What Language Discourse Tells Us About Bilingual Adolescents: A Study of Students in Gifted Programs and Students in General Education Programs

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The Latino/a population of the United States continues to increase dramatically; consequently, educators face the challenge of how best to provide educational services for those whose primary language is Spanish. The purpose of this study was to examine student discourse between bilingual students in gifted programs and bilingual students in the general education programs in an urban middle school. This study suggests a minor language advantage for the bilingual students in the gifted program. The overall conclusion seems to indicate that bilingualism, language abilities, and giftedness involve many variables and that the relationships are not necessarily direct.

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Journal for the Education of the Gifted. Vol. 32, No. 1, 2008, pp. 7–33.

As the Latino/a population of the United States continues to increase dramatically, teachers of the gifted and general education teachers repeatedly face the challenge of how to best provide educational services for those whose primary language is Spanish. The U.S. Census Bureau (2003) reported that the Latino/a population has reached 38.8 million and is now the largest minority in the U.S. Twenty-three percent of school-age children in Florida come from a home where English is not the native language (U.S. Census Bureau, 2002). A large number of these Latino/a individuals speak Spanish as their first language in the home. Without a doubt these numbers will continue to increase each year.

Although researchers and policy makers agree that giftedness occurs across cultures and is not specific to any one particular cultural group (Harris & Weismantel, 1991; Hughes, Shaunessy, Brice, Ratliff, & Alvarez-McHatton, 2006; Jacob K. Javits Gifted and Talented Students Education Act of 1988), Latino/a students remain tremendously underrepresented in programs for the gifted and talented (Bermúdez & Márquez, 1998; Brice & Brice, 2004; Castellano, 1998; Cohen, 2001; Coleman, 2003; De Leon & Argus-Calvo, 1997; Forsbach & Pierce, 1999; Irby & Lara-Alecio, 1996; Kloosterman, 1997; Masten, Plata, Wenglar, & Thedford, 1999; Naglieri & Ford, 2003; Schwartz, 1997; Valdes, 2003). Donovan and Cross (2002) found that Latinos are underrepresented when compared to White (non-Latino/a) students, yielding an odds ratio of 0.48 (the number of Latino/a gifted children divided by the number of White gifted children). This figure indicates that Latino/a children are identified approximately half as often as White students for gifted programs.

The inclusion and instruction of Limited English Proficient (LEP) students in gifted programs is also an area of concern. Recently, research funds to support investigations of programs for identifying and serving LEP students were provided through the Jacob K. Javits Grant (U.S. Department of Education, 2005), and a special committee generated a report about the inclusion and instruction of LEP learners in gifted education (U.S. Department of Education, 1998).

It is recommended that educators increase their knowledge of the interrelationships of languages used by their bilingual students. Kloosterman (1997) stated that, "Both bilingualism and talent development are multidimensional phenomena involving cognitive,

affective, cultural, environmental, and situational factors" (para. 3). Valdes (2003), in her work with bilingual interpreters, stated, "We [educators of the gifted] are optimistic that what we have to say may help researchers and practitioners in the field of gifted and talented education to understand high levels of accomplishment as they are manifested in some bilingual children" (p. 4). Research into bilingualism in students in gifted programs may contribute to a better understanding of how bilingualism relates to giftedness and the possibility of more effective programming and assessment practices.

Language Discourse

Language discourse, also known as pragmatics (Hymes, 1972; Prutting & Kirchner, 1987; Tyler, 2005), is defined here as the rules governing the use of language in social contexts. Language learners are faced with two types of tasks in acquiring communicative competence: the comparatively well-known task of becoming proficient in speaking (e.g., semantics, morphology, syntax), and the less well-understood task of learning how to use words and sentences in specific contexts in order to achieve desired actions (e.g., pragmatic competence; Brice & Absalom, 1996; Chouliaraki & Fairclough, 1999; Prutting & Kirchner, 1987).

