

How Proposition 227 Influences the Language Dynamics of a First- and Second-Grade Mathematics Lesson

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Abstract

This small scale study of a first/second-grade English language development classroom describes the influence of Proposition 227 on the language practices and appropriation of content knowledge among limited English proficient (LEP) students and their bilingual teacher. Interviews and fieldnotes from the math lesson conducted in English only were the sources of data used for the analysis and findings. How the school districts' implementation of Proposition 227, which reduced native language instruction to only 20% of the school day, influenced the teacher and her students on both an ideological and practical level are described.

In June 1998, California voters overwhelmingly approved Proposition 227, an educational reform policy that would end programs that used primary languages other than English for instruction. Advocates of Proposition 227 claimed that these programs, referred to as bilingual education, failed to meet the goal of teaching English to non-native speakers and ultimately did not fulfill its earlier mission to provide a better education to these students. In the 1998 California Voter Guide, Proposition 227 advocates proclaimed,

begun with the best of intentions in the 1970s, bilingual education has failed in actual practice and failed to teach children to read and write English. Bilingual education has created an educational ghetto by isolating non-English-speaking students and preventing them from becoming successful members of society. (State of California, 1998)

From this point of view, native language instruction was seen as an obstacle to English language learners (ELLs) fully reaching their academic and professional potential.

Claims made by the opponents of Proposition 227 about the consequences of eliminating bilingual education were just as severe. They argued that the provisions of Proposition 227, especially the expectation that children should transfer to mainstream English classes after only one year of English instruction, were unfounded, unrealistic, and harmful. The Council of Great City Schools claimed,

There is a high possibility that many English language learners in this state will end up in remedial, special education, or alternative classes where expectations are low rather than in mainstreamed classes as the proponents of the Unz Initiative envision. (1998)

From this perspective, the elimination of native language instruction would not only maintain the disparity in academic achievement between second language learners and their English-speaking peers, but would exacerbate it.

The purpose of this study was to understand how a reform policy is enacted at the local level once it is approved at the polls and is passed on to the school district. To begin, this study will show how one bilingual teacher and her students responded to Proposition 227. Second, it will show how Proposition 227 influenced the language dynamics of the classroom interaction.

Background

Bilingual Education

The basic premise of native language instruction is rooted in research on linguistics, bilingualism, and effective schooling. The belief is that the primary language should be a bridge to learning a second language, not an obstacle. In other words, a student's first language can and should be strengthened and used as a resource for learning the second language as well as academic knowledge.

Advocates of Proposition 227 claimed that bilingual education programs needed to be eliminated because, despite the original idea, they did not succeed at teaching children English. Whether or not this is a fair claim is a matter of serious contention and one that does not have a definitive answer. Due to the lack of methodologically sound research methods and the influence of politics, the majority of evidence that supports the efficacy or inefficacy of bilingual education programs is questionable (Garcia & August, 1988; Crawford, 1999; Krashen, 1996).

Of the small sample of studies that were determined to be methodologically sound, the National Research Council concluded that the findings are particular to certain classrooms, schools, and communities and cannot be generalized into a sweeping claim of the effectiveness or ineffectiveness of one instructional method (NRC, 1997). In some classrooms, native language instruction was effective for teaching English as well as content knowledge. Thus, bilingual programs can be successful. However, these results do not imply that bilingual education would be appropriate for all second language learners. On the contrary, program choice must be assessed in relation to the particular school, classroom, teacher, and group of students. There are a number of factors, including schoolwide support, professional development, and resources that will influence the successful implementation of a bilingual program. However, generalizations and facile strategies are often what the public wants to hear, despite what theory and research have shown us about the complexity of classroom environments. Currently, this is what reform measures like Proposition 227 deliver.

Context of Reform

Thus, one of the fundamental problems with educational reform is that policymakers often neglect to address core social problems and instead attack

peripheral issues with facile solutions (Gutiérrez & García, 1990). When serious educational issues, such as underachievement among minority students, overwhelm schools and alarm the public, quick fix solutions appear very appealing. Ignoring contributing factors such as poverty and racism reduces complex social issues to more manageable variables. And so, instead of relying on solid research, policy makers frequently offer one-size-fits-all solutions with the promise to ameliorate the problem.

The fact that many reform measures have consistently failed to raise achievement among students who are typically unsuccessful in school attests to the ineffectiveness of these approaches. There is no doubt then, that reform itself is in need of reform (García, 1999, p. 1084). Scholars suggest that as a necessary first step, policymakers and educators must redefine traditional notions of the purpose of schooling and how children learn. “[Reform] will not be effective unless we begin to think differently about the educational needs of all our students and the ‘systems’ that we have organized to serve them” (García, 1999). In other words, current structures that organize teaching and learning must be transformed to accommodate our increasingly heterogeneous society.

