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Dimensions of bilingual education program implementation in schools serving linguistically minoritized students in the Czech-Polish border region

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Introduction: A core challenge for the implementation of bilingual programs is ensuring that linguistically minoritized students have equitable access to instruction that honors and values their linguistic and cultural assets and strengths. To understand how leaders of bilingual programs might address this challenge, this study sought to identify dimensions of program implementation in bilingual schools serving Polish minorities in the Zaolzie region on the Czech Republic side of the Czech-Polish border.

Methods: Employing a sequential explanatory mixed methods design, the research team first collected surveys from 123 teachers and used factor analytical techniques to identify key dimensions of program implementation. Then, interview and observational data were collected and analyzed using deductive coding to develop descriptions of each dimension in this specific border region.

Results: The analysis revealed four dimensions of program implementation: (a) program structure and alignment; (b) culturally and linguistically responsive instruction; (c) staff quality and professional learning; and (d) family engagement and community support. They also showed how a network of community-based organizations partnered with schools and families in ways that supported each dimension and facilitated integration across dimensions.

Discussion: The findings have several implications for leaders and researchers in bilingual schools including the important role that community organizations and binational cooperation can play in positively contributing to the education of linguistically minoritized populations.

KEYWORDS

bilingual education, program implementation, linguistic minorities, border regions, cross-border education

1. Introduction

As the world becomes increasingly interconnected, the ability to speak multiple languages is essential to navigating and succeeding in the global economy (Callahan and Gándara, 2014). Although it has been a contentious political issue in the United States, bilingual education, or the teaching of children and youth in more than one language, has long been a common practice in many parts of the world (Tucker, 1999; García, 2009; García et al., 2017a; Pérez Cañado, 2023). Not only can bilingual education programs facilitate the development of students' proficiency in multiple languages, but they are also important for honoring and promoting the development

of students' home languages and cultures (García, 2009; Baker and Wright, 2017).

Teaching linguistically minoritized students in their home language(s) alongside the dominant societal language(s) is important for preserving their language and culture and for promoting long-term academic outcomes (Benson, 2002; Serafini et al., 2022). Research conducted in US schools has shown that students who have opportunities to learn in their home language(s) alongside English tend to demonstrate higher rates of English proficiency and greater academic achievement gains over time than their peers who are only taught in English (e.g., Lindholm-Leary, 2001; Umansky and Reardon, 2014; Steele et al., 2017). Across international studies, linguistically minoritized students who participate in bilingual programs tend to have more positive attitudes about their home language as well as an enhanced sense of identity, self-esteem, and self-concept (see Baker and Wright, 2017).

Although bilingual programs can have many benefits, especially for linguistically minoritized students, these students may have more limited access to programs that build on their linguistic and cultural assets and strengths. In some cases, bilingual programs are designed through a subtractive, "language-as-problem" lens, where students' home language(s) are used for just a short time as a tool for acquiring the dominant language (Ruiz, 1984; Baker and Wright, 2017). In other cases, a more additive, "language-as-resource" lens is applied, with the goal of developing students' bilingualism, biliteracy, and sociocultural competence (Howard et al., 2018). This additive approach is important for valuing linguistically minoritized students' home language(s). However, the non-dominant language(s) taught in these programs may be viewed primarily as a social and economic resource for students who speak the dominant language, leading to inequities in how linguistically minoritized students, and their languages and cultures, are treated within schools and classrooms (Valdés, 1997; Dörnyei and Cervantes-Soon, 2020).

Related to these inequities, recent research in US schools describes "the increasing presence of privileged populations in bilingual education spaces in ways that are frequently to the detriment of minoritized language students, their families, and their communities" (Delavan et al., 2021, p. 299). Additionally, the emphasis on national languages in bilingual education can preclude linguistically minoritized students' access to other, Indigenous languages (de Mejía, 2006). Even when these languages can be included, schools serving linguistically minoritized students tend to have limited access to resources and fewer qualified teachers (Gándara et al., 2008), which can constrain schools' capacity to implement high-quality bilingual education programs (Lindholm-Leary, 2012; Bailey and Christina, 2021).

Given these challenges, ensuring that linguistically minoritized students are equitably served by bilingual programs requires careful attention to program implementation (Shi et al., 2022). Facilitating bilingual program implementation is no simple task, as educational leaders must consider multiple dimensions, from curriculum and instruction to educator capacity to family and community engagement (Howard et al., 2018). To build the field's understandings of program implementation for linguistically minoritized students across diverse contexts, this study sought to address the following research question: *What are the core dimensions of program implementation in bilingual schools serving Polish minorities in the Zaolzie region on the Czech Republic side of the Czech-Polish border?*

Like many border regions around the world, the Zaolzie region is defined by a history of bilateral military aggressions that resulted in

the presence of a large linguistically minoritized population in a majority-led country. Zaolzie is the Polish name for the part of Cieszyn (Těšín) Silesia that lies to the west of the Olza River (where Poland lies to the east). For Polish inhabitants of Zaolzie, maintaining their language has long been important for preserving their national and cultural identity, leading to the establishment of bilingual schools serving Polish minorities after the Cold War. This study is a first attempt to examine how bilingual programs in these schools are implemented, with potential implications for leaders in bilingual education programs serving linguistically minoritized students in cross-border regions around the world.