Pragmatics intimately involves the speaker and listener, the nature of their interactions, and the contexts in which those interactions take place. Students must choose language appropriate to social encounters with others, that is, appropriate to the school setting in interactions with other classmates and with teachers. In sum, a number of researchers have argued that pragmatics, or discourse, is a better indicator of language abilities in bilingual children than use of formal measures (i.e., standardized, norm-referenced tests; Brice, 1992; Brice, Mastin, & Perkins, 1997a, 1997b; Brice & Montgomery, 1996; Damico & Oller, 1980; Damico, Oller, & Storey, 1983). Guthrie and Guthrie (1987) found, "How teachers and students use language [i.e., pragmatics], rather than particular linguistic aspects of speech, may have more to do with the way children learn, and the miscommunication, misunderstanding, and educational difficulty students encounter" (p. 206). Discourse in English can be a barrier for English

language learning (ELL) students because English serves as a content subject and also as the means of instruction.

One of the strategies bilingual students may employ to address this challenge is to alternate between their two languages (e.g., code-switching) as a bridge between their languages (Faltis, 1989). According to Aguirre (1988), language alternation in the classroom is obvious and unavoidable with bilingual children. Teachers of the gifted should regard code-switching as a positive example of communicative strategies employed by students. A brief discussion of language alternation follows.

Language Alternation

Language alternation is a normal, common, and important aspect of bilingualism (Brice, 2002; Grosjean, 1982; Kamwangamalu, 1992; Pennington, 1995; Zentella, 1997). For the bilingual student, the process of alternating between two languages requires a nonrandom, sophisticated cognitive and linguistic manipulation of their languages (Aguirre, 1988; Miller, 1981; Poplack, 1980).

Language alternation can be divided into the two linguistic categories of code-switching and code-mixing (Kamwangamalu, 1992). Language alternation across sentence boundaries is known as intersentential code-switching, while language alternation within a sentence is known as code-mixing and has been referred to as intrasentential alternation (Grosjean, 1982; Torres, 1989). In code-switching, the teacher may say, "Ya, se acabó (It is over). Siéntate (Sit down). The time is up." Thus, the transition from the Spanish command "Siéntate" to the English informative sentence of "The time is up" constitutes an intersentential, code-switched language alternation. Embedded words, phrases, and sentences from two languages also can be found within sentences forming an intrasentential, code-mixed language alternation. For example, the teacher may incorporate words or phrases into English from his or her other language. He or she may say, "What language is *mille lacs* (one thousand lakes)? Do you know what that means? What does *mille* (thousand) mean? *Mille* (French word for one thousand) means *mil* (Spanish word for

one thousand). *Lacs* (French word for lakes) means *lagos* (Spanish word for lakes)."

Cummins (1984, 1998) proposed the threshold hypothesis for sequential bilingual learners. A bilingual individual needs to achieve certain levels of proficiency and competence in his or her first language (L1) before linguistic and cognitive benefits can occur in the second language (L2). If this threshold is not achieved, then subtractive bilingualism may result. However, if the threshold is achieved, then additive bilingualism and transference between the two languages may occur. Thus, a minimum level of language and conceptual abilities in L1 must be attained in order for speakers to successfully transfer to the L2. Cummins did not specifically refer to language alternation abilities; however, we believe that language thresholds must be achieved in order for additive bilingualism to occur as displayed in positive language alternations (i.e., code-switching and code-mixing).

A true understanding of code-switching behaviors, classroom language use (i.e., pragmatics), and vocabulary are phenomena that few school professionals, including classroom teachers, understand well (Brice & Montgomery, 1996; Cheng & Butler, 1989; Murshad, 2002; Reyes, 1995; Simon, 1985). Teachers may misunderstand language norms for bilingual and English language learning students; therefore, the true language abilities of these learners may not be accurately assessed.

The aim of this article is to increase the knowledge base of how discourse manifests itself in bilingual adolescents identified as gifted. It is anticipated that this knowledge will yield an increased teacher understanding of bilingual language abilities and discourse related to giftedness, which may result in more accurate programming practices and effective assessment of bilingual students for gifted programs.

