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Teachers' Beliefs about Translanguaging: Effects of Language

Skills and Instructional Settings

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Abstract

Experimental research was conducted to examine teachers' beliefs about classroom activities involving translanguaging, a pedagogical practice in which students use both their home language and second language to communicate, learn academic content, and develop oral and literacy skills in both languages. Teachers (n = 249) completed a survey to rate the effectiveness of translanguaging in general and specifically for students who vary in L1 and L2 proficiency (in this research, Spanish and English). Participants were randomly assigned to respond concerning one of four instructional settings: Bilingual Education (BE), Dual Language (DL), General Education (GE), and English as a Second Language (ESL). In general, translanguaging was viewed as more effective when students' Spanish skills are strong, although strong English skills also were seen to make it more effective to a lesser extent. Teachers rated translanguaging as generally more effective in DL and BE, likely because these settings explicitly leverage students' home-language skills. Classroom practices based on these beliefs may exacerbate achievement gaps between high- and low-proficiency populations, by directing the richness of the home language and culture disproportionately to high-proficiency students. Teacher-education practices are needed emphasizing translanguaging for all students regardless of home-language proficiency.

1. Introduction

Teachers encounter numerous challenges in today's classrooms, including increasing numbers of students for whom the instructional language is a second language (Besterman, Ernst, & Williams, 2018; Calderón, Slavin, & Sanchez, 2011; National Center for Education Statistics, 2019; Pereira & de Oliviera, 2015; U.S. DOE & U.S. DOJ, 2015). These students come from many countries, speaking

different languages, with considerable variability in oral and literacy skills in both L1 and L2 (Hipfner-Boucher et al., 2015). Educators who advocate for bilingual education believe in utilizing students' first language to help them learn academic content and the new language (Cummins, 2001; Krashen, 1996; Saunders & O'Brien, 2006; Slavin & Cheung, 2005; Veliyeva, 2015).

Indeed, the foundational premise of bilingual education is to use the first language to facilitate student success in school. In bilingual settings the home language has been employed to foster second-language proficiency and teach academic content, in addition to fortifying oral and literacy skills in the home language (Freeman, Freeman, & Mercuri, 2005; Soltero, 2004). More recently, a shift in thinking has emerged, whereby the home language is used to promote second-language proficiency and teach academic classrooms, but also in ESL and general-education settings, which have traditionally not leveraged students' home language skills.

This practice has been described as *translanguaging* (Ascenzi-Moreno, 2018; Childs, 2016; DeCosta et al., 2017; Garcia, 2009; Garcia & Wei, 2014). In lessons involving translanguaging, students use both L1 and L2 to communicate, learn academic content, and develop oral and literacy skills in both languages. For example, students might use the home language to read about a topic (e.g., the water cycle) and talk with one another about it in the home language—and then use the second language to complete an assignment (e.g., make a poster showing the stages of the water cycle). Translanguaging encompasses "the ways bilinguals draw on their full linguistic toolkits in order to process information, make meaning, and convey it to others" (Orellana & Garcia, 2014, p. 386). Translanguaging has been discussed as both a pedagogical technique and a student language-use practice (Cenoz, 2017), but it is treated in this article in the former sense of the term.

The future of translanguaging, as with all pedagogical innovations, depends on the extent to which teachers perceive it to be an effective classroom practice; teachers do what they think works, and translanguaging is no exception. As detailed below, it seems plausible that teacher beliefs about the effectiveness of translanguaging depend upon various factors, including (1) the extent of students' home- and second-language skills, and (2) the instructional setting in which these skills are implemented (bilingual education, dual language, general education, ESL).

These two sets of factors are examined in the research reported in this article. We begin with a literature review and problem statement, present the methods and results of the research, and conclude with a discussion of the implications of this work in P-12 education and teacher education. The article refers to students who are candidates for translanguaging as "English Language Learners" (ELLs), but this student population has been described using other terms such as "Emergent Bilinguals" (EBs) and "Multilingual Learners" (MLLs).

2. Literature Review

The education literature presents a somewhat limited body of research on the efficacy of translanguaging and educators' beliefs about this classroom practice. In a study focused on the effects

of translanguaging in a higher education setting, Makalala (2014) investigated student performance on reading and vocabulary tests (n = 60). Students were randomly assigned to an experimental group that participated in translanguaging or a control group that used only the language of instruction. The intervention was three months in duration, and students were tested pre- and post-intervention. Results indicated that the experimental group significantly outperformed controls on the vocabulary test, but not on the reading test. Although the results were mixed, the author interprets the data as supporting a multilingual teaching pedagogy that treats translanguaging as a beneficial classroom strategy.