In the sections that follow, we begin with a more detailed description of the context under study. Then, we present the analytic framework used to identify dimensions of program implementation and discuss how our mixed method approach employed this framework. Turning to findings, we describe the four dimensions of program implementation that emerged as most salient among teachers in the Zaolzie region: (a) program structure and alignment; (b) culturally and linguistically responsive instruction; (c) staff quality and professional learning; and (d) family engagement and community support. We also show how a robust network of community-based organizations contributed to each dimension and created a local education system that honored and leveraged the unique languages and cultures present in the border region. Based on these findings, we offer implications for educational leaders and researchers.

2. Bilingual education in the Zaolzie region

In 1918, the Zaolzie region became part of what is today the Czech Republic, even though it was home to a significant Polish population. While preserving the national Polish identity and culture through education has been a consistent focus in the Zaolzie region, Polish education in the Czech Republic initially began after the Cold War when Czechoslovakia transformed from a communist state to a democratic one. In 2004, the Czech Republic joined the European Union and committed itself to upholding European standards applicable in various areas of social, political, and economic life, including education and the protection of the rights of national minorities (Szymbeczek, 2017).

According to guidelines from the Czech Ministry of Education, Youth, and Sports, a minimum number of students who belong to a national minority must be present in a region for schooling to be carried out in the minority language. The exact number of students required to establish a program varies from 15 to 20 depending on the level of education (Grabowska, 2021), from kindergarten to secondary school (which concludes at age 15 in the Czech Republic). Notably, Poles in the Zaolzie region are the only minority in the Czech Republic attending schools that provide instruction in their national language (Szymbeczek, 2017).

We sought to understand how these bilingual schools have maintained their presence in the region even as the Polish population has declined over time. There are currently 24 bilingual schools serving 2,500 students in the Zaolzie region, compared to 105 Polish schools serving 18,000 students in 1916 (Bogus, 2013). Of the current 24 schools, 10 schools serve students in grades 1 through 9, and the other 14 schools provide education only through grade 4. There are also 20 bilingual kindergartens in the Zaolzie region that are housed within these schools.

Bilingual schools in the Zaolzie region are part of the Czech public education system and are required to implement the national curriculum, with adaptations allowed to support the needs, requirements, and specific characteristics of each school's context. In grades 1 through 5, most subjects are taught in Polish except for Czech language classes, with instruction increasingly conducted in Czech at each grade level until reaching about a 50/50 ratio in grade 5. In grade 3, students also start learning English.

The mission of the bilingual schools in the Zaolzie region is not only to preserve and shape the identity of the Polish minority, but also to build relations with the Czech national group. Such intercultural cooperation can be challenging given that the border region is a unique context with a contentious history, and Polish community members' current experiences are often conditioned by the experiences of generations past (Szafrńska, 2017). In many ways, the Zaolzie region is a microcosm of border regions across Europe and even around the world, where linguistically minoritized populations struggle to maintain their identity amidst social and economic pressure to conform to the majority. As such, the Zaolzie region was a fruitful context for our inquiry which sought to understand the dimensions of program implementation that shape bilingual schooling for linguistically minoritized students. In the next section, we describe the analytical framework that guided our study design and analysis.

3. Analytical framework

We drew on the *Guiding Principles for Dual Language Education* (Howard et al., 2018) to help us identify dimensions of program implementation. The *Guiding Principles* were developed for use by dual language programs in the United States as a tool for planning, self-reflection, and continual improvement. The authors of the *Guiding Principles* use the term *dual language* to refer to:

[A]ny program that provides literacy and content instruction to all students through two languages and that promotes bilingualism and biliteracy, grade-level academic achievement, and sociocultural competence—a term encompassing identity development, cross-cultural competence, and multicultural appreciation—for all students (p. 3).

The bilingual schools in the Zaolzie region attend to each of these goals, as they offer both language and academic content classes in Polish and Czech and work to support students' capacity to engage in their multilingual and multicultural cross-border community.

Dual language programs can be either one-way or two-way depending on the student population (Howard et al., 2018). Whereas two-way programs serve approximately equal numbers of linguistically minoritized students and students from the dominant language group, one-way programs serve more homogenous groups, most typically with students who enter school speaking the non-dominant language. Bilingual schools in the Zaolzie region would align most closely with Howard et al.' (2018) description of one-way dual language programs, given that they primarily serve students from the Polish minority and teaching them in Polish and Czech.

The *Guiding Principles* are organized into seven research-based strands that reflect key dimensions of program implementation. The first strand centers on *program structure*, or the organizational aspects of a program including its vision and goals as well as its formal structures

(e.g., program duration, language allocations, demographic composition, enrollment policies) and leadership. The second strand focuses on *curriculum*, specifically the curriculum development process and the extent to which it “is culturally responsive and representative of the cultural and linguistic backgrounds of all students” while “promoting appreciation of multiculturalism and linguistic diversity” (Howard et al., 2018, p. 42). *Instruction* is the third strand and considers whether high-quality instruction is provided in both languages in a coordinated way, instruction promotes awareness of linguistic and cultural variation, and the teacher does not privilege certain voices or languages.

The fourth strand, *assessment and accountability*, attends to whether assessments are conducted in both languages, are authentic to each language, and are interpreted fairly to inform instruction. Then, *staff quality and professional development* is the fifth strand, including teacher qualifications as well as teacher recruitment and retention practices. This strand also considers how professional learning opportunities address the knowledge, dispositions, and skills needed to work with bilingual learners. The sixth strand is *families and communities*, which examines the school climate and the extent to which families are valued and welcomed, their cultural and linguistic practices are respected, and information is provided in a language and manner that they can understand. Finally, *support and resources* represent the seventh strand, which articulates that the program should be supported by all interest holders and is sufficiently funded to meet program goals, for example by purchasing high-quality instructional materials or hiring bilingual teachers and support staff.

