

Cultural Duality of Figurative Meanings of Idioms

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Abstract

This study reviews the current research related to idiom comprehension strategies for both native and English language learners (ELL). Central to this study was the examination of the cultural duality hypothesis – the theory that individuals may refer to idioms in their native language in order to solve culturally novel idioms that are different in form but similar in figurative meaning. A total of 86 participants were recruited into four testing groups: 1. English-speaking adults (EA) 2. Spanish-speaking adults (SA), 3. English-speaking children (EC), 4. Spanish-speaking children (SC). Each group completed both a Native Idiom Test (NIT) and a Culturally Novel Idiom Test (CNIT) in their native languages. The relationship between these two measures was used to indicate the presence and extent of cultural duality demonstrated by each group. Results revealed that English-speaking children and adults demonstrated the greatest relationship between the NIT and CNIT and therefore demonstrated evidence of the use of cultural duality. Fifth-grade English language learners appeared to have limited access to this strategy.

Keywords: *idioms; figurative language; ELL; bilingualism*

1. Introduction

1.1 Idiom Comprehension and the English Language Learner

Figurative language appears in several modalities such as metaphors, similes, proverbs, slang, and idioms, and each represents a challenge to the language learner attempting to sort out their meanings (Nippold, 1998). Comprehending figurative language requires the knowledge that words and even phrases can have multiple meanings that often do not closely correlate (Cain & Towse, 2008; Swinney & Cutler, 1979). Students must be able to view the text within a larger context rather than focusing on individual words, and they must be able to make inferences and establish links between different parts of the text in order to comprehend figurative language (Cain & Towse, 2008). Idioms are prolific in the English language and can pose a real challenge to both children with language deficits and English language learners alike (Nippold, Moran, & Schwarz, 2001). Research has shown that after the 4th grade, students encounter 4.08 idioms per minute in both the teacher's verbal instructions and in the curriculum texts (Nippold et al., 2001; Pollio & Pollio, 1974). Cooper (1998) discovered that the average individual uses 980 idioms a day. Furthermore, in a study of teachers' use of language, researchers found that up to 27% of teachers' utterances contained some sort of figurative language, and that 11.5% of these total utterances contained idioms (Larzar, Warr-Leeper, Nichololson, & Johnson, 1989). The rate at which students encounter idioms also increases with grade level and is the only form of figurative language that does so (Pollio & Pollio, 1974). Nippold et al. (2001) found that idioms were encountered in 6% of sentences in the 3rd grade and increased to more than 10% by the 8th grade. The fact that students spend around 60% of their classroom time listening rather than speaking means that students who lack mastery of idioms increase their chances of missing opportunities for comprehension with each passing grade level (Larzar et al., 1989). Studies have shown that performance on idiom tasks is highly correlated to intelligence and academic achievement in preadolescent students (Nippold et al., 2001), and that for English language learners (ELL), successful idiom comprehension can serve as a measure of language competence (Qualls & Harris, 1999).

Idiom comprehension and development has special implications for English language learners (Cooper, 1999). In fact, research has suggested that ELL process figurative language in a non-native language differently than they process

idioms from their native language (Liu, 2008). This strategy makes sense when one considers that these students have the dual challenge of learning the words that comprise the idiom, discovering which idioms are culturally specific, and knowing when the use of certain idioms is socially appropriate (Qualls & Harris, 1999). Furthermore, these students bring world knowledge that differs from that of their native English-speaking peers to the task of deciphering an idiom from the English language and culture (Littlemore, 2001). Qualls & Harris (1999) postulated that students' world knowledge affects the way in which they will solve an idiom. Indeed, cultural background has been known to play a large role in interpreting the meanings of novel idioms, whether they have been interpreted correctly or not (Littlemore, 2001).

A command of figurative language helps English language learners cross the bridge between learning the basic building blocks of language and developing an academic literacy that allows them full access to the content curriculum (Fitzgerald, 1993). While a significant body of literature exists on idiom development and mastery in the monolingual population, less research has been devoted to the idiom processing strategies unique to the English language learner population. The purpose of this study is to examine the extent to which English language learners use their knowledge of idioms in their native language and culture as a strategy to comprehend idioms novel to their culture.