Drawing a similar conclusion, Poza (2018) conducted a study of translanguaging in a 5th grade science classroom. Using data collected from ethnographic observation and recordings of student interactions in a bilingual education program, the author reports that "by allowing students ample use of their full bilingual repertoires, extensive collaboration, and authentic experience and exposure to target language varieties, they are supported in their learning of new content and linguistic forms" (p. 1). The author advocates a translanguaging approach to teaching, whereby language acquisition is treated as a social meaning-making processes, conventional forms of language use are questioned, and students can employ familiar communicative practices and develop their capacities concerning target discourses (including the academic discourse favored in the science lessons involved in the study). The author also offers a cautionary note about oversimplifying translanguaging pedagogies to a linguistic free-for-all, calling for authenticity of linguistic input in academic discourses.

In a study conducted in South Africa, fourth-grade students were encouraged to use their home language (IsiXhosa) when practicing comprehension strategies such as inferencing while learning to read in English (Mgijima & Makalela, 2016). Participants completed A pre-test assessment in both English and IsiXhosa, followed by an intervention comprised of translanguaging strategies. For example, during one intervention, students were instructed to read a question in one language and respond in the other while reading a text with alternating paragraphs in IsiXhosa and English. For the post-test, the students were presented with a similar two-language assessment format. Paired t-tests were used to compare the pre- and post-test scores in both languages, and gains in both were statistically significant. Although the researchers opted not to include a control group that did not receive a translanguaging intervention, they suggest that translanguaging had a positive effect on participants' overall reading comprehension as assessed in both English and IsiXhosa. Similar findings and conclusions have been published by Creese and Blackledge (2010), Neumann (2015), and Romero (2017).

Findings as such support commentators who have argued that translanguaging has beneficial effects on second language learners' academic performance (Lewis, Jones, & Baker, 2012; García, Bartlett, & Kleifgen, 2007), higher order thinking skills (Fu & Matoush, 2015; Garcia & Wei, 2014; Garcia, Bartlett, & Kleifgen, 2007; Lewis, Jones, & Baker, 2012; Martin, 2005), capacity to draw on background knowledge (Canagarajah, 2011), and sense of confidence in communicative abilities (Canagarajah, 2011). Madiba (2012) suggested that students benefit if their home and second languages

are used in a complimentary rather than competing manner during instruction. At the same, it seems clear that additional research is needed to evaluate the academic outcomes associated with translanguaging.

Other studies have focused on teachers' beliefs related to translanguaging, beliefs central to the study reported in this article. Karabenick and Clemens Noda (2004) investigated teachers' attitudes toward the ELLs in their classrooms, and their perspectives concerning the assertion that students who speak a language other than the instructional one (English) in school or at home were at a disadvantage in learning the new language. Teachers completed a survey that assessed their views about instruction for ELLs in general-education and bilingual settings. Results showed that nearly three-quarters of respondents had positive attitudes toward teaching ELLs, but over half believed that students' use of L1 at home and at school interfered with the acquisition of the instructional language. Results as such seem disconcordant with translanguaging, since a majority of respondents appeared not to value use of the home language to facilitate educational outcomes. The researchers call for professional development in such areas as second language acquisition and bilingual education.

García-Nevarez, Stafford, and Arias (2005) conducted a study focused on the attitudes of elementary teachers concerning ELLs' home languages and their use in instruction. The researchers administered a 27-item survey to 152 teachers of grades one through five in five school districts in Arizona. These school districts enroll large numbers of schools with students learning English as a second language. The results showed that teachers' attitudes differed significantly with the type of certification they held; bilingual-certified teachers were more supportive of ELL students using their native or home language in the classroom relative to teachers certified in general education and ESL. The researchers also reported an effect of teaching experience: teachers who had been in the profession longer had more negative attitudes toward use of students' home language in school. These results do not appear fully compatible with use of translanguaging in general-education settings, especially with more experienced teachers.

With similarly mixed results, Wang (2019) conducted a study investigating teachers' attitudes and behaviors concerning translanguaging practices in Chinese universities (n = 201). Survey results showed that about 50% of respondents supported a multilingual form of instruction which allows students to draw on their full range of linguistic resources in the classroom. Findings from semi-structured interviews revealed a range of attitudes toward translanguaging: while some teachers found it difficult to accommodate multilingualism, others embraced it and said they had developed a translanguaging pedagogy. Classroom observations showed translanguaging as a co-constructed dialog initiated by both teachers and students to facilitate communication in the classroom. As with other studies in this area, Wang's research reveals that teacher support for translanguaging does not appear aligned with the expanded use of the practice envisioned by its advocates (e.g., Ascenzi-Moreno, 2018; Lewis, Jones, & Baker, 2012; Canagarajah, 2011; Childs, 2016; DeCosta et al., 2017; Fu & Matoush, 2015; Garcia, 2009; García, Bartlett, & Kleifgen, 2007; Garcia & Wei, 2014; Lewis, Jones, & Baker,

2012; Martin, 2005).