Such a shift would require that dominant and long-standing beliefs about non-White cultures change drastically. Recent initiatives in California revealing resistive attitudes toward the increasingly diverse population in this state demonstrate that we are a long way from this point (Macedo, in press). Proposition 187, which proposed to restrict educational and health services to ‘undocumented’ immigrants and Proposition 209, which ended affirmative action policies, are examples. Underlying these initiatives is a perceived threat to the power structures that are in place in our society (Apple, 1996; Harris, 1995; Gotanda, 1995). When the status quo is threatened, politicians, public officials, and people with social and economic power take action to counter advances made by the people who represent the real or perceived threat. Many educators, scholars, and others who opposed Proposition 227 believe this initiative was a direct response to the influx of immigrant peoples coming to California (Crawford, 1999). Seen as a threat to the current distribution of power and wealth in this state, non-native people, especially Latinos, became the target of several political initiatives aimed at minimizing opportunities for minorities to advance economically, politically, and professionally. Although cloaked in the rhetoric of “English for the Children,” Proposition 227 subjugates English language learners (ELLs) by not allowing educators to utilize their students’ complete linguistic and cultural knowledge as resources for teaching and learning in the classroom. Extensive research has shown that effective schools customize curriculum and pedagogy to fit the unique social and cultural needs of the students, school, and community (National Research Council, 1997). By eliminating the option for teachers to use native languages other than English for instruction, 227 restricts educators from utilizing the full cultural and linguistic repertoire of their students. This clearly puts linguistic minority children at a disadvantage in comparison to their mainstream peers

whose cultures are most prominently represented in American schools. Ultimately, educational reforms will never truly diminish social inequalities if they continue to be presented in isolation from the social, cultural, and political context in which they occur and if resistance toward diversity perseveres.

Key Terms For This Study

The goal of this study is to understand how Proposition 227 influences teaching and learning practices at the classroom level.

Bilingual Education/Native Language Instruction:

Any method of instruction that utilizes languages other than English for instruction, especially to teach English.

Bilingual Education Program Models:

There are several program models that use the native language for instruction but that vary according to goals, content, and philosophy. For the purposes of this paper, two of those will be defined:

Maintenance Bilingual Education:

“Attempts to preserve and enhance students skills in the mother tongue while they acquire a second language” (Crawford, 1999).

Sheltered English Immersion:

English language acquisition process for young children in which nearly all classroom instruction is in English but with the curriculum and presentation designed for children who are learning the language (California’s Proposition 227, Article 2. Section 306: (d)).

English Language Learner:

Person whose primary language at home is not English and is learning English.

BCLAD:

Stands for the California Bilingual/Cross-cultural, Language, and Academic Development program. It is a teacher-credentialing program specifically for educators who want to address the specific needs of English language learners (National Research Council Report, 1997).

Methods

The Site

This study was conducted at Schuler Elementary, a K-6 elementary school in Vallejo, California, that serves the children from the local, diverse community. Of the total number of students at Schuler Elementary, 85.6% are eligible for the free lunch program, 36.4% of the student body are Hispanic, 48.1% are African-American, and 7.6% are White. One quarter of the children was designated limited English proficient (LEP).

The Educational Program Pre- and Post-Proposition 227

In 1990, four teachers at Schuler Elementary developed a bilingual education program to serve the needs of non-native English-speaking students at the school. The program was designed to transition students from instruction in the native language, Spanish, to mainstream English classrooms by the 6th grade. The breakdown of Spanish/English instruction in the first and second grades was 80/20 with the percentage of Spanish usage diminishing and English usage increasing as children progressed through the program.

Since the passage of Proposition 227, the bilingual program has been eliminated from Schuler Elementary. Implementing the law to the fullest extent, LEP children were to spend only one year in a 'sheltered immersion' program, named English language development (ELD) at Schuler Elementary. The district for the classroom in this study essentially reversed the percentage of Spanish to English to 20% Spanish and 80% English. The classroom teachers were left to decide how they wanted to utilize the 20% time allotted for native language instruction. The teacher of the classroom site for this study utilized her 20% native language instructional time for language arts, specifically reading and writing. The remaining school subjects were thus to be taught completely in English. The dramatic change in curriculum that was implemented at Schuler Elementary in direct response to Proposition 227 was the most critical feature in the search for a research site. In other words, the goal was to find a classroom that reflected the changes that Proposition 227 intended to generate. Schuler Elementary met these criteria exactly.

The Teacher

Ms. Stacey had been teaching at Schuler Elementary for 12 years. This was her first year teaching a first- and second-grade combination class. Ms. Stacey had a BBC, the bilingual teaching credential that preceded the current BCLAD. Over the course of many years, she developed her Spanish-speaking skills at the local university and by practicing with her students. At the time this study took place, she considered herself fluent.