Purpose

The purpose of this study was to examine student discourse (through discourse analysis) and other language abilities between bilingual students identified as gifted and bilingual students not identified as gifted and taught in the general education classroom in an urban

middle school. This study provides a different inquiry (i.e., at an exploratory level) into bilingualism from what is typically presented in the literature (i.e., how bilingual students in gifted programs use language). Particular attention was given to how the participating bilingual students used language in conversation and discourse involving code-switching and code-mixing. Discourse analysis refers to analyzing language so that an understanding of why and how language is used becomes more explicit (Fairclough, 1989). Vocabulary and measures of language alternation (i.e., code-switching, code-mixing, English language use, and Spanish language use) also were employed as indicators of language ability. Specifically, the research questions were:

1. Do Spanish-English speaking adolescent students identified as gifted display greater use of pragmatic functions (i.e., the reasons for speaking) as measured by four pragmatic functions when compared to students in the general education program?
2. Do Spanish-English speaking adolescent students identified as gifted display greater use of vocabulary as measured by a type/token ratio measure when compared to students in the general education program?
3. Do Spanish-English speaking adolescent students identified as gifted display greater use of language choice as measured by instances of English language use, Spanish language use, and code-switching/code-mixing use in their discourse when compared to students in the general education program?

Methods

A mixed methods study employing both qualitative and quantitative methodologies was employed. Qualitative research is descriptive research. Hence, words were used to describe the findings instead of numerical data (Bogdan & Biklen, 1992; Glesne & Peshkin, 1992). The data that was gathered was obtained via observations and field-based notes over an extended period of time (i.e., repeated observations of variables across time). Validity of the data, or authenticity,

is obtained through ethnographic triangulation (three separate data points of the observations). Qualitative triangulation of this study was obtained by having separate observers collecting data over an extended period of time (resulting in multiple observations) and by interviewing the students. The quantitative methods involved group comparisons for the pragmatic, vocabulary, and language alternation measures, as measured by percentage of occurrences obtained from the language samples.

Participants

Participants were 16 students served in a public middle school (grades 6–8) in one of the largest urban school districts in the southeastern United States. Approximately 47% of students in the district were eligible for free or reduced-price lunches; 37% of the students in this middle school were eligible. Most of the 82 teachers at the school were females ($n = 61$), and the majority of teachers employed were White (83%). Eleven teachers were African American (13%), and three were Latino/a (4%). The state reported 22% of its population as Latino/a; 25% of the overall student population in the district was Latino/a, and approximately 36% of the student population at this school was also Latino/a (Bureau of Education Information and Accountability Services, Florida Department of Education, 2004a, 2004b). Within the state's program for students in the gifted program, culturally and linguistically diverse students are underrepresented.

Eligibility criteria for participation in this study included being served in either gifted or general education, Latino/a origin, designation as bilingual, and documented identification for previous or current English Speakers of Other Languages (ESOL) services. Inclusion in the state's program for intellectual giftedness included: (a) parent, teacher, or peer referral; (b) earning a minimum score on a checklist of gifted characteristics; and (c) an individual IQ score of 130 or above. Although an alternative gifted identification process for low socioeconomic status (SES) and LEP students has been approved by the state's Department of Education, participants in this study were identified for gifted services based on the standard criteria rather than those provided for LEP and low-SES students. Individual IQ scores for the students in this study were not provided

to the researchers due to confidentiality matters. A recruitment letter was sent to all students in the gifted and general education programs who met these criteria. The students in the gifted program had been enrolled in gifted classes for a period of 2.5 years. All students in this study had exited an ESOL program.

The attitudes of the students in the gifted program were exemplified by students such as Malena. Malena stated, "We are learning at the ninth-grade level [though we are in eighth grade]; our lessons are ahead of other regular classes." The students in the gifted program recognized that their teachers had confidence in their ability to learn. These students felt that their teachers held high expectations for them, which was evident to them in the challenging tasks assigned in class. They also believed that, as Hispanics, they were even more distinct as learners. Malena also emphasized her gifts and her language abilities: "When you are gifted and bilingual, you know more than others [who are monolingual]."

Eduardo also shared his views of being enrolled in a gifted program and being Hispanic:

> You're already special enough [because you are bilingual], but you are extra special because you are also gifted. You're better [than the monolingual students], well not better, but you are excelling higher than [the students in general education]. Hispanics are not supposed to do well in school, and that's the expectation. So if you are gifted and Hispanic, then you've exceeded expectations. You feel a sense of pride because you are doing better than even the Americans and you aren't even from here.

