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INVESTIGATION OF THE OUTCOMES
OF DELIVERING TRAINING TO SPANISH SPEAKERS
IN STANDARD SPANISH VERSUS THEIR NATIVE DIALECT

by

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ABSTRACT

The present study explored the outcomes of delivering training to Spanish speakers in either their native dialect or in Standard Spanish in the context of a self-running, narrated PowerPoint presentation on a health topic, “The Importance of Vaccinations.” The training outcomes that were examined included learning scores; attitudes toward the training; and attitudes toward employment with organizations that employed the same or different dialect-speaking employees, supervisors, and trainers. In addition to examining the effects of ethnicity upon outcomes, this study also examined the effect of age, education level, time in the U.S., and familiarity with the locally dominant subgroup’s dialect. Overall, results showed mixed support for the effect of presenting training to participants in their native dialect, as compared to the non-native dialect. The results of this study are discussed in terms of the theoretical implications for acquiring a better understanding of the cognitive and affective factors underlying the role of training language in the learning process. Practical implications for training design are presented within the context of cognitive load theory and the need for a theory-based approach to delivering training to non-English speakers. Implications for organizational efforts toward employee attraction and retention are discussed.
This dissertation is dedicated to the memory of my grandmothers, Marie Mleziva Schleis and Katherine Mullane Pankratz. I miss you so much.
ACKNOWLEDGEMENTS

“We all warm ourselves on fires we did not build, we all drink from wells we did not dig.” (Celtic proverb).

“It has to do with men, women and children who harvest the crops in this country of ours, the best fed nation on Earth. These are the forgotten people, the underprotected, the undereducated, the underclothed, the underfed. If it were not for the labor of [these] people, you might not starve but your table would not be laden with the luxuries that we have all come to regard as essential.” (Edward R. Murrow, Harvest of Shame, CBS television, 1960).

I am grateful to the chair of my dissertation committee, Dr. Robert Pritchard, who taught in an entertaining manner and who never tried to discourage me, and to my committee members, Luis Barrios, Barbara Fritzsche, and Will Wooten, who answered my questions willingly and made the process fun. I also wish to acknowledge the many individuals who went out of their way to help me: Francisco Dovali-Solis, Lucy Robles; Mabel Magarinos; Fanny Ballester; and all the wonderful instructors, students, and administrators of the ESOL programs who participated in the study. I thank my family and friends, especially Jane Kirt, Shirley Pankratz, and Becky Gillespie, for their encouragement. Finally, I am grateful to my husband Roman and my son Nicholas for their unfaltering love and support. “Con esfuerzo y esperanza, todo se alcanza” (Rovira, 1984, p. 58).
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INTRODUCTION

Hispanic immigrants will comprise 13% of the U.S. labor force by 2008 (Salopek, 2003). Most of those immigrants will come from Mexico (see Hollmann, Mulder, & Kallan, 2000; Simcox, 2002). The typical immigrant will have little formal education, be functionally illiterate, and be monolingual in Spanish (see Little & Triest, 2002). The transition of these individuals into the U.S. workforce will be affected by their language skills (Hispanics: A people in motion, 2004). Although most non-Spanish speakers see Spanish as being monolithic across all Spanish-speakers, Hispanic immigrants represent many regional subgroups (see Albert, 1996; Castex, 1994; Crockett, 2004; Duany, 2003; Livingston, 1992). Each regional subgroup has its own Spanish dialect, distinguished by vocabulary, grammar, and pronunciation (see Livingston). Furthermore, each Spanish dialect has three registers, or styles: formal, informal, and colloquial (slang).

Although most Hispanic immigrants will be familiar only with the informal and colloquial styles of their Spanish dialect, organizations are being advised to deliver training to monolingual Spanish speakers in standard Spanish, the formal style of Spanish that is most familiar to well-educated, higher-status individuals (see Sizemore & Reynolds-Diaz, 2000). As a result, there may be a profound discrepancy between the training delivered and the learning that results. Not only their learning may be adversely affected; these Spanish speakers may experience negative attitudes toward their employers, which may make them less committed to the organization or less willing to remain employed by the organization (see Sessa & Jackson, 1995). In view of the projected labor shortage (see Little & Triest, 2002), research to understand the relationship between training delivery language and training outcomes is crucial.
This paper describes an exploratory study conducted to investigate whether delivering training to monolingual Spanish-speaking Mexican immigrants with low levels of formal education in their native dialect will affect training and other outcomes. Specifically, the effects of delivering training in both standard Spanish and colloquial (that is, Mexican) dialectical Spanish were compared to determine whether trainees experienced different levels of affective, cognitive, and behavioral outcomes. This research also extends the training focus to include the more long-range implications for organizational effectiveness. The target population of this proposal is monolingual Spanish immigrants with low levels of formal education who have recently arrived in the U.S. from Mexico. The target population does not include bilingual Hispanic immigrants, U.S.-born Hispanic-Americans, or acculturated Hispanic Americans. However, because Mexico is the major, but not only, source of Spanish-speaking immigrants, an examination of the effect of delivering training in a Mexican-language dialect to Spanish speakers whose native dialect is not Mexican, e.g., Puerto Rican, Colombian, is also proposed.

The following section presents background information describing the increasing numbers of Hispanic immigrants in the U.S. and their projected role in the workforce. Next, the characteristics of the Spanish language that must be considered when communicating with Spanish speakers are discussed. The theories underlying this study are reviewed and a proposed conceptual model is introduced. After a discussion of the relevant empirical literature, formal hypotheses are presented. The final sections of this paper describe the study’s methodology and results, along with a discussion of the theoretical and practical implications of the study’s findings.
LITERATURE REVIEW

An extensive body of empirical evidence exists that shows that a speaker’s accent or dialect can influence the degree to which listeners learn as well as their attitudinal and cognitive evaluations of the speaker and the training content. However, before beginning that discussion, it will be helpful to briefly review the changing demographics of the U.S., and discuss how the presence of Hispanic immigrants will be critical to the future U.S. labor force. The number and characteristics of Hispanic immigrants in the U.S. are discussed, with particular attention to those from Mexico. Currently, the Mexican immigrant population is the largest Hispanic subgroup in the U.S. (Hispanic or Latino by type, 2000) and is projected to remain the largest (see Hollmann, Mulder, & Kallan, 2000; Simcox, 2002).

Note that when studies are described, the vocabulary used by the original researchers is reported, e.g., White non-Hispanic versus Anglos.

Background on Hispanics in the U.S. Workforce

The U.S. Census Bureau projects a worker shortage by 2015. The shortage will result from the large cohort of aging baby boomers who will be entering retirement and the slowdown in the growth of the working-age population of native-born Americans. The presence of immigrant workers is expected to offset partially the worker shortfall. In fact, more than half of the U.S. population growth is projected to come from immigrants and their descendents. Unskilled immigrant workers will be in demand for jobs in the service industries such as personal care and household services, housekeeping, food services, healthcare, domestic tourism,
agriculture, landscaping, and construction (see Little & Triest, 2002). These jobs typically experience high employee turnover and require a regular supply of replacement workers.

The majority of future immigrants are expected to be Hispanic (Day, 2001). Hispanic or Latino origin, as defined by the U.S. Census Bureau (Hispanic or Latino by type, 2000), describes individuals who classify themselves in one of the following Hispanic or Latino categories: Mexican, Puerto Rican, or Cuban, or other Spanish, Hispanic, or Latin. Origin is the “heritage, nationality group, lineage, or country of birth of the person or the person's parents or ancestors before their arrival in the United States. People who identify their origin as Spanish, Hispanic, or Latino may be of any race.” (Hispanic origin, p. 1). In this paper, the term Hispanic will be used to describe individuals of Hispanic or Latino origin. (For convenience, definitions of the major terms are repeated in Appendix A.)

The Hispanic population in the U.S. has been increasing through immigration and native births. In the decade between 1990 and 2000, the total U.S. population grew 13.0%. Of that growth, the native population grew 9.3%, while the foreign-born population grew 57.0% (from 19.8 to 31.1 million) (Malone, Baluja, Costanzo, & Davis, 2003). Immigrants from Latin America (over 16 million) represented 52.0% of the foreign-born number (Malone et al.). Of those Latin immigrants, the largest group, 9,177,487 (29.5% of the total U.S. foreign-born population) came from Mexico (Hispanic or Latino by type, 2000). By 2002, the number of Hispanics had grown so much (to 38.8 million) that Hispanics became the largest minority group in the U.S. (Bernstein & Berman, 2003). By 2010, the Census Bureau projects that the U.S. population will total 308,936,000, of which 47,756,000 (15.5%) will be Hispanic.

In 2003, the percentage of foreign-born individuals (59%) in the prime working-year ages (25 – 54) was greater than the percentage of native-born individuals (42%) in that age range
Of those foreign-born working-age individuals, about 48% were Hispanic (Malone et al., 2003). The individuals in the working-age group are typically “full-time workers, most have completed schooling, and most are not eligible to retire.” (Malone et al., p. 10). According to the Pew Hispanic Center (Latino labor report, 2004), in the third quarter of 2004, the Hispanic population included 28 million working-age (16 and older) individuals. By 2008, the number of Hispanic workers is projected to rise 37% and constitute 13% of the workforce (Salopek, 2003).

In summary, immigrants from Spanish-speaking countries are expected to constitute an important part of the U.S. labor force. Currently, the largest group of Hispanics in the U.S. is from Mexico, the second largest is from Puerto Rico (a commonwealth of the U.S.), and the third is from Cuba (Duany, 2003). Geographical factors are partly responsible for the greater numbers of Mexican immigrants. For example, immigration of unskilled workers from Mexico into the U.S. is facilitated by the long border and strong family networks already established in the U.S.

In this paper, the focus is on Spanish-speaking individuals who were not born in the U.S. or whose native language is Spanish and not English, for example, Puerto Ricans. Puerto Rico is a commonwealth or territory of the U.S. and its residents are U.S. citizens. However, for the purposes of this paper, in following discussions the term **immigrant** will refer to any individual whose native language is Spanish.

The majority of future Hispanic immigrants will share certain characteristics with former Hispanic immigrants. For example, émigrés from Mexico and other Central and South American countries have distinctly lower levels of formal education than those born in the U.S. (Little & Triest, 2002). Because of their youth and lack of formal education, Hispanic immigrants tend to hold entry-level, low-status, unskilled jobs for which English proficiency is not mandatory. The
industries that employ Hispanics are private household services (31.0%), construction (20.9%), agriculture, fishing and forestry (20.1%), nondurable manufacturing (20.0%), and lodging, drinking, and eating services (18.9%) (Latino labor report, 2004). The occupations in which Hispanics are strongly represented are food preparation and serving (18.4%), production (20.6%), construction and extraction (24.2%), building/grounds cleaning/maintenance (30.2%), and farming, fishing and forestry (40.0%) (Latino labor report).

In summary, Hispanic immigrants will constitute an important part of the future labor force of the U.S. In general, these Hispanic immigrants are expected to be unskilled, have low levels of formal education, and lack English skills.

**Increased research on Hispanics**

The growth of the Hispanic population in the U.S. has not gone unnoticed by psychologists and other researchers. The theoretical and empirical research literature base on Hispanics has been expanding (see Cafferty & Engstrom, 2000), especially in the areas of consumer behavior (e.g., marketing and advertising) and clinical psychology (see Padilla, 1995). For example, the topic of Hispanic psychology was featured in the January 2005 issue of the *Monitor on Psychology*, an American Psychological Association publication. A keyword search on “Hispanics” by area of research in PsycINFO turned up the following results: 21 hits on “work”; 7 on “training”; 5 on “advertising”; 4 on “consumer behavior”; 2 on “marketing”; 13 on “clinical”, and 50 on “education”. Other fields in which research on Hispanics has been conducted include social work, sociology, and anthropology (see Phinney, 1990).

Industrial/organizational psychologists are studying Hispanics in the workplace. For example, Hispanics in the U.S. Navy have been the focus of a number of research studies.

The increasing amount of research by industrial and organizational psychologists on Hispanics in the workforce (see Knouse, Rosenfeld, & Culbertson, 1991) recognizes that the growing number of Hispanics in the workforce will impact organizations. Not only will native-born Hispanic Americans play a larger role in the workforce, Hispanic immigrants will become an important source of labor to offset the projected labor shortage. Yet, most research to date has targeted bilingual, acculturated Hispanic Americans. Little research has been done with Spanish-dominant speakers in the workforce.

Moreover, the limited amount of research that has been conducted has primarily treated Hispanics as a single, monolithic ethnic group, and ethnic subgroup differences have been ignored. Although Hispanics share some core cultural values, there are a number of dimensions
on which Hispanics subgroups differ. These differences must be considered and taken into account by psychologists who attempt to describe, explain, and predict native-born and immigrant Hispanic behavior, whether in clinical, consumer behavior, or organizational settings.

**Hispanics are not a monolithic group**

The U.S. Hispanic population consists of individuals representing more than 20 nations in which Spanish is spoken (Livingston, 1992). These racial and ethnic subgroups have different cultural traditions, languages and dialects (see Albert, 1996; Castex, 1994; Crockett, 2004; Duany, 2003; Livingston, 1992). Culture “encompasses a shared group consciousness, a common history, and common oral and written traditions.” (Cafferty, 2000, p. 71). According to Castex, the term “Hispanic” only refers to countries of origin and incorrectly suggests a common culture. Indeed, some researchers argue that most Spanish-speaking immigrants, e.g., Mexicans, Puerto Ricans, and Cubans, are strongly nationalistic and primarily define themselves by their country of national origin (Castex, 1994; Duany, 2003). However, other researchers (Marín & Marín, 1991) argue that Hispanics as a group hold shared cultural values.

**Shifting from Spanish to English**

The dominant language in the U.S. is English. For Spanish-speaking immigrants, the shift from speaking Spanish to speaking English depends on their age at the time of immigration and the number of years they lived in the U.S. (Veltman, 1988). Veltman (p. 559) concluded that “…approximately 80% of those aged fifteen to 24 at time of arrival, 70% of those aged 25 to 34, 50% of those aged 35-44 and 30% of those aged 45 or more will come to speak English on a regular basis.” Veltman uses four categories (Spanish monolingual, Spanish-dominant bilingual,
English-dominant bilingual, English monolingual) to describe the current language practices of those whose first language was Spanish. The categories are consistent with those used by other researchers, e.g., Altarriba and Santiago-Rivera (1994). Veltman labels people whose mother tongue is Spanish and who self-report that they do not “often speak English” as Spanish monolinguals. Those who “usually” speak Spanish and “often” speak English are Spanish-dominant bilinguals, and those who usually speak English, but who also speak Spanish regularly are English-dominant bilinguals. Those who do not speak Spanish “often” are English monolinguals. According to Veltman, most immigrants shift from Spanish to English in about 15 years.

Veltman (1988) analyzed data from the 1976 Survey of Income and Education data (SIE) conducted by the U.S. Census Bureau for the National Center for Education Statistics. He noted that adults and older teenagers did not emigrate to the U.S. in order to get a formal education. In fact, because they tended to find jobs that did not require the use of English, they were less exposed to English, and might have been less motivated to learn English. He noted that a large minority of Spanish immigrants nevertheless speak English regularly after approximately four years in the U.S. The majority of Spanish-speaking immigrants (except for those who were older than 45 when they came to the U.S.) speak English frequently after about nine years in the U.S. However, Veltman (1988) also noted that Puerto Ricans and Mexican immigrants shift from Spanish to English more slowly than do immigrants from Cuba, Central America, and those in the Other Hispanic category.

Veltman’s (1988) work demonstrates that Hispanic immigrants do not acquire fluency in English quickly. Accordingly, communicating with recent immigrants will have to be done in Spanish if the communication is to be successful. However, each Hispanic nationality (or
geographic region) has its own dialect of Spanish (see Marín & Marín, 1991). A dialect is “a regional variety of language distinguished by features of vocabulary, grammar, and pronunciation from other regional varieties and constituting together with them a single language” (Merriam-Webster, 2004). Consequently, an important issue is the question of which form of Spanish to use when communicating with Hispanic immigrants. As noted earlier, most working-age adult Hispanic immigrants will enter the workforce directly, bypassing formal education opportunities.

**The Spanish Language**

As discussed in the previous section, Hispanics share certain cultural values. Whereas values are internal and thus not easily observable by outsiders, language is an obvious ethnic marker. Accordingly, it appears to non-Spanish speakers that the Spanish language is a shared link across the various national Hispanic subgroups, i.e., Cuban, Mexican, and Puerto Rican (e.g., Santiago-Rivera & Altarriba, 2002). In the U.S., Spanish (28.1%) is the non-English language that is most frequently spoken at home. There are so many Spanish speakers in the U.S. that it ranks as the fifth largest Spanish-speaking country (see Brooke, 2000; Villa, 2000). Further, not all Spanish speakers learn English. In fact, almost half (13.8 million) of Spanish speakers in the U.S. report speaking English less than “very well” (Shin & Bruno, 2003). Moreover, Spanish-speaking immigrants typically spend four years in the U.S. before they speak English regularly (see Veltman, 1988).
**Styles or registers**

Within the various dialects of Spanish, users can switch between three major registers (also known as styles) depending on the situation (Cardenas, 1970; Valdes & Geoffrion-Vinci, 1998). The three major registers are formal (high-level), informal (or normal or mid-level), and colloquial (low-level). Levels of discourse can differ on lexicon (vocabulary), phonology (pronunciation), intonation (e.g., pitch), morphology (word formation), and syntax (grammar of forming phrases) (see Cardenas). An individual who has been well schooled in Spanish will use all three registers. The formal or high-level register is closest to the academic standard (discussed below) and is employed for academic or administrative use (i.e., public, official events) (see Hidalgo, 1997). The informal (normal or mid-level) register is suitable for TV news and popular writing, e.g., newspapers. Finally, the colloquial (slang) or low-level register is suitable for casual conversation. Less-educated speakers of Spanish use a blend of formal-informal and colloquial registers. Those with little or no formal schooling in Spanish use only one register, a blend of informal-colloquial that is dominated by colloquial (Valdes & Geoffrion-Vinci).

Cardenas (1970) noted that comprehension by speakers within the three styles of one version of Spanish is greater than that across varieties of Spanish. Valdes and Geoffrion-Vinci (1998) pointed out that high-status individuals have access to and become familiar with formal registers, but that the restricted access of low-status individuals to formal education means that they become familiar with mid- and low-level registers. Cardenas also agreed that those who are limited to the lower styles within a language variety have difficulty understanding the more
formal style. Valdés (1997) noted that the vocabularies of the *norma culta* (prestige or standard) variety and the stigmatized or low-prestige varieties of Spanish are substantially identical.

According to Porras (1997, p. 196),

“Es fácil observar la preferencia por la norma culta entre escritores y locutores de radio y televisión, profesores, conferenciantes y, en general, ciudadanos medios en la interacción formal. También es obvia la existencia de censura estigmática en el hablante común urbano respecto del uso popular inculto.”

*It is easy to observe the preference for formal, standard form among writers and speakers on radio and television, professors, lecturers and, in general, city people in formal interactions. Too, it is obvious that urban speakers stigmatize and censure the use of the uneducated form of Spanish.*

Socioeconomic status is related to the level of style used by Spanish speakers (see Hidalgo, 1997; Hopper, 1986). Most Mexican immigrants are from the ordinary (not middle- or upper-) social strata and therefore primarily use mid to low levels of Mexican Spanish (Valdes and Geofffrion-Vinci, 1998). In addition to differences in the language used in different situations and settings, there are differences between regional variations, or dialects, of Spanish.

**Dialects**

As noted earlier, there are over 20 Spanish-speaking nations, each of which has its own form of standard Spanish and dialects (see Livingston, 1992). Each nation has a “standard” variety of language, typically that which is spoken in the nation’s capital by the economic elite (upper class) and the educated (Porras, 1997; Villa, 2000). In every country in which Spanish is the main national language, there are language academies whose members attempt to maintain the purity of the language by standardizing it and establishing usage rules, e.g., dictionaries and grammars (see Hidalgo, 1987; Villa, 2000). Originally, peninsular Spanish (i.e., from Spain)
was the dominant political and economic language in countries where Spain ruled (see Hidalgo). The Real Academia Castellano was established to preserve the purity of the dominant Castilian language. It was not until the 19th century that the Academia was renamed the Real Academia Española (¿Español o Castellano? 2001). The Peninsular Castilian dialect of Spanish (castellano) is considered by some to be the most highly prestigious form of spoken Spanish (see Betancourt, 1986).

Some researchers, e.g., Villa (2000), argue that there is no definitive and widely agreed-upon meaning of a “standard” form of Spanish. When definitions exist, they are often contradictory. According to Hidalgo (1997, p. 109), “Los criterios de normatividad lingüística generalmente se asocian con la variedad estándar, la cual equivale a la norma superimpuesta en un país o región.” (The criteria for linguistic norms are generally associated with the standard variety, which is the form superimposed on a country or region.) Aparicio (1993), for example, defines standard Spanish as “the linguistic register that is practiced by the majority of speakers, that is, the usual, the norm”, but he then points out that many Latinos do “not find themselves in circumstances in which they need to speak standard Spanish” (p. 186). In any case, researchers agree that there is a great deal of overlap between standard and nonstandard Spanish dialects (Carreira, 2000; Hidalgo). In the remainder of this paper, the term “standard Spanish” will be used to refer to the formal Spanish used in academic settings.

Dialect refers to the variety of a language associated with a particular group, e.g., Mexican Spanish (Valdes & Geoffrion-Vinci, 1998). As noted above, within each dialect are three registers (formal, informal, and colloquial). The written rules of Spanish (grammar, especially morphology and syntax) are mostly inflexible across standard and dialect forms (Carreira, 2000). According to Aparicio (1993), each nation’s standard Spanish form to some
degree includes its regional and linguistic differences. The greatest differences are found in vocabulary, pronunciation, and accent (Carreira, 2000; Cofresi & Gorman, 2004). Different subgroups speak Spanish with varying intonation, pronunciation, and speed. Differences exist for such common words as the English “hey”, which becomes “oye” in Mexican Spanish and “mira” in Puerto Rican Spanish.