3. Problem Statement

The forgoing review of literature provides preliminary evidence for the effectiveness of translanguaging as a pedagogical technique, although the results were inconsistent. Mixed results also emerged concerning teachers' support for translanguaging. Research concerning teachers' beliefs in this area seems critical: since teachers make crucial pedagogical decisions in their classrooms, and are inclined to employ pedagogies they judge to be effective, the extent of classroom use of translanguaging depends upon teachers' beliefs about it.

At the same time, research is limited concerning the factors that affect teachers' beliefs about use of translanguaging in schools. Below we address this shortfall by providing research data testing the hypothesis that these beliefs are influenced by two factors in the school environment. The first involves students' levels of proficiency in L1 and L2; it stands to reason that teachers might regard translanguaging as less effective when students have weak home-language skills, since such weakness could be seen to limit how well translanguaging can work. It also seems possible that teachers might regard translanguaging as less useful for ELLs with strong L2 skills, since they may view translanguaging as unnecessary or counter productive for these students.

The second factor concerns the instructional settings in which translanguaging can be brought to bear. Four such settings are prevalent in modern schools, including general education, bilingual education, dual language, and ESL (see Table 1 for descriptions of each setting). It seems plausible that teachers might favor translanguaging in settings in which both L1 and L2 are already pressed into service: dual language and bilingual education.

In sum, the research presented below examines the extent to which teachers' beliefs about the effectiveness of translanguaging varies according to (1) levels of proficiency in the home language and second language and (2) the instructional setting in which translanguaging is employed (general education, bilingual education, dual language, or ESL). The results of the study have potential to inform teacher-education practices that facilitate more equitable use of translanguaging in schools.

4. Methods

A survey-development initiative was undertaken with two goals (see Appendix). The first was to assess teachers' beliefs about translanguaging in general, as well as for populations that differ in home-language and second-language proficiency (encompassing both oral and literacy skills). In this researchL1 was Spanish, the predominant home language in the schools in which the research was conducted, and L2 was English, the instructional language in these schools. Of course, proficiency in any language falls along a continuum from unskilled to highly skilled, with every point in between represented. For the purposes of investigating teachers' beliefs, however, it is practical to bifurcate this continuous variable into a categorical one, with levels of proficiency in a language coded as high and

low. As a result, the survey asks teachers to respond concerning four populations of learners:

- 1) High-English, high-Spanish (HH)
- 2) High-English, low-Spanish (HL)
- 3) Low-English, high-Spanish (LH)
- 4) Low-English, low-Spanish (LL)

The second goal of survey development was to examine how translanguaging beliefs differ as a function of the instructional setting in which it is used. Modern schooling manifests a great deal of diversity in the educational settings in which ELLs are served, but four settings seem prevalent (see Table 1 for descriptions):

- 1) Bilingual education (BE)
- 2) Dual language (DL)
- 3) General education (GE)
- 4) ESL self-contained (ESL)

Accordingly, four forms of the survey were created, one for each of four instructional settings: BE, DL, GE, and ESL. In keeping with the experimental design of this research, participants were randomly assigned to groups (settings). The four survey forms were collated and distributed to respondents in random fashion, resulting in groups of similar size.

The survey forms prominently stated the setting assignment and provided a detailed description of the relevant setting, including the goal, typical student population, and instructional languages (Table 1). Because these settings are commonplace and well known to teachers, it is likely they understood the settings to which they were assigned. Respondents reported no problems in this regard during pilot testing or survey administration.

In addition to group assignment, the survey provided a definition and an example of translanguaging, as follows:

In a teaching idea now being considered, students in classes with English as the instructional language sometimes use readings and other materials in their home language, and/or converse in their home language with other students to enhance their understanding of academic content.

For example, students might occasionally use Spanish to read about a topic (such as the water cycle) and talk with one another about it in Spanish—and then use English to complete an assignment (make a poster).

The surveys asked respondents to rate the effectiveness of translanguaging in general using a 10-point scale. It then requested that respondents rate each population individually (HH, HL, LH, LL), also with 10-point scales (Table 2). Ten-point scales were chosen because of the intuitive ease with which people are able to use them, given how widespread they are at present.

Twelve demographic variables were included on the survey. Continuous demographic variables included age, years of teaching experience, years in school administration, years teaching in BE settings, years teaching in DL settings, years teaching in GE settings, and years teaching in ESL

settings. Categorical variables included gender, ethnicity, educational attainment, Bilingual certification, and ESL certification. See Table 2 and Table 3 for descriptive statistics.