Ms. Stacey had firm beliefs about the merit and effectiveness of bilingual education for LEP students. She said that her experience using the native language as a tool for instruction enhanced teaching and learning. As a result, she played an active role in the development and maintenance of the bilingual program. With the new title of an "English Language Development" teacher, Ms. Stacey welcomed me into her classroom, excited about the topic of the study, and shared openly her experience as a bilingual teacher pre- and post-227 at Schuler Elementary.

The Students

The class where this study took place included 20 students, 19 of whom were Hispanic, and one who was East Indian. All 20 children were designated LEP and all were eligible for the free lunch program. Their levels of English

proficiency varied widely. Some children had recently emigrated from Latin America and did not speak any English whereas other students were fully conversational. (Despite their proficiency in conversational English, these students were classified as LEP by California standardized tests.) Sixteen of the 20 children were first graders and four were second graders. The students in Ms. Stacey's class did not represent the ethnic diversity that existed at Schuler Elementary. This was because all LEP students were grouped together in the yearlong ELD program described earlier.

Data Collection Procedures

Data collection was conducted over a period of six weeks, twice weekly, during the morning mathematics lesson, which was conducted in English only. The mathematics lesson varied in duration, lasting 35 minutes to one hour, depending on the day. During this time, the second graders left the room to attend a higher unit mathematics lesson. Schuler Elementary adopted a new mathematics program called "Mathematics Blasters" for the 1998-99 school year. The workbook and other peripheral materials were written in English. Before this year, Ms. Stacey had little experience teaching mathematics, partly due to the fact that she had previously only taught Kindergarten. The mathematics lessons were organized by units, each concept building on the one preceding it. For the duration of this study, the main concepts being studied were counting by tens, measuring, and labeling and counting coins. The goal of the "Mathematics Blasters" first-grade program is to expose children to concepts, not to require mastery of them. The same concepts would be re-introduced in later grades for mastery.

Data were collected in the form of field notes, audio-recording, and informal interviews which were also recorded. Notes were primarily taken on the non-verbal behavior and interaction of the students and their teacher. The researcher relied on the audiotapes to provide the verbal component of data collection. The audio recorder was generally placed in front of students who were interacting with Ms. Stacey and their peers during the mathematics lesson. The audio was transcribed in conjunction with fieldnotes providing a full picture of the verbal and nonverbal elements of the mathematics lesson for that day. Informal interviews with Ms. Stacey were conducted on a one-to-one basis, over the phone and in person. The interviews were 10-20 minutes in duration with the exception of one 2-hour conversation that took place toward the end of formal data collection. Topics included the implementation of Proposition 227 at the school, her role as a teacher in pre-and post-Proposition 227 contexts, and teacher and student participation in the mathematics lesson. All were recorded and the long interview was transcribed. Interviews with 10 of the children in Ms. Stacey's class were conducted in English, in the classroom, and during recess. A second grade, fully bilingual student, assisted in overcoming possible language barriers between the students and the researcher. Questions centered around language use and mathematics lessons.

Questions were directed at students who were particularly vocal on the audiotapes, but other students were free to walk up and contribute input to the questions as they wished. These interviews were also recorded but not transcribed. Student interviews took place throughout the period of formal data collection.

Rationale for Studying Mathematics

English language learners face two major tasks in the classroom. On one level, they must be able to understand the language that is being spoken to them, in this case, English. On another level, the students must comprehend the concepts being conveyed to them via the language of instruction. For studying both these phenomena, a school subject that was the least linguistically demanding was chosen for observation. Because the language of mathematics consists of numbers and operations for which there are universal symbols, mathematics seemed to present the least number of linguistic barriers and therefore allows for a better understanding of the state of learning of content knowledge in a post-Proposition 227 context.

Data Analysis Procedures

For the inductive analysis of the data, separate coding categories for the fieldnotes and interviews were developed. Two aspects of language use in the interaction between Ms. Stacey and her students were the focus in the fieldnote data. In one subcategory, the use of native language, or Spanish, by the students was examined. This subcategory was divided into spontaneous uses of Spanish, and elicited uses of Spanish by the teacher.

The language of learning was the second subcategory for analysis of the fieldnotes. After spending several weeks observing the class, the researcher had a general sense that the students were not appropriating certain concepts of mathematics that were being presented to them. To examine this further, instances in the data when the students clearly understood the mathematics concepts and questions were identified. The students providing right answers or explaining the solution to a mathematics problem demonstrated this. Data samples where the children obviously did not understand the material were also analyzed. This was determined to be the case when the students offered incorrect responses or no response at all. Finally, within this subcategory, the manner in which Ms. Stacey responded to her students in either situation was examined.