Leaders of dual language programs are encouraged to use the *Guiding Principles* to guide their planning, support their implementation efforts, and inform their monitoring of program effectiveness. Each strand has specific principles that are broken into key points around which leaders can assess their program's alignment. Robust implementation requires alignment with each of the strands, which together support overarching program goals (Howard et al., 2018). Although these strands were developed based on bilingual programs in the United States, we used them as a guide for our study given their comprehensiveness and basis in prior research.

4. Methods

Our study employed a sequential explanatory mixed method design (Creswell and Clark, 2017) involving the collection of surveys, interviews, and observational data from February through May 2022. In mixed methods research, the overall purpose of a sequential explanatory design is to use qualitative data (e.g., interviews and observations) to explain findings derived from quantitative data (e.g., surveys) (Creswell and Clark, 2017). Data are collected in two phases. First, the quantitative data collection and analysis are conducted; then, qualitative data are collected. This design was appropriate for our study given that we sought to both identify and describe dimensions of bilingual program implementation.

In our study, analysis of teacher survey data allowed for the identification of specific dimensions of program implementation in schools serving Polish minorities in the Zaolzie region. Then, interviews with local community leaders and observations in classroom and community settings informed our understanding of each dimension in this specific cross-border region and why it may have emerged as most salient in the survey analysis.

This study was conducted as part of the project “Regional Initiative of Excellence” in 2019–2023, project number 018/RID/2018/19,

carried out at WSB University in Dąbrowa Górnicza, Poland. The study was approved by the departmental research committee and was conducted maintaining research ethics in the social sciences. In the sections below, we describe methods of collection and analysis for each data source.

4.1. Teacher surveys

4.1.1. Instrument development

We developed survey items pertaining to each of the seven strands of program implementation identified by the *Guiding Principles of Dual Language Education* (Howard et al., 2018), as described above. Using the principles and key points outlined in the *Guiding Principles*, we drafted five items in English for each strand, for a total of 35 items (see Table 1). Each item asked teachers to what extent they agreed with the statement, from Strongly Disagree (1) to Strongly Agree (5). Then, we translated all items to Polish and engaged in a collaborative process to ensure that survey items would be understandable and relevant to teachers in schools in the Zaolzie region.

Content validity was supported through an expert review of the items by three researchers and two community members from the Zaolzie region. All reviewers were bilingual, while some held advanced degrees in education and others previously taught in Polish schools. Each reviewer assessed the readability of the questionnaire and the relevance of the questions to teachers in schools in the Zaolzie region. They also noted any issues with wording and translations and recommended changes to several items. Each reviewer also recommended the omission of one item that asked about data systems and accountability, as these policy-related constructs are not relevant to the education system in the Czech Republic. The final 34 survey items are shown in Table 1.

4.1.2. Data collection

After receiving research approval, an online survey was sent to all 280 teachers in the 14 Polish-Czech bilingual schools in the Zaolzie region. Teachers' participation was voluntary, and survey respondents could opt out of completing the survey at any stage. Participants were informed about the purpose of the research and the ways in which the data would be processed. The survey did not include any questions that would personally identify participants. A total of 123 teachers completed the survey for a response rate of 44%.

4.1.3. Sample

Most of the survey respondents were female-identifying and had more than 10 years of teaching experience. While most teachers were born on the Czech side of the border, they identified as Polish nationals (see Table 2).

4.1.4. Data analysis

We conducted an exploratory factor analysis (EFA) to identify the structure of the underlying data and reveal the underlying constructs comprising program implementation in bilingual schools in the Zaolzie region. While we developed items from the seven previously identified strands of program implementation, we were also open to different groupings of the strands given differences between US schools (where the *Guiding Principles* were developed) and schools in the Zaolzie region.

We conducted a maximum likelihood EFA with varimax rotation to maximize distance between the factors because of the likelihood that they would be correlated (Matsunaga, 2010). Items with a factor loading higher than 0.5 on the primary factor and lower than 0.3 on the secondary factor were noted as consistent with the factor. Items that loaded higher than 0.3 on the secondary factor (or split 0.4/0.2) were noted as multidimensional and in need of additional analysis (Matsunaga, 2010). For example, when an item loaded similarly on two factors and theoretically could belong to either construct, we compared Cronbach's alpha for the two factors to examine their internal consistency with and without the item (Hooper, 2012). We also calculated Cronbach's alpha for each of the final factors to assess their reliability.

4.2. Interviews and observations

4.2.1. Instrument development

Interview and observation protocols were developed to support more nuanced understandings of the dimensions of program implementation that were identified through the EFA. Alignment of the interview and observation protocols to survey findings was intentional based on our sequential explanatory mixed methods design (Creswell and Clark, 2017).

Following qualitative methodology (Merriam and Tisdell, 2016), we developed semi-structured interview protocols to ask participants how bilingual schools in the Zaolzie region are organized to support the dimensions identified in the survey. We asked two to three questions related to each dimension; for example, we asked for information about how school programs are structured for coherence and alignment and how schools engage family and community. We also asked whether and how the participant's specific organization supported each dimension.

The research team also developed a common observation protocol to take notes during field work. The two-page protocol listed each dimension of program implementation identified in the survey and provided space for researchers to document the context within which different dimensions were observed. The protocol also provided space for open notetaking in case additional activities that did not align with the dimensions were observed.