This research implemented a direct measurement of teachers' support for a classroom practice, akin to assessing how much respondents support a policy proposal or ballot initiative. Translanguaging is not a latent construct such as intelligence or motivation. Accordingly, the construct validity of "translanguaging" in this research is established through precise description of a concrete classroom practice, not through evaluation of the psychometric properties of the instrument. To that end, the survey provided a concise definition and a clear example of translanguaging. This manipulation appeared to be effective, as no confusion emerged in pilot testing or survey administration concerning what translanguaging is or how it works. Given the rising visibility of translanguaging at present, direct measurement of teacher support for it seems timely.

Participants were 249 teachers at three elementary schools in a large city in the northeastern United States, including classroom teachers and special-subjects teachers. These schools were selected because they are located in communities that are almost exclusively Spanish-speaking, and their enrollment is comprised predominantly of students whose home language is Spanish. Teachers in these schools know who these students are and are thus well-positioned to provide data on the perceived effectiveness of translanguaging for this population. The schools employ a variety of instructional settings including the four compared in this research (BE, DL, GE, and ESL). In schools such these, translanguaging is most likely to be put to use.

Teachers completed the surveys in printed form at the schools at which they were employed, during meetings of the full faculty. All teachers asked to participate did so, encompassing nearly all teachers at these schools. They were apprised that the survey asked for opinions and had no correct answers, and all responses were confidential. Participants were not compensated. Data were collected in Spring 2018, with SPSS version 25 used in data analysis.

5. Results

The dataset was comprised of 19 variables, including the grouping variable, seven continuous demographic variables (Table 2), five categorical demographic variables (Table 3), and six response variables (Table 4). The survey was completed by 249 teachers distributed across the four groups. There were no missing data, and no outliers were detected. The demographic variables did not contribute significantly to the variance in teachers' beliefs about translanguaging and were omitted from further analyses. In all analyses presented below, assumptions testing was satisfactory.

Impact of student proficiency in L1 and L2. To examine the ways in which teachers viewed the effectiveness of translanguaging as dependent upon the English and Spanish skills of the student population, paired-sample t-tests were conducted. All pair wise permutations of HH, LH, HL, and LL were tested, in each setting individually and in the combined settings. Because of the large number of pair wise comparisons (30), a significance level of .01 was used. It is possible the null hypothesis may

be rejected in comparisons wherein there is no true difference in means, but use of a .01 significance level reduces the likelihood of Type 1 error. Moreover, examining each setting individually (in addition to the combined settings) provides additional detail as to which setting(s) were involved in findings reported for the combined settings. Table 5 presents the results of these tests. The table shows 24 statistically significant pair wise comparisons, out of 30, indicating that language proficiency had substantial influence on teachers' beliefs about translanguaging.

For the combined settings, all six pair wise comparisons were significant, showing a clear rank order. Translanguaging was seen as most effective for HH, followed in descending order by LH, HL, and LL. In this order, a pattern began to emerge: translanguaging was viewed as more effective when Spanish skills are strong, although strong English skills also are seen to make it more effective to a lesser extent.

The results for the BE group show this pattern. In this group, HH was rated higher than the other three populations, LH outpaced HL, and LL was lower than the other three populations. In bilingual settings, translanguaging was rated as more effective for students with strong Spanish skills, but English skills also made a contribution.

The GE group follows suit. For GE settings, teachers rated HH higher than the three other populations, LH was higher than HL and LL, and HL outpaced LL. Taken together, these findings show that translanguaging was viewed as more effective when Spanish skills are strong, although strong English skills also are helpful.

The DL and ESL groups showed a different pattern, one balancing the impact of English and Spanish skills. In the DL group, LL students were rated lower than the other three populations, which did not differ. This finding indicates that English and Spanish skills had comparable impact.

Similarly, in the ESL group, HH was rated higher than all three other populations, and HL and LH exceeded LL. Findings as such suggest that English and Spanish skills were seen to have similar impact on the effectiveness of translanguaging.

Impact of instructional settings. A series of general linear models with post hoc tests examined the ways in which teachers viewed the effectiveness of translanguaging as dependent upon the instructional setting in which it is used. As in the comparisons reported above evaluating the impact of student populations, a large number of pair wise comparisons (30) necessitates that a significance level of .01 be used. Accordingly, it can't be ruled out that the null hypothesis may be rejected in comparisons with no true difference in means, but use of a .01 significance level reduces the likelihood of such errors. Moreover, examining each population individually, in addition to the combined populations, provides detail as to which population(s) were involved in findings reported for the combined populations. Table 6 presents relevant significance tests. Significant pair wise comparisons in post hoc testing were obtained for 10 of 36, suggesting that setting effects were less pervasive than population effects.