With respect to the interview data for Ms. Stacey, statements related to her interpretation of: (a) 227 as a state policy, (b) how Proposition 227 was implemented at the beginning of the school year, and (c) how Proposition 227 currently influenced teaching and learning in her classroom were identified. A separate category for statements that she made related to mathematics or the mathematics program was also created. Finally, in regard to the students interview data, any references to Proposition 227 or English-only instruction were studied.

Findings: A Portrait of a Classroom in the Post-Proposition 227 Era

The Findings section is divided into two parts. The first discusses how the teacher, Ms. Stacey, and her students interpreted the impact of Proposition 227. It will start with reporting of Ms. Stacey's initial reaction and understanding of Proposition 227. This will be followed by her statements about how Proposition 227 has affected her classroom seven months later, when this study took place. The students' perception of Proposition 227 will then be presented. The second half of the Findings section focuses on what was learned from the observational data collected during the mathematics lessons.

Part I: Perceptions of Proposition 227

Imposing rigidity: Ms. Stacey's perception of pedagogical freedom in a post-Proposition 227 era

On a personal and professional level, she was offended and felt defeated by the decision to eliminate the bilingual program. Ms. Stacey had been one of four teachers at Schuler Elementary who developed the bilingual program that was in place when Proposition 227 passed. She had devoted a substantial amount of time and effort to making the native language instruction an option for parents and their children at the school. She became a strong advocate for bilingual education several years earlier when she was learning Spanish and began using it as an instructional tool with her students. She said, "I began to speak more Spanish and the kids were learning more and more." For her, native language instruction was a very effective method for teaching and learning. Thus, when the district announced it would be implementing Proposition 227 to the fullest extent and dropping the bilingual program, Ms. Stacey felt disappointed and helpless. She said,

When [a district official] announced that she had dropped the program . . . I burst into tears and did not stop crying for hours. At a teachers meeting! With 30 teachers there! Just did not stop crying and yelling at her and saying, 'How could you do this to us? Are you for us or against us?'

In Ms. Stacey's view, the bilingual program represented not only a critical instructional technique, but also a personal investment and a source of professional pride. The elimination of the program translated into a rejection of her personal and professional beliefs and forced her to instruct in a manner that contradicted her teaching philosophy. Ultimately, Ms. Stacey felt a loss of control of her pedagogical freedom. She said,

I just feel like once again our decisions are being made for us and I highly resent being told that I have to do it this way. And what I would like to do, if of course the parents sign waivers, we do whatever program we want. If the parents sign waivers then once again it is up to us!

The feeling of no longer having authority over how her students were taught was further exacerbated by events that took place once the school year began. District and school officials made it clear that they were not to deviate from the 20% Spanish, 80% English program. Teachers were required to sign contracts stating that they would be held personally liable if they used native language instruction more than 20% of the time. To drive the issue home further, the former bilingual teachers not only received letters but visits from district administrators to ensure that they would abide by the new policies. Ms. Stacey was clearly embittered by this usurpation of her classroom autonomy. And as will be shown later, the district's actions intimidated Ms. Stacey and affected her classroom performance.

Seven months later

After describing her initial shock and the process of implementation early in the school year, Ms. Stacey explained how Proposition 227 changed her teaching now that the school year was halfway over. She said,

This summer when I was at that retreat in Sonoma—when [district official] had devastated our program and I was beside myself—I called my mother and she told me, ‘Don’t worry, no matter what language you teach in your kids will thrive.’ And that’s true. You’ve seen them, they’re thriving.

Despite her initial misgivings about how Proposition 227 would impact her classroom practices, Ms. Stacey felt that the ending of bilingual education did not negatively affect her teaching or how well the students learned.

This perspective was in sharp contrast to her earlier sentiments that Proposition 227 would disadvantage her students. She discovered that her original fears were unfounded and that her students were “thriving.” Although it was not explicitly asked what she meant by “thriving,” the researcher believes that for Ms. Stacey, this meant that her students were content and comfortable in their classroom, excited about learning, and appropriating knowledge. And, as an observer in this classroom for several months, the researcher would concur with Ms. Stacey on her belief that her students were flourishing as participants in this classroom. (Participation is different from learning, however, and this will be discussed in the section on mathematical content knowledge.)

Moreover, despite Proposition 227, the students and their teacher found ways to continue to make Latino culture a part of their educational experience. Ms. Stacey underestimated the contribution that her knowledge, passion, and respect for Latino culture, including Spanish, would have on the language dynamics of the classroom even in the context of Proposition 227. As before, Ms. Stacey’s classroom was filled with artifacts that represented the students’ culture. She encouraged the students to bring food and items from home to share with the class. She displayed photos of Latin America to show her students that she had visited places where their families were from. Despite the restriction on her use of Spanish, Ms. Stacey was able to create an

environment where the Latino culture was still held in a place of high esteem and value.

