación*, 5(2), 179-196. <https://doi.org/10.55813/gaea/ccri/v5/n2/545>
23. Sornoza-Delgado, Y. M. (2025). Strategies for applying culturally responsive pedagogy in the classroom. *Journal of Economic and Social Science Research*, 5(1), 201-213. <https://doi.org/10.55813/gaea/jessr/v5/n1/170>
24. Thanasi-Boçe, M. (2021). The role of the instructor, motivation, and interaction in building online learning satisfaction during the COVID-19 pandemic. *Electronic Journal of e-Learning*, 19(5), 342-354. <https://doi.org/10.34190/ejel.19.5.2475>
25. UNESCO. (2017). *Education for sustainable development goals: Learning objectives*. UNESCO Publishing.
26. United Nations. (1948). *Universal Declaration of Human Rights*. <https://www.un.org/en/about-us/universal-declaration-of-human-rights>
27. World Medical Association. (2013). Declaration of Helsinki: Ethical principles for medical research involving human subjects. *JAMA*, 310(20), 2191-2194. <https://doi.org/10.1001/jama.2013.281053>

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