Starting with overall rating, a one-score appraisal of teachers' beliefs about translanguaging in a particular setting, results indicate that DL was significantly higher than GE and ESL, but other pair

wise comparisons were no significant. Similar results were obtained by summing the four settings to create a combined-setting variable. For this variable, BE was higher than GE, and DL was higher than GE and ESL, but other pair wise comparisons were nonsignificant. Taken together, these results suggest that translanguaging is generally thought to be more effective in DL and BE, and less effective in GE and ESL.

Setting-specific results underscore the point that Spanish proficiency was the key variable in teachers' translanguaging beliefs: there were no significant setting effects for HH or LH populations. Translanguaging was seen as similarly effective across settings when Spanish is strong, regardless of English skills.

For HL students, three setting effects were obtained. In this case, GE was rated lower than the other three settings. For students high in English but low in Spanish, teachers did not favor GE, but otherwise had no setting preferences.

Finally, for the LL population weak in both languages, DL was rated higher than GE and ESL, but other pair wise comparisons produced no significant results. This finding lends credence to the notion that teachers favor translanguaging more in DL than in GE or ESL even when students' language skills are weak.

6. Discussion

Experimental research using survey methods was conducted to examine two sets of influences on teachers' beliefs about classroom activities that involve translanguaging: (1) the English skills and Spanish skills of the student population (high or low in each language); and (2) the different instructional settings in which translanguaging can be employed (bilingual education, dual language, general education, and ESL self-contained). The study also assessed the effects of a dozen demographic variables including age, years of teaching experience, years in school administration, years teaching in BE settings, years teaching in DL settings, years teaching in GE settings, years teaching in ESL settings, gender, ethnicity, educational attainment, Bilingual certification, and ESL certification.

Remarkably, these twelve demographic variables were not found to make a statistically significant contribution to the variance in teachers' beliefs about translanguaging. Neither older teachers nor more experienced ones differed from their younger or less experienced colleagues. Educational attainment, gender, ethnicity, and administrative experience had no significant effects. And perhaps most notably, no differences were obtained related to certification in Bilingual Education or ESL or with classroom experience in any of the four settings (in contrast to results reported by García-Nevarez, Stafford, & Arias, 2005). Findings in the current study comport with a considerable body of research showing stability in teachers' beliefs (e.g., Author, 2011; Authors, in press; Crano & Prislin, 2011; Pieterse, Caniëls, & Homan, 2012), and specifically in beliefs about education for second-language learners (Authors, 2019).

At the same time, the results support the hypothesis that beliefs about translanguaging are influenced

by a pair of factors: theL1 and L2 skills of the student population and the instructional setting. That the results include 34 significant pair wise comparisons out of 66 total (52%) suggests that these two factors had wide-ranging effects.

Influences on translanguaging were more pervasive concerning student population (24 of 30 pairwise comparisons) than instructional setting (10 of 36). In particular, population effects were most prevalent concerning Spanish proficiency: teachers judged translanguaging to be generally more effective when students have strong Spanish skills. Translanguaging is an explicit attempt to leverage students' Spanish skills in the classroom, so it follows that translanguaging might be seen to work better when students have well-developed Spanish skills to leverage. Accordingly, Spanish skills constitute the broadest influence on teachers' beliefs about translanguaging uncovered in this study.

That said, English skills also were associated with teachers' translanguaging beliefs, if to a lesser degree. Translanguaging activities were rated as more effective for students with strong English skills. Teachers did not feel that translanguaging was unnecessary or distracting for proficient English speakers; rather, they viewed translanguaging as an asset when working with these students.

As such, an interaction was found between these two sets of language skills. When Spanish skills are strong, students' level of English proficiency does not matter. But when Spanish is weak, translanguaging is judged more effective for high-English students than low-English ones.

These population effects were accompanied by setting effects, which were not as pervasive but were still significant predictors in some cases. In general, translanguaging was seen as more effective in DL and BE settings, and less effective in GE and ESL. Since the DL and BE settings are designed to make use of students' LI skills, and translanguaging works by leveraging home languages, it is not surprising that teachers viewed DL and BE as preferred settings for translanguaging.

But beliefs about translanguaging were not uniform across instructional settings. In BE and GE, Spanish skills had more impact on teachers' ratings than did English skills, although English had some effect. But in DL and ESL, Spanish and English skills were of similar influence on translanguaging beliefs. Clearly, students' language skills and the various instructional settings operate as interacting factors in prediction of teachers' beliefs about translanguaging.