1.2 Theories of Idiom Processing and Development

Two broad views of idiom processing have been put forth by Nippold et al., (2001). The language experience hypothesis, also termed the language exposure hypothesis, posited that idioms are learned through meaningful exposure to them. Those idioms to which the language user has been exposed more frequently will be easier to understand and quicker to process than idioms that are less familiar and less frequently occurring. For those idioms which are not familiar to the language user, Nippold et al. (2001) proposed the metasemantic hypothesis in which the literal meaning is considered first, and then the figurative meaning is derived from the components of the literal meaning. This process is more successful when the idiom is transparent, that is, when the literal meaning is closely related to the figurative meaning.

Other more specific models of idiom processing mainly differ in terms of which meaning – literal or figurative – is accessed first. Bobrow and Bell (1973) proposed that, upon encountering an idiom, the literal meaning is accessed first. The researchers came to this conclusion after a series of tests in which subjects were presented with a phrase and asked to come up with two possible meanings for that phrase. Then, the subjects were asked which meaning they thought of first. Given the greater proportion of individuals reporting having thought of the literal meaning first, they concluded that the only time the figurative meaning is accessed is when the context of the figurative phrase indicates that the literal meaning does not fit and confounds the meaning of the text. At this point, the figurative meaning is accessed and the meaning of the text interpreted correctly.

Cooper (1998) provides additional support for the literal first hypothesis, claiming that during normal comprehension, the "literal mode" is normally active while the "figurative mode" remains inactive until the literal meaning of the word or phrase does not fit the speech/written context. Cooper (1998) also stated that the age of the individual has a large effect on which meaning is conjured up first in the mind, claiming that until individuals are roughly nine years of age, they interpret almost all idioms literally. After age nine, as they begin to develop what Cooper (1998) called "semantic duality", these children begin to interpret idioms figuratively with greater frequency as they approach adulthood. Although the sequence of literal versus figurative meaning access is still being questioned by more recent theories of idiom processing, the knowledge that idioms are stored as single lexical units remains generally accepted in the recent literature (Bulut & Celik-Yazici, 2004; Liu, 2008).

The simultaneous processing model proposed by Swinney and Cutler (1979) suggested that individuals process both the literal and figurative meaning of the idiom simultaneously until sufficient context has been provided to differentiate which meaning is required. The literal meaning of the idiom may be accessed first if the context is suggestive of such an interpretation and *visa versa*. Theoretical support for this model comes from the position that idioms are stored as single lexical units in the same mental lexicon as all other words. This refined the Bobrow and Bell (1973) theory by agreeing that idioms are stored as single lexical items, but adding that they are not stored in a separate idiom list apart from the mental lexicon.

Titone and Connie (1999) proposed a similar hypothesis that incorporated aspects of linguistic processing with direct memory retrieval. For those idioms that are decomposable, processing can take one of two routes. One route involves the analysis of the idiom from a literal context (literal first hypothesis), and the other route involves processing the idiom as a single entity (figurative first). For those idioms that are non-decomposable, the idiom will be viewed as a single entity and therefore the figurative meaning will be accessed first. The dual representation model incorporates all

the previous theories of idiom processing and recognizes that language users likely depend on a variety of processing strategies to comprehend these complex figurative language units (Titone & Connie, 1999).

1.3 Idiom Processing in a Non-Native Language

Besides the aforementioned models of idiom processing, speakers of another language also employ additional comprehension strategies upon encountering a culturally novel idiom (Cooper, 1999). Perhaps the most widely employed strategy English language learners use to process novel idioms is to guess from the context (Bulut & Celik-Yazici, 2004; Cooper, 1999). Because idioms describe a limited number of content categories, many students can successfully guess the figurative meanings of idioms from the situation, emotion, or event presented in the text or spoken dialogue. Another widely used strategy to comprehend novel idioms is to employ pragmatic knowledge or knowledge of the world. Littlemore (2001) posited that individuals rely on schematic knowledge, contextual knowledge, and systemic knowledge in order to comprehend figurative language. Systemic knowledge, or knowledge of the language itself, is not as strong in a second language as it is in a native language. Therefore, individuals must rely more heavily on pragmatic knowledge and contextual clues in order to solve figurative language more accurately.