The dramatic change in Ms. Stacey's attitude regarding the impact of Proposition 227 raises an important point. Often, when reform policies are highly politicized, the anticipated consequences are excessive and uniform. Political rhetoric and media attention surrounding controversial issues such as native language instruction distract educators from the reality of the classroom. In this instance, Ms. Stacey found that her earlier apprehensions proved to be largely unjustified and viewed the learning environment in her classroom as positive and enlivening in spite of Proposition 227. Her commitment to validating and celebrating the culture of her students largely neutralized possible damaging effects of Proposition 227.

The Students' Perception of 227

When Ms. Stacey informed her students that she would be speaking English for the majority of the school day, she said that the students seemed disappointed but adjusted to the new program almost immediately. "Their reaction was just like when someone dies, or when the fish dies, or when the bird dies. They were sad, but their attitude was that everything is going to be OK." She also said that the students had heard of Proposition 227 and were well aware of what the law was. "They all knew about the law. It was all over the [Spanish] news. And they knew that they were supposed to speak English and that they are supposed to learn English." The students confirmed Ms. Stacey's statement when asked about the "law that says Ms. Stacey has to speak in English." They said, "it is good because they get to learn English." Thus, from the perspective of the students, Proposition 227 would expedite and encourage their English language acquisition.

The reaction of the students in this classroom to the initiative contradicts what many opponents of Proposition 227 expected. These children appeared enthusiastic about the opportunity to learn English in the accelerated manner that Proposition 227 required. As will be discussed further in a later section, the students chose to practice their English with Ms. Stacey yet still maintained their Spanish when talking with their peers in the classroom. Again, short-term predictions that the students would interpret 227 as a denigration of their language were unfounded in this classroom. Ms. Stacey ensured that their culture continued to be well represented and valued as part of the classroom culture. The children did not feel ashamed of their language and found ample opportunities to use it both inside and outside Ms. Stacey's classroom.

In the numerous public debates about what is best for English language learners, we often do not credit children with their ability to persevere and to maintain their identities in new circumstances. Instead, children are misconstrued as victims for political reasons. One of the key findings of this study is that children are extraordinarily resilient, creative, and assertive, not nearly as helpless as frequently portrayed. The Latino students in this

classroom showed that they are very capable of preserving their culture and identity even in an English only instructional context. And, as will be discussed further in a later section, their bilingual teacher ensured this by creating a respectful and culturally sensitive classroom environment.

Part II: Into the Classroom: Teaching and Learning in a Post-Proposition 227 Context

Native language use: The role of Spanish in a post-Proposition 227 context students

With the ending of the teacher's ability to use Spanish during mathematics instruction, the new role that the native language would play in the lesson was of particular interest. Most notably, it was found that there was a distinct difference in the amount of Spanish the students used to speak with Ms. Stacey in comparison to their peers. When talking with their teacher, they primarily used English to communicate in the official and unofficial discourse. Although Ms. Stacey was fluent in Spanish and the students were free to use their native language at any time, they primarily spoke English to their teacher. Only one category of instances when the children would consistently utilize their native language was identified. In response to questions about how a particular mathematical problem was solved, the children would often use Spanish to explain their thinking process to Ms. Stacey. In this example, the children are participating in a group math lesson on subtraction:

MS: What is 70 minus 30?

G:40!

MS: G., How did you figure that one out?

G: *Es que, es que (setenta) menos diez tres veces.*

MS: Uh-huh! He's a genius.

G: I'm a genius!

In this example, G. chooses to speak in Spanish when asked to explain how he solved the mathematics problem. It was found that the children were more likely to rely on their native language when talking about mathematical procedures because the linguistic demands for explication are much greater than for conversational talk. Only a few students, those who had a higher level of proficiency in English, attempted to answer conceptual questions in English. Then, in response to Ms. Stacey's reinforcement, G. reverts to English, the language of choice during this time period. Thus, the main function of Spanish during the mathematics lesson was to convey conceptual thinking to Ms. Stacey. For other communication, the students primarily used English.

When talking to each other, however, the students were more likely to use Spanish in both the official and unofficial discourse. The students would discuss mathematics problems as well as topics unrelated to mathematics in Spanish. These patterns of native language use suggested the ways that

Proposition 227 has influenced the linguistic environment in Ms. Stacey's classroom. On one hand, Proposition 227 communicated the message that non-native speakers need to learn English as quickly as possible. This message was conveyed to the children through the media, the community, and the school. Students comments such as, "I have to learn English," indicate that the message of Proposition 227 has been internalized. It can be argued that since Proposition 227 made the job of teaching English the responsibility of the school, the students understood that school time was reserved for practicing English. This in turn influenced their choice to primarily respond in English to their instructor.