Complex as this pattern of results may be, some useful conclusions can be drawn. One of the positive features of translanguaging is its focus on helping students learn academic content through the home language and culture. Such a view treats the home language/culture as an asset to be leveraged, not a distraction to be minimized. Advocates argue that not only can translanguaging help students with academics; it also enriches students' lives by furthering their connection to the richness of the home language and culture (Ascenzi-Moreno, 2018; Childs, 2016; DeCosta et al., 2017; Garcia, 2009; Garcia & Wei, 2014). Honoring and leveraging the home language and its attendant culture, translanguaging has potential to build students' pride in their communities and themselves.

As such, it seems desirable that all students with home languages other than the instructional one be afforded access to the benefits of translanguaging. With so many forces operating in the world to

separate the "haves" from the "have-nots", it might be tempting to laud translanguaging as a welcome effort to balance the scales. And there likely is merit to that, when viewed in terms of comparing second-language learners to their peers whose L1 is the instructional language.

But the picture turns darker when translanguaging is viewed in terms of comparing different groups of students with a home language other than the instructional one: students who are highly proficient in the home language, and students who are less so. It is demographic reality that these students vary in L1 proficiency, in the same way that speakers of any language vary.

A possible downside of translanguaging is revealed, although not one without remedy. At issue is the extent to which translanguaging is more likely to benefit students strong in the home language than their peers whose language skills are weaker, in effect exacerbating achievement gaps between these two groups of L1 speakers.

It is reasonable and obvious that teachers use in their classrooms those techniques and strategies they judge to be effective. If they believe translanguaging to be an effective pedagogical technique for students with strong home-language skills, it follows that they may be more likely to employ this technique when teaching these students. But if they see translanguaging as less effective for students with weak home-language skills, these students may receive fewer translanguaging activities, simply because teachers want to use what works.

As a result, translanguaging, which leverages the richness of home languages and cultures, maybe directed disproportionately to students with strong home-language skills, expanding an achievement gap between strong and weak home-language speakers. In essence, translanguaging may be more likely to be pressed into service with students who least need exposure to the homelanguage and culture, and less likely to be used with students who need it most. To the extent that translanguaging is effective, its classroom use may have the unintended result of expanding achievement gaps within the home-language community.

But that unfortunate outcome is not inevitable. Teachers who appreciate that translanguaging benefits *all* ELLs, both the strong and the weak in home-language proficiency, are more likely to provide equitable access to translanguaging in the classroom. Needed are teacher-education initiatives, preservice and in-service, to encourage teachers to provide this equitable access. Initiatives as such face an uphill climb in attempting to induce change in teachers' beliefs, which have been shown to be remarkably robust, even after thoughtful interventions explicitly designed to foster belief change (Crano & Prislin, 2011; Pieterse, Caniëls, & Homan, 2012; Richardson & Placier, 2002).

But at least four tried-and-true techniques in teacher education have potential to promote belief change concerning equitable use of translanguaging. Questions, discussions, journals, and assignments designed to encourage reflection on existing beliefs are needed, since simply telling people what to believe is rarely effective, especially over the long term (Author, 2014). Also helpful is detailed analysis of case studies of curriculum and instruction in which students with weak home-language skills are denied access to translanguaging activities that benefit their more language-proficient peers.

Teachers can be asked to evaluate models of best practice wherein translanguaging is effectively used with students with weak home-language skills. Finally, curriculum-writing projects can be explicitly designed to emphasize effective translanguaging experiences for students who vary in home-language skills.

Taking stock, the research reveals patterns in teacher support for translanguaging, patterns that may predict how the technique is ultimately used in schools. In short, teachers may be more likely to employ translanguaging when they perceive students to have strong home-language skills, and when they are teaching in a setting seen as conducive to it (DL and BE, in the main). Predilections as such may result in uneven use of translanguaging in schools, with fewer opportunities offered to students who are weak in the home language (and thus could benefit from opportunities to use and develop their home-language skills). Initiatives along these lines in preservice and in-service teacher education could make classroom use of translanguaging more effective and equitable.

Limitations and future research. Replication of these findings is needed, preferably with a larger sample. The research was conducted in an urban area in the United States, and outcomes elsewhere could vary. Participants in this study were elementary-level teachers, whose responses might differ from those of secondary or postsecondary teachers. Future research might well consider how translanguaging beliefs vary across grade levels, academic subjects, and special education classifications, and how translanguaging activities dovetail with existing curriculum frameworks established by states and districts. Research might also be undertaken to develop and test strategies for optimal use of translanguaging with students who vary in home-language skills.