Liu (2008) suggested yet another commonly used strategy among the ELL population. When encountering a culturally novel idiom, English language learners often reference the idioms in their first language in order to find an equivalent. Liu believed that referencing the native language lexicon is actually the first strategy ELL use in processing culturally novel idioms, and that the successful interpretation of novel idioms partly depends on whether or not the novel idiom has an equivalent in the non-native language. Irujo (1986) conducted a study to examine whether or not English language learners use their knowledge of their native language in order to solve idioms in their second language. Irujo (1986) tested 12 Venezuelan participants whose native language was Spanish but who were also considered advanced learners of English. They were first administered a comprehension test in English that contained 15 idioms that were identical in English and Spanish, 15 idioms that were similar in English and Spanish, and, finally, 15 idioms that were different in English and Spanish but had the same figurative meaning. In a separate production test, the participants were given a short story in Spanish that contained a familiar Spanish idiom followed by the English translation of the same short story. In the English version, there was a blank where the idiom should have been, and the participants were asked to supply the English equivalent of the Spanish idiom. Overall, results showed that the native language had a very strong effect on these students' interpretations and productions of English idioms. Students were most successful completing test items in which the idioms were identical in both languages. Students also experienced success dealing with idioms that were similar in form for both languages. Finally, while students were able to comprehend some of the idioms that were completely different in form between the two languages, they had trouble producing the English idiom equivalent unless they had already been exposed to it through language experience. Irujo (1986) concluded that the results provided further evidence that non-native speakers often hearken to their native idiom repertoire to help them solve culturally and linguistically novel idioms, especially when the novel idiom has a similar or even identical form in their native language.

While evidence exists to support the claim that non-native speakers often consult their native language, there has been some debate as to the efficacy of referring to the native language in order to solve culturally novel idioms. Bulut and Celik-Yazici (2004) hypothesized that referring to the native language for idiom parallels, a term they call "the interlingual factor", would have a strong positive effect on the correct interpretation of novel idioms. In their study, it was found that test items were interpreted with greater accuracy for the individuals in the study who reported referring to the native language in order to solve novel idioms. However, the researchers noted that some individuals in their study actually avoided utilizing the interlingual factor and performed worse in interpreting novel idioms, believing the parallel likely to be a false cognate.

1.4 The Cultural Duality Hypothesis

English language learners often use their knowledge of idioms in the first language in order to find an equivalent that will help them solve an idiom from a novel culture or language (Cooper, 1999; Irujo, 1986). Liu (2008) and Irujo (1986) suggested that many children find this strategy particularly successful when the novel idiom has an exact equivalent or when it only varies by one or two words. For example, the English idiom "to have a heart of stone" has an exact equivalent in Spanish - "tener un corazón de piedra". Also, the English idiom that describes a person who loves books as "a bookworm" has a semantically similar equivalent in Spanish - "Ser un ratón de biblioteca" (to be a library mouse). However, does this strategy of looking to the native language for idiom equivalents only extend to idioms that have an exact or very close native language parallel, or does looking to the native language also aid in solving idioms that are *different* in form but *similar* in figurative meaning? For example, the English idiom "to kick the bucket" has the same figurative meaning as the Spanish idiom "to hang up one's tennis shoes". They are both

used in similar figurative contexts to imply that someone or something has died. The cultural duality hypothesis proposes that when individuals encounter a culturally novel idiom that does not have an exact native language equivalent, they still look to the native language to find an idiom that would apply to that similar figurative context in order to discover the probable meaning of the culturally novel idiom. Individuals who exhibit the ability to connect the figurative meanings of the culturally different idioms might suggest that there is a cultural duality of figurative meanings of idioms, or cultural duality. Employing the cultural duality strategy requires a combination of guessing from context and referring to the native language in order to solve a culturally novel idiom that does not have an exact native language equivalent. Specifically, individuals must first be able to identify the context of the novel idiom as being figurative before searching their native idiom inventory for idioms that would be applicable in that same figurative context.

While the cultural duality hypothesis shares many of the same premises as the "interlingual factor" proposed by Bulut and Celik-Yazici (2004) in that it presupposes that speakers of a second language hearken to their native language to find idiom equivalents, it differs in that it adds the significance of the figurative context into the idiom processing equation. The cultural duality model hypothesizes that the non-native speaker who successfully employs cultural duality would first recognize the linguistic context in question as being idiomatic, at least partly because there exists a similar linguistic context in which a native language idiom would apply. The following made-up passage about rain will serve as an example of how the cultural duality strategy of non-native idiom comprehension would work:

Imagine the following sentences are actually presented in a language that is not native to the reader:

"Jeremy always gets good grades on tests, but his friends think he talks about his grades too much. His friends say, 'He always throws flowers at himself'".