There are also differences in pronunciation. For example, some Spanish speakers do not pronounce all the syllables and letters in a word. Some may add endings to nouns, or soften the ends of work (Cofresi & Gorman, 2004). However, although vocabulary differences between dialects can create temporary confusion, continued contact between the groups alleviates the confusion (Lipski, 1985, as cited in Hidalgo, 1987).

The main varieties of Spanish used in the United States are standard (or peninsular), Mexican, Puerto Rican, and Cuban (see Cardenas, 1970). According to Cardenas, several dialects are spoken within the country of Mexico, but the majority of Mexican immigrants who entered the U.S. came from the two zones in the North and the Central High Plains (Henríquez-Ureña, 1938, as cited in Cardenas). In contrast, Puerto Rican Spanish is a mix of indigenous, Spanish, and African languages that is very distinguishable from other national versions of Spanish (Couvertier, 1997).

As with registers or styles, the use of standard or dialect versions of Spanish is associated with judgments about level of education and social class. A qualitative study by Galindo (1996) with Mexican-Americans illustrates this point. From interviews with students and a teacher, Galindo showed that standard Spanish was considered more formal and correct than Spanish dialects. He quoted one woman who said “la gente que tiene mejor educación tiene mejor español que gente humilde.” (better-educated people have better Spanish than common people).
In summary, Spanish language is not unitary. Different regions speak different versions (dialects) of Spanish, and even within a single nation’s version of Spanish, there are at least three levels or styles that vary according to the situation. These differences of style and of dialect are associated with social status, level of education, and socioeconomic conditions. Hispanic immigrants to the U.S. will be less likely to speak the standard Spanish of their native country. As noted earlier, the use of standard Spanish is restricted primarily to the wealthy and well educated, and most Hispanic immigrants will be poor and uneducated (see Webster, 1991).

Communicating with immigrants

Some researchers argue that standard Spanish should be used when communicating with Hispanic immigrants. For example, Marín and Marín (1991) recommended that standard Spanish be used across countries because the vocabulary uses standard nouns and is without regional or national differences. However, as was shown above, with 22 Spanish language academies, there is no single standard for Spanish. Moreover, each single nation’s version of the Spanish language comprises at least three styles, of which the lowest (slang) level is most familiar to individuals with low levels of education.

For organizations that hire recent Hispanic immigrants, the implications are clear. Although formal standard Spanish is considered the most appropriate form of Spanish for classroom use, the vocabulary and pronunciation may not be familiar to trainees who are recent immigrants. The exception will be those trainees who have had extensive formal education and consequently are familiar with standard Spanish. As noted by Cotton and Sharp (1988, p. 203), “Spanish as written by an educated Puertorriqueño is indistinguishable from that composed by a peer in Mexico City or Madrid.” Because the target population of this proposed study is
Spanish-dominant speakers who may possess low levels of formal education, it is likely that the language in which training is delivered will affect their ability to process and learn information. Therefore, the choice of standard Spanish to deliver training may not be optimal, especially if training classes consist of very recent Hispanic immigrants. For them, training presented in their own dialect will be most familiar to them and easiest for them to process.

However, another related and potentially important consideration must be taken into account when choosing a training-language dialect. If organizations do not deliver training in standard Spanish, they will have to deliver it in a particular Spanish dialect. For trainees who are familiar with that dialect, the training may be efficacious. However, for trainees whose native dialect is different, learning and other outcomes may be less successful. The reasons are the objections that were presented earlier to the use of standard Spanish for training recent immigrants. Specifically, trainees may not be familiar with the accent, the vocabulary, and grammatical features of the training dialect. All of those features may impede processing of the training content and affect other attitudinal and cognitive outcomes.

**Training in dominant language**

Research shows that people perform better (e.g., speed, accuracy) in their first (dominant) language than in their second (non-dominant) language. This effect is particularly strong for those who are not proficient in the second language (see Daneman & Merikle, 1996). For example, Service, Simola, Metsänheimio, and Maury (2002) found that bilingual participants had more difficulty understanding material in a well-mastered, but not fully automatized, second language than in their native language. The researchers concluded that the performance decrement was due to the lower language proficiency making extra demands upon
participants’ working-memory resources. They noted that second-language understanding improved with practice because with practice, individuals required less working-memory resources to process information. Using a working-memory span task, participants were tested on working-memory span, sentence verification accuracy and sentence verification speed. The researchers concluded that when individuals were tested in a foreign language in which they were not proficient (that is, a language that was not fully automatized for them), sentence verification required so much additional working memory resources that the participants’ overall capacity diminished. Similar decrements were not found in participants who were tested in their native language.

In the following section, relevant empirical research is presented that shows the powerful influence of accents and dialects upon the learning, cognitive, and attitudinal reactions of listeners (Fuertes, Potere, & Ramirez, 2002), as well as the theories upon which the study is based. Next, a conceptual model is presented that summarizes the theories and variables of interest. After a brief discussion of the components of the model, the formal hypotheses to be tested are listed.

**Accents and Dialects**

Language researchers differentiate between a dialect, which is a regional variation of a language (e.g., Texan vs. New Englander), and an accent, which reflects differences in pronunciation between national groups (e.g., German versus American) (Gill & Badzinski, 1992). More specifically, an accent refers only to pronunciation variations between speakers of a single language (Fuertes, Potere, & Ramirez, 2002), but a dialect encompasses not only pronunciation differences, but vocabulary and grammar variations as well.
Empirical findings support the notion that when speech accents are present, listeners’ comprehension and recall of material is reduced (Fuertes, Potere, & Ramirez, 2002; Ryan & Sebastian, 1980). For example, Gill (1994) briefly exposed North American English-speaking university students to material presented in three different accent conditions (American, British, Malaysian), and then analyzed their perceptions of the teachers on three dimensions (dynamism, aesthetic qualities, and socio-intellectual qualities). The main dependent variables of interest were the effects of the listeners’ perceptions on comprehension and learning. Results indicated that the teachers’ accents affected both participants’ learning and their perceptions of the teachers on the three dimensions. Students in the American accent condition had higher recall scores than students in the other accent conditions.

However, other studies of accents have found that accents can improve listeners’ recall. For example, Bottriell and Johnson (1985) studied the effect of accents on listeners’ immediate recall for verbal material. They employed the matched-guise technique (MGT), in which a single speaker imitates each of the accents being presented to participants (Bottriell & Johnson, 1985). The technique is used to eliminate regionally idiosyncratic accent features (e.g., volume, intonation) (see Bottriell & Johnson; Hogg & Adams, 1988). Contrary to their expectations, the researchers found that participants showed greater recall for the details of a news report when the speaker’s accent was Received Pronunciation (RP). RP is the most upper-class accent in Britain (Bottriell & Johnson). The authors suggested that the effect might be due to a) the distinctiveness and lack of ambiguity present in the RP accent, b) the fact that a strong accent distracts the listener’s attention from the content of the material, and c) that strong accents disrupt information processing because they cause the listener to experience emotional reactions. However, the researchers concluded that, consistent with the earlier work of Giles (1970), the
effect was probably due to the prestige and credibility that listeners ascribe to high-prestige accents, which would have assisted information processing and encoding of the message. A possible explanation for the opposite findings may be that the Gill study was conducted in the American Midwest, where British and Malaysian accents may be relatively unusual; whereas the Bottriell and Johnson study was conducted in England, where residents may be frequently exposed to different languages through television and radio broadcasts.

Some authors argue that differences in Spanish dialects and language styles can impact the comprehension of listeners (see Dolinsky & Feinberg, 1986). Regarding the effect of dialect on learning outcomes, a literature search revealed no studies that directly investigated the effect on trainees of receiving training in standard Spanish or dialects. However, whereas accents reflect differences in a speaker’s pronunciation and lilt, dialects additionally differ in vocabulary and morphology. These additional differences may cause the effects of dialects upon listeners’ comprehension to be greater than those of accents.

This argument is consistent with the premises of cognitive information-processing theory (see Kahneman, 1973; Mayer, Sobko, & Mautone, 2003). According to the theory, individuals have a limited amount of working memory. As a result, they are also limited in their ability to process information during task performance. Specifically, the theory predicts that individuals will be able to attend to only a few aspects of any situation. The theory further predicts that the cognitive load that comes from split attention will increase when individuals are required to process more information than their working memory can accommodate.

Therefore, it is expected that a greater load will be put on the working memory of listeners who have to process a dialect as well as the message (see Chandler & Sweller, 1991; Sweller & Chandler, 1994). For example, if learners were asked to process information while
simultaneously trying to understand an unfamiliar accent, working-memory overload would occur. Listeners would have to use up limited cognitive resources to understand the accent, which would reduce information-processing resources by lessening the capacity available to process and learn the message (see Fuertes, Potere, & Ramirez, 2002). As Colombi (1997, p. 107) says “la conversación diaria se encuentra inmersa dentro de un contexto de situaciones conocidas or familiares, mientras que el lenguaje académico le hace al individuo demandas cognitivas enteramente diferentes.” (“Daily conversation immerses one within a context of known or familiar situations, but academic language places entirely different cognitive demands upon a person.”).

Working memory load is also related to the type of learning (e.g., declarative, procedural, complex, e.g., interpersonal, critical thinking) that was expected from trainees. Even if bilingual individuals are proficient in a second language, they may not be able to perform cognitively complex tasks in that language (see Cummins, 1984).

Trainees who receive training delivered in an unfamiliar Spanish dialect may experience a decrement in performance caused by two simultaneous needs: to understand the presentation dialect while at the same time processing (i.e., learning) the training content (see Chandler & Sweller, 2004; Sweller & Chandler, 1994). However, the amount of working memory available for cognitive processing is not the only factor that affects training outcomes.

**Ethnic Identity and Language Preference**

The purpose of training is to effect learning-induced changes in an individual. However, organizational trainers are interested in more than just cognitive outcomes: affective outcomes such as attitudes and motivation can be just as important (Noe, 1999). For example, the degree
to which trainees are satisfied with training is an affective outcome that has been shown to influence his or her willingness to sign up for additional training (see Alliger & Tannenbaum, 1997). A learner’s evaluation of the setting and the speaker will impact his or her ratings of satisfaction with the training. In circumstances in which ethnicity becomes salient, a learner’s evaluations will be influenced by the strength of his or her feelings toward the referent ethnic group.

Social Identity Theory (SIT) (Tajfel, 1978; Tajfel & Turner, 1986) describes relations among social groups. It predicts that members of a minority group will feel stronger affiliation toward and liking for members of their own, similar in-group than for members of the outgroup. According to Social Identity Theory (SIT) (Tajfel, 1978; Tajfel & Turner, 1986) an individual’s self-concept is based partly on the social groups to which he or she belongs and the degree to which he or she feels emotional attachment to and value for the group. Individuals prefer and like others similar to themselves more than they like or prefer others who are dissimilar (Tajfel). This feeling is known as ingroup bias, a tendency to prefer one’s own group over other groups (see Turner, 1978). Ingroup bias has been shown to be especially likely when an individual’s group has lower status than the outgroup (see Ellemers, Van Rijswijk, Roefs, & Simons, 1997).

Past research on language preferences has often included ethnic identity (see Phinney, 1992), an individual differences variable that is associated with an individual’s or subgroup’s preference for accents or dialects. It refers to psychological feelings towards one’s subgroup as it compares to the dominant culture (de las Fuentes, Barón, & Vásquez, 2003). Awareness of ethnic identity has been shown to be context dependent, i.e., influenced by the social setting (Christian, Gadfield, Giles, & Taylor, 1976; Deshpandé & Stayman, 1994; Phinney, 1996). Moreover, researchers have found that the strength of ethnic identification varies across
individuals (see Phinney). Ethnic identity is considered a dynamic phenomenon that changes over time. It affects both individuals’ attitudes and cognitions (see Christian, Gadfield, Giles, & Taylor, 1976; McKirnan & Hamayan, 1984).

Evidence supports the notion that the salience of ethnic identification is contextual and can be evoked in members of minority subgroups (Christian, Gadfield, Giles, & Taylor, 1976; Deshpandé & Stayman, 1994; Phinney, 1996). For example, Christian, Gadfield, Giles, and Taylor (1976) manipulated the strength of ethnic identification of Welsh students by assigning them to two groups and asking one group to write essays on topics that made their minority status salient and the other group to write status-neutral essays. Respondents in both groups were then asked to judge the similarity between pairs of stimulus labels, one of which was always “myself”. A mean similarity matrix was generated using multidimensional scaling (MDS).

As hypothesized, the group for whom their outgroup status had been made salient showed greater similarity judgments toward their ingroup and lower ones toward the outgroup. The researchers concluded that changing the social context, i.e., increasing the salience of English-Welsh intergroup relations, caused the minority-group respondents to report higher levels of ethnic identification. Former studies had shown that manipulating the social context would cause minority-group respondents to increase affect in the form of positive judgments toward their ingroups and reduced affect toward outgroups. However, this study also demonstrated that it was possible change cognitive responses (such as similarity judgments) by manipulating the social context.

Research has also shown that ethnic identity is dynamic for members of a subgroup and is associated with contextual cues such as the subgroup’s relative size in the local community
(Phinney, 1990). For example, Deshpandé and Stayman (1994) conducted an empirical study of the influence of social context on ethnic identification. Their sample consisted of Anglo and Hispanic adults from Austin (Anglos majority, Hispanics minority) and San Antonio (Anglos minority, Hispanics majority). As they had hypothesized, the researchers found that ethnicity was more salient for members of a minority group (numerical minority) in a city than for members of the majority group (numerical majority).

As mentioned in an earlier section, the effect of accents and dialects upon learning outcomes is mixed. However, accents and dialects have been shown to affect individuals’ ratings of liking and preference. Social Identity Theory (SIT) (Tajfel, 1978; Tajfel & Turner, 1986) predicts that individuals prefer and like others similar to themselves more than they like or prefer others who are dissimilar (Tajfel). By extension, members of minority ethnic subgroups will prefer and like others of their subgroup (ingroup) more than they will like members of the dominant ethnic subgroup (outgroup). In general, research on accents has shown that people will view those with similar accents (see Ryan & Sebastian, 1980) more favorably than those with dissimilar accents (see McKirnan & Hamayan, 1984). The same effect has been found in the study of dialects. In his study of perceptions of dialect, Martinez (2003) asked participants along the Texas-Mexico border to rate the similarity of neighboring dialects to their own. Participants were also asked to judge how pleasant or unpleasant a dialect was. Martinez found that participants rated dialects geographically closer to them as more similar and more pleasant than those which were geographically distant.

An implication is that trainees’ self-reported ethnic identity will be associated with their preferred training language. Specifically, those who identify themselves as being Hispanic or Latino and not as members of a specific subgroup (e.g., Mexican, Mexican American) will prefer
a dialect-neutral language, i.e., standard Spanish for training. It is expected that participants of Mexican background will prefer the Mexican-dialect language and report greater satisfaction with the Mexican-dialect language condition than will those in the standard condition.

**Ethnic Identity and Attitudes Toward Organizations**

This section proposes that delivering training to immigrant Hispanics in their native dialect, especially during their first encounters with an organization, may not only result in better outcomes for the trainees, but also in positive long-term outcomes for the organization (e.g., organizational attraction and commitment in the form of retention, positive perceptions of organizational climate, etc.). Research has linked the positive attitudes of individuals toward various organizational outcomes such as attraction, commitment, and retention. In the case of training outcomes, positive attitudes toward an organization's training may cause trainees to feel attraction toward membership in the organization (Härtel, 2004). Specifically, Hispanic trainees may perceive that an organization that offers training in Spanish dialects promotes an Hispanic-friendly work climate. In turn, individuals who perceive an Hispanic-friendly climate may be more likely to report attraction to the organization. No literature currently exists that has explored the relationship between training delivery and trainee perceptions of an Hispanic-friendly climate.

**Limitations of Earlier Studies**

Previous studies that examined the influence of dialects on an individual's attitudes, cognitions, and behaviors were conducted in non-training situations. No previous study was found that has compared training outcomes from delivering training in recent immigrants’ native
dialect versus delivering training in standard Spanish. Furthermore, none of the participants in the studies mentioned in the literature review section of this paper were Hispanic immigrants whose dominant language was Spanish.

**Model of Delivery Language Outcomes**

This section introduces the conceptual model shown in Figure 1 and presents a specific antecedent of the training process, i.e., dialect of the training delivery language. The dialect in which the training is delivered affects three components of training outcomes: affective (e.g., ratings of satisfaction with the training), cognitive (e.g., amount of learning, ratings of organizational attractiveness), and behavioral (e.g., choice of future training delivery language). Two trainee individual differences characteristics, familiarity with the training language dialect and ethnic identity, may affect the influence of the training delivery language upon training outcomes. The numbered circles identify the formal hypotheses to be presented in the following section.
Figure 1. Proposed Model Indicating Hypotheses

The model is partly based on Baldwin and Ford’s (1988) model of the training transfer process. According to their model, characteristics of the individual, the training setting, and the work environment interact to determine training outcomes, i.e., learning and transfer. In addition, learning affects the extent to which training is transferred from the training setting to the work setting. Empirical support for the Baldwin and Ford model is strong (see Arthur, Bennett, Edens, & Bell, 2003). Researchers have investigated many aspects of the model. For example, in a recent meta-analysis, Colquitt, LePine, and Noe (2000) summarized research on the effect of motivation on training performance, which included a review of cognitive ability, locus of control, and other individual differences characteristics important in training. Recent
research on training design has highlighted the importance of understanding the cognitive information-processing approach to learning (see Nadolski, Kirschner, Eroen, & van Merriënboer, 2005). Training delivery has also been addressed; for example, research has been done as such facets as the effect of trainer expressiveness on learner outcomes (Towler & Dipboye, 2001). Finally, research on the work environment has highlighted the importance of peer and supervisor as well as organizational policies to employee learning (see Facteau, Dobbins, Russel, Ladd, & Kudisch, 1995; Rouiller & Goldstein, 1993; Tracey, Tannenbaum, & Kavanagh, 1995). However, comparatively little research has been conducted on how to maximize training outcomes for Spanish speakers, particularly those who are Spanish-language dominant, that is, they speak Spanish better than English (see Knouse, Rosenfeld, & Culbertson, 1991).
Consistent with the Baldwin and Ford model (1988) model, the conceptual model predicts that an element of the training design, i.e., the language in which training is delivered, will affect a trainee’s outcomes. The dialect conditions will be either standard Spanish (the formal register of the Castilian dialect of Spanish) or colloquial Spanish (the colloquial register of the Mexican dialect of Spanish).

Cognitive-Information Processing Theory (see Kahneman, 1993; Mayer, Sobko, & Mautone, 2003) predicts that the amount an individual can learn is affected by the cognitive demands upon the learner. As an individual’s working memory load increases, the individual is expected to be less able to process information. The model in Figure 1 shows that the training
delivery dialect condition is expected to impact a trainee’s learning through the demands upon his or her working memory. The more familiar a trainee is with the delivery language, the greater his or her learning. Conversely, if the trainee is unfamiliar with the training language, he or she is expected to have to divert information-processing resources to understand the dialect, and as a result, the trainee is expected to learn less content. Consequently, the trainee’s learning score is expected to be lower.

The model also incorporates two previously discussed theories. Both Distinctiveness Theory (McGuire, 1984) and Social Information Theory (Tajfel, 1978) make predictions about an individual's social cognitions. Distinctiveness Theory (McGuire) postulates that individuals are most aware of those personal characteristics that distinguish them from others in the social environment. The theory predicts that members of a majority group will be less conscious of their ethnic background than will members of minority groups (McGuire, McGuire, Child, & Fujioka, 1978). McGuire and his colleagues found support for the theory in an experiment in which members of a minority group were asked to describe themselves. Their ethnicity became spontaneously salient in the presence of majority group members.

According to Social Information Theory (Tajfel, 1978), an individual’s self-concept is based on membership in different social groups. The degree to which a particular social ingroup is made salient causes the individual to feel greater liking for other ingroup members. The model expresses ingroup membership through ethnic subgroup identity. To the extent that a trainee perceives the training delivery language to be similar to his or her own native dialect, he or she is expected to give higher ratings of satisfaction to the training. A trainee who is asked to rate an organization as being friendly to ethnic subgroup members is expected to give higher ratings if the organization provides training in the trainee’s native dialect. Therefore, if a trainee
is offered the opportunity to choose the language in which future training will be offered, he or she is expected to choose to attend training that is offered in his or her native dialect. However, individual characteristics, such as age, time in the U.S., and hours spent listening to talk radio may familiarize individuals with the local dominant subgroup’s dialect. Such familiarity may cause some individuals to be more willing to attend future training offered in the local dominant subgroup’s dialect.

**Purpose of the Study**

The current study was an exploratory study that proposed to expand the presently limited Hispanic-related training literature. The study investigated the outcomes of delivering training in different dialects to monolingual Spanish-speaking immigrants. The research question being addressed is, “Does the language dialect (colloquial Mexican or standard Spanish) in which training is delivered to recent Spanish-monolingual Hispanic immigrants affect their affective, behavioral, and cognitive training outcomes?” Specifically, this study investigated whether training-delivery dialects can affect trainees’ learning as well as their reactions to the training. The study also investigated whether trainees prefer to receive future training in their native dialect, and how they evaluate organizations that would offer such training. These issues are important given that labor shortages of unskilled workers are projected in many industries (construction, food, lodging, personal services). Organizations will benefit from empirical evidence that helps them to attract and retain employees.
Hypotheses

The model in Figure 1 describes the variables that were tested in the study. The formal hypotheses presented below are derived from the conceptual model. For the convenience of the reader, the numbers of the hypotheses are indicated on the model.