4.2.2. Data collection

Based on the research team's experience in the region, we identified five key interest holders to interview who were involved in supporting bilingual schools in the Zaolzie region. These included: (a) the director of the *Macierz Szkolna*, a faction of the Polish Education Society designed to support the education of Polish nationals who remained on the Czech side of the Olza River; (b) two staff members from the *Centrum Pedagogiczne*, a Pedagogical Center funded by the Czech Ministry of Education that develops instructional materials, provides teacher training, and offers cross-cultural student exchanges for Polish bilingual schools; (c) the director of the *Polski Związek Kulturalno-Oświatowy*, or the Polish Cultural and Education Union, which represents the Polish minority in the Czech Republic; and (d) a public relations specialist from the *Towarzystwo Nauczycieli Polskich*, or the Association of Polish Teachers in the Czech Republic. Interviews lasted between 45 and 60 min and were conducted in Polish by the second author. Extensive notes were taken in Polish during the

TABLE 1 Survey items pertaining to dimensions of program implementation and their associated strand and dimension.

Item <i>To what extent do you agree with the following statements related to the bilingual program at your school?</i>	Guiding Principles Strand from Howard et al. (2018)	Dimension Based on Exploratory Factor Analysis			
		1	2	3	4
The program design is aligned with its goals.	1	0.47			
Appropriate grade-level academic expectations are clearly identified in the program design.	1				
The program is articulated across grade levels.	1	0.61			
There is deliberate planning and coordination of curriculum, instruction, and assessment across the languages used for instruction.	1				
High-quality instruction in both languages is provided to all students in all grades in a way that is consistent with the program model.	1	0.41			
The curriculum is adaptable to student, program, and community needs.	2		0.61		
The curriculum is coordinated within and across grade levels.	2	0.45			
The curriculum in both languages of instruction meets or exceeds national standards.	2				
The curriculum promotes and maintains equal status among languages.	2				
The curriculum is representative of the cultural and linguistic backgrounds of all students.	2		0.37		
The program model and corresponding curriculum are implemented with fidelity.	3				
When delivering instruction, teachers take into consideration the varying linguistic needs of students.	3		0.52		
Instruction in one language builds on concepts learned in the other language.	3		0.45		
Instruction promotes metalinguistic awareness and metacognitive skills.	3		0.56		
Instruction promotes an awareness of language variation.	3		0.64		
Student assessment is aligned with program goals and national standards for both languages of instruction.	4	0.50			
The program systematically collects and analyses data to determine whether its goals have been met.	4				
The program engages in ongoing evaluation.	4	0.64			
Assessment is consistently conducted for all languages taught the program.	4	0.52			
Student progress is measured on a variety of indicators.	4				
Selection of new program staff is based on credentials, language proficiency, and demonstrated commitment to program goals.	5			0.58	
All staff are valued and appropriately supported in carrying out their work.	5			0.44	
There is a long-term professional development plan that is comprehensive, inclusive, and differentiated.	5			0.72	
Professional development is aligned with competencies needed to meet program goals.	5			0.65	
Professional development is supported by adequate funding, time, and resources.	5				
All families are valued and welcomed into the school community.	6		0.51		
The program incorporates learning activities that are designed to help families understand and support the program.	6				0.76
The program refers families to resources in the community.	6				0.34
The program plans for and engages in community-building activities with families.	6				0.42
Communication with families and the community is in the appropriate language.	6				0.66
Program administrators have adequate knowledge to support and lead program staff.	7			0.61	
Funding allocations are aligned with program goals.	7				
Funding provides sufficient staff, equipment, and materials in both program languages.	7				0.61
The program engages in public relations activities to promote the program to a variety of audiences.	7				0.63
The program advocates for funding based on its needs.	7				

TABLE 2 Participant demographics.

	Female-identifying	Teaching experience				Place of birth		Nationality	
		0–5 years	6–10 years	11–20 years	21+ years	Polish side	Czech side	Polish	Czech
Percent of sample (<i>n</i> = 123)	84%	15%	19%	33%	33%	8%	88%	95% ^a	3%

interview that were translated into English for use by the full research team.

The research team also conducted a day-long field visit to the Zaolzie region, during which they toured and met staff at the *Centrum Pedagogiczne*, the *Macierz Szkolna*, and one of the schools included in the survey sample. At the school, the research team met with the director and lead teacher and observed a 45-min bilingual lesson in a grade 6 technology class. During the school visit, the team asked clarifying questions about different dimensions of program implementation, reviewed instructional materials produced by the *Centrum Pedagogiczne*, and took field notes related to teachers' and students' language use in the classroom (Emerson et al., 2011).

4.2.3. Data analysis

After review and discussion among the research team, interview and observational notes were hand-coded by the first author using a deductive coding scheme (Saldaña, 2021), with one code representing each dimension identified in the survey analysis. The coded excerpts from both the interviews and observations were then curated by dimension and reviewed collaboratively by the research team. Each dimension was discussed in detail during a series of research team meetings; then, the first author developed a detailed analytic memo for each dimension that described the dimension in depth and how it was supported in bilingual schools in the Zaolzie region, with data excerpts included to elucidate key points (Miles et al., 2013). These memos served as the basis of the qualitative findings presented below.

5. Results

Our survey analysis revealed four underlying constructs that represent different dimensions of bilingual program implementation in the Zaolzie region: (a) program structure and alignment; (b) culturally and linguistically responsive instruction; (c) staff quality and professional learning; and (d) family and community engagement and support. In the sections that follow, we describe these dimensions and how they were enacted in this specific context.