Even though the phrase "he throws flowers at himself" is completely different in form from the familiar "he toots his own horn", it was likely easy to understand, because first, the reader could connect the fact that idioms are commonly used to talk about bragging (observing a figurative context in connection with the native language), and secondly because the reader can remember that the phrase "to toot one's own horn" exists in the reader's native language, which means "to brag about one's self". Therefore, the phrase "to throw flowers at himself" probably has the same figurative meaning as the familiar idiom "to toot one's own horn". This hypothetical example demonstrates the cultural duality strategy at work to solve a culturally novel idiom.

1.5 Research Questions

The present study tests the cultural duality hypothesis through native and novel idiom tasks to provide information pertaining to the following research questions:

1. Do students use their knowledge of native language idioms to solve culturally novel idioms that differ in form but contain the same figurative meaning?
2. Do English language learners exhibit greater levels of cultural duality of idioms than monolingual students?
3. Does the ability to use cultural duality to solve culturally novel idioms increase in adulthood?

2. Methods

2.1 Participants

Participants were recruited from area elementary schools, and a group of 24 native English speaking 5th graders and 22 ELL 5th graders completed the tasks for the study. All children completed a home language survey to determine group placement. The children were qualified as native English speaking if English was reported as the primary language spoken in the home. The children were deemed native Spanish speaking if the primary language of the home was reported as Spanish based on a home language survey. All students were confirmed by their teachers as having normal intelligence, and that none of the student participants were receiving special education services or speech therapy. Fifth grade students were selected for the study because, according to Nippold and Duthie (2003), preadolescence is a time when figurative language understanding grows rapidly, and students' performance in tasks of figurative language differ between those who have strong language skills and those who do not.

Two adult groups were recruited to serve as a comparison between their 5th grade counterparts in the measure of cultural duality of figurative idioms. Twenty-five native English speaking adults and twenty-five Spanish speaking adults from area churches participated in the study. None of the adults were known to have any speech-language or cognitive deficits.

2.2 Testing Procedures

All participants signed informed consent letters written in their native language informing them of the purposes and procedures of the study while at the same time ensuring them that there were no known risks for participating and that they had the right to withdraw at any time without penalty. In order to determine and document the native language of all participants, a home language survey was administered along with the informed consent letter. This survey asked questions pertaining to the language spoken in the home and the language of the media consumed in the home.

Native English speaking participants were administered the *Peabody Picture Vocabulary Test (PPVT-4; Dunn & Dunn, 2007)* and all had to obtain a standard score of 85 or above to qualify for participation in the study. The Spanish speaking participants were administered the *Test de Vocabulario en Imágenes Peabody (TVIP; Dunn, Padilla, Lugo, Dunn, 1986)* and also were required to obtain a standard score of 85 or above to participate in the study. In addition, the Spanish speaking 5th grade participants were also administered the *PPVT-4*; however, the standard score did not eliminate them from participation in the study. These tests were administered to the participants individually, and all scores were recorded using a participant number rather than a name in order to ensure anonymity of the participants.

The administration of the Native Idiom Test (NIT) and the Culturally Novel Idiom Test (CNIT) were presented in small groups to the participants when possible, either at the children's schools or the adult's area church.

2.3 Idiom Task Design

The first idiom task, called the Native Idiom Test (NIT), contained 15 idioms gleaned from the native culture and native language of the participants of the group. For the English speaking group, the NIT-E contained English idioms such as "kick the bucket" and "out of the blue". For the Spanish speaking group, the NIT-S contained Spanish idioms such as "me dio el avión" (you gave me a plane) and "descubrirse el pastel" (to discover the cake). Immediately after each group of 5th graders was administered their respective NIT, both groups completed a second idiom task called the Culturally Novel Idiom Test (CNIT), which contained 15 idioms novel to the native culture of the participant. The CNIT was unique in that, although the idioms were unfamiliar to the test groups, the items themselves were presented in the native language of the group in order to ensure that language was not a barrier to the interpretation of these novel idioms. The children in both the English speaking and Spanish speaking groups were administered both idiom tasks in a classroom setting.