Please note that the term standard Spanish dialect will be used to refer to the formal register of the Castilian dialect of Spanish and the term colloquial Spanish dialect will be used to refer to the colloquial register of the Mexican dialect of Spanish.

Being trained in an unfamiliar dialect imposes a working-memory load upon trainees that taxes the cognitive resources required to process and learn the training content (Daneman & Merikle, 1996). Individuals whose cognitive resources are split by trying to understand a dialect while simultaneously processing and learning training material are expected to learn less. Specifically, those who are taught in their native dialect are expected to have higher learning scores than those who are not taught in their native dialect.

Further, as shown in Table 1, speakers of a particular dialect of Spanish (such as Mexican) understand better within that dialect’s registers (formal, informal, and colloquial) than they do across another dialect (for example, any register within Puerto Rican Spanish) (Cardenas, 1970). The more familiar a listener is with a non-native dialect, the fewer resources he or she will require to process that dialect. Therefore, a listener will find it easier to process a familiar dialect than an unfamiliar dialect (Gill, 1994). As their level of exposure to an unfamiliar dialect grows, individuals become used to the dialect’s idiosyncrasies and require fewer cognitive resources to process it.
Table 1
*Comprehension Within Versus Across Spanish Dialects*

<table>
<thead>
<tr>
<th>Registers of a Dialect</th>
<th>Castilian</th>
<th>Mexican</th>
<th>Puerto Rican</th>
<th>Cuban</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colloquial/slang</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Individuals may be exposed to an unfamiliar dialect in various ways, for example, through contact with speakers of the other dialect or by hearing it on the radio and television. In the case of standard Spanish, individuals are most frequently exposed to it in educational settings. Whereas high-status individuals have access to more education and consequently become familiar with formal registers, low-status individuals have restricted access to formal education and they become familiar with mid- and low-level registers (Valdes & Geoffrion-Vinci, 1998). Those who are limited to the lower styles within a language variety have difficulty understanding the more formal style (Cardenas, 1970).

In general, the target participants are expected to have lower levels of education than individuals born in the U.S. Although 11% of adult U.S.-born residents of working age (between the ages of 25 and 64) do not have high school degrees, approximately 67% of similarly aged immigrants from Mexico and 34% of immigrants from other Central and South American countries lack high school degrees (Little & Triest, 2002). For example, in Los Angeles, which is home to the largest Mexican immigrant population in the U.S., the average male Mexican who
immigrated during the 1990’s had only six years of formal education (Waldinger, 2001). Therefore, it is expected that participants who were exposed more to the standard dialect in educational settings (i.e., have higher levels of formal education) would show higher learning outcomes.

In addition, it was expected that learning scores would be affected by an interaction that will occur between participants’ native or non-native status in the colloquial Spanish dialect condition and their level of formal education. Research has consistently identified general cognitive ability as the single most important predictor of training success (see Colquitt, LePine, & Noe, 2000). Higher cognitive ability is also associated with higher levels of education (see Avolio & Waldman, 1994). Research has shown that individuals with higher levels of formal education will generally outperform individuals with lower levels of formal education because the former have “learned how to learn” (see Thornton & Dumke, 2005). Therefore, the more educated someone is, the more familiar standard Spanish will be to him or her, and the easier it will be for him or her to process the language because of the availability of more cognitive resources to dedicate to learning training material. Participants who receive training delivered in their native colloquial dialect of Spanish are expected to have higher learning scores than participants who receive training delivered in a dialect of Spanish that is not their native dialect. However, differences in learning scores are expected to be smaller for those with higher levels of education. In order to achieve high levels of education, individuals must possess high cognitive ability (see Kuncel, Hezlett, & Ones, 2004), and as noted above, high cognitive ability predicts learning. Therefore, years of education are expected to correlate with learning scores. In particular, it is expected that highly educated individuals in both conditions will outperform the less educated, but the difference will be greater in the standard Spanish dialect.
Table 2 presents the cells that are referred to in the hypotheses. The Training Conditions are standard Spanish dialect and colloquial Spanish dialect. Ethnicity is either Mexican or non-Mexican (Other).

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Training Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Standard Spanish dialect</td>
</tr>
<tr>
<td>Mexican</td>
<td>Cell A</td>
</tr>
<tr>
<td>Non-Mexican (Other)</td>
<td>Cell B</td>
</tr>
</tbody>
</table>

Hypothesis 1a: Participants in the colloquial Spanish condition who were matched with their native dialect (Cell C) will have higher learning scores than participants who did not receive training in their native Spanish dialect (Cells A, B, and D).

Hypothesis 1b: Across training conditions and especially in the standard Spanish condition, learning scores will be higher for participants who reported high levels of formal education.

Individuals prefer to listen to their native language dialect more than they prefer to listen to dissimilar language dialects (see Ryan & Sebastian, 1980). It is hypothesized that participants who receive training delivered in their own native colloquial Spanish dialect are expected to report higher satisfaction with the training.
**Hypothesis 2a**: Participants who received training delivered in their native colloquial Spanish dialect (Cell C) will report higher satisfaction with the training than participants who did not receive training delivered in their native colloquial Spanish dialect (Cells, A, B., and D).

**Hypothesis 2b**: For the participants who did not receive training delivered in their native colloquial Spanish dialect, those who received training delivered in standard Spanish (Cells A and B) will report higher satisfaction with the training than those who received training delivered in a non-native colloquial Spanish dialect (Cell D).

Hispanics are not a monolithic group. They identify with their own subgroup and prefer conversing in their native dialect (see Herbig & Yelkur, 1997). However, although individuals in general are expected to prefer being trained in their native dialect, there may be certain individuals for whom the choice of future training dialect may be influenced by specific individual difference characteristics.

For example, older workers may prefer being trained in their native dialect. As discussed earlier, training delivered in a non-native dialect imposes a cognitive load on working memory that may interfere with learning the training content. Age has been shown to influence learning (see Martocchio, 1994). Research on training older workers has suggested that training performance decrements may be attributable to reduced working-memory capacity that slows down speed of processing (see Kubeck, Delp, Haslett, & McDaniel, 1996; Thornton & Dumke, 2005, Warr, 1994). Older workers may feel lower self-efficacy toward training, and that
combined with being trained in an unfamiliar dialect, and age-related working memory capacity
decline may combine to produce lower learning scores. Older workers may prefer being trained
in their native language as a means by which to compensate for the age-related training score
decrements.

Also, individuals who listen to local talk radio stations are expected to be more familiar
with the local dominant language, given that talk show hosts are more likely to be chosen from
the dominant Hispanic subgroup because of sheer numbers and because of station-owners’
perceptions that such talk show hosts would more closely match the market listeners’
demographics. Finally, the longer individuals live in the U.S., the more likely they are to
encounter different dialects, e.g., church, shopping, radio and television. Therefore, it seems
worthwhile to explore whether a set of predictors consisting of age, years in the U.S., and hours
spent listening to talk radio stations can predict preference for future dialect training.

*Hypothesis 3a*: Younger participants will report less preference
for being trained in their native colloquial Spanish dialect than
older participants.

*Hypothesis 3b*: Participants who listened to more hours of talk
radio weekly will report less preference for being trained in their
native colloquial Spanish dialect than those who listened to fewer
hours of talk radio.

*Hypothesis 3c*: Participants who lived longer in the U.S. will
report less preference for being trained in their native colloquial
Spanish dialect than those who lived a shorter time in the U.S.
Trainees may feel attracted to organizations that they perceive as having an organizational climate that is friendly to their ethnic group and subgroup. Specifically, they may evaluate organizations that offer training in their own native colloquial Spanish dialect as promoting an Hispanic-friendly work climate. Consequently, trainees may rate the organization as being attractive.

*Hypothesis 4*: Participants will rate organizational attractiveness higher for organizations that offered training in their native colloquial Spanish dialect than for organizations that offered training in the standard Spanish dialect.
METHOD

Participants

The target population of this study was Spanish speakers (immigrants or Puerto Ricans) from countries in which Spanish is the dominant language. One hundred and seventy participants were recruited from English as a Second Language (ESOL) programs in various Florida counties. In addition, 18 participants were recruited from a health class offered by a local non-profit Hispanic organization. There were 129 females and 55 males, whose ages ranged from 16 to 71 years (X̄ = 35.88 years; SD = 12.19 years). Regarding ethnic background, 63 of the participants were of Mexican ethnicity and 123 were of non-Mexican (Other) ethnicity.

As described below, the Hispanic population in Central Florida comprises individuals from many nations in which Spanish is the dominant language. Participation in the study was restricted to individuals whose native language was Spanish. It was anticipated that although Mexican immigrants in general would have low levels of formal education (an average of sixth grade was expected), greater variability would be found in the educational backgrounds of non-Mexican-dialect Spanish speakers. As expected, the data showed that the average educational level of Mexicans (X̄ = 9.95; SD = 3.13) was lower than that of the non-Mexicans (X̄ = 12.77; SD = 3.75).

The Hispanic population of Central Florida comprises individuals from various Spanish-speaking countries such as Puerto Rico, Mexico, and Cuba. The U.S. Census Bureau provided population estimates for the Orlando Metropolitan Statistical Area (MSA) that were based on the 2000 census. The Orlando MSA includes Lake, Orange, Osceola, and Seminole Counties. Of
the total 2000 Orlando MSA population of 1,773,738, there were 340,648 Hispanics or Latinos (of any race) making up 19.2% of the total population. Of the Hispanics or Latinos, 161,426 were Puerto Rican (47.4%), 44,513 were Mexican (13.1%), 17,618 were Cuban (5%), and 117,091 were Other Hispanic or Latino (34.4%) (U.S. Census Bureau, 2000). Although Mexicans represent approximately 13% of the local Hispanic population, they comprised 33.5% of the study participants.

**Measures**

Data were collected with three questionnaires. One was a pre-training form used to familiarize participants with the response format. The other two collected post-study knowledge and demographic data.

**Questionnaires**

The titles of the questionnaires that were used to collect participant responses are listed in this section in the order in which they were administered during the study. Most of the questions were administered after the training session ended, and only a few, short questions were asked to avoid tiring the participants and losing their attention. Because of the possibility that individuals in the sample pools were residing in the U.S. illegally, no questions regarding the status of their residency in the U.S. were asked. It was believed that asking questions about their legal status would cause anxiety in the participants, evoke evasive answers from them, and reduce the number of individuals in the participant pool. Specific items are provided in the appendixes. The methods used to assess reliability and validity are discussed below.
The nine items on the post-training knowledge measure were created by sampling directly from the training content. All items were read to the participants as part of the PowerPoint presentation, and the items were also written on the scoring form. The items were written exactly as read by the narrator. The content validity of those items was assessed by a panel of three Subject-Matter Experts (SMEs) and analyzed by percentage of interrater agreement. Reliability was assessed by interrater agreement. Three judges were asked to read the training content and then evaluate whether each question reflected training content (Y/N). The judges worked independently. Individual item agreement was determined by the percentage of agreement method (points per item/total points possible). For eight of the nine items, reliability was 1.0. However, for Item 3, the agreement percent dropped to .67 (2/3) due to one judge’s disagreement. The average interrater agreement coefficient for all judges was .89, which was determined by dividing the number of exact agreements by the number of agreements and disagreements (8/9). Therefore, none of the original items was dropped.

Validity and reliability were not addressed for items on the demographic questionnaire, such as age, years of education, and years in U.S. One item was used for the preference for future training delivery measure. Wanous, Reichers, and Hudy (1997) argue that the use of one-item measures may be justified when the constructs being measured are not complex, and when practical and cost limitations exist. According to the authors (p. 247),

“There are exceptions to the norm of using only scales to measure psychological constructs, however. If the construct being measured is sufficiently narrow or is unambiguous to the respondent, a single-item
measure may suffice, as pointed out by Sackett and Larson (1990). For example, most expectancy theory researchers use a single item to measure the perceived probability that effort leads to performance (e.g., Ilgen, Nebeker, & Pritchard, 1981).”

Wanous et al. (1997) performed a meta-analysis of overall job satisfaction measured with single-item measures. They reported an average uncorrected correlation of .63 between scale measures of overall job satisfaction and the single-item measures.

For the organizational attractiveness measure, a single-item measure was used, and reliability was not calculated. The pilot study provided an opportunity to verify the validity and reliability of the items by confirming the meaning of the questions to the participants and by eliciting their agreement that the target construct was being measured. No items were identified as being inconsistent with their intended purpose. See the Appendices for specifics on how the measures such as the knowledge test were scored.

**Procedures**

This section presents information about the study, such as length of the study, assignment to conditions, administrative procedures, and an overview of the study steps. Refer to Appendix K for a copy of the complete English script and to Appendix L for a copy of the complete Spanish script.

**Focus group**

A focus group was convened to review the content and administration of the proposed study. The purpose of the focus group was to a) determine if the manipulation worked (i.e., did
participants detect differences between the dialects in which the training was presented?), b) to
determine if self-running PowerPoint presentations could be used to train the target audience, c) to
investigate whether the scoring system (i.e., narrated questions and questionnaire response
format) were suitable for the target audience, and d) to solicit feedback on how the study could be improved.

The focus group, which lasted approximately 45 minutes, comprised a group of three individuals chosen from the primary target participant pool. The focus group was held in a classroom setting similar to those in which the actual study was conducted. The experimenter ensured that the equipment worked and provided copies of the script, questionnaires, and all handouts. The experimenter was joined by a fluent Spanish speaker who acted as translator when necessary.

The session opened with introductions. The experimenter provided background information about the study, including the interest of the experimenter in the effect of ethnicity upon participant responses. After the informed consent procedure was completed, vocabulary terms were explained (e.g., narrated, self-running). Notes of the proceedings were made for future reference.

Participants were told that the experimenters were interested in their feelings and that there were no “right” or “wrong” answers (except for the post-training knowledge test answers). They were encouraged to ask questions before and after the presentation. The PowerPoint presentation was shown. The experimenter asked probing questions and waited for the participants to respond. Every effort was made to appear open to the participants and interested in anything they said.
Participants were not compensated for their time. The participants in the focus group were not eligible to participate in the pilot study or the actual study. Please refer to Appendix E for a list of the questions that were asked during the focus group meeting.

Based on answers to the focus group questions, it was determined that a) participants were able to detect differences between the dialects in which the training was presented, b) the self-running PowerPoint presentation was effective in training as judged by the post-study knowledge test, c) the scoring system functioned as it was intended, and d) no changes were required in the content or the presentation itself.

**Pilot study**

A pilot study was conducted with individuals drawn from the target population to ensure that the training evoked the anticipated reactions from the participants and that the pace of the training was sufficiently slow for all listeners to comprehend the material. It was also used to determine if the study in its current form resulted in score variability on variables of interest. The pilot test also provided a means by which to ensure that the instructions, questionnaires, and audiotaped presentation were comprehensible and to elicit suggestions for improvement.

The pilot study lasted approximately 45 minutes. Three individuals made up the pilot study participants. The pilot study was held in a classroom setting, similar to the ones in which the actual study was conducted. The experimenter ensured that equipment works and provided copies of the script, questionnaire response forms, and all handouts. Also present was a fluent Spanish speaker who translated if necessary. The session opened with introductions. After the informed consent process concluded and verbal consent had been received from the participants,
the session began. Notes from the session were stored in a locked file cabinet; after three years they will be destroyed.

The experimenter explained the purpose of the pilot study and indicated that all study protocols would be followed, except that the presentation would be stopped frequently during the study: after the informed consent procedure, after the practice session, after the first questionnaire was administered, after the training session, after the post-training session questionnaire, and after the demographic & other questionnaire.

One goal of the pilot study was to conduct a manipulation check. A critical question was whether the participants in the pilot study could distinguish between the standard and the colloquial Spanish dialects in which the training materials were presented and were able to identify the national origin of the dialects. Another question of interest was whether the training was effective, which was determined by the participants’ post-training knowledge test scores. If a ceiling or floor effect had been found, the training content would have been revised accordingly. Because the pilot test was successful, i.e., if learning scores demonstrated that the training was effective, there was no floor or ceiling effect, and the manipulation check showed that participants were able to distinguish between the dialects used by the narrators, the data collected from the participants was included in the study analyses. Please refer to Appendix F for a list of the questions that were asked during the pilot study.

Based on feedback from the focus group, pilot study, and post-session interviews, no significant changes to the protocol or content were determined to be necessary. Had changes been required, they would have been submitted to the IRB for approval and a copy of the changes would have been presented to the dissertation committee members.
Design

The study consisted of a 2 x 2 factorial design in which training condition was crossed with ethnicity (see Table 3). As shown in Figure 3, groups of participants were randomly assigned to either the standard Spanish dialect condition or the colloquial Spanish dialect condition. Within each training dialect condition, participants were characterized as being either of Mexican ethnicity or non-Mexican (Other) ethnicity. In the colloquial Spanish dialect delivery condition (which was the colloquial register of the Mexican Spanish dialect), participants whose native dialect was the colloquial Spanish dialect (that is, Mexicans) were matched by training condition and native dialect; the other participants (that is, non-Mexicans) were considered non-matched.

Table 3

<table>
<thead>
<tr>
<th>Training Condition</th>
<th>Ethnicity</th>
<th>Standard Spanish dialect</th>
<th>Colloquial Spanish dialect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mexican</td>
<td>Cell A</td>
<td>Cell C</td>
</tr>
<tr>
<td></td>
<td>Non-Mexican (Other)</td>
<td>Cell B</td>
<td>Cell D</td>
</tr>
</tbody>
</table>
Figure 3. Study Design

The study was administered in classrooms at the educational institutions used by the programs. The entire study lasted approximately one-half hour. There were no breaks during the study because it was lasted only 22 minutes and to prevent participants from discussing the study and possibly influencing each other’s reactions.

Participants were assigned to conditions in groups. This study was quasi-experimental; individual participants were not randomly assigned to conditions, because they took part as members of ESOL classes. However, groups were randomly assigned to conditions. The experimenter flipped a coin to determine which condition would be administered first. After that, every other group was assigned to that condition. Post-study analyses were conducted to determine if the groups were equivalent on the demographic data collected during the study. Variables examined included the following: age, years of education, years in the U.S., hours spent listening to talk radio, gender, and familiarity with the Castilian dialect.

The individual monitoring the training study, usually the instructor of the class, spoke fluent Spanish. She (all instructors were female) witnessed the acceptance of the informed
consent forms and answered questions from the participants as needed. Before the participants arrived, the experimenter ensured the availability of an adequate supply of forms, handouts, and pencils, and verified that the equipment worked. Speakers were used to make sure that the sound broadcast at a level easily heard by participants seated in the back of the room. A set of stapled answer forms for the measures was handed out before the session began. Each form was printed on a sheet of colored paper (pink, yellow, green, blue, gold) to help participants identify the appropriate form to use at different points in the study.

As participants entered the study setting, the experimenter told them that the training would last for a half-hour without interruptions. Participants were encouraged to avail themselves of restrooms before the study began. Reading a script in Spanish, the experimenter then introduced herself and thanked the participants for taking part in the study. The experimenter next explained that the study would be delivered as a self-running PowerPoint presentation and asked if there were any questions. If not, the experimenter started the PowerPoint presentation. The introduction described the purpose of the study, the anticipated length of the study, and the format of the study.

In order to protect the participants and in compliance with the University of Central Florida’s Institutional Review Board (UCFIRB) requirements, as mandated by the National Institutes of Health’s U.S. Office for Protection from Research Risks (OPRR), informed consent of the participants was solicited. Informed consent described the study’s procedures to the research participants in language that they could easily understand. However, there was a possibility that some of the participants were illiterate and would have been unable to read a written informed consent form. In such cases, the UCFIRB may determine that written documentation of consent may be waived and that consent may be obtained orally. However, a
written version of the process that was described orally must also be delivered to the participant as part of the protocol. Therefore, consistent with the provisions of OPRR, a Spanish version of the short form of the informed consent form was handed out to each participant.

During the introduction section of the study, the narrator read the short form of the informed consent procedure to the participants. The informed consent described the right of the participants to leave the study at any time without penalty and that no potential harm to the participants was anticipated. Participants were asked for their voluntary participation in the study. They did not have to sign the form. Informed consent procedures require that a translator (the class instructor) be present to answer questions from participants. The experimenter asked the translator to sign informed-consent forms for later distribution to study participants. Participants were given a copy of the form signed by the Spanish-speaking witness who was present during the study, along with a brief summary of the study. Permission to use an already translated short form was been granted by an external agency. A copy of the form is attached in Appendix H.

Before the training content was introduced, participants were presented with a sample practice PowerPoint exercise consisting of three questions. The purpose of the questions was to ensure that the participants were able to follow the PowerPoint presentation and understood how to mark the response form properly. One of the items on the form was included to make salient to the participants their ethnic status relative to that of the dominant local Hispanic subgroup (i.e., Puerto Ricans). The participants listened to and answered the narrated questions (see Appendix B).

After the training session, a post-session questionnaire (see Appendix C) consisting of two measures (post-training knowledge test and rating of satisfaction with training) was
administered. Next, participants were asked to respond to a demographic questionnaire (see Appendix D) consisting of the following measures: demographic (ethnic identification, age, years of formal education, time in U.S., etc.), preference for future training session language, and ratings of perceptions of organizational attractiveness based on dialects used by employees, trainers, and supervisors. There was no need to score the responses blindly because no identifying information was collected from the participants.

The training session was then delivered (see Appendix K.) After the training session, the narrator read the items on the post-training questionnaire and participants responded (see Appendix C). After participants completed the training measures, the presentation transitioned to the final evaluation segment of the study. Participants responded as the narrator read the demographic and other measures (see Appendix D). Finally, the narrator verbally provided the correct responses to the post-training knowledge test so that the participants experienced post-training performance feedback and also to reinforce the correct answers.