Another way that Proposition 227 influenced the role of the native language in this classroom was through the designation of instructional time for English, 80%, and time for Spanish, 20%. There were distinct boundaries between times when Ms. Stacey could speak either language. Reading and writing were the only subjects that Ms. Stacey could teach in Spanish. Although the focus was on mathematics, the language arts lesson in Spanish was also observed. And, it was found that the students spoke exclusively in their primary language with Ms. Stacey. It was clear that the students were very aware of the language boundaries because they applied them to their own language practices. The external emphasis on language acquisition in combination with the separate times for instruction in Spanish or English clearly influenced the students' choice to use English to communicate with Ms. Stacey during the mathematics lesson.

Ms. Stacey

Although Ms. Stacey did not speak Spanish during mathematics, her knowledge of Spanish still served as a bridge to learning. She utilized her knowledge to serve two main purposes: to check vocabulary and to correct linguistic errors.

In the following example, Ms. Stacey checks for comprehension of English vocabulary by prompting the student to translate the word from English to Spanish.

MS: She always carried a ruler in her pocket. Do you know what a ruler is?

Class: Yeah!

MS: What is it?

M: *La regla.*

MS: Yes!

Ms. Stacey checked the student's comprehension of the word 'ruler' by having him tell her the word in Spanish. In this way, Ms. Stacey could ensure that her student understood key terms presented in the assignment.

In a similar fashion, Ms. Stacey was able to catch linguistic errors that the students made and correct them.

MS: What does wide mean?

J: *Blanco*.

MS: Wide is not white, sweetheart. WIDE. Wide is something that is . . .

Class: ¡*Ancho!*

MS: Exactly.

And another example,

MS: J., can I see? Oh, you erased it? 13, honey, 13. You have to be careful in English because 30 almost sounds the same as 13.

In the first example, Ms. Stacey is able to correct her student's confusion between the similar sounds of 'wide' and 'white' because she knows that 'blanco' means white in Spanish. In the second example, Ms. Stacey recognizes that J.'s error is a linguistic one, not a conceptual one. She is then able to help this student in the appropriate manner.

Although Ms. Stacey was restricted from using Spanish during the math lesson, Spanish is still used as a tool for teaching and learning in the official discourse. This makes the point that even in the context of Proposition 227, knowing Spanish is very important. Ms. Stacey's knowledge of the Spanish is clearly beneficial for both the students and the teacher because it allowed her to assist her students' learning in ways not otherwise possible. The students have the opportunity to share knowledge in the language they feel most comfortable and Ms. Stacey can be sensitive to the unique circumstances of second language learners in an English-only context. Furthermore, by welcoming and even encouraging use of Spanish, Ms. Stacey creates an environment where the students' culture and linguistic toolkit is valued. In a society where there is such a heavy emphasis on the acquisition of English, this aspect of Ms. Stacey's pedagogy is important for conveying to the students that their first language, and by extension their culture and identity, holds a place of high value and utility in the classroom.

It is important to recognize that Ms. Stacey's knowledge of Spanish is critical to providing the students with opportunities to integrate the primary language into the instruction. Furthermore, the students never have to fear that they will not be understood when communicating their ideas or needs. It was very evident that these students had a very close relationship with Ms. Stacey. It can be argued that this was partly due to the fact that she shared such a fundamental part of their culture with them; their native language. It is not being implied that teachers who are not bilingual cannot have close relationships with their students. However, in this classroom, it was apparent that Ms. Stacey's bilingualism contributed to the intimacy she had with the students.

Although Proposition 227 limits the teacher's ability to speak Spanish, it does not diminish the need for teachers to be bilingual. As the evidence from this study shows, BCLAD credentials are still essential in classrooms where students are learning English as a second language. In Ms. Stacey's class,

Spanish was still an important resource for teaching and learning, even during class subjects that were instructed in English. As the population of young English language learners grows in California, bilingual teachers are needed now more than ever.

Content Knowledge

In addition to claims that 227 would negatively impact the culture and identity of English language learners, there was concern that English-only instruction would erect linguistic boundaries preventing access to content knowledge and complex ideas. In the classroom, English language learners face two major challenges. First, they have to understand what is being said in English. The teacher's words have to come together in a logical order that means something. Second, the children must be able to appropriate the ideas behind what is being communicated through English. Opponents of Proposition 227 argued that in the process of trying to comprehend English, the students would lose the content. Thus, the second focus of the observations was on the teaching and learning of mathematical concepts.

The primary purpose of this section is to address the question of whether or not limited language proficiency erected barriers between the students and the content of mathematics. The researcher is aware that other variables impact mathematics instruction, most notably the character of the curriculum and the teacher's instructional practices and competence in the discipline. An examination of these factors, however, is beyond the scope of this project. The focus will be on the role the specific language codes played in the appropriation of mathematical concepts.