5.1. Program structure and alignment

Seven survey items composed the first dimension of program implementation, as indicated in Table 1. The factor loadings of these items ranged from 0.41 to 0.64, and the Cronbach's alpha was $\alpha = 0.79$ indicating acceptable internal consistency. These items represent features of three different strands outlined in the *Guiding Principles*: program structure, curriculum, and assessment. Overall, the items attend to the alignment between program goals and curriculum and assessment practices across grade levels.

Our analysis of interview and observational data suggested that program structure in the bilingual schools was enacted through robust curricular and assessment materials developed and provided by the *Centrum Pedagogiczne*. As staff from the Pedagogical Center noted, schools that use Polish as a language of instruction must still operate under the Czech national curriculum, and any materials must be approved by the Czech Ministry of Education. With funding from the Czech and Polish governments, the Center developed textbooks, workbooks, worksheets, and associated teaching manuals for each content area in Czech, Polish, and the regional Silesian dialect. These materials were developed around a curricular framework that articulates which national standards should be taught in which language at each grade level and how they align across languages.

While some of the textbooks developed by the Center were simply translated from Czech into Polish, others were specially designed and written by Center staff to support content knowledge related to Czech and Polish history and geography and to support regional education: "We have created a core curriculum that is similar to the core curriculum of the Czech language, but also develops such threads as tradition and culture." Regional traditions and linguistic practices were honored through specially designed materials that teach students about the relationships between the diverse languages used in the region. During our field work, we reviewed a series of workbooks for each grade level that attended to relations between the Czech and Polish language as well as the regional dialect (e.g., by exploring cognates or common word origins). The history of language use in the region was also presented through text passages and accompanying visuals, and the evolution of cultural traditions were described as aligned to the grade-level standards under study.

The Center also provided professional learning opportunities to teachers to implement the materials (more on this below) and workshops on how to assess student learning across the curriculum. Although Center staff stated that they did not design a specific assessment system for schools, they described offering schools examples of formative assessments that were aligned to the curriculum. Overall, our findings suggest that the resources provided by the Center offered robust supports for articulating and enacting the program structure.

5.2. Culturally and linguistically responsive instruction

Aligned with the curriculum and instruction strands as described in the *Guiding Principles*, six survey items made up the second dimension of program implementation (see Table 1). These items attend to the responsiveness of the curriculum and teachers' classroom instruction to students' backgrounds and needs and to the development of dynamic linguistic practices. The factor loadings

ranged from 0.37 to 0.64, and the Cronbach's alpha was $\alpha=0.83$ indicating good internal consistency.

The *Centrum Pedagogiczn* was also an important resource for supporting this dimension. The materials developed by the Center, and associated professional learning activities for teachers, emphasized that “not everything needs to be taught in the same way in both languages,” according to the Center director. She went on to provide a few examples of how languages could be used dynamically in instruction:

When students learn nouns, it can be done in Polish classes, and in Czech lessons, you no longer need to learn these nouns. You can pay attention to, for example, similarities and differences between these two languages, but you do not have to learn the same thing all over again. When it comes to literature, if I teach about the Polish Romantics, I look at Romanticism through the European or Czech-Polish perspective. Analogically, if I talk about the Polish Romantics in Polish, it is worth having the same topic in Czech – Czech Romantics. All these activities form a whole, which supports bilingualism. These children see one topic twice through the prism of both languages.

These examples align with the translanguaging stance and associated practices that have been described in prior literature (e.g., Esquinca et al., 2014; García et al., 2017b; Somerville and Faltis, 2019) and illustrate how instruction in the bilingual schools in the Zaolzie region was grounded in an approach that honors and values the diverse linguistic and cultural practices in the community.

We observed a translanguaging stance in our field visit as well. The lesson we observed occurred during an instructional block specifically designed to allow students to use the language practices with which they felt most comfortable. This block was distinct from other blocks during which instructional activities were explicitly conducted either in Polish or Czech. While the lesson we observed was delivered in Polish, some students participated orally and produced written work in Czech or the Silesian regional dialect. In this way, instruction was adaptable to students' learning needs and promoted a culturally and linguistically responsive environment for all participants.

5.3. Staff quality and professional learning

The third dimension of program implementation we observed aligned well with the staff quality and professional learning strand as articulated in the *Guiding Principles*. The five items composing this construct centered on the selection and ongoing professional development of program staff, which in our analysis included administrators' program knowledge and leadership (see Table 1). The factor loadings of these items ranged from 0.44 to 0.72 and had a Cronbach's alpha of $\alpha=0.76$ suggestive of acceptable internal consistency.

As alluded to previously, teachers in the bilingual schools in the Zaolzie region had many opportunities to engage in professional learning activities to support their implementation of curricular materials. Staff from the Pedagogical Center described organizing regular workshops for teachers and leaders to support unit and lesson development around these materials. Workshops were organized for individual schools based on their needs, interests, and requirements

and for the entire Teachers' Council (i.e., all teachers from all schools). They were often designed around demonstration lessons where teachers are asked to co-analyze a lesson and reflect and discuss what they observed. The director also described a recent set of workshops designed specifically for school leaders focused on methods of formative assessment for critical thinking skills to support leaders' work with teachers in this area.

Center staff noted that their work was supported by the *Towarzystwo Nauczycieli Polskich*, or the Association of Polish Teachers, which served as a liaison between schools and the Center. Staff at the Association gathered information from teachers and advocated for their learning needs; this often resulted in specially designed workshops or cross-border fieldwork activities. For example, the Association worked with the Center to organize a series of workshops for teachers from both sides of the border: “The teachers tried to use the neighbor's language, to communicate in Polish or Czech, without using English. However, the most important thing there was the exchange of experiences.” These activities supported Polish teachers' linguistic and cultural awareness and helped to “build their prestige in the region,” according to Association staff. Overall, professional learning activities provided opportunities for teachers to continue developing their linguistic and cultural competencies and for school leaders to learn how to support teachers in these efforts.