The researchers balanced the grade-level distribution from those students whose parents consented, and a total of 16 learners were included, 8 from each group (students in gifted and general education programs), all of whom were also first-generation Americans, although this was not a requirement for participation. These students' families came from Puerto Rico, Cuba, Guatemala, El Salvador, the Dominican Republic, Mexico, and Colombia. This sample seems to be representative of the diverse Latino/a population in the U.S. and Florida (U.S. Census Bureau, 2002, 2003).

Fluency in both Spanish and English was a prerequisite and determined by self-report and results of an oral language proficiency rating (i.e., a score of 4 or higher on a Likert scale using the International Second Language Proficiency Ratings [ISLPR]; Wylie & Ingram, 1999). The ISLPR is a Likert-type scale from 0 to 5 (*low* to *high abilities*) with plus ratings (0, 1, 1+, 2, 2+, 3, 3+, 4, 4+, 5). The ISLPR is a proficiency scale involving the macrolanguage skills of listening, speaking, reading, and writing. Only speaking skills were evaluated for this study. There are two models of the ISLPR: the general proficiency model and the specified purpose model (e.g., English for court of law purposes). Because the participants were rated for overall proficiency, the general model was chosen. Only the overall score was obtained for this study. A balanced Spanish-English bilingual speaker scored this rating scale. In addition, through self-report, all participants indicated high-level fluent abilities in both languages.

Data Collection

The data collection began with a social-interaction activity to allow for communication and conversational discourse opportunities. To initially facilitate open forums for discussion, an "ice breaker" activity was provided to the students in both groups. For this activity, participants from each group were divided into two teams whose mission was for all group members to cross an imaginary river. During the remainder of the data collection, each group of students convened with the facilitator for hour-long group meetings over the course of 5 consecutive days. Discussions were based upon the researchers' previously developed questions that addressed cultural experiences in school, language acquisition, and communication. These questions were used to guide discussions in both groups, and student-initiated conversation extensions also were encouraged during the data collection. The groups met in the school media center. The sessions were videotaped for later transcription and analysis.

To encourage students to speak both languages in this setting, the facilitator (a fluent Spanish-English speaker) conversed with students in Spanish, English, and in language alternations (i.e., code-switching and code-mixing). Analysis revealed that 18% (448/2,454 words) of the facilitator's language was spoken in Spanish. This is

comparable to the 17.4% figure found by Brice and Perkins (1997) when bilingual teachers spoke with bilingual students in classrooms. Therefore, it appears that the facilitator offered ample opportunities for the students to speak in both languages. Discussions were student generated yet prompted by the facilitator on a variety of topics of interest to the students. Topics included bilingualism, code-switching, bilingual friends, speaking Spanish with friends or in school, and bilingualism and personality.

Despite the language modeling, several students sought permission to speak Spanish. Tarone and Swain (1995) found that immersion students in Canada avoided using their second language in peer-to-peer interactions as they moved into the upper primary grades. Hence, the opposite may have occurred with the students in this study; for example, the students needed encouragement to speak Spanish and to code-switch. Consequently, most students spoke both languages during the taped sessions after receiving repeated modeling and encouragement from the bilingual facilitator. These meetings were scheduled during the students' lunch breaks by group (gifted; general education).

Data Coding

Using qualitative grounded theory methodology (Charmaz, 2000; Strauss & Corbin, 1998), 2 hours of videotape were analyzed (1 hour per group). The coding process involved two major steps: (a) a content analysis, whereby each video was viewed in its entirety and independently coded; and (b) agreement of the codings by the first two researchers was obtained. The codings were established specific to this investigation.

A total of 467 codings were obtained and analyzed. For the students in the gifted program, 238 codings were analyzed, while 229 codings were analyzed for the students in the general education program. The first two researchers then exchanged codes and interpretations and compared relationships until it was determined that further coding would not enhance the analysis, or satiation was achieved. Codes were collated based on shared meanings, and then categorized into core groups. The first two researchers then agreed that the codes developed for this study matched codes developed in earlier research

by the first author. Therefore, the codes from the previous research were applied to the analysis of the language discourse for this study (Brice et al., 1997a; Brice, Miller, & Brice, 2006). Explanation and examples of these codes are presented below (i.e., questions, declarations, explanations, answers). One hundred percent interrater reliability was achieved, as the first two researchers agreed upon the nature of the codes during two sessions.