All four idiom tasks - NIT-English, CNIT-English, NIT-Spanish, and the CNIT-Spanish - were designed and compiled by the first author. Each idiom was presented in a brief story context of two to four sentences that contained situations relevant to 5th graders such as going to school, trouble with friends, or conversations with parents. According to the Flesch-Kincaid Grade Level Scale, all four of the idiom tasks ranked between a 3.0 (3rd grade level) and 4.7 (approaching 5th grade level). Following each story, the examinee was asked to select a multiple-choice answer that best signified the meaning of the idiom. The answer choices for each story always presented three possible interpretations: a literal interpretation of the idiom, the correct figurative interpretation of the idiom, and finally, a fact from the story that could be true but did not reflect the meaning of the idiom. These answer choices were presented in random order for each test item. The following is a sample item from the Native Idiom Test - English.

Greg had been pestering his sister all day. When Greg came into the house with a bunch of flowers for his sister, she said, "Well that was out of the blue!"

What did Greg's sister mean when she said "that was out of the blue"?

- a. The flowers were blue
- b. The flowers were an unexpected surprise
- c. The flowers came from the water

The selection of idioms for each of the four idiom tasks involved the passing of certain criteria set by the researcher in order to ensure the validity of the testing items. For the Native Idiom Test-English, the idioms had to meet the following criteria: 1. Idioms must contain words in a 5th grader's vocabulary 2. Idioms must contain a Spanish equivalent that is different in form but the same in figurative meaning from the English idiom 3. Idioms should be familiar to native English speakers. Finding idioms that fulfilled the first criteria did not prove difficult since the vocabulary of most idioms does not fall above the 3rd grade reading level (Nippold et al., 2001). Finding idioms that met the second criteria, however, proved to be a challenge because many of the familiar idioms in the English language (criteria 3) have an exact Spanish equivalent. For example, the English idiom "to have a heart of stone" meaning 'to be unfeeling', has an exact Spanish equivalent "tener un corazón de piedra" and would therefore fail to meet the second criteria. Another challenge to meeting the second selection criteria was that many English idioms did not have a

Spanish equivalent or the equivalent contained concepts or words that were too mature for a 5th grader. In order to compensate for the lack of available "researched" lists of idiom familiarity applicable to the current study, the researcher gleaned English idioms from Nippold (1998) as appropriate and relied on the judgment of the second author to validate the familiarity of the other selected idioms. In spite of these challenges, the researcher was able to find 15 idioms in the native English language and culture that met all three selection criteria, with particular emphasis placed on meeting the second selection criteria.

The selection of idioms for the CNIT-E- involved passing the following selection criteria: 1. Culturally novel idioms must be opaque 2. Culturally novel idioms must conjure a mental image 3. Figurative meanings must parallel those idioms on the native task but be very different in form from those on the native task. Regarding the first selection criteria, the term "opaque" is a measure of the transparency of an idiom. Transparency has to do with how closely the figurative meaning of the idiom is related to the literal meaning (Nippold & Duthie, 2003). An idiom that is transparent is easily interpreted due to the similarity between the figurative and literal meanings. For example, the idiom "to skate on thin ice" is easily interpreted because both the literal and figurative meaning imply someone being close to danger. For an idiom to be deemed opaque, however, the literal and figurative meanings must have little to do with one another. For example, the literal meaning of "kick the bucket" is in no way related to its figurative meaning "to die". In order to ensure that individuals solved culturally novel idioms using cultural duality rather than simply being able to pragmatically figure out the meaning of the figurative expression, only opaque idioms were selected in the CNIT. While it was essential that the culturally novel idioms be opaque, the second selection criteria was deemed appropriate in order to ensure that the idioms were not so opaque that they did not even bring a mental image to mind. Therefore, phrasal verb idioms such as "put up with" or "come across" were not included in the CNIT-English.

Finally, selection criteria three was identical to selection criteria two for the NIT-English. The figurative meanings in the CNIT-English must parallel those on the NIT-English if the task was to be a true measure of cultural duality used for idiom comprehension. Idioms for the CNIT-English were drawn from the Spanish language and culture but were rendered in English in order to prevent the hindrance of a language barrier. Also unique to the CNIT-English was the inclusion of five "foil" items that do not have figurative meanings that parallel items on the NIT-English. The additional foil items helped ensure that correct answers on the CNIT-English were more likely the result of the presence of cultural duality rather than chance or the use of pragmatic knowledge to solve the idioms. Furthermore, the foil items helped mask the connectedness of the two idiom tasks. The CNIT-English contained 15 novel idioms that paralleled the native idioms and five "foil" idioms for a total of 20 idioms.

