

ABSTRACT

Foreign Language Teachers' Attitudes and the Benefits of Learning a Second Language

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This project analyzes foreign language teachers' attitudes towards learning a second language and the numerous student benefits associated with becoming bilingual. The scholarly research was narrowed to focus on four areas: cognitive benefits, academic benefits, cultural awareness and competency, and career opportunities. Foreign language teachers from the United States completed a survey intended to support, reject, or add additional insight to current literature on advantages from second language acquisition. Field participants included teachers from private and public universities, private and public secondary schools, and elementary schools. In most cases, the survey supported and added to the current literature on the benefits of second language acquisition.

Foreign Language Teachers' Attitudes and the Benefits of Learning a Second Language

by

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CHAPTER ONE

Introduction

The Need for Second Language Programs in the U.S.

In the fall of 2000, a study was conducted on foreign language enrollment in public secondary schools in America. The results showed that approximately one-third of seventh through twelfth grade students studied a foreign language and fewer than one-in-ten college students enrolled in a foreign language class. Approximately one percent of undergraduates studied abroad, and teacher education programs required few courses in international topics. These numbers are staggering considering the global marketplace emerging within the United States. For these reasons and so many others, second language study has emerged as a critical factor in insuring that students across America receive a holistic education that prepares them to make international contributions.

Historical Implications for Language Learning in the U.S.

Establishing programs in support of second language learning and bilingual education has been a part of the national agenda for many years. Beginning in 1968, the Bilingual Education Act (BEA) was the first piece of United States federal legislation that recognized the needs of Limited English Speaking Ability (LESA) students. More specifically, the BEA demonstrated "a shift from the notion that students should be afforded equal educational opportunity to the idea that educational policy should work to equalize academic outcomes, even if such equity means providing different learning environments" (BEA). With this legislation, two primary viewpoints emerged. In her

novel *Forked Tongue*, Rosalie Porter suggested that schools empower minority students by providing them with tools to enter the American mainstream (2). In contrast, Jim Cummins, author of *The Empowering of Minority Students*, recommended that social transformation should be the ultimate goal of schooling which could be attained through a model of bilingual education that recognized the cultural and linguistic resources in minority students. In the end, this important piece of legislation set in motion a number of laws concerning bilingual education, and as a result, hundreds of special interest groups formed which began to influence the growth of second language programs: the National Security Education Act (NSEA), Omnibus Act of 1988, and the Association of American Colleges (AAC). One group in particular, the Committee for Economic Development (CED) based out of Washington, D.C, investigated a myriad of statistics related to foreign language programs in American schools. The results were stunning. CED found that political systems and movements around the world were having a profound impact on national security. Therefore, the United States needed to increase foreign language skills and cultural awareness of students. CED concluded that America's continued global leadership depended on our students' abilities to interact with the world community both inside and outside our borders. CED also found that state high school graduation requirements often included only minimal course work in international studies and that just one percent of undergraduates studied abroad (2000). One in five U.S. manufacturing jobs were tied to exportation (10), and in 2004, 58 percent of growth in the earnings in U.S. businesses came from overseas (11). United States affiliates of foreign companies directly employed more than 5.4 million workers in the United States in 2002, and global mergers and acquisitions resulted in more U.S

companies being owned by foreign partners, such as DaimlerChrysler AG, Bertelsmann, and BP Amoco (5). Future careers in business, government, health care, and law enforcement required global knowledge and skills. U.S based multinational corporations employed 21.8 million workers in the United States in 2003, accounting for one-fifth of the total U.S. non-government employment (22). Small businesses especially needed employees with foreign language skills, as managers often connected with foreign customers; and large businesses like Coca-Cola had over 70 percent of their annual profit come from outside the United States (19).

Furthermore, a survey of large U.S. corporations found that nearly 30 percent of the companies believed that they had failed to exploit fully their international business opportunities due to insufficient personnel with international skills (2002). The consequences of poor cultural competency were the following: missed marketing or business opportunities, failure to anticipate the needs of international customers, and failure to take advantage of the expertise available or technological advances occurring abroad. Almost 80 percent of the business leaders concluded that overall business would increase if they had more internationally competent employees on staff (26).