Language Measures: Pragmatics, Vocabulary, and Language Choice

All interactions were videotaped and transcribed by a student research assistant (a fluent Spanish-English speaker). The first researcher and the student met and transcribed 20% of the sample, thus ensuring reliability of the transcriptions. The taped observations were transcribed and checked for accuracy by the first researcher and the research assistant by reviewing 20% of the videotapes. Discrepancies were corrected by having both parties come to an agreement of what was said.

Four pragmatic language functions obtained from the two-step coding process were deemed appropriate for oral conversations and were consequently used:

1. *Questions* are uncommon in discourse; however, they are a significant aspect of instruction in classrooms and school. Sinclair and Coulthard (1975) stated that elicitations is one of three main classroom language functions. The use of questions is a highly occurring language function of classrooms, and, therefore, the ability to ask and respond to questions is imperative to learning.

   Example:

   STUDENT: "Can I speak Spanish?"
   FACILITATOR: "Of course!"

2. *Declarations* (comments) are frequently seen in discourse interactions (typically in response to teacher-directed questions and also with classmates in oral conversation [Brice et al., 1997a; Cazden, 1988]). The speaker provides a comment or point of view related to the task or lesson (Brice

et al., 1997a; Canagarajah, 1995). Basic statements, simple directions, basic facts, and knowledge are stated.

Example:

> STUDENT: "Whenever your friends are talking Spanish, it's like, it's like, you know, like, like you could understand when nobody else can. It's fun."

3. *Explanations* involve detailed dissemination of information that may involve two or more facts or bits of information. Hence, speakers give more than one thought (Brice et al., 1997a). Explaining involves more detail with a greater depth of thought. In addition, more complexity is stated in the message. This pragmatics function serves the purpose of elaborating on topic discussions inside and outside the classroom.

   Example:

   > STUDENT: "I lived in Puerto Rico for 3 years, and I, so, I spoke more Spanish than I do now, but then, I came to like it here, and there, they're not speaking English, so, my mom thought to speak mostly English, and I guess Spanish kind of withered away cause we kind of don't use it that much when I was little, and, so, now, I'm trying to learn right now to talk, but I can understand everybody when they talk" [understand those who speak Spanish].

4. *Answers* (responses) have been cited in the literature as pertinent to classroom and oral discourse. Vejleskov's (1988) behavior of expressing one's feelings positively also shares some attributes with the behavior of answering and responding. Brice's (1992) classroom function of expressing oneself also falls into the same pragmatic category; yet, the latter functions deal only with personal aspects and not school topics. Answering and responding also deals with content aspects and structuring conversations.

Example:

FACILITATOR: "I wanna know your name cause I have so many questions. I need to know your name."
STUDENT: "Okay, yo me llamo E." (my name is E.)

Other Language Measures

Vocabulary was measured by obtaining a type-token ratio (TTR) measure for each group. TTR is a standard vocabulary formula measuring the different types (the number of different words spoken by the student in the language sample) divided by the tokens (the total number of words spoken by the student in the sample). TTR is a typical measure of semantics or vocabulary (Hedge, 1996; Miller, 1981). A TTR of .50 or greater indicates vocabulary diversity.

Language choice was measured by tallying the number of student utterances that were spoken containing all English, all Spanish, and code-switching and/or code-mixing. The facilitator engaged in all three types of language choice, thus modeling and encouraging all three forms throughout the interactions. Two examples of code-switching (a complete alternation to the other language at the sentence boundary) and code-mixing (alternation to the other language within a sentence) follow:

a. Code-switching. "I know a lot of people, like, are racists. *Ellos, como ellos dicen siempre* (They, like they always say)."
b. Code-mixing. "They will be speaking Spanish and like [my dad will say], *Yo soy Cubano, mi esposa es Portorriquena* (I am Cuban and my wife is Puerto Rican)."