As stated earlier, the students would demonstrate their mastery of concepts by explaining the solutions in Spanish to Ms. Stacey. Overall, however, these instances were infrequent. The following example represents a more typical interaction between Ms. Stacey and her students during a mathematics lesson. On this day, the class was working on the concept of subtraction. The students are sitting in a large circle in the carpet and Ms. Stacey is in the front. The students do not have any materials. During the interaction, the students offer a substantial number of incorrect responses to the question. When Ms. Stacey introduces a visual aid to explain subtraction, one student finally gives the correct answer.

Ms. Stacey poses the question, 'How many more beans does Lisa have than Sandi? How many more is 90 than 80? Mark?' Mark does not give the correct answer. Ms. Stacey continues to call on eight more students, none of whom offers the correct response. Ms. Stacey re-introduces the question and asks the class to refer to the 100s chart on the wall. She asks a student to go up and point to 80, then 90. She re-states the question, 'What's the difference between 90 and 80?' The students raise their hands. She calls on three consecutive students, all of whom answer incorrectly. The fourth student, G., finally says '10.'

G., a student with advanced skills in English and mathematics, finally solves the problem after Ms. Stacey refers the children to the chart. Many students, however, even with the help of the chart indicate to Ms. Stacey that they do not understand by stating incorrect responses. Earlier in the lesson, however, the class did a series of subtraction problems on a dry erase board very successfully. Clearly, it was not that the students did not understand the concept of subtraction, it was that they did not understand the wording for representing subtraction. The words “subtraction” or “minus” are never explicitly stated. This suggests that the students’ limited proficiency in English is a hindrance in their comprehension of mathematical concepts.

The next example is a continuation of the previous lesson. When the students are prompted with the word “minus,” they begin to understand Ms. Stacey’s question.

Ms. Stacey returns to another word problem. She says, ‘We’ve got the 90. We’ve got the 60, right? How much bigger is 90 than 60?’ None of the students raise their hands or attempt to answer aloud. Ms. Stacey says, ‘How many numbers are between 90 and 60? 90 MINUS 60?’ Several members of the class reply with ‘Ohhh! Minus!’ One student, W., says the right answer, ‘30.’

As soon as Ms. Stacey says that the problem calls for subtraction, several of the students reply in recognition indicating that this was not clear to them previously. Although Ms. Stacey’s method of instruction is likely to be contributing to the students’ misapprehension of the question, it is clear the language barriers do present a problem in this mathematics lesson. The students’ English skills are not yet strong enough to understand that “How much bigger is 90 than 60” is also “What is 90 minus 60?” In other words, limited proficiency in English prevents the students from gaining access to the content of what Ms. Stacey is trying to convey. Perhaps if the question were translated into Spanish, the relationship between the words and the mathematical operation it is calling for could be clarified. Instead, it is questionable if the majority of the students really made the connection that Ms. Stacey’s earlier question meant the same as “minus.”

This next example shows what happens when students are not given access to a visual cue or keyword. Ms. Stacey attempts to communicate the relationship between an object’s size and the amount of space that it will occupy. This concept is represented in a bar graph pictured in the students’ workbooks. One bar indicates the number of kidney beans that would fit into a 24-ounce cup. The second bar shows the same for lima beans. Because kidney beans are smaller, more fit in a cup. The bar representing kidney beans is thus higher.

Ms. Stacey says, “Which beans were bigger? The lima beans or the kidney beans?” No one in the class responds. Ms. Stacey draws a replica of the graph on a dry erase board and poses the question again. The students yell out different answers. Ms. Stacey poses a series of

questions trying to lead the students to the right answer. The children shout a variety of answers. Ms. Stacey laughs and sighs. She says, "So everyone just write 'lima.' There is no way I'm going to be able to explain that."

This question was especially difficult and abstract and none of the students demonstrate an understanding of the concept. Because they do not understand what is being asked of them, it is unclear if they know the relationship between the size of the beans and the amount that will fit into a cup. Ms. Stacey attempts to facilitate their understanding of the question but ultimately becomes frustrated and gives up. She believes the linguistic barrier is too great to overcome. Again, the students are limited in their access to the content knowledge of mathematics on account of their teacher's frustration and perception of their difficulties with comprehension of English.

When later asked about incidents like this that tended to occur regularly in her class, Ms. Stacey said,

[Sometimes] when I am trying to explain a workbook page I'm sitting there thinking, 'This is so stupid! They have no idea what I'm talking about.' They start looking around the room or I get blank stares or I ask a question and I get an answer that is totally off. On pages like that I just tell them what to write.

Thus, when her students show that they do not have a grasp of certain questions of concepts, Ms. Stacey abandons the problem and gives the children the answer. She identifies the problem as "they have no idea what I'm talking about," which suggests that in her view, the students' lack of understanding can be attributed to language barriers. She confirmed this when she said, "First of all . . . they are still dealing with the English . . . they haven't had enough experience dealing with the numbers in English." Her explanation for why the students were sometimes confused was because of their limited proficiency in English. Because of this perceived obstacle, the children do not have the opportunity to explore some of the content and ideas in the mathematics curriculum.