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Setting	Goal	Student	Instructional	Instructional
		Population	Language	Environment
Bilingual	Maintain	ELLs only	Home language	Self-contained
Education	home-language		for all content	
	skills and develop		areas with daily	
	English skills		ESL periods	
Dual	ELLs and	ELLs taught	English	Self-contained
Language	non-ELLs become	with non-ELLs	alternating with	
	bilingual and		home language	
	biliterate		every day or	
			half-day	
General	Academic	Students	English only	Combines ESL and
Education	instruction in	classified as		unclassified students in
	English	ELLS as well		a single classroom
		as unclassified		setting, sometimes with
		students		push-in and pullout
				support for ESL

Table 1. Descriptions of Settings Included on Survey

				students
ESL	Learn English and	ELLs only	English	Self-contained
Self-Contained	transfer to gen-ed			
	class			

Notes. ESL = English as a second language; ELLs = English language learners.

Variable	n	Mean	SD	Min	Max	SE	
Age	249	35.81	8.11	4.00	60.00	.51	
Years of teaching	249	9.77	7.01	1.00	29.00	.44	
Years in	249	.04	.38	0.00	4.00	.02	
Administration							
Years in BI	249	.79	2.80	0.00	22.00	.18	
Years in DL	249	.70	2.07	0.00	12.00	.13	
Years in GE	249	6.52	6.84	0.00	29.00	.43	
Years in ESL	249	3.33	5.63	0.00	21.00	.36	

Notes. BI = bilingual education; DL = dual language; GE = general education; ESL = English as a second language.

Variable	Category	Frequency	Percentage
Gender	female	208	14.5
	male	36	83.5
Ethnicity	white	146	58.6
	black	13	5.2
	Hispanic	57	22.9
	Asian	12	4.8
	other	21	8.4
Educational	Bachelor's	38	15.3
attainment	Master's	87	34.9
	Master's +30	110	44.2
	Master's +60	13	5.2
	Doctoral	1	.4
ESL certification	yes	58	23.3
	no	190	76.3
Bilingual	yes	26	10.4

Table 3. Descriptive Statistics for Categorical Demographic Variables

certification	no	223	89.6
		-	

Notes. ESL = English as a second language.

Variable	Setting	n	Mean	SD	Min	Max	SE
Overall	BE	249	7.11	1.93	2.00	10.00	.25
Rating	DL	249	7.79	2.62	1.00	10.00	.34
	GE	249	6.41	2.23	1.00	10.00	.26
	ESL	249	6.81	2.18	1.00	10.00	.29
	Combined	249	6.14	1.56	2.25	10.00	.10
	settings						
HH	BE	249	7.80	2.50	1.00	10.00	.32
	DL	249	7.48	2.64	1.00	10.00	.35
	GE	249	8.08	1.99	1.00	10.00	.23
	ESL	249	8.16	1.82	1.00	10.00	.25
	Combined	249	7.89	2.26	1.00	10.00	.14
	settings						
HL	BE	249	5.92	2.88	1.00	10.00	.37
	DL	249	6.76	2.31	1.00	10.00	.30
	GE	249	4.43	2.48	1.00	9.00	.29
	ESL	249	5.76	2.47	1.00	10.00	.33
	Combined	249	5.64	2.68	1.00	10.00	.17
	settings						
LH	BE	249	6.94	2.35	1.00	10.00	.30
	DL	249	6.78	2.69	1.00	10.00	.35
	GE	249	6.39	2.44	1.00	10.00	.28
	ESL	249	6.18	2.22	1.00	10.00	.30
	Combined	249	6.57	2.44	1.00	10.00	.15
	settings						
LL	BE	249	4.48	2.39	1.00	10.00	.30
	DL	249	5.47	3.02	1.00	10.00	.40
	GE	249	3.97	2.45	1.00	9.00	.28
	ESL	249	4.05	2.41	1.00	10.00	.32
	Combined	249	4.47	2.62	1.00	10.00	.17
	settings						
Combined	BE	249	6.29	1.52	3.50	10.00	.19

Table 4. Descriptive Statistics for Response Variables

populations	DL	249	6.62	1.78	2.25	10.00	.23
	GE	249	5.72	1.46	2.50	9.00	.17
	ESL	249	6.04	1.36	3.25	10.00	.18

Notes. BI = bilingual education; DL = dual language; GE = general education; ESL = English as a second language. HH = high-English and high-Spanish; HL = high-English and low-Spanish; LH = low-English and high-Spanish; LL = low-English and low-Spanish.