A debriefing session was held. The Institutional Review Board requires that when information is withheld from participants during the informed consent stage of the study, a debriefing must follow the study to reveal previously withheld material. At the time of debriefing, participants were told that a specific facet of interest in the study was to determine whether their membership in a particular Hispanic subgroup influenced their responses to the study questions, e.g., how much they liked being trained in their native dialect or in a non-native dialect and in which dialect they would prefer to receive future training.

In the completion phase of the study, the presentation consisted of closing statements. The experimenter ended the PowerPoint show and again thanked participants for their help. Participants were then asked if they had any questions. The experimenter then collected forms,
handed out signed consent forms and study summaries written in Spanish, and distributed pamphlets (patient education materials in Spanish and English). Refreshments were offered to the participants.

**Training content and tasks**

Cognitive information-processing theory predicts that a greater load is put on the working memory of listeners who have to process a dialect as well as the message (see Chandler & Sweller, 2004; Sweller & Chandler, 1994). In addition, Chandler and Sweller argue that working memory load is related to the type (e.g., declarative, procedural) and the complexity of the material (e.g., interpersonal, critical thinking) to be learned.

The goal of the study was to determine the effects of spoken dialect variations, which is a verbal phenomenon, on trainee outcomes. The limitations of the participant population included possible illiteracy due to low levels of formal education. As a result, some participants might have been unable to communicate in writing or learn by reading. An ancillary goal was the desire to test the efficacy of delivering training in a narrated medium. Therefore, the training task chosen was highly dependent on the verbal and listening skills of the participants. For example, a task involving both verbal and motor skills (e.g., how to assemble something) was deemed unacceptable because it might have placed too great of a cognitive load on the participants. Yet, the desire to avoid a floor effect during testing was also a concern. Analysis of the pilot study data revealed that the difficulty level of the material did not need to be modified further.

The task also had to provide some benefit to the individuals, seem to be a reasonable topic for training, and be meaningful enough to the participants to engage their attention and
interest. Conversations with local health-service professionals (Belenoff, Hristic, Kendrick, Mercado, 2005, personal communication) suggested that appropriate topics would include basic health information, e.g., hygiene, immunizations. Furthermore, because the target population can be considered disadvantaged (e.g., low levels of formal education, limited income), the participants and their families were expected to benefit from learning about a health-related training topic. The training topic chosen was *Why Vaccinations Are Important for Everyone*, a topic of interest to all adults, not just to parents with children. Thus, the content was chosen to meet the criteria of a) engaging participants’ listening skills, b) being of medium difficulty to avoid either a testing floor or ceiling effect, and c) being meaningful and of practical value to the participants.

The training was designed in accordance with the principles of the instructional systems design (ISD) approach. Research (Doak, Doak, & Root, 1996) has shown that low-literacy individuals have a limited attention span. Approximately eight minutes of video instruction is the maximum length of time for which individuals at all literacy levels can maintain interest in and concentrate on material being presented (Doak, Doak, & Root, 1996). Doak et al. recommended stopping the presentation after eight minutes and engaging the participants in another activity, e.g., completing questionnaires. Therefore, the training session lasted approximately 8 minutes.

**Delivery method**

The training was delivered via a self-running, narrated PowerPoint show to standardize administration conditions. One version of the training topic was narrated in standard Spanish and the other in dialect (Mexican) Spanish. All regional dialects or versions of Spanish have
three registers (formal, informal, and colloquial). The formal register of the Castilian dialect of Spanish is considered by some to be the most prestigious version of formal Spanish (see Betancourt, 1986). To maximize the effect on listeners of the disparity between formal and colloquial Spanish, the most formal register of Castilian Spanish was chosen to be recorded for the standard Spanish dialect version of the study. For each condition, the entire narrated presentation was delivered in one dialect. Because the training content in this study was presented via a PowerPoint show, each PowerPoint slide featured an appropriate graphic and minimal text display.

For participants who were Spanish-speaking Mexicans and recent immigrants, it was anticipated that their self-reported education level would be approximately sixth grade. Individuals with a sixth-grade education are included in the lowest literacy level as defined by the National Institute for Literacy. To accommodate this limitation, the PowerPoint show was narrated, i.e., audio broadcast. Participants were asked to respond to narrated survey questions by marking a form containing numbered questions with different facial expressions (very happy, happy, neutral, sad, very sad) for response scales. The face-response scale format is consistent with the work of Amason, Allen, and Holmes (1999). The target population would be able to recognize the numbers because numbers are one of the first symbols taught in formal education settings, such as first and second grade. A short practice session before training commenced ensured that participants were able to complete the response forms correctly. The PowerPoint presentation contained slides that showed the response format and explained how to mark the form correctly. The narrator repeated each item in the measures to ensure that participants had time to process the information.
Translation procedures

This section describes the procedures used to ensure that meaning was preserved when material was translated from English to Spanish. The training content was adapted from material available on the Centers for Disease Control and Prevention (CDC) website and from patient education materials provided by the Central Florida Partnership on Health Disparities. The material had been professionally translated into Spanish from English and reviewed by medical professionals. Because the material is in the public domain and is not copyrighted, the public may freely use it. No additional translation was necessary for that material.

The script and measures were created in English and then translated into Spanish so that the underlying meaning of the content was preserved. After the first translation was completed, a Spanish-speaking graduate student who spoke with native proficiency reviewed and confirmed the translations, and made suggestions to improve the flow and the naturalness of the translation. Members of the focus and pilot groups gave a final check for comprehensibility of the material.

Narrators’ speech characteristics

Narrators were instructed to speak clearly and at a natural pace when recording the presentation. During the focus group and pilot study, participants verified the equivalency of the speakers’ rate and clarity of the speech. No other differences between the narrators were noted.

Threats to validity

Threats to internal validity are ruled out by random assignment to condition, which ensures equivalence among participants before a study commences. However, practical constraints often make it impossible to assign individuals randomly to conditions (Shadish,
Cook, & Campbell, 2002). In the case of intact groups such as those of the ESOL classes from which this study’s participants were recruited, lack of classrooms as well as instructors’ and administrators’ preferences proved an impediment to assigning individuals randomly to treatment conditions.

Although individual members of extant groups cannot always be randomly assigned to conditions, entire groups can be randomly assigned to treatment conditions, a common tactic in educational research, and one advocated by Kerlinger and Lee (2000) for quasi-experimental designs. Shadish, Cook, and Campbell (2002) also endorse that tactic, which they suggest will “approximate random assignment decently well” (p. 157). That solution was implemented in this study. Kerlinger and Lee further recommend another practical option, that of comparing group members on other variables, e.g., age, years of education, and ethnicity. Therefore, because the greatest threat to internal validity is caused by participants’ self-selection to groups, additional inspection of the demographic data was conducted to determine group equivalency.

Because of the quasi-experimental nature of the study (e.g., participants are trained in naturally occurring groups), it is impossible to ensure that participants in the training conditions are equivalent. There may be unanticipated differences in the rooms, time of day, and composition of participants. However, because the study presentation was recorded, control was high for administration standardization and experimenter expectancy.

Regarding threats to construct validity, sufficient previous research exists regarding the construct of ethnicity to make construct threats unlikely. Construct confounding is also not an issue. Mono-method bias can be dismissed because self-report measures presented via paper and pen are an integral feature of the treatment (i.e., the training) (Shadish, Cook, & Campbell, 2002, p. 76). Regarding statistical threats, as will be explained below, participants were expected to be
homogeneous in their characteristics, which would reduce the within-group variance and make it more difficult to find an effect size.
RESULTS

Focus Group and Pilot Study Results

The research design was quasi-experimental; pre-existing groups were assigned to one of two experimental conditions. The major conditions were standard Spanish dialect (formal register of Castilian Spanish dialect) training language and colloquial Spanish dialect (the colloquial register of the Mexican Spanish dialect) training language. Because the focus of the study was to compare the learning outcomes of individuals who receive training in their native dialect with those who receive it in a non-native dialect, participants in the colloquial-dialect Spanish condition were divided into two subgroups based on their ethnicity: the Matched group (Mexicans) and the Not-matched group (non-Mexicans).

In addition to the quantitative analyses, the data from the focus groups and post-study question-and-answer sessions were recorded and analyzed with an informal qualitative analysis. If more than 50% of the participants had indicated that they found any part of the training introduction, training session, or any items to be unclear or difficult to understand, that material was amended according to the suggestions of the participants. However, the participants raised no systematic objections to any part of the study and so the original materials were retained.

The pilot data were analyzed and interpreted as follows. First, a qualitative analysis was conducted to determine if the narrators’ speech pace and pronunciation were comprehensible to the participants. The ability of participants to identify the language dialect as being the same as or different from their own was also analyzed. The knowledge test described earlier was also evaluated during the pilot study. If a floor or ceiling effect had been found for the post-training
session knowledge tests, the difficulty of the training material would have been adjusted accordingly. However, the lack of ceiling or floor effect led to retention of the items on the proposed knowledge test.

Data were discarded if collected from an individual with one or more of the following characteristics: his or her dominant language was not Spanish (e.g., it was Indian, Haitian, or Brazilian), and he or she was less than 18 years or more than 65 years of age. Anyone who participated in the focus group was not eligible to take part in the actual study.

**Power and Sample Size**

Because this study was exploratory, both power and alpha levels were set at traditional levels: power at .80 and alpha at .05. No previous studies existed to provide guidelines for the effect size, so a medium effect size was used for the power analyses. Eight statistical tests were conducted. Effects sizes for a zero-order correlation ($r_{xy}$) are defined as the following: small is .10, medium is .30, and large is .50 (Cohen, 1988, p. 129). Cohen’s (1988) power tables indicate that the total sample size should be 140 (p. 120) for a medium effect size (zero-order correlation of .30, one-tailed), an alpha level set at .05, and power of .80. Tabachnick and Fidell (2001) recommend Green’s (1991) rule for determining sample size: “$N \geq 50 + 8m$ (where $m$ is the number of IVs) for testing the multiple correlation” (p. 117). According to that formula, the required minimum sample size was calculated to be 130. A target N of 130 participants was consistent with the minimum sample sizes suggested by Cohen (1988) and Green (1991). Thus, the target sample size was set at 130 participants.
Data Inspection

Prior to data analysis, the following data-inspection procedures were performed: inspection for the presence of outliers, homogeneity of variance, and normality of distribution (see Tabachnick & Fidell, 2001). Because data from working-age individuals (aged 16 to 65) was sought, Cases 158, 133, and 144 were dropped for reporting age greater than 65 years. Cases 7 and 108 were dropped for reporting age as less than 16 years.

A missing value analysis was conducted. Cases 151 and 45 were dropped for having too many missing values. Eleven respondents did not provide an answer for the Satisfaction with Training variable. Because all of those cases were located in the standard Spanish dialect condition, and because the number of cases exceeded the 5% limit proposed by Tabachnick and Fidell (2001), the missing variables were replaced with the predicted mean, using the SPSS Estimation Maximization function as recommended by Tabachnick and Fidell. In order to retain as much data as possible in the analyses, other missing values were deleted pairwise during data analysis.

The pattern of outliers was inspected. Case 65 was deleted for reporting a value of 102 hours of listening to talk radio weekly. Respondents who reported listening to more than 40 hours of talk radio weekly were retained because with a large data set (n = 188), it is reasonable to expect outliers (see Tabachnick & Fidell, 2001).

Further diagnostic procedures revealed non-normal distributions among variables. Two of the variables with non-normal distributions were satisfaction with training ($\bar{X} = 4.9$, $SD = .48$) and total learning score ($\bar{X} = 6.2$; $SD = .85$). Both were transformed, but because transformation did not improve the distribution, the original variables were retained. However, the distributions
of two variables, years in U.S. and hours of talk radio, were improved through square root transformation, and so the transformed variables were used in subsequent data analyses.

The Levene test for homogeneity of variance for the means of the conditions on total learning score showed heterogeneity of variance, Levene statistic = 16.59 (2, 183), \( p = .00 \). The significant statistic indicates that the conditions do not have equal variances and so do not come from the same distribution in the population. A lack of homogeneity of variance makes it more difficult to find a linear relationship among variables. In order to reduce heteroscedasticity, the DV score data (that is, total learning score) could have been transformed. However, as Tabachnick and Fidell (2001) cautioned, interpretation would then be limited to the transformed data. In any case, as the preceding paragraph explained, transformation of the total learning score variable did not improve the data distribution.

**Descriptive Statistics**

Table 4 describes participants by gender and ethnicity both overall as well as by condition (standard Spanish or colloquial Spanish dialect). Females are disproportionately represented in the sample. However, no hypotheses were generated regarding differential outcomes based on gender.
Table 4

*Gender and Ethnicity of Participants by Condition*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Combined Conditions a</th>
<th>Standard Spanish Condition b</th>
<th>Mexican-dialect Condition c</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>%</td>
<td>Mean</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>129</td>
<td>(68.6%)</td>
<td>66</td>
</tr>
<tr>
<td>Male</td>
<td>55</td>
<td>(29.3%)</td>
<td>30</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexican</td>
<td>63</td>
<td>(33.5%)</td>
<td>36</td>
</tr>
<tr>
<td>Other</td>
<td>123</td>
<td>(65.4%)</td>
<td>61</td>
</tr>
</tbody>
</table>

Table 5 describes the composition of participants overall and by condition on age, years of education, years in U.S., and hours of talk radio. The average number of years in U.S. is higher in the colloquial Spanish dialect condition. Fewer Mexicans are found in both training conditions; however, the proportion shown in the table reflects their approximate numbers in the local population. They represent approximately 13% of the local Hispanic population. Age and years of education appear to be evenly distributed among the conditions.
Table 5

*Participant Characteristics Overall and by Condition*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Combined Conditions $^a$</th>
<th>Standard Spanish Condition $^b$</th>
<th>Mexican-dialect Condition $^c$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Age</td>
<td>35.88</td>
<td>12.19</td>
<td>34.61</td>
</tr>
<tr>
<td>Years of Education</td>
<td>11.80</td>
<td>3.84</td>
<td>11.98</td>
</tr>
<tr>
<td>Years in U.S.</td>
<td>2.37</td>
<td>1.20</td>
<td>5.7</td>
</tr>
<tr>
<td>Talk Radio (Hours/week)</td>
<td>1.28</td>
<td>1.37</td>
<td>2.98</td>
</tr>
</tbody>
</table>

*Note.* $^a$ Combined N ranges from 180 to 188; $^b$ Standard Spanish condition N ranges from 93 to 97; and $^c$ colloquial Spanish condition N ranges from 88 to 91. Data represent untransformed variables.

Correlation matrices for both the standard Spanish and the Mexican Spanish conditions are presented in Table 6. No evidence of multicollinearity was apparent.
Table 6  
*Correlation Matrix by Condition*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Standard Spanish Condition</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>1. Learning Score</td>
<td>6.02</td>
<td>.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Satisfaction</td>
<td>4.85</td>
<td>.49</td>
<td>-.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Age</td>
<td>34.61</td>
<td>11.87</td>
<td>-.03</td>
<td>.18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Education</td>
<td>11.98</td>
<td>3.67</td>
<td>.11</td>
<td>-.15</td>
<td>.26*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Years in U.S.</td>
<td>5.71</td>
<td>5.29</td>
<td>.15</td>
<td>.09</td>
<td>.16</td>
<td>-.02</td>
<td></td>
</tr>
<tr>
<td>6. Talk Radio (Hours/week)</td>
<td>2.98</td>
<td>5.78</td>
<td>.01</td>
<td>-.01</td>
<td>.35**</td>
<td>.13</td>
<td>.14</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Colloquial Spanish Condition</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>1. Learning Score</td>
<td>6.36</td>
<td>1.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Satisfaction</td>
<td>4.88</td>
<td>.47</td>
<td>-.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Age</td>
<td>37.22</td>
<td>12.45</td>
<td>-.02</td>
<td>-.13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Education</td>
<td>11.60</td>
<td>4.01</td>
<td>.05</td>
<td>-.06</td>
<td>.34**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Years in U.S.</td>
<td>8.52</td>
<td>8.78</td>
<td>.05</td>
<td>.16</td>
<td>.25*</td>
<td>-.05</td>
<td></td>
</tr>
<tr>
<td>6. Talk Radio (Hours/wk)</td>
<td>4.08</td>
<td>8.43</td>
<td>.03</td>
<td>-.35**</td>
<td>.10</td>
<td>.12</td>
<td>.05</td>
</tr>
</tbody>
</table>

* Correlation is significant at the .05 level, two-tailed; ** correlation is significant at the .01 level, two-tailed, \( p < .00 \).

**Tests of Hypotheses**

The hypotheses are listed along with the results of the statistical analyses. Table 2, which was presented in the Introduction section, has been reproduced as Table 6. The cell letters are used to describe the various tests of hypotheses discussed below.
Table 7
*Cells Indicating Training Condition by Ethnicity*

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Standard Spanish dialect</th>
<th>Colloquial Spanish dialect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexican</td>
<td>Cell A</td>
<td>Cell C</td>
</tr>
<tr>
<td>Non-Mexican (Other)</td>
<td>Cell B</td>
<td>Cell D</td>
</tr>
</tbody>
</table>

_Hypothesis 1a:_ Participants in the colloquial Spanish condition who were matched with their native dialect (Cell C) will have higher learning scores than participants who did not receive training in their native Spanish dialect (Cells A, B, and D).

Hypotheses 1a was tested with analysis of variance (ANOVA) with training condition (standard Spanish dialect or colloquial Spanish dialect) and ethnicity (Mexican or non-Mexican) as fixed-effect IVs and total learning score as DV. A significant interaction was expected such that Mexican participants in the colloquial Spanish dialect condition (Cell C) would show higher learning scores than non-Mexicans in the colloquial Spanish condition (Cell D) and all participants in the standard Spanish condition (Cells A and B).

Learning scores were calculated for each participant by summing the number of correct responses to the knowledge test questions to create a total learning score. Possible total learning score values ranged from 0 to 8.

Hypothesis 1a was not supported. Participants in the colloquial Spanish dialect condition for whom it was their native dialect (that is, Mexicans in the colloquial dialect condition; Cell C) did not have higher learning scores than participants in the standard Spanish or colloquial
Spanish dialect condition for whom it was not their native dialect (that is, non-Mexicans; Cells A, B, and D). However, there was a main effect of training condition, \( F(1, 182) = 5.38, p = 0.02 \), such that participants in the colloquial Spanish dialect condition (Cells C and D) had higher learning scores than participants in the standard Spanish dialect condition (Cells A and B) (see Table 8). The means of the conditions were as follows: Mexicans in the standard Spanish dialect (Cell A), \( \bar{X} = 6.06, SD = .58 \), non-Mexicans in the standard Spanish condition (Cell B), \( \bar{X} = 6.00, SD = .68 \), Mexicans in the colloquial Spanish condition (Cell C), \( \bar{X} = 6.30, SD = .54 \), and non-Mexicans in the colloquial Spanish condition (Cell D), \( \bar{X} = 6.37, SD = 1.16 \).

Table 8  
Analysis of Variance Table for Learning Scores by Training Condition and Ethnicity

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>( F )</th>
<th>( \eta )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training Condition</td>
<td>1</td>
<td>5.38*</td>
<td>.03</td>
<td>.02</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>1</td>
<td>0.01</td>
<td>.00</td>
<td>.94</td>
</tr>
<tr>
<td>Training Condition * Ethnicity</td>
<td>1</td>
<td>0.24</td>
<td>.00</td>
<td>.62</td>
</tr>
<tr>
<td>Error</td>
<td>182</td>
<td>(.71)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. Value enclosed in parentheses represents mean square error. *\( p < .05 \).

Figure 4 shows the total learning score means by training condition (standard Spanish or colloquial Spanish dialect) and ethnicity (Mexican or non-Mexican).
Hypothesis 1b: Across training conditions and especially in the standard Spanish condition, learning scores will be higher for participants who reported high levels of formal education.

It was expected that the Mexican immigrant population would be characterized by low levels of education (see Waldinger, 2001). Therefore, before the analysis was conducted, the data were checked to ensure that sufficient variability in years of education existed (i.e., to avoid range restriction that would reduce the correlation between the variables). Sufficient variability was found: $\bar{X} = 11.80$, $SD = 3.84$, range $= 3 – 20$.

Hypotheses 1b was tested with a correlational analysis. Years of education was the IV and total learning score was the DV. The zero-order correlation was not significant ($r = .06$, $t = .82$, $p = .42$). Next, separate correlations were run by condition (standard Spanish or colloquial Spanish) with years of education as the IV and total learning score as the DV.

Hypothesis 1b was not supported. The correlation was not significant for the standard condition ($r = .11$, $t = 1.05$, $p = .30$, $n = 97$), nor was it significant for the colloquial condition ($r = .05$, $t = .47$, $p = .64$, $n = 91$). A comparison of the difference between the correlation
coefficients was made after using Fisher’s r-to-z transformation. The difference was not significant ($Z_{\text{std}} - Z_{\text{coll}} = .06, s (\text{diff}) = .15, Z = .41, p = .68$).

Table 9 presents average years of education by training condition and ethnicity.

Table 9
*Average Years of Education by Training Condition and Ethnicity*

<table>
<thead>
<tr>
<th>Training Condition</th>
<th>Ethnicity</th>
<th>Standard Spanish dialect</th>
<th>Colloquial Spanish dialect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mexicans</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$\bar{X}$</td>
<td>10.09</td>
<td>9.78</td>
<td>9.95</td>
</tr>
<tr>
<td></td>
<td>$SD$</td>
<td>2.90</td>
<td>3.45</td>
<td>3.13</td>
</tr>
<tr>
<td></td>
<td>$n$</td>
<td>35</td>
<td>27</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>Non-Mexicans</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$\bar{X}$</td>
<td>13.08</td>
<td>12.47</td>
<td>12.77</td>
</tr>
<tr>
<td></td>
<td>$SD$</td>
<td>3.64</td>
<td>3.86</td>
<td>3.75</td>
</tr>
<tr>
<td></td>
<td>$n$</td>
<td>60</td>
<td>62</td>
<td>122</td>
</tr>
</tbody>
</table>

**Hypothesis 2a:** Participants who received training delivered in their native colloquial Spanish dialect (Cell C) will report higher satisfaction with the training than participants who did not receive training delivered in their native colloquial Spanish dialect (Cells A, B, and D).