5.4. Family engagement and community support

The final dimension of program implementation we identified pertained both to family and community and support and resources, the last two strands articulated in the *Guiding Principles*. This construct comprised six items with factor loadings ranging from 0.34 to 0.76 and a Cronbach's alpha of $\alpha=0.82$, which indicated good internal consistency (see Table 1). These six items attended to how families were engaged with the school and accessed community resources as well as to how the schools promoted themselves in the community and accessed fiscal resources.

In bilingual schools in the Zaolzie region, these two components (i.e., family engagement and community outreach) were connected through the work of community-based organizations that offered events and activities for families and communicated with community members about the schools' activities. Our interviewees described three ways that community organizations helped to accomplish these tasks. First, each school had a parents' association that organizes various non-school activities, such as parent meetings, cross-border trips, and picnics, using funds from membership fees. The parents' association worked with the Pedagogical Center to prepare workshops for parents to support their interactions with teachers and to resolve any conflicts that arise at school. Second, a range of inter-school activities was provided by a Central School Matrix in the Czech Republic. The Matrix brought together schools around different initiatives, such as a “first-grader voucher,” where each child in the first grade received a well-equipped schoolbag with supplies and books to read in Polish and Czech as an introduction to school.

Third, several community organizations described how they arranged cultural events to facilitate engagement in the regional traditions in ways that bolster the school curriculum. For example, the *Polski Związek Kulturalno-Oświatowy*, or the Polish Cultural and

Education Union, developed cooperative agreements with schools to offer families cross-border trips so that they “have as much contact with the Polish culture and language as possible,” according to the director. The *Macierz Szkolna*, or the Polish Education Society, also managed cultural events and activities for parents and students, although these were run separately from the schools. As the Society’s director noted, their goal is to ensure “the best possible education in the field of learning Polish and Czech language, as well as their history and culture.” To accomplish this goal, the Society also provided financial assistance to support tutoring and other out-of-school activities for students. Overall, these community-based organizations constituted an important system of support for Polish families in the Zaolzie region, and their work interfaced closely with the schools their children attend.

6. Discussion

Our study sought to identify and describe dimensions of program implementation that supported bilingual education for Polish minorities in the Zaolzie region along the Czech-Polish border. Education has been an important means for Polish minorities in the region to preserve their language and culture and to integrate into the social and economic fabric of the Czech Republic. Our findings show how various dimensions of program implementation enabled bilingual schools in the Zaolzie region to honor and value the languages, cultures, and traditions of both Poland and the Czech Republic. Further, they supported the incorporation of regional history and the regional dialect into formal education spaces.

Drawing on the *Guiding Principles* (Howard et al., 2018) that were designed to facilitate program design and implementation in US bilingual programs, we identified four key dimensions of implementation in bilingual schools in the Zaolzie region. The first dimension, program structure and alignment, considers the program’s alignment with its stated goals and articulation across grade levels with respect to curriculum and assessment practices. That these aspects of program implementation formed an overarching construct in our analysis may be related to the fact that schools were provided with a core curriculum and associated instructional materials in each language, including the local dialect, and offered examples of aligned assessments. The development of the curriculum and materials was government-funded and facilitated by a community-based organization that also provided professional learning opportunities to teachers and leaders. This level of support for bilingual schools serving Polish minorities in the Zaolzie region stands in stark contrast with what has typically been observed in US schools, where teachers of the non-dominant language must often develop their own curricular guides and create their own instructional materials (Amanti, 2019). When teachers are responsible for designing their own curricula, alignment within and across grade levels can be limited; this was not the case in the bilingual schools we studied.

Second, the provision of culturally and linguistically responsive instruction emerged as a salient component of program implementation. Instruction in both languages as well as the local dialect was supported by the resources described above and was enacted by bilingual teachers. While there were specific blocks of instructional time dedicated to each language, there were also opportunities for students to engage in translanguaging practices to support and demonstrate their learning. These practices were viewed as a natural part of interacting in the

cross-border region, unlike in many contexts around the globe where translanguaging is viewed negatively and even discouraged (Corona and Block, 2020; Oliver and Exell, 2020). In Zaolzie, incorporating the diverse linguistic and cultural practices of the region was central to program goals. Given prior research demonstrating the benefits of bilingual programming for linguistically minoritized populations, this approach likely promoted positive academic and social outcomes for students (Baker and Wright, 2017).

The third dimension of program implementation was staff quality and professional learning. Ensuring that teachers and leaders were equipped to enact the curriculum and that materials provided was central to the work of two community-based organizations. One organization represented the teaching staff and advocated for their needs, and the other designed and facilitated professional learning opportunities. The latter also provided learning opportunities for leaders to support their work with teachers. This approach to professional learning likely supported coherence across curriculum, assessment, and instruction, facilitating teachers’ enactment of curriculum and assessment materials (i.e., the first dimension) and facilitation of culturally and linguistically responsive instructional practices (i.e., the second dimension).

Finally, family and community engagement and support constituted the fourth dimension of program implementation. This dimension was bolstered through a constellation of community supports that included fiscal resources as well as out-of-school events and activities for families that extended learning into cross-border community spaces. Families were also encouraged to organize and advocate for themselves and had support to facilitate interactions with teachers. These activities and supports likely created more opportunities for two-way communication between teachers and families, which can facilitate students’ academic success and social emotional well-being (Patrikakou et al., 2005). This dimension in particular highlights the extensive network of community supports that enabled program implementation and sustainability for bilingual schools in the Zaolzie region. Such community supports, when integrated into the daily work of schools, can be important for ensuring equitable opportunities for linguistically minoritized students (Hopkins et al., 2021).