Limitations

A primary limitation of this study was the small sample size ($n = 16$). This was one of the few schools in the district with a high concentration of students enrolled in a gifted program who were also Spanish-English ESOL-identified learners. Other schools with students in gifted programs who were also Spanish-English speaking did not have a sufficient number of students for the purposes of this study. Another limitation was the amount of data collected (a few hours), the short duration of the interactions (approximately 1 hour each in

length), and the technical challenges that were presented through videotaping the samples (e.g., noise, sound quality, and disruptive school bells and announcements). Additionally, the researchers did not have information pertaining to the classroom environments for both groups of students and whether instruction included extended discourse opportunities. Finally, IQ scores were not made available to the researchers due to confidentiality issues.

The researchers were unable to determine prior language abilities of the students in the two programs (gifted education and general education). Consequently, one purpose of this study was to investigate, at an exploratory level, the highest level of language abilities of the students in this study, as demonstrated by their language interactions.

In sum, the researchers are aware of these limitations. Although conversational Spanish proficiency was not formally assessed through paper-and-pencil tests, the bilingual facilitator assessed this ability through use of the ISLPR and noted the students' language abilities as being balanced and proficiently bilingual. Therefore, these limitations will be noted in suggestions for further research.

Results and Discussion

The aim of this study was to determine if the language of the students who were educated in gifted programs would be revealed in oral discourse samples. Specifically, the researchers sought to examine student discourse between bilingual students in gifted programs and bilingual students in general education programs (not identified as gifted) in an urban middle school. Pragmatic language measures, a vocabulary measure, and measures of language alternation (code-switching, code-mixing, English language use, and Spanish language use) were used as indicators of their language ability.

Pragmatics

The first research question sought to determine if Spanish-English speaking adolescent students in gifted programs displayed greater use of pragmatic functions as measured by four pragmatic functions (codings), when compared to students in general education pro-

grams. Utterances were analyzed using critical discourse analysis for pragmatic functions of language for both the students in the gifted program (238 utterances) and students in the general education program (229 utterances). Research Question 1 seems to be partially supported by half of the pragmatic categories demonstrating differences. Language uses were different across the pragmatic language measures for half of the students in the gifted and general education programs (two of the four measures showed differences). Students in the gifted and general education programs differed on the use of declarations (gifted program 71.42% vs. general education program 65.93%); and explanations (gifted program 12.60% vs. general education program 8.73%). The language behaviors of asking and answering questions, not typically seen in conversational discourse, were not different between the groups.

The descriptive and quantitative analyses revealed that the students in the gifted program generally made more comments and tended to give more elaborate explanations. For example, the following explanation was typical of students in the gifted program,

> Every time my dad sees someone who looks like they are Spanish he goes over to speak to them in Spanish. Why you would do that all the time? He says, "Cause I'm Spanish, and I just like talking Spanish." And he's always making Spanish jokes. He is always encouraging us, "Talk Spanish more often." I do. Our whole family is Spanish. I have to speak Spanish to them.

However, the following exchange was typical of students in the general education program: "I know because . . . pues, I just, I don't know. To me, it is, I'm proud to be Spanish, and I'm trying again to learn how to speak it again, so."

The difference in the two groups' language use was initially noted to be different during the warm-up or "ice breaker" activity. Specifically, groups have typically approached this activity as a competitive event and worked diligently to be the first team to get across the hypothetical river. Nowhere during the directions is competition between teams addressed. Unlike prior groups the facilitator had observed solving this task, the two teams in the gifted program did not view this challenge as a competition; rather, they met in the middle of the river, at which

time they adjusted their strategy so that both teams were working in tandem to reach their destination. As an observation, it seemed that the students in the gifted program seemed to exhibit a more collectivistic, noncompetitive group orientation than those in the general education program. This group orientation is typical in the Hispanic culture (Brice & Campbell, 1999). As the students in the gifted program worked to solve the problem, they required little assistance or direction from the facilitator in order to successfully complete this task. They discussed multiple options for solutions and quickly solved the task at hand without any hesitation.

When the students in the general education program were presented with this same challenge, the problem-solving process and outcomes were noticeably different. The two teams in the general education program required extensive scaffolding and modeling by the facilitator before they attempted to solve the problem. Students appeared to be apprehensive about how to approach the problem and asked the facilitator for assistance and guidance ("How do we do it? How do you get across? I'm confused."). Learners had difficulty working together within their team to solve the problem. The students in the general education program seemed to show more field dependence (vs. field independence) in the task and a lesser ability to independently problem solve (Brice & Campbell, 1999). One of the two teams from the general education program perceived only one solution option and eventually decided to replicate the solution utilized by the other group.