Hypotheses 2a and 2b were tested with analysis of variance with training condition and ethnicity as the fixed-effect variables and satisfaction with training as the DV. For Hypothesis 2a, a significant effect was expected such that Mexicans in the colloquial Spanish condition (Cell C in Table 6) would report higher satisfaction than non-Mexicans in both the standard Spanish
and the colloquial Spanish condition (Cells A, B, and D). Hypothesis 2a was not supported. As shown in Table 10, regardless of training condition or ethnicity, all participants reported equivalent satisfaction with the training.

Table 10
Analysis of Variance for Satisfaction by Training Condition and Ethnicity

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>η</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training Condition</td>
<td>1</td>
<td>0.48</td>
<td>.00</td>
<td>.49</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>1</td>
<td>0.40</td>
<td>.00</td>
<td>.84</td>
</tr>
<tr>
<td>Training Condition * Ethnicity</td>
<td>1</td>
<td>1.36</td>
<td>.01</td>
<td>.25</td>
</tr>
<tr>
<td>Error</td>
<td>182</td>
<td>(.71)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. Value enclosed in parentheses represents mean square error.
*p < .05.

**Hypothesis 2b**: For the participants who did not receive training delivered in their native colloquial Spanish dialect, those who received training delivered in standard Spanish (Cells A and B) will report higher satisfaction with the training than those who received training delivered in a non-native colloquial Spanish dialect (Cell D).

For Hypothesis 2b, a significant effect was expected such that participants in the standard Spanish condition (Cells A and B in Table 6) would report higher satisfaction than non-Mexican participants in the colloquial Spanish condition (Cell D). Hypothesis 2b was not supported. As shown in Table 10, participants in both conditions reported equivalent satisfaction with the training.
**Hypothesis 3a:** Younger participants will report less preference for being trained in their native colloquial Spanish dialect than older participants.

As shown by the zero-order correlation in Table 11, Hypothesis 3a was not supported \((r = -.08, p = ns)\). Younger and older participants were equally likely to prefer receiving training in their native dialect.

**Hypothesis 3b:** Participants who listened to more hours of talk radio weekly will report less preference for being trained in their native colloquial Spanish dialect than those who listened to fewer hours of talk radio.

As shown in Table 11, Hypothesis 3b was supported \((r = -.17, p = .05)\). Participants who reported listening to talk radio less frequently reported a higher preference for being trained in their own dialect, whereas those who listened to many hours of talk radio reported less preference for being trained in their native dialect, \(R = .17, R^2 = .02, b = -.19, CI = -.366 - -.023, SE = .09, t = -2.24, p = .03\).

**Hypothesis 3c:** Participants who lived longer in the U.S. will report less preference for being trained in their native colloquial Spanish dialect than those who lived a shorter time in the U.S.

As shown in Table 11, Hypothesis 3c was not supported \((r = -.01, p = ns)\). The amount of time that participants spend living in the U.S. was not associated with their preference for being trained in a native dialect.
Table 11
Descriptive Statistics and Correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Preferred Training</td>
<td>3.82</td>
<td>1.61</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Age</td>
<td>35.88</td>
<td>12.19</td>
<td>-.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Years in U.S.</td>
<td>2.37</td>
<td>1.20</td>
<td>-.01</td>
<td>.16*</td>
<td></td>
</tr>
<tr>
<td>4. Talk Radio (Hours/wk)</td>
<td>1.28</td>
<td>1.37</td>
<td>-.17*</td>
<td>.23*</td>
<td>.09</td>
</tr>
</tbody>
</table>

*p < .05.

Table 12
Regression Results for Variables with Preferred Training

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE</th>
<th>t</th>
<th>p</th>
<th>R</th>
<th>R2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.01</td>
<td>.01</td>
<td>-1.11</td>
<td>.268</td>
<td>.08</td>
<td>.01</td>
</tr>
<tr>
<td>Talk Radio (Hours/wk)</td>
<td>-.19</td>
<td>.09</td>
<td>-2.24*</td>
<td>.03</td>
<td>-.17</td>
<td>.02</td>
</tr>
<tr>
<td>Years in U.S.</td>
<td>-.01</td>
<td>.10</td>
<td>-.06</td>
<td>.95</td>
<td>.01</td>
<td>.00</td>
</tr>
</tbody>
</table>

*p < .05

Hypothesis 4: Participants will rate organizational attractiveness higher for organizations that offered training in their native colloquial Spanish dialect than for organizations that offered training in the standard Spanish dialect.
Participants were asked to indicate the extent to which they agreed that an organization that offered training in their native dialect was attractive. They responded using a 5-point Likert scale with options ranging from *Strongly Disagree* to *Strongly Agree*. To test Hypothesis 4, the mean of the response was calculated, \( \bar{X} = 3.82, SD = 1.61 \), and the null hypothesis of equality among response options was rejected. As shown in Figure 5, participants indicated that they preferred to work for an organization that delivered training in their native dialect.

![Figure 5. Attractiveness Ratings of Organization Offering Same-dialect Training](image)

The relationship between ethnicity and preferred training dialect was also tested. A Chi-square test found statistically significant differences between the observed and expected values for ethnicity and preferred training dialect, which showed that Spanish-speaking participants did not prefer to receive training in their native dialect (for ethnicity, \( \chi^2 (3, 188) = 107.20, p = 0.00 \); for preferred training dialect, \( \chi^2 (4, 188) = 85.40, p = 0.00 \)).
DISCUSSION

This study examined whether the dialect in which training was delivered to native Spanish speakers affected their cognitive or affective training outcomes. The study is a preliminary attempt to investigate how to train Spanish speakers most effectively.

Study Findings

Mixed support was found for the hypotheses. In this section, the findings are discussed, and implications for theory, practice, and future research are presented.

Training condition and learning scores (Hypotheses 1a, 1b)

The findings of this study showed partial support for the impact of training dialect on learning scores. It was hypothesized that learning scores would be affected by the dialect in which training was delivered to Spanish speakers. More specifically, it was expected that learners who had to process an unfamiliar dialect as well as training content would experience some learning decrement. Hypothesis 1a predicted that participants who were matched with their native dialect in the same dialect training condition (Cell C in Table 6) would show higher learning scores than participants whose training condition was not matched with their native dialect (Cells A, B, & D). However, no significant difference was found.

However, there was a main effect of training condition ($F = 5.38$, $df = 1$, $p = .02$), such that participants in the colloquial Spanish dialect condition (Cells C and D) had higher learning scores than participants in the standard Spanish dialect condition (Cells A and B). This finding implies that individuals who are trained in a colloquial dialect condition (that is, Mexican) will
perform better than individuals who are trained in a standard Spanish dialect. However, it should be noted that the effect of training condition on total learning score was small and the variance accounted for may be considered of small practical value ($R^2 = .03$).

The second hypothesis regarding the association between training delivery language and learning scores proposed that years of education would predict total learning scores across conditions, especially in the standard Spanish condition. Surprisingly, no effect of years of education on total learning score was found. Instead, participants in the colloquial Spanish dialect condition (Cells C and D) had higher total learning scores than participants in the standard Spanish dialect condition (Cells A and B).

The education level of the Mexicans overall ($\bar{X} = 9.95$) was less than that of the other ethnic groups ($\bar{X} = 12.77$). This point deserves further discussion because in spite of their lower overall average level of education, the average learning score of Mexicans ($\bar{X} = 6.16$) was comparable to that of non-Mexicans ($\bar{X} = 6.19$). Such a large difference in educational level between the groups should have translated into a large learning score difference. This suggests that even with a significantly lower average education level, Mexicans were able to achieve learning scores comparable to a group with a higher education level. That result may be due to a combination of factors, that is a) the manipulation was not strong enough, b) the learning score measure was not precise enough, and c) the number of Mexican participants was too low. Because cognitive ability has been shown to predict educational achievement (see Avolio & Waldman, 1994), it is possible that the training manipulation was not strong enough or that participants were compensating in some fashion. As some researchers have noted (see Gill, 1994), individuals whose working-memory is being taxed may compensate by focusing attention on the difficult parts of the task they are facing. According to Colquitt, LePine, and Noe (2000,
p. 680), cognitive ability is the strongest predictor of training success. They also noted, “Because of the central role played by cognitive ability in learning, it is important in studies of training to determine whether individual and situational characteristics explain any incremental variance in training outcomes.”

**Training condition and satisfaction (Hypotheses 2a, 2b)**

It was hypothesized that participant satisfaction would be related to training language delivery condition. However, those hypothesized relationships were not supported. The first hypothesis explored the relationship between training dialect condition and satisfaction with the training. Specifically, it was expected that participants in the same-dialect condition (Mexicans in the colloquial dialect condition. Cell C) would rate training satisfaction higher than participants in the not-matched dialect condition (non-Mexicans in the Mexican condition, Cell D; and all in the standard Spanish condition, Cells A and B). The second hypothesis proposed that participants in the standard Spanish dialect condition (Cells A and B) would report higher satisfaction than would non-Mexican participants in the colloquial dialect condition (Cell D). Neither prediction was supported.

An inspection of the data offers a simple explanation for the lack of association between training condition and satisfaction with the training. The satisfaction variable data were negatively skewed. In fact, 96.7% of the respondents either agreed or strongly agreed that they were satisfied with the training. The result is a major restriction in range, which would attenuate any relationships between the two variables. Perhaps a better dispersion of responses through a more precise set of questions or a satisfaction score that was more directly related to satisfaction with language aspects of the training presentation would have increased the score variability.
Effect of age, years in U.S., and hours of talk radio on training preference

(Hypotheses 3a – 3d)

Hypotheses were formulated regarding the relationship between specific individual difference variables (age, years living in the U.S., and hours spent listening to talk radio) and participants’ preference for same dialect training. Mixed support was found for the hypothesized relationships.

First, it was hypothesized that younger participants would show less preference for being trained in their native dialect than would older participants. However, no support was found (t = -1.11, p = .27). Therefore, it was concluded that younger and older participants were equally likely to prefer receiving training in their native dialect. Although research suggests that older individuals hold stereotypes about their ability to succeed in training and have lower self-efficacy toward succeeding in classes (see Sterns & Doverspike, 1989), the participants in this study were already enrolled in LEP, ESOL, or health education classes. It may be that their success in the classes in which they were presently enrolled contributed to their general training self-efficacy. Alternatively, because the instructors were of various national origins (for example, Argentina, Mexico, Puerto Rico, and Peru), it may be that participants were confident of their ability to understand instructors who spoke a dialect other than their own. Another explanation is that older individuals, through their life experiences, had more exposure to speakers of other dialects, and consequently had more practice at understanding them.

A second hypothesis concerning individual difference characteristics proposed that participants who had lived longer in the U.S. would report less preference for being trained in their native dialect. However, the amount of time spent living in the U.S. was not associated
with preference for same-dialect training ($t = -.06, p = .95$). This finding is somewhat surprising because presumably, the more time an immigrant spends in the U.S., the more familiar he or she would be with the dialect spoken by the dominant Spanish subgroup. In this study, Puerto Ricans represent the dominant local Hispanic subgroup. However, Puerto Ricans accounted for only 16% ($n = 20$) of the sample that was non-Mexican ($n = 123$). There is no obvious explanation for this finding.

Finally, it was hypothesized that participants who listened to more hours of talk radio would report less preference for being trained in their native dialect. Interestingly, a small significant negative relationship was found between hours spent listening to the radio each week and preference for being trained in a native dialect ($t = -2.236, p = .027$). In other words, those who listen to more hours of talk radio reported less preference for being trained in their native dialect. There may be several explanations for this finding. First, those who listen to more talk radio may be exposed to a variety of Spanish dialects, and the increasing familiarity made them more willing to be trained in a non-native dialect. A more likely explanation is that the relationship may have been due to the finding that level of education was positively associated with listening to talk radio. The zero-order correlation between years of education and hours spent listening to talk radio weekly (untransformed) was not significant, but the transformed variable was correlated with education, $F = 5.34 (1, 179), p = .02$. Educated individuals listened to talk radio more and were more open to being trained in a non-native dialect. This is consistent with the information-processing theory, which maintains that processing an unfamiliar language requires cognitive resources to be diverted from processing information. Less-educated individuals listened to less radio, and consequently have been less able to process different
dialects easily. More highly educated individuals would require less cognitive resources and would have greater familiarity with other dialects from listening to talk radio.

**Same-dialect training and rating of organizational attractiveness (Hypothesis 4)**

The last hypothesis examined the degree to which participants rated as attractive an organization that would provide training in their native dialect. The average rating of organizational attractiveness was $\bar{X} = 3.82$, $SD = 1.61$ indicating that participants indeed rated as highly attractive an organization that provided training in their native Spanish dialect. This was one of the last questions asked in the study. By the time participants reached this question, the saliency of their ethnic identity should have been activated, for example, by the question regarding Puerto Ricans’ presence in the local community, exposure to the narrator’s dialect, previous questions asking about ethnic group membership, and two immediately preceding questions asking participants to rate the attractiveness of organizations in which fellow employees and supervisors spoke the same dialect. The most probable explanation is that, consistent with Social Identity Theory (see Tajfel, 1978), participants were expressing an in-group bias, that is, a tendency to prefer one’s subgroup to other groups. Unfortunately, because of practical limitations, it was not possible to ask additional questions that might have identified the motivation for preferring one’s native dialect.

As discussed earlier, this study showed that the effect of same-dialect training on cognitive outcomes such as learning is small. However, the results also show that 119 out of 188 participants (63%) expressed a clear affective preference toward same-dialect training by endorsing the *Strongly Agree* and *Agree* response options rating the attractiveness of an organization that offered same-dialect training. Only 42 participants (22.3%) endorsed the
Disagree or Strongly Disagree options. Whatever the reason for the preference, it was a strong one.

**Implications for Theory**

According to cognitive information-processing theory (see Kahneman, 1973; Mayer, Sobko, & Mautone, 2003), individuals have a limited amount of working memory, which in turn limits their ability to process information while performing tasks. As a result, individuals are able to attend to only a few aspects of any situation. When individuals are required to process more information than their working memory can accommodate, they experience cognitive load from the need to split their attention. The first set of hypotheses that examined the relationship between training language condition and learning scores found very limited support for this theory. However, it may be that the training content was too easy, and participants were not engaging their entire cognitive resources to process the data. The majority of participants were female (129 or 69%) and women are traditionally responsible for health-related issues in the family. Moreover, mothers typically are involved in arranging for vaccinations for their school-aged children. As a result, the women in the study may already have been familiar with the main principles of vaccination. As a result, they would not have experienced cognitive load if trying to process an unfamiliar dialect.

According to Social Identity Theory (SIT) (Tajfel, 1978; Tajfel & Turner, 1986), members of a minority group will feel stronger attraction toward and liking for members of their own in-group than for members of the outgroup. Individuals prefer others similar to themselves more than they like or prefer others who are dissimilar (Tajfel). This feeling of ingroup bias is especially likely when an individual’s group is small and is of lower status than the outgroup.
(Ellemers, Van Rijswijk, Roefs, & Simons, 1997). Research has shown that the same-group attraction extends to liking for one’s own native dialect (see Ryan & Sebastian, 1980). However, the hypothesized relationship between ratings of satisfaction with the training and matching of ethnic background and training condition (that is, Mexicans in the Mexican condition) was not supported. Severe restriction of range in the dependent variable may explain the lack of a relationship. Furthermore, participants were asked to give an overall rating of satisfaction for the training. Greater variability might have been found if more precise questions (such as satisfaction with the narrator’s dialect) had been asked. In any case, the participants did express a clear affective preference for same-dialect training, which supports the tenets of Social Identity Theory (SIT) (see Tajfel, 1978).

**Practical Implications**

Although statistically significant differences were found indicating that level of education and language dialect interacted to influence learning scores for Mexicans, the effect sizes were small. They were so small that inferring practical significance is problematic. For such small effect sizes, it would be unlikely than any organization could justify incurring the expense of identifying dialect speakers and having them present focused training to members of a particular Hispanic subgroup. Nor is it feasible for an organization to deliver training in the dialects of all of its Spanish-speaking employees given that there are 22 countries in which Spanish is the dominant language. An important consideration for employers is that the study findings show that more highly educated individuals have less preference for same-dialect training. For organizations that employ a less-educated workforce, it may be that the additional cost of
tailored language training would result in improved training outcomes as well as greater affective results.

However, participants in this study did clearly indicate their preference for organizations that offer same-dialect training. Instead of offering all training in a particular dialect, organizations might find it feasible to provide tailored, short training segments on materials through which individuals experience key interactions with the organization. For example, prospective applicants and new hires are searching for information about an organization when reviewing recruitment or orientation materials (see Chapman, Uggerslev, Carroll, Piasentin, & Jones, 2005).

Another option for organizations to recognize that much organizational training is informally delivered “on-the-job” (OTJ). Therefore, if organizations have large concentrations of employees who belong to particular Hispanic subgroups, they could arrange for members of the same Hispanic subgroup to be assigned as peer mentors or “buddies” to the new hires (see Carrington, 2004).

**Implications for Future Research**

This study was conducted in order to investigate empirically whether delivering training to Spanish speakers in standard Spanish would maximize training outcomes. As discussed in an earlier section of this paper, many Spanish speakers interpret “standard Spanish” to mean Castilian Spanish, although sociolinguists define standard Spanish as the most formal register of Spanish. The most formal register of Spanish is associated with correct grammar and a higher vocabulary level than that of either the informal or colloquial register (see Sizemore & Reynolds-
Diaz, 2000). When asked if they understood the Castilian dialect, 93.9% of all participants endorsed the strongly agree and agree response options.

The results of this study may be generalizable to all other Hispanic subgroups. However, future research that replicates this study with training being delivered in the dialects of other ethnic groups (for example, Puerto Rican) is encouraged.

Future research should investigate the specific reasons that Spanish-speaking individuals prefer to be trained by someone who speaks their native dialect. It might be that participants engaged in some cognitive analysis regarding the probable organizational culture toward promoting employee morale; that is, if the organization were willing to accommodate employees on the issues of training delivery, it might be equally likely to engage in other pro-employee procedures. It might be because same-dialect accent is easier to understand, that subconscious feelings of comfort and familiarity are induced, or it may be that individuals are aware of the effort required to process a dissimilar dialect. For example, after one presentation of the study, respondents discussed among themselves that the Spanish language can be understood by all Spanish speakers, although there are differences in dialect. They agreed that it made no difference to comprehension of the conversation. However, after several questions on other topics had been addressed, the researcher asked whether they would prefer being trained in their own dialect. In complete accordance, they agreed they would. When queried as to why, they responded that it was easier to learn in one’s own dialect, because it didn’t take as much effort to understand the speaker.

Another area for future research is to investigate at what point Spanish speakers who have learned English are ready to be trained in English. How much English fluency is required for training outcomes (for example, in the form of learning scores) to be maximized? The
consequences for some jobs, e.g., construction, can be fatal if Spanish speakers do not understand training delivered in English and are unwilling to ask for clarification, for example, of Material Safety Data (MSD) sheets or hazardous materials training. Furthermore, there may be certain types of jobs, such as call centers or technical positions, for which bilingualism is required and for which turnover is high and training is intensive and costly. In such cases, the return on training investment (see Cascio, 1991) might be higher if some or all training were not delivered in English. It may be of great practical value to determine whether delivering training to speakers whose dominant language is Spanish in Spanish may result in faster training or better learning outcomes.

The projected demographic changes in the workplace require ongoing research related to diversity issues. For example, more research should be conducted to investigate the degree to which Spanish-speaking employees are affected in general by the acceptance or prohibition of Spanish in an English-dominant workplace. English-only rules in the workplace continue to be a source of litigation for employers. Determining the individual differences characteristics of employees who prefer same-language interactions might help organizations protect themselves against future litigation while improving employee morale.

**Limitations**

This study was limited to two training conditions: standard Spanish dialect and Mexican Spanish dialect. The need for future studies delivered in different Spanish dialects is discussed in the future research section of this paper.

The findings from this research can reasonably be expected to generalize to non-Mexican, Spanish-speaking immigrants who receive training delivered via a narrated
presentation with responses collected on paper-and-pen questionnaires. However, other threats to 
generalizability exist. For example, in a short training session such as the one proposed in this 
study, a limitation to generalizability is that participants may rely more on short-term memory
and rehearsal to learn rather than cognitive learning strategies. As a result, future studies might 
find that learning scores in longer training sessions were much lower. Another possible 
limitation to generalizability is that the training material in this session is health related, not job-
related. Working individuals or job applicants may experience higher motivation to acquire job-
related information.

Although the findings of this study were discussed earlier in relation to organizational 
settings, no direct employee-employer links were established. Therefore, drawing strong 
conclusions about the role of same-dialect training for employee retention or attraction is 
problematic. In addition, the training topic, vaccinations, was health related and not job or work 
related. It may be that different results would have been found if the study has been 
administered to actual employees and the topic had been directly work related. A final limitation 
is that the training topic was delivered verbally as a measure of cognitive information-processing 
limitations associated with auditory processing of information. It may be that training that is 
more hands-on or kinesthetic or that is presented through figures or animation would be less 
affected by delivery dialect.