Overall, our study’s findings have several implications for educational leaders and researchers working to support bilingual program implementation. We highlight three here. First, our findings highlight the importance of providing well-aligned curricular resources in the language(s) of instruction, especially the non-dominant language(s). Given that these resources do not exist in many contexts, there is a need for leaders to advocate for their identification and/or development and for researchers to identify those resources that are most effective for facilitating program outcomes. Second, our study revealed the importance of school-community relationships in bilingual program implementation, and especially the relevance of community-based organizations for supporting teachers, leaders, and families. Leaders of bilingual schools may thus benefit from identifying community resources, developing relationships with community organizations that serve their specific populations, and partnering with these organizations to co-design instructional resources and/or activities and events that honor the community’s language and cultural practices both inside and outside of school.

Third, looking across dimensions, we observed substantial coherence in how the bilingual schools in the Zaolzie region were implemented. That is, implementation of the program structure (e.g.,

the curriculum) was facilitated by professional learning opportunities as well as community resources and related activities, which enabled the provision of culturally and linguistically responsive instruction. Thus, program leaders not only need to assess how they are supporting each dimension, but also how they are fostering integration and alignment across dimensions. Although our study highlights some of the resources that supported this integration, more research is needed to understand how leaders integrate these dimensions in their practice. There is also a need for comparative work on bilingual program implementation across diverse contexts. The schools we studied were situated in a region that is unique in many respects, and notably we were not able to examine some of the challenges (e.g., racial discrimination) faced by leaders serving linguistically minoritized populations in other regions.

7. Conclusion

Findings from this study helped to elucidate how bilingual programs can be implemented to ensure that linguistically minoritized students have equitable access to instruction that honors and values their linguistic and cultural assets and strengths. The study provided key insights into the dimensions that support robust program implementation and highlighted the important role of community organizations in this work. It also highlighted how binational governmental cooperation can positively contribute to the education of linguistically minoritized populations through resource sharing and cross-border activities for students and teachers. Overall, these findings offer a glimmer of hope for bilingual educators around the globe, educators who are tirelessly working to uplift the voices of the students and families they serve.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

The studies involving humans were approved by the WSB University Dept. Research Ethics Committee. The studies were conducted in accordance with the local legislation and institutional requirements. The Ethics Committee waived the requirement of written informed consent. Digital informed consent was obtained from the survey participants for participation in the study. Verbal consent was obtained for the interview participants to participate in

the study; once findings were generated, we shared them with interviewees and obtained verbal consent to publish them and include the name of their organizations.

Author contributions

MH: Conceptualization, Formal analysis, Methodology, Writing – original draft. EN-Ž: Data curation, Investigation, Writing – original draft. JK-P: Conceptualization, Data curation, Funding acquisition, Supervision, Writing – review & editing. MS: Data curation, Project administration, Validation, Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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References

- Amanti, C. (2019). The (invisible) work of dual language bilingual education teachers. *Biling. Res. J.* 42, 455–470. doi: 10.1080/15235882.2019.1687111
- Bailey, K. M., and Christina, D. (2021). *Research on teaching and learning English in under-resourced contexts*. New York, NY: Routledge.
- Baker, C., and Wright, W. E. (2017). *Foundations of bilingual education and bilingualism. 6th Edn*. Bristol, UK: Multilingual Matters.
- Benson, C. J. (2002). Real and potential benefits of bilingual programmes in developing countries. *Int. J. Biling. Educ. Biling.* 5, 303–317. doi: 10.1080/13670050208667764
- Bogus, M. (2013). *Teachers of folk schools in the Cieszyn Silesia in the 19th and early 20th centuries*. Czeski Cieszyn–Częstochowa: Legal and Professional Considerations.
- Callahan, R. M., and Gándara, P. C. (2014). *The bilingual advantage: language, literacy, and the US labor market*. Bristol, UK: Multilingual Matters.
- Corona, V., and Block, D. (2020). Raciolinguistic micro-aggressions in the school stories of immigrant adolescents in Barcelona: a challenge to the notion of Spanish exceptionalism? *Int. J. Biling. Educ. Biling.* 23, 778–788. doi: 10.1080/13670050.2020.1713046