Setting	Learner Type	HL	LH	LL
BE	HH	HH>HL	ns	HH>LL p<.01
		<i>p</i> <.01		
	HL		LH>HL	HL>LL p<.01
			<i>p</i> <.01	
	LH			LH>LL p<.01
DL	HH	ns	ns	HH>LL p<.01
	HL		ns	HL>LL p<.01
	LH			LH>LL p<.01
GE	HH	HH>HL	HH>LH	HH>LL
		<i>p</i> <.01	<i>p</i> <.01	<i>p</i> <.01
	HL		LH > HL p <.01	ns
	LH			LH>LL p<.01
ESL	HH	HH>HL <i>p</i> <.01	HH>LH <i>p</i> <.01	HH>LL p<.01
	HL		ns	HL>LL p<.01
	LH			LH>LL p<.01
Combined	НН	HH>HL <i>p</i> <.01	HH > LH p <.01	HH>LL p<.01
Settings	HL		LH > HL p < .01	HL>LL p<.01
	LH			LH>LL p<.01

 Table 5. Significance Tests for Population Effects, by Setting

Notes. The "greater than" symbol (>) indicates that the first variable was significantly higher than the second variable. BI = bilingual education; DL = dual language; GE = general education; ESL = English as a second language. HH = high-English and high-Spanish; HL = high-English and low-Spanish; LH = low-English and high-Spanish.

Table 6.	Significance	Tests for	Setting	Effects,	bv I	Population

Population	Setting	DL	GE	ESL
Overall	BE	ns	ns	ns
Rating	DL		DL>GE <i>p</i> <.01	DL>ESL p<.01

	GE			ns
HH	BE	ns	ns	ns
	DL		ns	ns
	GE			ns
HL	BE	ns	BE>GE <i>p</i> <.01	ns
	DL		DL>GE <i>p</i> <.01	ns
	GE			ESL>GE <i>p</i> <.01
LH	BE	ns	ns	ns
	DL		ns	ns
	GE			ns
LL	BE	ns	ns	ns
	DL		DL>GE <i>p</i> <.01	DL>ESL p<.01
	GE			ns
Combined	BE	ns	BE>GE <i>p</i> <.01	ns
Populations	DL		DL>GE p<.01	DL>ESL p<.01
	GE			ns

Notes. The "greater than" symbol (>) indicates that the first variable was significantly higher than the second variable. BI = bilingual education; DL = dual language; GE = general education; ESL = English as a second language. HH = high-English and high-Spanish; HL = high-English and low-Spanish; LH = low-English and high-Spanish.

Appendix

Note: Appended below is the survey for the *general education* group, one of four groups (settings) in the study. Surveys for the other

three groups were identical except for group assignment. In addition to the survey, respondents were presented with the appropriate

setting description, as shown in Table 1.

Opinion Survey:

Teaching Spanish-Speaking ELLS (English Language Learners)

All responses confidential

In a teaching idea now being considered, students in classes with English as the instructional language sometimes

usereadings and other materials in their home language, and/or converse in their home language with other students

to enhance their understanding of academic content.

For example, students might occasionally use Spanish to read about a topic (such as the water cycle) and talk with one another about it in Spanish—and then use English to complete an assignment (make a poster).

How effective is this teaching idea, in **GENERAL EDUCATION***classrooms? *See description below (Circle one)

1 2 3 4 5 6 7 8 9 10 ineffective effective

How effective is the teaching idea in **GENERAL EDUCATION** classrooms, for the following four groups of students?

(Circle one for each group.)

Students with literacy	Students with literacy	Students with literacy	Students with literacy
skills that are strong in	skills that are strong in	skills that are strong in	skills that are weak in
both	English but weak in	Spanish but weak in	both English and
English and Spanish	Spanish	English	Spanish
English and Spanish 1 2 3 4 5 6 7 8 9 10	Spanish 1 2 3 4 5 6 7 8 9 10	English 1 2 3 4 5 6 7 8 9 10	Spanish 1 2 3 4 5 6 7 8 9 10

Gender: Male Female Other

Ethnicity: White Black Hispanic Asian Other

Education level: Bachelor's Master's Master's +30 Master's +60 Doctorate

Do you hold ESL certification? Yes No

Do you hold **bilingual** certification? Yes No

Years as an administrator: _____ (write "0" if none)

Years as a teacher:

Age:

Years teaching in a **general education** classroom: _____ (write "0" if none)

Years teaching in a **bilingual education** classroom: _____ (write "0" if none)

Years teaching in a **dual language** classroom: (write "0" if none)

Years teaching in an **ESL** classroom: (write "0" if none)

Setting Description:

	Goal	Student	Instructional	Instructional
		Population	Language	Environment
General	Academic	Students classified	English only	Combines ESL and
Education	instruction in	as ELLS as well as		unclassified students
	English	unclassified		in a single classroom
		students		setting, sometimes

with push-in and pullout support for ESL students

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