If possible, sample groups should be taken from the population of interest or sample 
groups should be highly similar (Kerlinger & Lee, 2000). For this study, participants were 
drawn mainly from the pool of Central Florida Limited-English Proficiency (LEP) or English as 
a Second Language (ESOL) classes. Members of the target population (Spanish-speakers) are 
heavily represented in those classes. The classes were sponsored by various sources: local
County Adult Education Programs, religious organizations, Migrant Education programs, and literacy agencies. In addition, 18 participants were students from a health class offered by a local non-profit Hispanic organization that provides individual counseling and group classes to Spanish speakers on a variety of topics (e.g., job hunting). To join any of these classes, individuals must proactively seek out and meet the requirements of the sponsoring agency. Such individuals may differ in fundamental ways from other Spanish speakers who do not attend LEP or ESOL classes. They may differ on socioeconomic, cognitive, or motivational factors. For example, non-students a) may not be interested in learning English, b) may not have the childcare or financial resources to attend the classes, c) may have work or family conflicts that prevent them from attending the classes, or d) may lack cognitive ability or achievement drive necessary to succeed in such classes. Individuals enrolled in classes have demonstrated initiative by finding and engaging in such training opportunities. The findings of this study may not generalize to Spanish speakers who differ in some way from these students.

Another limitation of this study is the length of training. The actual training content was delivered in approximately eight minutes, consistent with the recommendations of Doak, Doak, and Root (1996). It is possible that greater group differences would have been found with longer training sessions, which place a greater cognitive load on participants. Further, every effort was made to repeat key training points at least once during the delivery, which would have reinforced the content to the participant. A greater effect might also be found if training content contained more, non-redundant information (see Kubeck, Delp, Haslett, & McDaniel, 1996).
CONCLUSION

This study found only a very slight effect of the impact of delivering training in a native dialect on learning scores. However, participants expressed a clear preference toward organizations that offer training in their native dialect. Future studies in which stronger links between language delivery and workplace outcomes are created are encouraged.
Table 13  
*Glossary of Terms*

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dialect</td>
<td>“A regional variety of language distinguished by features of vocabulary, grammar, and pronunciation from other regional varieties and constituting together with them a single language” (Merriam-Webster, 2004). Term referring to a language variety associated with a particular group, e.g., Mexican Spanish (Valdes &amp; Geoffrion-Vinci, 1998).</td>
</tr>
<tr>
<td>English-dominant bilinguals</td>
<td>Those who usually speak English, but who also speak Spanish regularly (Veltman, 1988).</td>
</tr>
<tr>
<td>English monolinguals</td>
<td>Those who do not speak Spanish “often” (Veltman, 1988).</td>
</tr>
<tr>
<td>Ethnic identity</td>
<td>“A person’s knowledge of his or her membership in a social group and the value and emotional significance attached to that membership” (Phinney, 1992, p. 156).</td>
</tr>
<tr>
<td>Hispanic</td>
<td>Individuals who classify themselves in one of the following Hispanic or Latino categories: Mexican, Puerto Rican, or Cuban, or other Spanish, Hispanic, or Latin (Hispanic origin, 2000).</td>
</tr>
<tr>
<td>Latino</td>
<td>Refers to individuals of Latin or Central American descent.</td>
</tr>
<tr>
<td>Limited English Proficiency (LEP)</td>
<td>A term used to describe individuals who are learning to speak English.</td>
</tr>
<tr>
<td>Matched-guise technique</td>
<td>One speaker simulates all of the accents being presented to participants in order to eliminate regionally idiosyncratic accent features (e.g., volume, intonation) (Bottriell &amp; Johnson, 1985).</td>
</tr>
<tr>
<td>Morphology</td>
<td>Description of language word formation (e.g., compounding, inflection, derivation) (Merriam-Webster Online Dictionary, 2004).</td>
</tr>
<tr>
<td>Received pronunciation (RP)</td>
<td>Most upper-class accent in England (Bottriell &amp; Johnson, 1985).</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Register</td>
<td>Refers to different varieties of a language used in specific situational contexts, e.g., formal or high-level (suitable for academic or administrative use), informal or mid-level (suitable for TV news and popular writings such as newspaper), and slang or low-level (suitable for casual conversation) registers used within the Mexican Spanish dialect (Valdes &amp; Geoffrion-Vinci, 1998).</td>
</tr>
<tr>
<td>Semantic</td>
<td>Relating to meaning in language (Merriam-Webster Online Dictionary, 2004).</td>
</tr>
<tr>
<td>Spanish-dominant bilinguals</td>
<td>Those who “usually” speak Spanish and “often” speak English (Veltman, 1988).</td>
</tr>
<tr>
<td>Spanish monolingual</td>
<td>Those whose mother tongue is Spanish and who self-report that they do not “often speak English” (Veltman, 1988).</td>
</tr>
<tr>
<td>Standard Spanish</td>
<td>Formal Spanish.</td>
</tr>
<tr>
<td>Style</td>
<td>Language used in specific social situation (Davidhizar &amp; Brownson, 1999) (See register.).</td>
</tr>
<tr>
<td>Suprasegmental</td>
<td>Language features, (including timing, loudness, and pitch) that occur across sentences, phrases, and words (Harris, Sturm, Klassen, &amp; Bechtold, 1986).</td>
</tr>
<tr>
<td>Syntax</td>
<td>Part of grammar that deals with the manner linguistic elements (i.e., words) are joined to form phrases or clauses (Merriam-Webster Online Dictionary, 2004).</td>
</tr>
<tr>
<td>Vernacular</td>
<td>Nonstandard dialect or language of a country, region, or place (Merriam-Webster Online Dictionary, 2004).</td>
</tr>
</tbody>
</table>
APPENDIX B: PRACTICE FORM
### Practice form

Please make a cross on the face that shows your answer.

<table>
<thead>
<tr>
<th>NO</th>
<th>SI</th>
<th>1. I speak Spanish.</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Cross" /></td>
<td><img src="image" alt="Face" /></td>
<td><img src="image" alt="Face" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NO</th>
<th>SI</th>
<th>2. I speak English.</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Cross" /></td>
<td><img src="image" alt="Face" /></td>
<td><img src="image" alt="Face" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NO</th>
<th>SI</th>
<th>3. There are many Puerto Ricans in Central Florida.</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Cross" /></td>
<td><img src="image" alt="Face" /></td>
<td><img src="image" alt="Face" /></td>
</tr>
</tbody>
</table>
Usted marcará con un equis el círculo correspondiente con la respuesta deseada.

<table>
<thead>
<tr>
<th>NO</th>
<th>SI</th>
</tr>
</thead>
</table>
### Questions about the training

<table>
<thead>
<tr>
<th>False</th>
<th>True</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><img src="false.jpg" alt="False" /></td>
<td><img src="true.jpg" alt="True" /></td>
</tr>
<tr>
<td>1. Only babies need vaccinations.</td>
<td></td>
</tr>
<tr>
<td><img src="false.jpg" alt="False" /></td>
<td><img src="true.jpg" alt="True" /></td>
</tr>
<tr>
<td>2. Diseases can spread very easily.</td>
<td></td>
</tr>
<tr>
<td><img src="false.jpg" alt="False" /></td>
<td><img src="true.jpg" alt="True" /></td>
</tr>
<tr>
<td>3. The idea behind vaccination is to give you immunity to a disease before it has a chance to make you sick.</td>
<td></td>
</tr>
<tr>
<td><img src="false.jpg" alt="False" /></td>
<td><img src="true.jpg" alt="True" /></td>
</tr>
<tr>
<td>4. Vaccines are made from the same germs that cause the disease.</td>
<td></td>
</tr>
<tr>
<td><img src="false.jpg" alt="False" /></td>
<td><img src="true.jpg" alt="True" /></td>
</tr>
<tr>
<td>5. With vaccines you have to get sick first to get protection against future infections.</td>
<td></td>
</tr>
<tr>
<td><img src="false.jpg" alt="False" /></td>
<td><img src="true.jpg" alt="True" /></td>
</tr>
<tr>
<td>6. All children need to be immunized before they are three years old.</td>
<td></td>
</tr>
<tr>
<td><img src="false.jpg" alt="False" /></td>
<td><img src="true.jpg" alt="True" /></td>
</tr>
<tr>
<td>7. Immunization is something almost everybody needs throughout their lives.</td>
<td></td>
</tr>
<tr>
<td><img src="false.jpg" alt="False" /></td>
<td><img src="true.jpg" alt="True" /></td>
</tr>
<tr>
<td>8. Shots are very safe, but they are not perfect.</td>
<td></td>
</tr>
<tr>
<td><img src="false.jpg" alt="False" /></td>
<td><img src="true.jpg" alt="True" /></td>
</tr>
</tbody>
</table>
| 9. Overall, I am satisfied with the training. | ```NO
[ ☹️ ☻ ☺ ☀️ ]
Yes```
### Unas preguntas sobre el seminario

<table>
<thead>
<tr>
<th>Falso</th>
<th>Cierto</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Falso" /> <img src="image2" alt="Falso" /></td>
<td>1. Sólo los bebés necesitan vacunas.</td>
</tr>
<tr>
<td><img src="image1" alt="Falso" /> <img src="image2" alt="Falso" /></td>
<td>2. Los virus se pueden contraer con facilidad.</td>
</tr>
<tr>
<td><img src="image1" alt="Falso" /> <img src="image2" alt="Falso" /></td>
<td>3. El principio de la vacunación es proporcionar inmunidad contra una enfermedad antes de que la misma se contraiga.</td>
</tr>
<tr>
<td><img src="image1" alt="Falso" /> <img src="image2" alt="Falso" /></td>
<td>4. Las vacunas se fabrican con los mismos gérmenes que causan la enfermedad.</td>
</tr>
<tr>
<td><img src="image1" alt="Falso" /> <img src="image2" alt="Falso" /></td>
<td>5. Gracias a las vacunas, usted tiene que contraer la enfermedad para adquirir inmunidad ante las infecciones futuras.</td>
</tr>
<tr>
<td><img src="image1" alt="Falso" /> <img src="image2" alt="Falso" /></td>
<td>6. Todos los niños deben recibir vacunas antes de los tres años de edad.</td>
</tr>
<tr>
<td><img src="image1" alt="Falso" /> <img src="image2" alt="Falso" /></td>
<td>7. La inmunización es algo que casi todas las personas necesitan.</td>
</tr>
<tr>
<td><img src="image1" alt="Falso" /> <img src="image2" alt="Falso" /></td>
<td>8. Las vacunas son muy seguras, pero no son perfectas.</td>
</tr>
</tbody>
</table>

| NO | SI | 9. En total, el entrenamiento es bueno. |
APPENDIX D: DEMOGRAPHIC AND OTHER QUESTIONNAIRE
Some questions about you

<table>
<thead>
<tr>
<th>Years</th>
<th>1. How old are you?</th>
</tr>
</thead>
<tbody>
<tr>
<td>_______ years</td>
<td>2. How many years of formal school have you had? (What was the last grade you finished in school?)</td>
</tr>
<tr>
<td>_______ hours</td>
<td>3. About how many hours per week do you listen to Talk Radio?</td>
</tr>
<tr>
<td>_______ years</td>
<td>4. How many years have you lived in the U.S. (not including time in Puerto Rico)?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>5. Are you A. Puerto Rican, B. Cuban, C. Mexican, D. Other?</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>6. Would you most like to be trained by someone speaking in the a) Castilian dialect, b) Puerto Rican dialect, c) Cuban dialect, d) Mexican dialect, e) Other dialect?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NO</th>
<th>SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. I would most prefer to work in a place where other employees speak my native dialect.</td>
<td></td>
</tr>
<tr>
<td>8. I would most prefer to work in a place where the supervisors speak my native dialect.</td>
<td></td>
</tr>
<tr>
<td>9. I would most prefer to work in a place where trainers speak my native dialect.</td>
<td></td>
</tr>
<tr>
<td>10. The narrator seems to be well educated.</td>
<td></td>
</tr>
<tr>
<td>11. The narrator seems kind.</td>
<td></td>
</tr>
<tr>
<td>12. The style of speech used seems too casual for this training.</td>
<td></td>
</tr>
<tr>
<td>13. The style of speech used seems appropriate for this training.</td>
<td></td>
</tr>
<tr>
<td>14. The style of speech used seems too formal for this training.</td>
<td></td>
</tr>
</tbody>
</table>
### More questions about you

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
<th>1. Are you female or male?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO</td>
<td>SI</td>
<td></td>
</tr>
<tr>
<td>☢️</td>
<td>☺️</td>
<td>☺️</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>NO</th>
<th>SI</th>
<th>2. Do you understand the Castilian idiom?</th>
</tr>
</thead>
<tbody>
<tr>
<td>☢️</td>
<td>☺️</td>
<td>☺️</td>
<td></td>
</tr>
</tbody>
</table>
### Unas preguntas con respecto a usted

<table>
<thead>
<tr>
<th></th>
<th>1. ¿Cuántos años tiene usted?</th>
</tr>
</thead>
<tbody>
<tr>
<td>años</td>
<td></td>
</tr>
<tr>
<td>años</td>
<td>2. ¿Cuántos años de educación tiene usted? (o indique hasta que grado fue a la escuela)</td>
</tr>
<tr>
<td>horas</td>
<td>3. ¿Cuántas horas a la semana escucha programas de radio (no de música)?</td>
</tr>
<tr>
<td>años</td>
<td>4. ¿Cuántos años lleva viviendo en los Estados Unidos (no incluyendo tiempo en Puerto Rico)?</td>
</tr>
<tr>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>E</td>
<td>F</td>
</tr>
</tbody>
</table>

5. ¿Es usted: a.) Puertorriqueño, b.) Cubano, c.) Mexicano, d.) Otro?

6. Yo prefiero recibir entrenamiento en el siguiente dialecto a) Castellano (Español), b) Puertorriqueño, c) Mexicano, d) Cubano, e) Otro

<table>
<thead>
<tr>
<th>NO</th>
<th>SI</th>
</tr>
</thead>
</table>

7. Preferiría trabajar en un sitio en el cual los otros empleados hablan su mismo idioma.

8. Preferiría trabajar en un sitio en el cual los supervisores hablan su mismo dialecto.

9. Sería mejor trabajar en una organización en la cual los instructores hablan español utilizando su mismo dialecto.

10. El narrador me parece una persona con un nivel alto de educación.


12. El estilo de hablar utilizado me pareció demasiado casual para este seminario.

13. El estilo de hablar utilizado fue adecuado para este seminario.

14. El estilo de hablar utilizado fue demasiado formal para este seminario.
<table>
<thead>
<tr>
<th>Femenino</th>
<th>Masculino</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NO</strong></td>
<td><strong>SI</strong></td>
</tr>
</tbody>
</table>

1. ¿Su sexo es femenino o masculino?

2. ¿Comprende usted el idioma castellano?
APPENDIX E: FOCUS GROUP QUESTIONNAIRE
A formative evaluation occurred during the development of the training presentations. The purpose of the focus group will be to obtain feedback from participants similar to the target participants about proposed content or format features, and to determine whether any are confusing to participants (see Doak, Doak, & Root, 1996). The goal will be to correct misunderstood or unaccepted features. The session will be audiotaped for later analysis. The session will last 1-2 hours. The required materials include the following: computer with external speakers, PowerPoint projector equipment, forms, pencils, tape recorder & tapes, gifts, handouts, job aids (i.e., demonstration materials).

The content, graphics, and presentation will be discussed during the focus group meeting. Questions will be asked about the flow, presentation speed, usefulness of the material, and understandability, quality, and effectiveness of the material and graphics (Doak et al., 1996, Jantz, Anderson, & Gould, 2002). Participants will also be asked what they liked and did not like, what they most remembered, suggestions for improvement, and comments. The information will be elicited via open-ended questions.

Doak, Doak, and Root (1996) offered a number of suggestions. For example, researchers should follow the script closely, and not interrupt the participants. They also recommended spending approximately 15-20 minutes with the participants, and opined that about 10-15 questions should be asked. For evaluating multimedia presentations, they suggested using neutral, open-ended questions in a small group session, with a maximum of 8-10 participants. Sentences should be kept short, and the flow of the questions should follow the presentation (Doak et al.).

Below are listed the questions will be asked after the format of the study has been explained (for training purpose, in PowerPoint format, using the face response format). First, the participants will discuss the presentation format, i.e., PowerPoint. Then, they will discuss the scoring form. Next, they will be asked if they noticed a difference between the dialects. Finally, they will be asked how to improve any part of the study.

**Script in English**
Hello. My name is ______. I’m working on a research study. The study is about training people like you. We want them to learn how they can stay healthy by having vaccinations. Vaccinations are shots so people won’t get some very bad diseases. This training will last about 10 minutes.

We want this training to be useful. Would you please watch the training presentation? When you’ve finished, we would like to ask you some questions to see if we got the important points across. This study can still be changed, so your help can make this study better. There are no right or wrong answers. Will you please help us? Do you have any questions?

**Items in English**

*Reviewing content*
1. Tell me in your own words, what is this all about? *(to elicit main theme or purpose)*
2. Some words are hard to understand. What words were hard for you?

*Reviewing value of the training*
3. Do you think vaccinations are important for you? For other people?
4. What did you learn from the training?
   **Reviewing PowerPoint presentation**
5. Using a computer makes it easy to train many people. But, some people won’t like it.
   Why do you think they won’t like it?
6. Did you like it? Why or why not?
   **Reviewing narrators & sound**
7. Was the sound loud enough?
8. Did the speakers talk too slow, too fast, or about right?
9. Did you notice a difference between the way the speakers talked? *(If the answer is
   “No”, there’s a problem with the manipulation.)*
10. Could you understand the speakers’ accent?
11. Where do you think the first speaker was from?
12. Where do you think the second speaker was from? *(They should reply “Mexico or
    peninsular Spain”).*
   **Reviewing graphics**
13. What did you think about the pictures? Were they nice to look at?
   **Reviewing questionnaires**
14. Is there a better way to ask any of the questions? What is it?
   **Reviewing response form**
15. Now let’s talk about the answer form. Was the answer form easy to use?
   **Overall review**
16. What did you like about the study?
17. What didn’t you like about this study?
18. What would you change in this study if you could?
19. What would make this study easier to understand?
20. Do you have anything else to say about the study?

**Script in Spanish**

Hola. Mi nombre es _________________. Estoy haciendo un estudio investigativo. El
estudio es sobre entrenamientos dados a personas como tú. Queremos que ellos aprendan como
pueden mantenerse saludables a través de las vacunas. Las vacuna son inyecciones que se les
ponen a las personas para que no contraigan enfermedades graves. Este entrenamiento durará 10
minutos.

Queremos que este entrenamiento sea útil. ¿Nos haría el favor de ver esta presentación?
Cuando termine, os gustaría hacerle preguntas para ver si logramos comunicarle la información
efectivamente. Este estudio puede ser modificado, así que su ayuda puede mejorarlo. No hay
respuestas correctas o erroneas. ¿Nos puede ayudar, por favor? ¿Tiene preguntas?

**Items in Spanish**

1. En sus propias palabras, ¿de qué se trató este programa, o que fue el propósito?
2. Algunas de las palabras presentadas fueron difíciles de entender. ¿Cual de las
   palabras se le hicieron a usted difícil de entender?
3. ¿Cree usted que las vacunas son importantes para su salud? ¿Y para la salud de los de
   más?
4. ¿Que aprendió usted de este programa?
5. Las computadoras nos facilitan el proceso de enseñarles a muchas personas. Pero, algunas personas no les gusta aprender usando una computadora. ¿Porque cree usted, que a estas personas no le va a gustar usar una computadora para aprender?
6. ¿A usted le gustó el sistema? ¿Porque?
7. ¿El volumen estuvo al nivel adecuado para entender lo que fue presentado?
8. ¿Los presentadores hablaron a una velocidad adecuada para entender la información?
9. ¿Notó usted una diferencia en la manera que hablaron los presentadores?
10. ¿Pudo usted entender los acentos de los presentadores?
11. ¿De que origen cree usted que es el primer presentador?
12. ¿De que origen cree usted que es el segundo presentador?
13. ¿Que opina usted de las fotos presentadas? ¿Eran agradables ver estas fotos?
15. En respecto a la forma usada para contestar las preguntas, ¿fue fácil de utilizar?
16. ¿Cuáles aspectos del estudio a usted más le gustaron?
17. ¿Y cuáles aspectos del estudio a usted menos le gustaron?
18. ¿Que cambiaría usted si fuera posible?
19. ¿Que nos recomendaría para facilitar el entendimiento del material?
20. ¿Nos puede recomendar o nos puede comentar algo más al respecto al estudio?

Scoring Instructions
After the responses have been transcribed, they will be analyzed for patterns (Doak et al., 1996). Any problems will be into categories and then reviewed for importance in terms of the participants’ understanding and the research question (Doak et al.).
APPENDIX F: PILOT STUDY QUESTIONNAIRE
These questions will be asked after every major part of the presentation. The self-running timing of the show will be adjusted so that there is a break after each main section of the presentation. Each slide will be numbered for easy reference. A worksheet listing each slide will be created on which to record answers. The session will also be audiotaped for later analysis. Participation will be voluntary.

Participants will be told that the experimenters are interested in the participants’ feelings about how to improve the study, and that there are no “right” or “wrong” answers (except for the knowledge test answers). They will be encouraged to ask questions before and after the presentation.

**Items in English**

*After each major section*
1. Did this section of the study make sense to you?
2. What did you like about this section?
3. What didn’t you like about this section?
4. What would make this section easier to understand?
5. Did you have enough time to answer each question? Did you feel rushed?

*After the study*
6. Does the study make sense to you?
7. What do you think the study was about? *(What we want is for them not to guess that the purpose concerned training in different accents.)*
8. What would you change in this study if you could?
9. What would make this training easier to understand?
10. Did you like being trained this way, with a PowerPoint presentation?
11. Would you rather take training in standard (castellano), Mexican or Puerto Rican Spanish? Why? Is it easier, better quality, or more familiar?
12. Which language is easier for you to understand?
13. Which language do you think you would learn better in?