- Creswell, J. W., and Clark, V. L. (2017). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage.
- de Mejía, A. (2006). Bilingual education in Colombia: towards a recognition of languages, cultures, and identities. *Colomb. App. Ling. J.* 8, 152–168. doi: 10.14483/22487085.176
- Delavan, M. G., Freire, J. A., and Menken, K. (2021). Editorial introduction: a historical overview of the expanding critique(s) of the gentrification of dual language bilingual education. *Lang. Policy* 20, 299–321. doi: 10.1007/s10993-021-09597-x
- Dorner, L. M., and Cervantes-Soon, C. G. (2020). Equity for students learning English in dual language bilingual education: persistent challenges and promising practices. *TESOL Q.* 54, 535–547. doi: 10.1002/tesq.599
- Emerson, R. M., Fretz, R. I., and Shaw, L. L. (2011). *Writing ethnographic fieldnotes*. 2nd Edn. Chicago, IL: The University of Chicago Press.
- Esquinca, A., Araujo, B., and de la Piedra, M. T. (2014). Meaning making and translanguaging in a two-way dual-language program on the U.S.-Mexico border. *Biling. Res. J.* 37, 164–181. doi: 10.1080/15235882.2014.934970
- Gándara, P., Maxwell-Jolly, J., and Rumberger, R. W. (2008). *Resource needs for English learners: getting down to policy recommendations*. University of California: Linguistic Minority Research Institute.
- García, O. (2009). *Bilingual education in the 21st century: a global perspective*. Hoboken, NJ: Wiley-Blackwell.
- García, O., Johnson, S. I., and Seltzer, K. (2017a). *The translanguaging classroom: leveraging student bilingualism for learning*. Philadelphia, PA: Caslon.
- García, O., Lin, A. M. Y., and May, S. (2017b). *Bilingual and multilingual education*. 3rd Edn Springer.
- Grabowska, B. (2021). Education in schools with Polish as the language of instruction in the Zaolzie region in the opinions of pupils and their parents. *Edukacja Międzykulturowa*. 2, 204–220.
- Hooper, D. (2012). “Exploratory factor analysis” in *Approaches to quantitative research – Theory and its practical application*. ed. H. Chen (Cork, Ireland: Oak Tree Press).
- Hopkins, M., Weddle, H., Bjorklund, P., Umansky, I. M., and Dabach, D. B. (2021). “It’s created by a community”: local context mediating districts’ approaches to serving immigrant and refugee newcomers. *AERA Open* 7:233285842110322. doi: 10.1177/23328584211032234
- Howard, E. R., Lindholm-Leary, K. J., Rogers, D., Olague, N., Medina, J., Kennedy, B., et al. (2018). *Guiding principles for dual language education*. 3rd Edn. Washington, DC: Center for Applied Linguistics.
- Lindholm-Leary, K. J. (2001). *Dual language education*. Bristol, UK: Multilingual Matters.
- Lindholm-Leary, K. (2012). Success and challenges in dual language education. *Theory Pract.* 51, 256–262. doi: 10.1080/00405841.2012.726053
- Matsunaga, M. (2010). How to factor-analyze your data right: do’s, don’ts, and how-to’s. *Int. J. Psychol. Res.* 3, 97–110. doi: 10.21500/20112084.854
- Merriam, S. B., and Tisdell, E. J. (2016). *Qualitative research: a guide to design and implementation*. 4th Edn. San Francisco, CA: Jossey-Bass.
- Miles, M. B., Huberman, A. M., and Saldana, J. (2013). *Qualitative data analysis*. Thousand Oaks, CA: Sage.
- Oliver, R., and Exell, M. (2020). Identity, translanguaging, linguisticism and racism: the experience of Australian aboriginal people living in a remote community. *Int. J. Biling. Educ. Biling.* 23, 819–832. doi: 10.1080/13670050.2020.1713722
- Patrikakou, E. N., Weissberg, R. P., Redding, S., and Walberg, H. J. (2005). *School-family partnerships: fostering children’s school success*. New York, NY: Teachers College Press.
- Pérez Cañado, M. L. (2023). Inclusion and diversity in bilingual education: a European comparative study. *Int. J. Biling. Educ. Biling.* 26, 1129–1145. doi: 10.1080/13670050.2021.2013770
- Ruiz, R. (1984). Orientations in language planning. *NABE J.* 8, 15–34. doi: 10.1080/08855072.1984.10668464
- Saldaña, J. (2021). *The coding manual for qualitative researchers*. 4th Edn. Thousand Oaks, CA: Sage.
- Serafini, E. J., Rozell, N., and Winsler, A. (2022). Academic and English language outcomes for DLLs as a function of school bilingual education model: the role of two-way immersion and home language support. *Int. J. Biling. Educ. Biling.* 25, 552–570. doi: 10.1080/13670050.2019.1707477
- Shi, M., Huang, J., and Lu, G. (2022). Meeting the bilingual learning needs of Tibetan minority students in Qinghai Province: a multiple perspective investigation into problems and solutions. *Front. Psychol.* 13:937390. doi: 10.3389/fpsyg.2022.937390
- Somerville, J., and Faltis, C. (2019). Dual languaging as strategy and translanguaging as tactic in two-way dual language programs. *Theory Pract.* 58, 164–175. doi: 10.1080/00405841.2019.1569380
- Steele, J. L., Slater, R. O., Zamarro, G., Miller, T., Li, J., Burkhauser, S., et al. (2017). Effects of dual-language immersion programs on student achievement: evidence from lottery data. *Am. Educ. Res. J.* 54, 282S–306S. doi: 10.3102/0002831216634463
- Szafrańska, A. (2017). The polish-Czech border area as a space for building cross-border cooperation from the perspective of teachers. *Intercult. Educ.* 6, 130–142.
- Szymeczek, R. (2017). Polish schooling in Czechoslovakia (Czech Republic) from the time of its establishment to the present day. *Rocznik SNPL, Wilno, Litwa* 17, 254–274.
- Tucker, G. R. (1999). A global perspective on bilingualism and bilingual education. Center for Applied Linguistics. Available at: <https://www.cal.org/wp-content/uploads/2022/05/AGlobalPerspectiveonBilingualism.pdf>
- Umansky, I. M., and Reardon, S. F. (2014). Reclassification patterns among Latino English learner students in bilingual, dual immersion, and English immersion classrooms. *Am. Educ. Res. J.* 51, 879–912. doi: 10.3102/0002831214545110
- Valdés, G. (1997). Dual-language immersion programs: a cautionary note concerning the education of language-minority students. *Harv. Educ. Rev.* 67, 391–430. doi: 10.17763/haer.67.3.n5q175qp86120948