The selection criteria for the NIT-Spanish and CNIT-Spanish followed those used for the NIT-English and CNIT-English, except the idioms on the NIT-Spanish were native to the Spanish language and culture, and idioms on the CNIT-Spanish were novel to the Spanish culture. Idioms selected for the CNIT-Spanish were drawn from the English culture in order to involve only two languages - English and Spanish- across all idiom tasks throughout the study. Just as in the NIT-English, the NIT-Spanish contained 15 items. Finally, the CNIT-Spanish contained 20 idioms, 15 with parallels and 5 foils, in the same format as the CNIT-English. Although the first author composed all the NIT-S and CNIT-S items, a native Spanish speaker reviewed them for accuracy. This individual is a professor at a university who teaches Spanish literature and language.

3. Results

3.1 Analysis

All data were analyzed using IBM SPSS descriptive statistics software version 10. A series of one-way ANOVAs were conducted to compare group differences for all experimental measures. In addition, paired sample *t*- tests were completed to analyze the means between the NIT and CNIT within both English and Spanish speaking children and adults.

3.2 Results for EC and SC Groups

A total of 24 English speaking 5th graders were recruited and 20 children met the criteria (n=20, 11 female, 10 male, mean age 11.1) and a total of 22 Spanish speaking 5th graders were recruited and 16 met the criteria (n=16, 11 female, 5 male, mean age 10.6).

Table 1 reports the performance of the English child (EC) and Spanish child (SC) groups. An ANOVA was used to evaluate differences in performance between the EC and SC groups. Results showed a statistically significant difference between performance on the *PPVT-4* [$F(1,78)=6.50, p<.015$] with the EC group outperforming the SC group. This result is not surprising considering that the *PPVT-4* is normed and designed for native English speakers.

Considering that the SC group reported Spanish as its native language, the SC's mean standard score of 93.50 on the *PPVT-4* demonstrated a level of bilingualism and placed them within functional limits for an English measure of receptive vocabulary. For the idiom measures, group differences in performance on both the NIT and CNIT were both statistically significant [NIT: $F(1,78)=15.5$, $p<.001$; CNIT: $F(1,78)=4.29$, $p<.046$] with the EC group performing higher than the SC group for both tasks.

Table 1. Standard Score on Vocabulary Assessment and Mean Scores on Idiom Tasks for English and Spanish Speaking Children

Task	English	Spanish
PPVT-4	102.70	93.50
TVIP	n/a	97.06
NIT	13.75	10.63
CNIT	12.30	9.75

Note. NIT=Native Idiom Test. CNIT=Culturally Novel Idiom Test. *PPVT-4*= *Peabody Picture Vocabulary Test-4*; *TVIP*= *Test de Vocabulario en Imágenes Peabody*.

A series of independent *t* tests were used to evaluate differences between NIT and CNIT within each group. The performance on the NIT task for the EC group was significantly higher than the CNIT tasks [$t(19)=2.57$, $p=.019$]. However, there was not a significant difference between these two tasks for the SC group [$t(15)=.86$, $p=.40$].

3.3 Results for EA and SA Groups

All 25 English speaking adults (EA, mean age 39.9) and 25 Spanish speaking adults (SA, mean age 34.6) met criteria on the *PPVT-4* and the *TVIP* respectively. Table 2 reports results on both assessments of vocabulary and the idiom tasks.

Table 2. Standard Score on Vocabulary Assessment and Mean Scores on Idiom Tasks for English and Spanish Speaking Adults

Task	English	Spanish
PPVT-4	105.32	n/a
IVTP	n/a	111.32
NIT	15/15	13.68/15
CNIT	14.84/15	11.72/15

Note. NIT=Native Idiom Test. CNIT=Culturally Novel Idiom Test. *PPVT-4*= *Peabody Picture Vocabulary Test-4*; *TVIP*= *Test de Vocabulario en Imágenes Peabody*.

Results from the two idiom tasks revealed a significant difference between the groups with the EA scoring higher on each [NIT: $F(1,48)=17.58$, $p<.001$; CNIT: $F(1,48)=64.61$, $p<.001$]. A pair sample *t* test within groups found a trend for significant difference between performances on the NIT and CNIT tasks for the EA group [$t(24)=2.14$, $p=.043$], and the differences between these tasks for the SA group was also significant [$t(24)=6.15$, $p=.001$]. Again, not unexpected since this was the more challenging task.