**Script in Spanish**

**Items in Spanish**

1. ¿Entendió esta parte del estudio?
2. ¿Qué le gustó de esta parte?
3. ¿Qué no le gustó de esta parte?
4. ¿Nos puede recomendar algo para facilitar el entendimiento de esta parte?
5. ¿Tuvo usted tiempo adecuado para responder a las preguntas? ¿Se sintió apurado/a?
6. ¿Entendió esta parte del estudio?
7. ¿De que se trató este estudio?
8. ¿Qué cambiaría usted si fuera posible?
9. ¿Qué haría usted para facilitar el entendimiento del material?
10. ¿Nos recomendaría para facilitar el entendimiento del material?
11. ¿A usted le gustó recibir este seminario presentado por la computadora (usando el programa de PowerPoint)?
12. ¿Prefiere usted recibir información presentado por un hablante castellano, mejicano, o puertorriqueño? ¿Porque? ¿Se le hace más fácil de entender, es de mejor calidad, o suena más familiar?
13. ¿En cual idioma se le hace más fácil de entender la información presentada?
14. ¿En cual idioma se le hace más fácil de aprender?

**Scoring Instructions**

The post-session qualitative analysis will consist of identifying and categorizing problems and deciding how drastically they affect the goals of the study. Then, appropriate changes will be made.

The experimenter will determine if learning occurred (post-training learning scores), if participants could use the scoring forms successfully, that the narrator speed and speech was comprehensible, and that narrator dialect differences were apparent to participants.
Knowledge test

The training session will be followed by a posttest that will consist of an 8-item true-or-false knowledge quiz.

Items in English

1. Only babies need vaccinations.
2. Diseases can spread very easily.
3. Vaccinations give immunity to a disease before it can make you sick.
4. Vaccines are made from the same germs that cause the disease.
5. With vaccines you have to get sick first to get protection against future infections.
6. All children need to be immunized before they are three years old.
7. Immunization is something almost everybody needs throughout their lives.
8. Shots are very safe, but they are not perfect.

Items in Spanish

9. Sólo los bebes necesitan vacunas.
10. Los virus se pueden pegar con facilidad.
11. La vacunación se contrae inmunidad contra una enfermedad antes de que la misma se contraiga.
12. Las vacunas se fabrican con los mismos gérmenes que causan la enfermedad.
13. Gracias a las vacunas, usted tiene que contraer la enfermedad para adquirir inmunidad ante las infecciones futuras.
14. Todos los niños deben recibir vacunas antes de los tres años de edad.
15. La inmunización es algo que casi todas las personas necesitan.
16. Las vacunas son muy seguras, pero no son perfectas.

Scoring Instructions

The number of correct items will be added for a total learning score. The maximum score is 8 and the minimum score is 0.

Satisfaction with training

One item will measure a participant’s overall satisfaction with the training.

Items in English

1. Overall, I am satisfied with the training.

Items in Spanish

2. En total, el entretenimiento es bueno.

Scoring Instructions

The number of points per item (1-5) will indicate the total satisfaction score. The minimum score is 1; the maximum score is 5.

Demographic questions

This questionnaire will collect demographic information from the participants.

Items in English

1. Are you A. Puerto Rican, B. Cuban, C. Mexican, E. Other?
2. How old are you?
3. How many years of formal school have you had? (What was the last grade you finished in school?) (Note: need blank on answer form to answer.)
4. About how many hours do you listen to Talk Radio during the week?
5. How many years have you lived in the U.S.?
6. What is your gender ___ female or ___ male?
7. Do you understand Castilian Spanish?

**Items in Spanish**
1. ¿Es usted: A. Puertorriqueño, B. Cubano, C. Mejicano, E. Otro?
2. ¿Cuántos años tiene usted?
3. ¿Cuántos años de educación usted tiene? (o indique grados alcanzados) _____
4. Cuantas horas a la semana dedica usted a escuchar a programas de radio (no de música)? ___
5. ¿Cuántos años lleva usted viviendo en los Estados Unidos (no incluyendo tiempo en Puerto Rico)? _____
6. ¿Su sexo es femenino o masculino?
7. ¿Comprende usted el idioma castellano?

**Scoring Instructions**
N/A.

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**Preference for language of future training**

**Items in English**
1. The dialect I would most like to be trained in is a) Castilian dialect, b) Puerto Rican dialect, c) Mexican dialect, d) Other.

**Items in Spanish**
2. Yo prefiero recibir entrenamiento en el siguiente dialecto a) Castellano, b) Puertorriqueño, c) Mejicano, d) Cubano, e) Otro ________

**Scoring Instructions**
N/A.

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**Perceptions of organizational attractiveness**

**Items in English**
1. I prefer to work where other employees speak my native-dialect Spanish.
2. I would prefer to work where supervisors speak my native-dialect Spanish.
3. I would prefer to work for an organization where instructors speak my native dialect.

**Items in Spanish**
4. Preferiría trabajar en un sitio en lo cual los otros empleados hablan mi mismo idioma.
5. Preferiría trabajar en un sitio en lo cual los supervisores hablan el dialecto mío.
6. Sería mejor trabajar en una organización en la cual los instructores hablan español utilizando el dialecto mío.
Informational Letter in English

Consent to Participate in Research
University of Central Florida
Title: Training Evaluation Study
Principal Investigator: Mary P. Kosarzycki, M.B.A., M.S.
Sponsor: R. D. Pritchard, Ph.D.

You are being asked to participate in a research study.
Before we begin, we would like to make sure that you understand that this is a study and that you do not have to take part if you do not want to.

This study is a research project for University of Central Florida. The purpose of the study is to evaluate training presented using a computer (with the program PowerPoint). In this study, we will teach you about vaccinations. You will watch a 10-minute slide show while a speaker talks. We will ask you some questions before and after the training. We will ask you how to make the training better.

You will answer questions read by a narrator, marking the answers on a form that uses faces to show agreement with the questions.

The study will last about half an hour.

You do not have to answer any question(s) that you do not want to answer. You will not be uncomfortable or hurt if you take part in the study.

The only benefit to you is that you will learn about the training. You will not get anything else for taking part in this study.

We will protect your rights. We will not give out your answers to anyone; we will keep your answers locked up in a file cabinet so that no one else can see them. We will destroy your answers after three years. Do not write your name on anything. We do not want to know your name. This study is not about immigration and has nothing to do with immigration.

If you are in a class and we ask you to take part in this study, we will protect your rights. We will not give any information that could identify you to the class instructors or to anyone else. When we report data, it will be data for the entire group, not for any one individual.

Your participation in this research is voluntary, and you will not be penalized or lose benefits if you refuse to participate or decide to stop.

If you agree to participate, you will be given a copy of this information.
You may contact Mary Kosarzycki at 407-227-0669 any time you have questions about the research.

You may contact the Office of Research at the University of Central Florida at (407) 823-3778 if you have questions about your rights as a research subject.

Do you have any questions? If you agree to take part in this study, please say “Yes” now. If you do not want to take part in this study, you may leave now. Thank you.

Signature of Witness: ___________________________ Date: _____________
Para tu información
Consentimiento Para Participar en una Investigación Científica
University of Central Florida

Título: Estudio evaluativo de seminario
Investigador Principal: Mary P. Kosarzycki, M.B.A., M.S.
Patrocinador: R. D. Pritchard, Ph.D.

Lo están invitando a usted a que participe en un estudio de investigación científica.

Antes que empecemos, queremos asegurarnos que ustedes entiendan que esto es parte de un estudio y que usted sepa que su participación en el mismo es voluntaria.

Este estudio es un proyecto para la Universidad de la Florida Central. El propósito de este estudio es para evaluar la presentación de información utilizando un programa de computadora. El seminario será presentado usando el programa de PowerPoint. En este estudio, nosotros vamos a enseñarles sobre las vacunas. Usted verá una presentación que durara 10 minutos en el cual un narrador presentará la información. Nosotros vamos a hacerle unas preguntas antes y después del seminario. Vamos a preguntarles como nosotros podamos mejorar el seminario.

Usted responderá a unas preguntas presentadas por un narrador, marcando sus respuestas en una forma que utiliza unas caritas con distintas expresiones para indicar sus sentimientos al respecto a cada pregunta.

El estudio durará media hora.

Usted no está obligado/a a responder a ninguna de las preguntas si usted no lo desea. Los investigadores de la universidad no creen que este estudio le va a causar a usted estar incomodo/a ni que le vaya a causar ninguna clase de daño por su participación.

El único beneficio que usted va a recibir es que usted puede aprender algo del seminario. Usted no recibirá ningún otro beneficio por su participación.

Protegeremos sus derechos. No le daremos sus respuestas a nadie; mantendremos sus respuestas en un archivo asegurado. Después de 3 años serán destruidas. Por favor, no escriba su nombre en los formularios. Este estudio no tiene nada que ver con inmigración.

También, estaremos grabando las respuestas verbales suyas en caso que necesitemos utilizar esta información en el futuro. Las respuestas suyas solo estarán usadas para nuestro uso; todas sus respuestas estarán guardadas seguramente con cerradura por 3 años y luego destruidas. Por favor, no escriba el nombre suyo en las formas para mantener su información confidencial.

Si usted está en una clase y le estamos pidiendo que participe en este estudio, protegeremos su privacidad. No le daremos información que pueda identificarlo a su instructor ni a nadie más. Cuando reportemos los datos recaudados, lo haremos para todo el grupo, no para un individuo en particular.

Su participación en este estudio es voluntaria y no será sancionado ni perderá beneficios si se niega a participar o decide separarse.

Si usted acepta participar le entregarán una copia de este consentimiento.

Puede comunicarse con nosotros Mary Kosarzycki al 407-227-0669 siempre que tenga alguna duda acerca de esta investigación.

Puede comunicarse con el Office of Research (oficina de integridad de las investigaciones) de la Universidad de la Florida Central (UCF) en el (407) 823-3778 si tiene alguna duda acerca de sus derechos como objeto de una investigación científica, o qué es lo que debe hacer en el caso de resultar lesionado.

¿Tiene preguntas? Si usted consiente a participar en este estudio, por favor diga “sí” ahora. Si no quiere participar en este estudio puede retirarse ahora. Gracias.
APPENDIX I: STUDY SUMMARY
Study Summary

Hispanics are the largest minority group in the U.S. Most of the future immigrants to the U.S. will be Hispanic. However, many of the Hispanic immigrants will come from Mexico and have low levels of formal education. Each Hispanic country has different versions, or dialects, of the Spanish language. However, no studies have been conducted to find out whether the training in which dialect is delivered affects learning outcomes. This study is being conducted to find out if Spanish speakers learn more when they are trained in their native Spanish dialect than when they are trained in standard Spanish (Castilian dialect). This study will also examine trainees’ affective and cognitive evaluations of the training. Training will be delivered as a self-running, narrated PowerPoint presentation. Participants will answer narrated questions by marking their answers on a form with response options in a facial-expression format. The study lasts less than one hour.

Sumario del Estudio

Los ‘hispanos’ constituyen el grupo más grande de los grupos minoritarios en Estados Unidos. El mayor porcentaje de inmigrantes al USA son hispanos. Sin embargo, cada país Hispano de donde se originan estas personas tiene modos distintos dialectos of diferentes formas de hablar español. Sin embargo, ningún estudio ha sido realizado para examinar si el uso de distintos dialectos en español tiene algún efecto en los resultados de la presentación de información. Este estudio esta siendo realizado para examinar si hablantes de español aprenden más mientras la información es presentada en su dialecto nativo comparado con un dialecto castellano. También, evaluáramos las reacciones afectivas y cognitivas del seminario. El seminario será presentado usando una computadora (con el programa de PowerPoint), cual presentara la información con un narrador en una forma estandarizada y automática. Participantes responderán a unas preguntas presentadas por un narrador, marcando sus respuestas en una forma que utiliza unas caritas con distintas expresiones para indicar sus sentimientos al respeto a cada pregunta. El estudio durara menos de una hora.
APPENDIX J: INSTRUCTIONS TO NARRATORS AND EXPERIMENTERS
Instructions to Narrators
You have been given a PowerPoint file containing slides of training material text. The file is saved as either Cas.ppt or Mex.ppt. Cas indicates the Castilian version and Mex indicates the Mexican version. Each slide has a slide number located in the lower right hand corner. Using a sound recorder application, please record each slide as a separate .wav file and save it to a file named with the page number. For example, save slide one either to Cas1.wav or Mex1.wav. As appropriate, please save the .wav files to a subdirectory named either “Cas dialect” or “Mex dialect”.

Before you begin, note the specific dialect in which you will record. Spend a few minutes talking aloud in the dialect, consciously ensuring that you are using a pure dialect. Please speak clearly, enunciating well. Use the same rate of speech throughout the sessions. The entire recording session time is approximately 12 minutes.

Instructions to Experimenters
Wear a nametag with your name written in large letters. Adjust the sound before beginning the presentation. Speak slowly and distinctly. Read the script verbatim.
APPENDIX K: PRESENTATION SCRIPT IN ENGLISH
The following script is for the training topic, *The Importance of Vaccinations.*

**Experimenter Introduction**

Good day. Thank you for joining us here today. My name is _____. I am a researcher at the University of Central Florida. We are doing a study. The study is about using a computer to train people who speak Spanish. The training presentation has been recorded. When I start it, it will run by itself, like a movie. You will hear the narrator, the speaker, talk.

Before I start the show, are there any questions?

**Introduction to Show**

Welcome. Thank you for helping us by taking part in our study. This study is a research project for University of Central Florida. The purpose of the study is to evaluate training using a computer program. In this study, we will teach you about vaccinations. You will watch a 10-minute slide show while a speaker talks. We will ask you some questions before and after the training. We will ask you how to make the training better.

We are testing this training. You will like some parts of the training, but there are some parts you will not like. It is important for you to tell us what you don’t like, so that we can change it. Please help us make the training better.

The study will last about half an hour.

**Informed Consent Process**

[Narrator reads the following verbatim.]

You are being asked to participate in a research study.

Before we begin, we would like to make sure that you understand that this is a study and that you do not have to take part if you do not want to.

This study is a research project for University of Central Florida. The purpose of the study is to evaluate training presented using a computer program (with the program PowerPoint). In this study, we will teach you about vaccinations. You will watch a 10-minute slide show while a speaker talks. We will ask you some questions before and after the training. We will ask you how to make the training better.

You will answer questions read by a narrator, marking the answers on a form that uses faces to show agreement with the questions.

The study will last about half an hour.

You do not have to answer any question(s) that you do not want to answer. You will not be uncomfortable or hurt if you take part in the study.

The only benefit to you is that you will learn about the training. You will not get anything else for taking part in this study.

We will protect your rights. We will not give out your answers to anyone; we will keep your answers locked up in a file cabinet so that no one else can see them. We will destroy your answers after three years. Do not write your name on anything. We
do not want to know your name. This study is not about immigration and has nothing to do with immigration.

If you are in a class and we ask you to take part in this study, we will protect your rights. We will not give any information that could identify you to the class instructors or to anyone else. When we report data, it will be data for the entire group, not for any one individual.

Your participation in this research is voluntary, and you will not be penalized or lose benefits if you refuse to participate or decide to stop.

If you agree to participate, you will be given a copy of this information.

You may contact Mary Kosarzycki at 407-227-0669 any time you have questions about the research.

You may contact the Office of Research at the University of Central Florida at (407) 823-3778 if you have questions about your rights as a research subject.

Do you have any questions? If you agree to take part in this study, please say “Yes” now. If you do not want to take part in this study, you may leave now. Thank you.

Now, you will practice answering questions that will be read to you.

Practice Session

During the study, we will ask you to answer questions. You will answer the questions on the paper that you have been given. Each paper is a different color. Now we will explain how to answer.

We will read each question twice. You will answer by marking a circle on the form. Look at the form. Each question is numbered. Each question has five boxes for answers. Look at the faces in the boxes. The face on the left is frowning. You will mark that box if you do NOT agree with the question. The face on the right is smiling. You will mark that box if you agree with the question. The face in the middle is not smiling or frowning. You will mark it if you don’t feel strongly about the question. You will mark only one box for each question.

Let’s practice on a few questions so you can get familiar with the method. Please find the form that is printed on green paper. For each question, think about your answer. Then mark the box under the face that best shows your answer. Question 1 is “Yo hablo español.” “Yo hablo español.” If you speak Spanish, you should mark the box on the right. The second question is “Yo hablo ingles.” Question 2, “Yo hablo ingles.” If you speak English, you should mark the box on the right. But, if you don’t speak any English at all, you should mark the box on the left. If you speak only a few words of English, you should mark the second box on the left. If you speak a little English, you should mark the box in the middle.

Good. Now that we have practiced, let’s answer more questions.

[ Narrator reads the question verbatim, and then repeats it. ]

Question 3. There are many Puerto Ricans in Central Florida. Question 3. There are many Puerto Ricans in Central Florida.

Good. Now we will begin the training session. The training will teach you why vaccinations are important for your health and for your family’s health.
Training Session

Now we will begin the training session. The training will teach you why vaccinations are important for your health and for your family’s health.

[ Narrator reads training script as shown below.]

Why immunize? None of us wants to see our children get sick. If we could, we would protect them from any illness, no matter how small— even the sniffles. Now suppose you could make your child safe from some of the most deadly diseases in history. And suppose that at the same time you could also help protect your neighbors’ children and other children around the country from the same diseases.

In the U.S., vaccines have reduced or eliminated many infectious diseases that once routinely killed or harmed many infants, children, and adults. However, the viruses and bacteria that cause vaccine-preventable disease and death still exist and can be passed on to people who are not protected by vaccines. Vaccine-preventable diseases have many social and economic costs: sick children miss school and can cause parents to lose time from work. These diseases also result in doctor’s visits, hospitalizations, and even premature deaths.

Embedded “Protect Them” media clip.

Why should almost everybody be immunized? A few people cannot be immunized, and for a few others, the vaccines don’t take. These people are at a higher risk of death and disability from preventable diseases. However, if a high enough proportion of your community is immunized, transmission of diseases that are passed from person to person may be interrupted. Thus protection is provided for those who cannot, themselves, be protected by immunizations. In addition to protecting the immunized person from potentially serious diseases, vaccines protect your entire community by reducing the spread of infectious agents.

How does immunity work? You get sick when your body is invaded by germs. When measles virus enters your body it gives you measles. And so on. It is the job of your immune system to protect you from these germs. Here’s how it works: Germs enter your body and start to reproduce. Your immune system recognizes these germs as invaders from outside your body and responds by making proteins called antibodies. Antibodies have two jobs. The first is to help destroy the germs that are making you sick. Because the germs have a head start, you will already be sick by the time your immune system has produced enough antibodies to destroy them. But by eliminating the attacking germs, antibodies help you to get well. Now the antibodies start doing their second job. They remain in your bloodstream, guarding you against future infections. If the same germs ever try to infect you again—even after many years—these antibodies will come to your defense. Only now they can destroy the germs before they have a chance to make you sick. This process is called immunity. It is why most people get diseases like measles or chickenpox only once, even though they might be exposed many times during their lifetime. This is a very effective system for preventing disease. The only problem is you have to get sick before you develop immunity.

Embedded “What is Immunity?” media clip.

How do vaccines help? The idea behind vaccination is to give you immunity to a disease before it has a chance to make you sick. Vaccines are made from the same germs (or parts of them) that cause disease—measles vaccine is made from measles virus, for instance. But the germs in vaccines are either killed or weakened so they won’t make you sick. Then the vaccines containing these weakened or killed germs are introduced into your body, usually by injection.
Your immune system reacts to the vaccine the same as it would if it were being invaded by the disease – by making antibodies. The antibodies destroy the vaccine germs just as they would the disease germs. Then they stay in your body, giving you immunity. If you are ever exposed to the real disease, the antibodies will be there to protect you. Immunizations help your child’s immune system do its work. The child develops protection against future infections, the same as if he or she had been exposed to the natural disease. The good news is, with vaccines your child doesn’t have to get sick first to get that protection.

How do vaccines help babies & children? All children need to be immunized against dangerous diseases such as measles, whooping cough, and bacterial meningitis before they are two years old. Why are vaccines given at such an early age? Vaccines are given at an early age because the diseases they prevent can strike at an early age. Some diseases are far more serious or common among infants or young children.

How serious are these diseases? Any of them can kill a child. It’s easy to forget how serious they are because – thanks largely to vaccines – we don’t see them nearly as much as we used to. These diseases aren’t as common as they used to be, but they haven’t changed. They can still lead to pneumonia, choking, brain damage, heart problems, liver cancer, and blindness in children who are not immune. They still kill children every year, even in the United States. If your child is not vaccinated and is exposed to a disease germ, the child’s body may not be strong enough to fight the disease.

Why should young children be vaccinated? Infants and children need to be vaccinated because they are more likely to develop complications or die from vaccine-preventable diseases. Immunization is one of the most important things a parent can do to protect their children’s health. Today we can protect children from 12 potentially serious diseases. Failure to vaccinate may mean putting children at risk for serious diseases.

Early protection is vital. Immunization begins at birth. This early start on immunization is crucial because an infant’s immune system does not yet have the necessary defenses to fight infectious diseases. Infants and toddlers are, therefore, especially susceptible to these illnesses as well as their serious complications. Immunization is one of the most important tools we have to protect children from disease. And an adequately protected child will have completed the recommended primary series of doses by age two.

How do vaccines help adults? Immunization is a lifetime commitment. Most parents wouldn’t think of letting their children go without immunization. Yet, these very same adults, and even the parents of these adults, suffer from infectious diseases—diseases that adult immunization can easily prevent. Some are unaware that adult vaccines exist that can give them longer, healthier lives. Some think immunization is just for kids, and others are procrastinators. But when these people’s lives are damaged or cut short, far more than their families suffer. Our entire society suffers.

Which vaccines should adults receive? Influenza, Pneumococcal Tetanus, and Diphtheria (Td). Other vaccines should also be considered: Hepatitis A, Hepatitis B, Measles, Mumps, Rubella (MMR), and Chicken Pox (Varicella).