Furthermore, the average number of languages spoken by American executives was 1.5 in 2002, compared to executives in the Netherlands who spoke an average of 3.9 languages (31). A 2004 survey of the Garvin School for International Management revealed that 80 percent of the 2,500 graduates from 1970 to 2002 reported that foreign language skills gave them a competitive advantage in the workplace. According to the 2003 national census, Hispanics comprised 13.7 percent of the U.S. population, while Asians comprised 4.1 percent (62). The Hispanic population is projected to increase by

almost 200 percent in 2050 to nearly 25 percent of the total population (63). In fact, the Census Bureau has predicted that by 2050, non-Hispanic whites will constitute only one-half of the U.S. population. Seventy-seven percent of the public believes that high school programs in the United States are not adequately preparing students to understand current international affairs (81), and less than one percent of college students study critical languages. The amount of students in higher education taking foreign language classes was between seven and nine percent; and a 1997 survey found that out of 109 MBA programs, less than one-third had foreign language instruction available (108). Overall, there is a shortage of qualified foreign language teachers that hinders the ability to develop proficient foreign language speakers. From 2000-2001, only 192 Bachelor's degrees, 265 Master's degrees, and 13 doctorates were awarded in foreign languages. The evidence is clear that foreign language is a vital piece of expanding American students' knowledge of other countries and cultures, as well as developing national, business, and political leaders who possess the ability to make informed decisions about the future. Second language acquisition is a must for the global development and security of America.

CHAPTER TWO

Literature Review: The Benefits of Learning a Second Language

Cognitive Benefits

Numerous studies have been conducted analyzing the relationship between foreign language learning and its direct effect on one's cognitive capacity. First and foremost, the American Council for Teaching Foreign Language (ACTFL) cites a number of research projects which seem to support this correlation. There is evidence that early language learning improves cognitive abilities. For example, Foster and Reeves conducted a study which examined the effects of an elementary school foreign language program on basic skills by looking at the relationship between months of elementary foreign language in French and scores on instruments designed to measure cognitive and metacognitive processes. The study included 67 sixth-grade students who were divided into four groups that differed by lengths of time in the foreign language program. There was a control group of 25 students who had no French instruction and three groups of students who had participated in the program for different lengths of time (6.5 months, 15.5 months, and 24.5 months). The students who did obtain foreign language instruction had received 30 minutes of French instruction daily after 30 minutes of basic level reading in English. The control group received an additional 30 minutes of reading instruction in place of foreign language instruction. The results of the analysis showed that the groups who received foreign language instruction scored significantly higher on tasks involving evaluation which is the highest cognitive skill according to Bloom's

taxonomy. The linear trend analysis showed that the students who had studied French the longest performed the best.

There is evidence that bilingualism correlates with increased cognitive development and abilities. Duncan examined Hispanic children in grades 1 and 3 and examined the relationship between degree of bilingualism in English and Spanish, intellectual development level, and performance on two tests of cognitive-perceptual functioning or field dependence and independence. Duncan found a positive, significant relationship between relative language proficiency and cognitive perceptual performance. Similarly, Ricciardeli conducted an investigation of the cognitive development of Italian-English bilinguals and Italian monolinguals based on measures of metalinguistic awareness, creativity, nonverbal abilities, and reading achievement. Following proficiency testing in both languages, students were assigned to groups of high and low Italian proficiency and high and low English proficiency, producing 6 groups for comparison. Results of the comparison indicated that students who demonstrated high proficiency in both English and Italian achieved higher scores on the creativity, metalinguistic awareness, and reading achievement tests.

Bilingualism and the Offset of Age-related Cognitive Losses

Research indicates there is a correlation between bilingualism and the offset of age-related cognitive losses. Bialystok attempted to determine whether there was a bilingual advantage for adults and whether bilingualism reduced the negative effects of aging on cognitive controls in older adults. Three studies were conducted comparing the achievement of monolingual and bilingual middle-age and older adults on task-oriented tests. Bialystok discovered that bilingualism was associated with smaller Simon effect

costs (theory which claims that reaction times are usually faster and more accurate when the stimulus occurs in the same relative location as the response) for both age groups. Bilingual participants responded more quickly to conditions that placed greater demands on working memory. In all cases, the bilingual advantage was greater for older participants. The brain's processing ability was increased for bilinguals, and as a result, it was concluded that bilingualism helped to offset age-related losses in certain executive processes. Furthermore, Bialystok conducted an experiment which revealed that there was a correlation between bilingualism and attention control on cognitive tasks. Sixty preschool children, half of whom were bilingual, were divided into groups of younger and older children. All the children were given a test of English proficiency and working memory (visually-cued recall tasks) to assure comparability of the groups and then administered the dimensional changing card sort task and the moving word task. The bilingual children were more advanced than the monolinguals in the solving of empirical problems requiring high levels of control.

Bilingualism and Intelligence

Research also demonstrates a correlation between bilingualism and intelligence. Peal and Lambert conducted a study exploring the relationship between learning a second language and intellectual capacity. The study utilized monolingual and bilingual groups of 10-year old children obtained from six Montreal French schools that were given verbal and nonverbal intelligence tests and measures of attitudes to the English and French communities. The study found that bilinguals performed significantly better than their monolingual controls both on the verbal and the nonverbal intelligence tests. In addition, the bilingual group possessed a more diversified set of mental abilities, and attitude

studies appeared to give the bilinguals a more favorable attitude than their monolingual peers.