A comparison of EC and EA groups found significant differences between each of the idiom tasks: [NIT: $F(1,43)=9.60$, $p<.003$, CNIT: $F(1,43)=14.06$, $p<.001$] with EA scoring higher on both idiom tasks. The normed scores for the age groups from the *PPVT-4* were not significantly different [$F(1,43)=.809$, $p<.374$]. A comparison of SC and SA found differences on all tasks, with adults scoring higher [TVIP: [$F(1,39)=26.50$, $p<.001$]; NIT: [$F(1,39)=19.29$, $p<.001$]; CNIT: [$F(1,39)=7.97$, $p=.007$].

In order to determine if knowledge of native idioms influenced performance on the culturally novel idioms with similar form, individual responses for each group on each item were analyzed. Concordance percentages between NIT and CNIT were computed for each participant in each group and paired-sample *t* tests were completed to reveal group differences. Results are represented in Table 3. T-test comparisons revealed significant difference between each group: EC>SC: [$t(15)=-9.20$, $p<.001$]; EA>SA: [$t(24)=-8.61$, $p<.001$]; SA>SC: [$t(15)=-4.03$, $p<.001$]; EA>EC: [$t(21)=-6.254$, $p<.001$].

Table 3. Mean Concordance Percentage between Native Idiom Task and Culturally Novel Idiom Task

Group	Concordance Percentage
English Children	85.8%
Spanish Children	42.7%
English Adults	99.1%
Spanish Adults	72.1%

4. Discussion

The children in the EC group outperformed those in the SC group for all measures. According to Nippold (1998), young adolescents have developed rudimentary mastery of figurative language by the 5th grade and easily recognize non-literal language. The EC's almost perfect scores on the NIT (13.75/15) support this research on idiom mastery in the adolescent population as the vast majority of the EC participants exhibited little to no difficulty comprehending idioms native to the English language and culture. The EC group performed slightly lower on the CNIT (12.10/15), however the difference was statistically significant. Several factors may be taken into consideration when trying to explain the EC's lower performance on the CNIT. The most likely explanation relates to the idiom experience hypothesis (Nippold, 1998), which states that idioms are learned through repeated exposure to them. As was the intended nature of the CNIT, these 5th grade students had never heard or read the idioms drawn from the Spanish culture. Without prior exposure to guide their comprehension of the idioms, the students had to rely on other idiom solving strategies. However, the 80% average on the CNIT might demonstrate that in addition to using context clues to arrive at an accurate definition of the novel idiom, the children might also use their knowledge of a similar idiom in the native language. The concordance of 86% between the native and novel form suggests that using a cultural duality strategy might actually aid in the accurate interpretation of novel idioms.

The children in the SC group had an average of 5;6 years of study where English was the only language of instruction. They all performed within normal ranges on a receptive vocabulary test in both English (*PPVT-4*) and Spanish (*TVIP*), and there was not a significant difference between those two assessments [$t(15)=-.808, p=.432$]. Therefore, a degree of bilingualism was assumed. Those in the SC group did not demonstrate a difference between the NIT and CNIT tasks, and they performed lower on each task than their English speaking peers and the Spanish adults. This could be attributed to a lack of exposure to common Spanish idioms since the majority of time speaking Spanish was with their family at home and not at school or with friends from school. The average percent on the NIT was 70% correct, but the concordance to the CNIT was only 42%. This suggests that the bilingual children may rely solely on a contextual strategy to accurately define novel idioms. Because of their lack of exposure and therefore knowledge of Spanish idioms, they might not be able to use a dual cultural strategy to interpret novel idioms on the CNIT-S. Although those in the SC group had receptive vocabulary scores that were within normal ranges, they were significantly lower than their English speaking peers. This could suggest that their knowledge of American idioms was also poorer than the English speaking children, and therefore restricted their use of a cultural duality strategy.

The Spanish speaking adults performed higher on all idiom tasks and on the *TVIP* when compared the bilingual children. Like SC and EC, they scored significantly lower on the more challenging novel idiom task. The concordance between correctly identified native idioms and the similar novel idioms was 72%, much higher than SC. It might be assumed that these Spanish speaking adults have had greater exposure to the native idioms, and that they are, to some degree, taking advantage of their knowledge of American idioms to aid in interpreting the novel forms. This might be difficult to explain, however, since the Spanish speaking adults were not all from the same country and the years of studying English varied. (Ten reported zero years of studying English, 2 had university degrees, and 13 did not respond to the question). Although efforts were made to choose native Spanish idioms that were more common across Mexican and Central American countries, some of the native idioms might not have been familiar to the participants. Also, too many of the Spanish speaking adults did not report time living in the United States to make this a variable.