The students in the general education program also were much more competitive (less collectivistic); when one group successfully completed the task, they pronounced victory over the other group. The approach, solution generation, and ultimate conclusion of the task were more labored, anxiety-ridden experiences for these students than the students in the gifted education program. The level of enjoyment during this activity also differed between groups; while the students in the gifted program seemed to thoroughly enjoy the process and were motivated to find the solution, the general education program students were passive and tentative in their approach and did not appear excited about solving the problem.

The students in the gifted program also seemed to be more aware of their language as noticed by their metalinguistic awareness regard-

ing speaking Spanish, "Yeah, I talk Spanish at home. It's weird. I love speaking Spanish. It's so fun." It also was noted that the students in the gifted program seemed to pose more rhetorical questions, as seen in the following example: "You know what they eat a lot? Platano frito, platano mojado (fried plantains, wet plantains)." Rhetorical questions function as conversational strategies (Brice et al., 1997a), which signifies a metalinguistic knowledge of language.

The students in the gifted program in essence recognized that language is a tool. The following examples illustrate this point: "Y cuando te miran, y si hay alquien que no te gusta, tu puede hablarle, y el no entiende lo que tu dice. Pero, mi amiga lo odia cuando yo hago eso (And when they look at you, and if there is someone you don't like, you can speak to them [in Spanish], and he doesn't understand what you're saying. But my friend hates when I do that)."

Another example is when a student in the gifted program expanded upon the benefits of being bilingual:

> I was talking to my aunt at Home Depot in Spanish cause my aunt speaks Spanish. So, she grabbed me, and then she wanted me to translate what they were saying, and I was like, I translated, and they wanted an icemaker and then, she's like, "oh good. Oh, okay, gracias," and then, she's like, "you are gonna be a good girl when you grow up because you are gonna get a good job and you're gonna be bilingual." And I was like, Oh good, I like being bilingual cause I kind of like to talk to people in different languages.

These instances suggest that their abilities were seen in their expressive language discourse. It should be noted the students in the gifted program tended to need less prompting to speak and they seemed less hesitant to ask permission to speak in Spanish. However, the students in the general education program required more facilitator prompting (through the use of questions) to elicit conversation. For example, it was noted that the facilitator tried to initiate conversations several times with Spanish and English prompts such as, "*Y hablabas Ingles?* (and you spoke English?)" or "Did you speak English?"

The students in the gifted program were initially more verbal and they seemed to be less hesitant about speaking. The question of the whether the students in the gifted program had greater experiences in

speaking needs to be investigated, as this may have affected the results. It is suggested that future studies gather samples where opportunities to ask and answer questions may be more prevalent.

Vocabulary

It was expected that the students in the gifted program would show a greater breadth of vocabulary. Vocabulary diversity was measured by obtaining a TTR, a standard and typical measure of vocabulary diversity (Hedge, 1996; Miller, 1981). A TTR of .50 or greater indicates vocabulary diversity, while a TTR of less than .40 indicates limited vocabulary. Students in the gifted program displayed an average TTR of 0.14, while students in the general education program displayed an average TTR of 0.15. The ratio results between students in the gifted and general education programs differed by 0.01, indicating no overall differences and also what appeared to be limited use of conversational vocabulary for both groups. The limited vocabulary results for both groups may have been affected by the activities chosen and the conversational topics that followed. The open-ended structure of the discourse conversations also may have affected the vocabulary results. It is suggested that further studies employ a greater range of conversational topics in obtaining language samples.

Even though no numerical differences were found, some qualitative comments suggest that the students in the general education program may have English word vocabulary difficulties, pronunciation difficulties, grammatical errors, and loss of Spanish abilities. An example of English word difficulties was noted when a student in the general education program used a word-for-word direct translation of a Spanish phrase to English. She said, "That touches my nerves. It's so loud." The student's word choice conveys her meaning; however, her sense of discomfort is typically not expressed in this manner in English. Another example of difficulties was evident in misarticulations exemplified in the following quote, "Like, I don't know, like because when I say chocolate, cheetah, cheese, I can't say the '*sh*.'" It is suggested that future studies of structured conversations and conversations be conducted in classroom settings to allow for critical discourse analysis.