Are shots safe? Are the recommended vaccines safe? Years of testing are required, by law, before vaccines can be licensed. And once in use, they are continually monitored for safety and efficacy. These vaccines are held to the highest standard of safety; however, no medicine is 100% safe. Even a medication as common and life-saving as penicillin can cause an adverse reaction in a small number of people. Vaccines are extremely safe, and improvements for both
the vaccines and the immunization schedules are constantly being sought and implemented to make them even safer. Shots are very safe, but they are not perfect. Like any other medicine they can occasionally cause reactions. Usually these are mild, like a sore arm or a slight fever. Serious reactions are rare, but they can happen. Your doctor or nurse can discuss the risks with you before your child gets her shots. The important thing to remember is that getting the diseases is much more dangerous than getting the shots.

Vaccinations are important because they protect you health and the health of everyone in your family.

Vaccinations are a sign of love. Don’t delay. Call your healthcare provider and get your immunizations.

**Post-training Questionnaire**

Now we will ask questions about the training session. There will be questions about the training, and there will be questions about the pictures, the sound, the speakers, and other questions. Please find the yellow paper.

The questions are either true or false. If a question is true, please mark the smiling face. [show on slide] If a question is false, please mark the frowning face. [show on slide]

[Narrator reads the post-training questionnaire verbatim, repeating each question before moving to the next one. See Appendix C.]

**Demographic Questionnaire**

After the post-training questionnaire has been completed, the presentation will display slides that will transition to the final evaluation segment of the study, in which participants will be asked to respond to demographic and other measures.

Thank you. Now, we would like to ask you some questions about yourself. Please find the blue paper.

[Narrator reads the Demographic & Other questionnaire verbatim, repeating each question before moving on to the next question. See Appendix D.]

That is all the questions we have.

The narrator will provide verbally the correct responses to the knowledge test (Post-training performance feedback).

[Narrator reads each training test question and then the correct answer.] Now, we will tell you the answers to the test questions. The first question was _____. The answer is _______. The second question ....

**Debriefing**

Thank you for helping us with the study today. We will use your answers to make this training better. Also, let me tell you that one thing we are studying is if people like to hear training in their own native dialect. That’s why we asked about your ethnic background and about which training you would like in the future.
Conclusion of Study

Last slide shows words “Thank you”.

In the study completion phase, the presentation will consist of ending statements. The experimenter will end the show and again thank participants for their help. He or she will then ask if there are any questions. The experimenter will then announce that the questionnaires will be collected. The experimenter will collect forms, hand out Spanish signed consent forms and study summaries, and distribute pamphlets (patient education materials). If the room is available after the study, refreshments will be offered. The experimenter will be available to chat with any participant who expresses a desire to do so.

Thank you for your help. Are there any questions? Now we will gather up all the forms that you filled out. We will give you handouts that you can take home with you.
APPENDIX L: PRESENTATION SCRIPT IN SPANISH
One version will be narrated in the formal register of the Peninsular Castilian dialect of Spanish. One version will be narrated in the colloquial register of the Mexican dialect of Spanish.

**Experimenter Introduction**

*Buenos Días. Gracias por estar aquí en el día de hoy. Mi nombre es __________. Yo soy una investigadora de la Universidad de Central Florida. Estamos realizando un estudio examinando el uso de las computadoras para enseñarles a personas que hablan español. La presentación que les vamos a enseñar ha sido grabada. Cuando yo la empiece, la presentación va a seguir automáticamente como una película. Usted va a escuchar a los narradores hablando.*

*Antes que la empezamos, ¿hay alguna pregunta?*

**Introduction to Show**


*Estamos en el proceso de evaluar este seminario. Hay unas partes del seminario que a usted le va a gustar más que otras. Es importante que ustedes nos evalúen críticamente para mejorar el proceso de aprendizaje en el futuro.*

*El estudio durara media hora.*

*Antes que empecemos, queremos asegurarnos que ustedes entiendan que esto es parte de un estudio y que usted sepa que su participación en el mismo es voluntaria. Vamos a leerles una forma de consentimiento informado.*

*Esta forma le provee información en respecto al estudio. La forma, con su consentimiento, nos da permiso a hacerle preguntas al respecto al estudio. Usted firmara una copia de la forma de consentimiento informado para nosotros y también recibirá una copia para usted.*

*Usted no esta obligado/a a responder a ninguna de las preguntas si usted no lo desea. Los investigadores de la universidad no creen que este estudio le va a causar a usted estar incomodo/a ni que le vaya a causar ninguna clase de daño por su participación.*

*El único beneficio que usted va a recibir es que usted puede aprender algo del seminario. Usted no recibirá ningún otro beneficio por su participación.*

*También, estaremos grabando las respuestas verbales suyas en caso que necesitemos utilizar esta información en el futuro. Las respuestas suyas solo estarán usadas para nuestro uso; todas sus respuestas estarán guardadas seguramente con cerradura por 3 años y luego destruidas. Por favor, no escriba el nombre suyo en las formas para mantener su información confidencial.*
Informed Consent Process

[Narrator reads the following verbatim.]

Lo están invitando a usted a que participe en un estudio de investigación científica.

Antes que empecemos, queremos asegurarnos que ustedes entiendan que esto es parte de un estudio y que usted sepa que su participación en el mismo es voluntaria. Este estudio es un proyecto para la Universidad Central de la Florida. El propósito de este estudio es para evaluar la presentación de información utilizando un programa de computadora. El seminario será presentado usando el programa de PowerPoint. En este estudio, nosotros vamos a enseñarles sobre las vacunas. Usted vera una presentación que durara 10 minutos en el cual un narrador presentara la información. Nosotros vamos a hacerle unas preguntas antes y después del seminario. Vamos a preguntarles como nosotros podamos mejorar el seminario.

Usted responderá a unas preguntas presentadas por un narrador, marcando sus respuestas en una forma que utiliza unas caritas con distintas expresiones para indicar sus sentimientos al respeto a cada pregunta.

El estudio durara media hora.

Usted no esta obligado/a a responder a ninguna de las preguntas si usted no lo desea. Los investigadores de la universidad no creen que este estudio le va a causar a usted estar incomodo/a ni que le vaya a causar ninguna clase de daño por su participación.

El único beneficio que usted va a recibir es que usted puede aprender algo del seminario. Usted no recibirá ningún otro beneficio por su participación.

Protegeremos sus derechos. No le daremos sus respuestas a nadie; mantendremos sus respuestas en un archivo asegurado. Después de 3 años serán destruidas. Por favor, no escriba su nombre en los formularios. Este estudio no tiene nada que ver con inmigración.

También, estaremos grabando las respuestas verbales suyas en caso que necesitemos utilizar esta información en el futuro. Las respuestas suyas solo estarán usadas para nuestro uso; todas sus respuestas estarán guardadas seguramente con cerradura por 3 años y luego destruidas. Por favor, no escriba el nombre suyo en las formas para mantener su información confidencial.

Su participación en este estudio es voluntaria y no será sancionado ni perderá beneficios si se niega a participar o decide separarse.

Si usted acepta participar le entregaran una copia de este información.

Puede comunicarse con nosotros Mary Kosarzycki al 407-227-0669 siempre que tenga alguna duda acerca de esta investigación.

Puede comunicarse con la Office of Research (oficina de integridad de las investigaciones) de University of Central Florida (UCF) en el (407) 823-3778 si tiene alguna duda acerca de sus derechos como objeto de una investigación científica, o qué es lo que debe hacer en el caso de resultar lesionado.

¿Tiene preguntas? Si usted asiente a participar en este estudio, por favor diga “sí” ahora. Si no quiere participar en este estudio puede retirarse ahora. Gracias.
Practice Session

Durante el estudio, nosotros le vamos a presentar varias preguntas. Usted va a responder a las preguntas usando las formas proveídas por los investigadores. Las formas tienen distintos colores. Ahora le explicamos como contestar las preguntas.

Nosotros vamos a leer cada pregunta dos veces. Usted marcará el círculo correspondiente con la respuesta deseada. Cada pregunta es numerada, y lleva cinco cajas para sus respuestas. Mire a las caras en las cajas. La cara del lado izquierdo tiene un ceño. Usted marcará esta caja si no está de acuerdo con la información presentada. La cara del lado derecho está sonriendo. Usted marcará esta caja si usted está de acuerdo con la información presentada. La cara en el medio no tiene ninguna expresión. Usted marcará esta caja si usted no tiene ningún sentimiento en respecto a la información presentada. Usted sólo marcará una caja para cada pregunta.

Ahora practiquemos con unas preguntas para que se familiaricen ustedes con el método. Búsque la forma verde. Para cada pregunta, piense bien su respuesta. Marque la caja correspondiente a la cara que demuestra su respuesta. Pregunta 1. Yo hablo español. Si usted habla español, usted debe marcar la caja del lado derecho.

Pregunta 2. Yo hablo inglés. Si usted habla inglés, debe marcar la caja del lado derecho. Pero, si no lo habla o sólo habla unas palabras, debe marcar la caja del lado izquierdo. Si hablas un poco, debe marcar la caja del medio.

Bueno. Ahora que hemos practicado, podemos responder a mas preguntas.

Training Session

Ahora empezamos el seminario. Este seminario les enseñara sobre la importancia de las vacunas para la salud suya y para la de sus familias.

¿Por qué vacunar? A nadie le gusta que sus hijos enfermen. Si pudiéramos, los protegeríamos de cualquier enfermedad, por leve que sea -incluso de un resfrío. Ahora imagínese que usted pudiera proteger a su hijo de algunas de las enfermedades más mortales de la historia. Y suponga que al mismo tiempo pudiera también proteger a los hijos de su vecino y a otros niños en todo el país de las mismas enfermedades.

Las vacunas son un mecanismo para el control de muchas enfermedades infecciosas que en el pasado eran comunes en este país. Sin embargo, los virus y bacterias que causan enfermedades, e incluso la muerte, todavía existen (aunque pueden prevenirse mediante vacunas) y pueden ser transmitidos a aquellas personas que no están protegidas por las vacunas. Dichas enfermedades tienen un gran impacto económico y traen como consecuencia consultas médicas, hospitalizaciones y muertes prematuras. Además, las enfermedades de los niños también pueden hacer que los padres pierdan días de trabajo.
¿Por qué deben inmunizarse casi todas las personas? Unas cuantas personas no pueden inmunizarse, y en unas cuantas personas más las vacunas no funcionan. Estas personas tienen un riesgo elevado de muerte o incapacidad como resultado de enfermedades inmunoprevenibles. Sin embargo, si una proporción bastante grande de la población de la comunidad está inmunizada, la transmisión de enfermedades de persona a persona puede interrumpirse. Así que aquellas personas que no pueden ser protegidas por la vacunación son protegidas por la reducción de transmisión de enfermedades en la comunidad. Además de proteger a una persona inmunizada contra enfermedades que pueden ser graves, las vacunas protegen a todos los miembros de su comunidad al reducir la transmisión de agentes infecciosos.

¿Cómo funciona la inmunidad? Las enfermedades aparecen cuando los gérmenes invaden el cuerpo. Cuando el virus de sarampión entra al cuerpo, se contrae la enfermedad. El sistema inmunológico tiene la función de protegerle de estas enfermedades. Así es cómo funciona: Los gérmenes entran al cuerpo y empiezan a reproducirse. Su sistema inmunológico reconoce a los gérmenes como invasores del exterior del cuerpo y responde fabricando proteínas llamadas anticuerpos. Los anticuerpos tienen dos funciones. La primera es destruir a los gérmenes que causan la enfermedad. Como los gérmenes llevan ventaja, usted ya estará enfermo para el momento en que el cuerpo ha producido suficientes anticuerpos para destruir los invasores. Sin embargo, al eliminar los gérmenes que le atacan, los anticuerpos le ayudan a recuperarse. Ahora los anticuerpos comienzan a llevar a cabo su segunda función. Permanecen en el torrente sanguíneo, para protegerle contra futuras infecciones. Si los mismos gérmenes tratan de infectar su cuerpo otra vez -incluso después de muchos años- estos anticuerpos vendrán en su ayuda. Sólo que ahora pueden destruir a los gérmenes antes de que puedan producir la enfermedad. Este proceso se denomina inmunidad. Es por esta razón que la mayoría de la gente sólo sufre de enfermedades como el sarampión y la varicela una sola vez, aunque puedan estar expuestos a ellas muchas veces durante su vida. Este sistema de prevención de las enfermedades es muy efectivo. El único problema es que hay que contraer la enfermedad antes de desarrollar inmunidad.

¿Cómo ayudan las vacunas? El principio de la vacunación es proporcionar inmunidad contra una enfermedad antes de que la misma se contraiga. Las vacunas se fabrican con los mismos gérmenes (o partes de ellos) que causan la enfermedad - la vacuna contra el sarampión se fabrica con el virus de esta enfermedad, por ejemplo. Pero los gérmenes de las vacunas han sido desactivados o debilitados de manera que no transmitan la enfermedad. Luego se administra la vacuna que contiene estos gérmenes debilitados o desactivados, generalmente a través de una inyección. El sistema inmunológico reacciona ante la vacuna de la misma forma que si hubiera sido invadido por la enfermedad –produciendo anticuerpos. Los anticuerpos destruyen los gérmenes contenidos en la vacuna del mismo modo que eliminan los gérmenes de la enfermedad. Luego permanecen en el cuerpo, proporcionándole inmunidad. Si alguna vez se está expuesto a la verdadera enfermedad, los anticuerpos le protegerán. Las vacunas ayudan al sistema inmunológico de los niños a hacer su trabajo. El niño desarrolla un mecanismo de protección ante las infecciones futuras, igual que si hubiera estado expuesto a la enfermedad. Lo bueno es que gracias a las vacunas, el niño no tiene que contraer la enfermedad para adquirir inmunidad.
¿Cómo ayudan las vacunas los niños? Todos los niños deben recibir vacunas contra enfermedades peligrosas como el sarampión, la tos ferina y la meningitis bacteriana antes de los dos años de edad. ¿Por qué se administran las vacunas a una edad tan temprana? Las vacunas generalmente se administran a una edad temprana porque las enfermedades que éstas previenen pueden atacar a cualquier edad. Algunas enfermedades son mucho más graves o comunes entre los bebés o niños pequeños.

¿Qué tan graves son estas enfermedades? Cualquiera de ellas puede matar a un niño. Es fácil olvidar lo graves que son porque ahora son mucho menos frecuentes, sobre todo gracias a las vacunas. Estas enfermedades no son tan comunes como antes, pero no han cambiado. Todavía pueden provocar neumonía, asfixia, lesiones cerebrales, trastornos cardíacos, cáncer de hígado y ceguera en los niños que no tienen inmunidad. Todavía matan niños cada año, incluso en los EE.UU. Si su hijo no está vacunado y se ve expuesto al germen causante de la enfermedad, puede que su organismo no sea lo suficientemente fuerte para luchar contra ésta.

¿Por qué hay que vacunar a los bebés y a los niños de corta edad? Los bebés y los niños de corta edad necesitan vacunaciones porque corren mayor riesgo de sufrir complicaciones o morir a causa de enfermedades, que se pueden prevenir mediante las vacunas. Por esta razón, vacunar a los niños es una de las cosas más importantes que pueden hacer los padres por la salud de los niños.

La protección temprana es vital. La inmunización comienza al nacer. El empezar la inmunización temprana es crucial porque el sistema de inmunidad del niño todavía no tiene las defensas necesarias para combatir las enfermedades infecciosas. Por eso, los bebés y los niños muy pequeños son especialmente propensos a estas enfermedades igual que a sus complicaciones graves. La inmunización es una de las mejores herramientas con las que contamos para proteger a los niños contra las enfermedades. Un niño adecuadamente protegido habrá completado la serie primaria de dosis recomendadas en los primeros dos años de edad.

¿Cómo ayudan las vacunas los adultos?
La inmunización es una responsabilidad que dura toda la vida. La mayoría de los padres no dejarían a sus niños sin vacunación. Pero estos mismos adultos, e incluso hasta los padres de estos adultos, sufren de enfermedades infecciosas - enfermedades que las vacunas para adultos pueden prevenir con facilidad. Algunos adultos no saben que existen vacunas que puedan prolongar sus vidas y hacerles más saludables. Algunos piensan que la inmunización es sólo para los niños, y otros simplemente dejan que pase el tiempo sin tomar la decisión de vacunarse. Pero cuando estos adultos se lesionan o mueren como resultado de una enfermedad inmunoprevenible, no sólo sufren sus familias. También sufre toda nuestra sociedad.

¿Cuáles vacunas deben recibir los adultos? La Vacuna Contra la Influenza, La Vacuna Neumocócica, Los Toxoides Tétánico y Difterico (Td) Otras vacunas que también deben considerarse La Vacuna Contra la Hepatitis A, La Vacuna Contra la Hepatitis B, La Vacuna Triple Viral, La Vacuna Contra la Varicela

¿Son seguras las vacunas? ¿Son seguras las vacunas recomendadas? Por ley, se necesitan años de pruebas antes de que las vacunas sean autorizadas. Una vez que son utilizadas, las vacunas son controladas continuamente para asegurar su seguridad y eficacia. Estas vacunas se atienen a los más altos estándares de seguridad; sin embargo ninguna medicina es 100% segura. Aun un medicamento tan común y que salva vidas como la penicilina puede causar una reacción adversa en un número pequeño de personas. Las vacunas son extremadamente seguras y constantemente se están buscando e implementando mejoramientos.
tanto para las vacunas como para el itinerario de vacunación para hacerlas más seguras. Las vacunas son muy seguras, pero no son perfectas. Al igual que cualquier otro medicamento, a veces pueden producir reacciones secundarias. Generalmente son leves, como dolor en el brazo o un poco de fiebre. Las reacciones severas son poco frecuentes, pero pueden ocurrir. Su doctor o enfermera puede informarle de los riesgos antes de administrar las vacunas a su hijo. Es importante recordar que contraer alguna de estas enfermedades es mucho más peligroso que recibir la vacuna.

La vacunación: un gesto de amor. No lo deje para más tarde. Consulte al profesional de la salud y pida una cita para vacunar a su hijo.

**Post-training Questionnaire**

Ahora les vamos a hacer unas preguntas sobre el seminario. Hay unas preguntas que examinan el nivel de entretenimiento, y otras que examen las fotos, los sonidos, los narradores y otras preguntas. Busque la forma amarilla.

[Narrator reads the post-training questionnaire verbatim, repeating each question before moving to the next one. See Appendix C.]

**Demographic Questionnaire**

After the post-training questionnaire has been completed, the presentation will display slides that will transition to the final evaluation segment of the study, in which participants will be asked to respond to demographic and other measures.

Gracias. Ahora, vamos a preguntarles unas cosas con respecto de usted. Búsquense la forma azul.

[Narrator reads the Demographic & Other questionnaire verbatim, repeating each question before moving on to the next question. See Appendix D.]

Ya terminamos con la sección de responder a preguntas.

The narrator will provide verbally the correct responses to the knowledge test (Post-training performance feedback).

[Narrator reads each training test question and then the correct answer.] Ahora, les proveemos con las respuestas a las preguntas al examen. La primera pregunta fue ____. La respuesta es ______. ….

**Debriefing**

Gracias por ayudarnos con el estudio hoy. Utilizaremos sus respuestas para mejorar este seminario en el futuro. Además, estamos estudiando el efecto del dialecto en el proceso de aprendizaje. Es por esta razón les preguntamos sobre sus raíces étnicas y sus preferencias en el futuro mientras es presentado/a con información que le toca aprender.

**Conclusion of Study**

In the study completion phase, the presentation will consist of ending statements. The experimenter will end the show and again thank participants for their help. He or she will then ask if there are any questions. The experimenter will then announce that the questionnaires will
be collected. The experimenter will collect forms, hand out Spanish signed consent forms and study summaries, and distribute pamphlets (patient education materials). If the room is available after the study, refreshments will be offered. The experimenter will be available to chat with any participant who expresses a desire to do so.

Gracias por su ayuda. ¿Hay preguntas? Ahora recogemos todas las formas que ustedes han llenado. Les daremos unos paquetes de información para llevar.
APPENDIX M: IRB COMMITTEE APPROVAL LETTER
June 17, 2005

Mary P. Kosarzycki
3804 Becontree Place
Oviedo, FL 32765

Dear Ms. Kosarzycki:

With reference to your protocol #05-2666 entitled, “Comparing Outcomes of Training Spanish Speakers in Standard Spanish Versus Their Native Dialect,” I am enclosing for your records the approved, expedited document of the UCFIRB Form you had submitted to our office. This study was approved by the Chairman on 6/16/05. The expiration date for this study will be 6/15/06. Should there be a need to extend this study, a Continuing Review form must be submitted to the IRB Office for review by the Chairman or full IRB at least one month prior to the expiration date. This is the responsibility of the investigator. **Please notify the IRB when you have completed this study.**

Please be advised that this approval is given for one year. Should there be any addendums or administrative changes to the already approved protocol, they must also be submitted to the Board through use of the Addendum/Modification Request form. Changes should not be initiated until written IRB approval is received. Adverse events should be reported to the IRB as they occur.

Should you have any questions, please do not hesitate to call me at 407-823-2901.

Please accept our best wishes for the success of your endeavors.

Cordially,

*Barbara Ward*

Barbara Ward, CIM
IRB Coordinator

Copy: IRB file
Robert D. Pritchard, Ph.D., Department of Psychology
APPENDIX N: PERMISSION TO USE COPYRIGHTED MATERIAL
Dear Mary

Thank you for your email request. Permission is granted for you to use the material below for your thesis subject to the usual acknowledgements and on the understanding that you will reapply for permission if you wish to distribute or publish your thesis commercially.

Good luck!

Best Wishes
Zoë

Zoë Ellams (Miss)
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Posted To: 14 Nov -18 Nov
Conversation: Permission to reprint figure in doctoral dissertation
Subject: Permission to reprint figure in doctoral dissertation

3804 Becontree Place
Oviedo, FL 32765
November 14, 2005

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UK
Dear Sir or Madam:

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The excerpt to be reproduced is Figure 1: A Model of the Transfer Process on page 65.

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