Finally, English-speaking adults performed very well on both idioms tasks, and the concordance of native idioms to their novel idiom forms was 99.1%. Like the English-speaking children, the high concordance might be a result of using contextual cues to interpret the novel idioms, but it also might suggest that the adults are recalling a similar form of the idiom in English to accurately define the novel idiom, in other words, using a dual cultural strategy. There is a definite trend that the higher percentage correct on the NIT yields a higher percentage of concordance on

the CNIT. Results from this study are similar to Irujo (1986) who used advance English language speakers, but only if we compare the EC, EA, and SA groups. The children in the SC group, however, did not appear to employ this cultural duality strategy. What we could assume concerning the fifth-grade English language learners is that even though they are exposed to multiple cultures and languages on a daily basis, their lack of a solid foundation in the native language idioms greatly hinders the use of the cultural duality strategy. These ELL likely utilize a more common idiom comprehension strategy such as guessing from the context. Adding other strategies might be acquired as they mature and have time to become more fully exposed to idioms in their native language and well as in their second language. What was not revealed in this study was the extent that the Spanish-speaking participants employed their knowledge of not only Spanish idioms, but American idioms as well in order to interpret novel idioms.

4.1 The Use of Cultural Duality as a Teaching Tool

The primary purpose of the present study was to investigate the cultural duality hypothesis with the aim of finding an additional idiom teaching strategy to aid English language learners. While the data from this study failed to definitively provide evidence that individuals spontaneously use cultural duality to solve novel idioms, perhaps the practice of referring to the native language for idioms that are similar in figurative meaning could be an effective strategy when specifically taught to the English language learner population. Much in the same way a child might be taught to group idioms that essentially mean the same thing (e.g. to be in hot water, to be about to boil over) a child may also be taught to group idioms between languages that have the same figurative meaning and are found in similar contexts. In doing so, the child may learn more about the idioms in his native culture while also mastering idioms in the second language. Also, it would provide English language learners with an additional idiom-solving strategy as they try to master these difficult and seemingly arbitrary figurative phrases. Discussion of idioms from different cultures should also include instruction in the socially appropriate contexts for each figurative phrase. Teaching cultural duality may be particularly useful for older children at the high school level or for adults who are simply learning the colorful and social nuances of a second or third language since these populations have had more exposure to the idioms in their native language.

Practically speaking, teaching the cultural duality strategy would require additional research on the part of the instructor to locate idioms in the child's native language that also have parallels in the English language. If the language teacher knows the native language of her clients, she can locate books and other text resources that contain idioms from the child's native language. Using these resources, she can help her students learn idioms from their native language and then help them make parallels to the idioms in the language of instruction. The language teacher may wish to make use of graphic organizers that help students to group idioms that have the same figurative meaning across cultures and languages. Even if the therapist does not speak the native language of her ELL clients, there are still several ways to incorporate cultural duality into daily therapy activities. During I.E.P meetings when the child's parents and a translator are present, ask the parents to make a list of common idioms from their culture. The translator may assist in explaining the meaning and proper use of these idioms. Idiom dictionaries are also readily available for purchase and usually include helpful examples of the proper use of idioms not native to the English language and culture. Furthermore, the child may take some responsibility in learning the idioms from his native language by becoming an "idiom investigator". The student may be sent home with a worksheet in which he has to ask his parents for some examples of idioms in his native language, or the child may challenge himself to pick up on idioms in everyday speech and texts. After several idioms have been collected, the student could report on the idioms he found during a cultural sharing day. Allowing the student to share some of the unique linguistic features of his native culture would give the therapist an opportunity to acknowledge the value of the child's native language while simultaneously showing connections to idioms in the language of instruction.

The benefit of helping English language learners master idioms in the language of instruction, while simultaneously educating them more about the unique figurative phrases of their own culture cannot be understated. With structured practice, English language learners could become increasingly adept at recognizing figurative contexts in multiple languages. Furthermore, helping English language learners draw connections between languages could help bolster their metalinguistic skills in addition to providing another strategy for idiom comprehension. With increased performance in idiom comprehension, English language learners will have increased understanding and access to the content curriculum. As language instructors concerned about the language abilities of our bilingual students, we must take a keen interest in their performance in both their native and second languages, even for advanced language skills such as the use of figurative expressions.

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