Language Choice

The third research question focused on whether the Spanish-English speaking adolescents in the gifted program would display greater language choices (i.e., speaking in English, speaking in Spanish, and code-switching and code-mixing) than the students in the general education program. Four hundred sixty-seven utterances were examined for presence of (a) English use, (b) Spanish use, and (c) code-switching and code-mixing. The groups differed on all three language choice measures: (a) English use (gifted program 79.09% vs. general education program 64.19%), (b) Spanish use (gifted program 10.08% vs. general education program 27.07%), and (c) code-switching and code-mixing (gifted program 14.70% vs. general education program 8.73%).

Research Question 3 seems to be partially supported by the data. The students in the gifted program tended to use more English, and the students in the general education program tended to use more Spanish in their conversations. This finding was unexpected. However, the researchers felt that the greater use of English was a result of the students in the gifted program trying to "fit into" their classes and excel in the language of the school. It should be noted that school professionals consciously and unconsciously tend to promote English at the expense of the bilingual students' Spanish (Brice, 2002; Wong-Fillmore, 1992). Language choice also can be constrained by the environment (e.g., predominantly monolingual students in a classroom; Gumperz, 1982). The students in the gifted program showed greater use of language alternations through code-mixing. The language alternations were more complex in that Spanish phrases were inserted into their English. However, the students in the general education program tended to only insert single Spanish words into their English.

Code-switching and code-mixing are rule governed and developmental in nature (Brice, 2002). To insert an entire phrase into English, a student should follow the rule structures of both languages. Poplack (1980) iterates the rules of equivalence constraint (syntactic rules of each language cannot be violated) and the free morpheme constraint (language switches may not occur around a bound morpheme) within language alternations. In the following

quote illustrating code-mixing, the students in the gifted program were commenting about nationalities and prejudice, "Like *me siente ser mal porque* (I feel bad because), Mexicano, Salvadoreno, they're like the same *raza* (race). *Todos somos Hispanos* (We are all Hispanic), and like all of us." Brice (2002) noted that such an easy and flowing interchange between two languages is an example of high-level language skill. Hence, this example actually demonstrates knowledge of English language rules and knowledge of Spanish language rules and is an exemplar of high language and cognitive skill. Future studies should attempt to elicit and analyze a wider sample of code-switching and code-mixing among students in the gifted program.

Conclusion

In sum, the evidence from this study suggests mixed support for the three research questions and a slight language advantage for the bilingual students in the gifted program. Bilingualism, language abilities, and giftedness involve many variables, and the relationships are not necessarily direct. Giftedness may be reflected in language use and also reflected in bilingualism; however, the results from this exploratory study suggest that further quantitative research is needed to verify these results.

However, bilingual language abilities do not seem to be measured or captured in teacher perceptions. Fernandez, Gay, Lucky, and Gavilan (1998) stated that classroom teachers perceived the ability to speak another language the least important trait of students in gifted programs. In their survey of 373 elementary teachers in southern Florida, they found that teachers—even Hispanic teachers—were more certain about characteristics of giftedness in White students than among Hispanic students. Hany (1993) and Fernandez et al. both suggested that teachers may consider students as gifted when the students resemble those with which the teacher has had contact. Therefore, it appears that teachers will need further information about traits of giftedness among bilingual students. Further research indicating why teachers may perceive Hispanic students differently may add to the body of knowledge

that would be applied in correcting these misperceptions. Hence, further research is needed in this area.

Grosjean (1989) stated that a bilingual speaker is not the sum of two monolingual speakers. The coexistence of two languages in a person produces a unique speaker and listener that is different from monolingual speakers. We postulate that bilingual speakers will demonstrate their cognitive abilities in ways that are different from monolingual speakers and may be evidenced in their language use. Further studies investigating the nature of how two languages interact (whether positively or negatively) is still a new area of research and merits further investigation.

It appears that an understanding of bilingualism and second language acquisition would be beneficial for gifted and general education teachers. Hence, school professionals need to make a conscious effort to be aware of their students' first and second language functioning. More research is warranted to determine how giftedness manifests itself in bilingual students and how the characteristics and behaviors differ from gifted monolingual students.

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