There is a clear contradiction between her previous statement that the children were thriving and these instances when she was frustrated and gave answers to mathematics problems. There are several explanations for why Ms. Stacey could teach in this manner and still perceive her students as prospering. Most importantly, the math program that she was utilizing promoted the position that young children should be exposed to concepts, not required to master them. So, if the students showed that they did not fully grasp a particular concept, it was acceptable to move on according to the mathematics curriculum and guide. This gave Ms. Stacey the liberty to make a justifiable decision to sometimes give answers or skip hard questions and move on. Success in the math lesson was not dependent on the students' full comprehension of mathematical problems or questions. And as a result, Ms. Stacey could still maintain her notion that her students were thriving.

Returning to the issue of language and Proposition 227, Ms. Stacey acknowledged that her students sometimes do not comprehend the material and that this is due, in part, to the fact that “they haven’t had enough experience dealing with the numbers in English.” (As indicated earlier, Ms. Stacey’s limited experience in teaching mathematics also played a part in the students’ misunderstanding.) Yet, she consistently made the choice not to explain the topic in Spanish and to move forward with the lesson. The researcher believes that external pressures imposed as a result of Proposition 227 heavily influenced these decisions. To begin, Ms. Stacey was very reluctant to stray from the 20% Spanish/80% English policy. She had one designated subject period in which she used up her quota of native language instruction time and, according to policy, was not to speak Spanish at any other time. Because the district was so aggressive in their enforcement of Proposition 227, Ms. Stacey initially felt very intimidated. This feeling persisted in the months following the district’s actions up until the time of this study. In the lessons that were observed, Ms. Stacey spoke Spanish on one occasion only. She strictly adhered to the 20/80 rule. As a result, when the students gave her “blank stares” or gave an “answer that was totally off,” she chose to move on instead of trying to explain it in English, the only option she believed she had. Thus Proposition 227, after filtering down the district, school, and classroom levels, influenced Ms. Stacey’s decisions about pursuing mathematics questions that were difficult for the students. Her understanding of the restrictions on native language use imposed by the state and the district prevented her from utilizing her knowledge of Spanish as a resource for explaining mathematics concepts. Although there was no real threat in the classroom preventing her from explaining the mathematics concepts in Spanish, her perception of being regulated influenced her decision to “just tell them what to write.”

Furthermore, at the time implementation of Proposition 227 was occurring, Ms. Stacey was also introduced to a new mathematics program. District administrators emphasized that the teachers had to closely follow the curriculum presented in the book. Thus, the same rigid boundaries that were drawn for the 20/80 program were applied to the mathematics curriculum as well. It was found that Ms. Stacey adhered to the mathematics guidelines as strictly as the 20/80 guidelines. She said, “I have a new mathematics program . . . [and] I have to stick to it by the book. Absolutely by the book.” The school exerted pressure on Ms. Stacey to complete a certain number of mathematics units before the school year was over. Thus, going back over mathematics concepts and ideas that the children didn’t understand was not an option. She felt a great deal of pressure to meet the expectation of the school administrators. Ms. Stacey’s feelings about the district’s implementation of Proposition 227 were reflected in her attitude and approach to the mathematics program. And as a result, she opted to move forward instead of addressing the student’s difficulties. Ultimately, it was found that English-only instruction without the option to explain certain ideas in the native language did preclude opportunities to problem solve.

Sometimes, the presentation of mathematics in linguistic terms, without the accompaniment of symbols, keywords, visuals, or manipulatives, presented major obstacles for these students. On the other hand, the use of these tools greatly enhanced the students' grasp of the material.

Summary

In this paper, the ways Proposition 227 has influenced Ms. Stacey, her students, and teaching and learning practices in this elementary school classroom were shown. The data revealed four major findings. The first is that Ms. Stacey's original fears about the severe repercussions that Proposition 227 would have on her teaching and the student's learning were, for the most part, unfounded. Despite having to use 80% of her instructional time in English, she believed that her children were excelling. The second major finding is that the original fears about the negative impact that Proposition 227 would have on student's largely underestimated their ability to cope in a post-Proposition 227 context. The Latino students in Ms. Stacey's class were very successful at maintaining their identity and culture while still learning English. Third, although Ms. Stacey did not speak Spanish during instruction, her knowledge of Spanish and Latino culture was critical for teaching and generating an atmosphere where the student's culture was well-represented and highly regarded. And finally, in terms of the actual teaching and learning of mathematics, sometimes the students' limited English proficiency presented difficulties in the comprehension of questions and problems. Overall, it was discovered that Proposition 227 did in fact influence the language dynamics of this classroom in important ways.

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