Memory Skills

There is a correlation between learning a second language and memory skills. Kormi-Nouri and Moniri analyzed the episodic and semantic memory in bilingual and monolingual children. In this study, 60 (30 girls and 30 boys) bilingual and 60 (30 girls and 30 boys) monolingual children were placed into three age groups (ages 7.9-9.4, 9.7-11.4 and 11.7-13.3 yrs.) and compared on episodic memory and semantic memory tasks. Episodic memory was assessed using subject-performed tasks and verbal tasks with retrieval by both free recall and intentional recall. Semantic memory was assessed by word fluency tests. Positive effects of bilingualism were found on both episodic memory and semantic memory at all age levels. These findings suggested that bilingual children assimilated the information of two languages, and so bilingualism created advantages in terms of memory.

Problem-solving

There is a relationship between bilingualism and problem-solving ability. Stephens conducted an experiment designed to evaluate bilingualism, creativity, and social problem solving. The inquiry investigated the effects of bilingualism on the creativity and social problem-solving skills of 84 Hispanic children from Spanish-speaking homes. The subjects were students from a small city school district in the New York metropolitan area. Only students demonstrating high levels of proficiency (60% or higher on the Language Assessment Battery) were considered to be proficient in the

language being assessed. Students who demonstrated proficiency in both Spanish and English were considered “bilingual” for the purposes of the study. Those meeting the criterion in only one language were considered to be “monolingual.” The Torrance Test of Creative Thinking was administered as the measure of creativity, and the Preschool Interpersonal Problem Solving Scale was used to measure social problem-solving abilities. Progressive matrices were used to measure general cognitive ability. The results indicated that the bilingual children outperformed their monolingual peers in the area of social problem solving.

Verbal and Spatial Abilities

Learning a second language is also associated with improved verbal and spatial abilities. Diaz considered the impact of second-language learning on the development of rhetorical and structural abilities. More specifically, the study investigated the development of verbal and spatial abilities over time within a group of Spanish (L1) and English (L2) bilingual children currently attending introductory bilingual programs. The results supported the claim that bilingualism fosters the development of verbal and spatial abilities. The relationship between degree of bilingualism and cognitive abilities was especially strong for children of low second-language proficiency. Diaz designed a new threshold hypothesis which stated that variability in second-language proficiency was related to variability in cognitive measures only before a certain brink of proficiency in the second language. Finally, an experimental study examined the construct of cognitive flexibility and provided some support for the claim that the nonverbal advantages observed in bilingual children could be explained by their use of verbal mediation in the processing of nonverbal tasks.

Abstract and Creative Thinking

Similar to the research initiatives collected by ACTFL, the Connecticut State Department of Education cites a number of studies regarding world language education. In particular, the department suggests that second language study benefits higher order, abstract, and creative thinking. Bamford and Mizokawa conducted several studies indicating that individuals who learn a second language are more creative and better at solving complex problems than those who do not, while Hakuta found that language learners demonstrated more cognitive flexibility, better problem solving and higher order thinking skills. Cummins noted that foreign language study enhanced children's understanding of how language itself works and their ability to manipulate language in the service of thinking and problem solving. Similarly, Landry implied that early language study encouraged divergent thinking and figural creativity. In addition, the Connecticut State Department indicated that early second language learning enriched and enhanced cognitive development. According to Dr. Susan Curtiss, learning language is a power so great in young child that it does not matter how many languages one seems to throw their way because they can learn as many spoken languages as you allow them to hear systematically and regularly at the same time. Children have this capacity. Bialystok and Hakuta indicated that children who are exposed to a foreign language at a young age achieve higher levels of cognitive development; and language learners show greater cognitive flexibility, better problem solving, and higher order thinking skills. Bruck, Lambert, Tucker, and Weatherford examined individuals who were competent in more than one language who consistently outscored monolinguals on tests of verbal and

nonverbal intelligence. Finally, Lampkin established the concept of foreign language learners possessing better listening skills and sharper memories than monolingual peers.

Other Cognitive Benefits

Numerous other authors have pointed out the cognitive benefits of foreign language learning. According to Marcos, “some research suggests that students who receive second language instruction are more creative and better at solving complex problems than those who do not” (2). Other studies suggested that persons with full proficiency in more than one language outperformed monolingual persons on verbal and nonverbal, tests of intelligence, which leads to greater intellectual flexibility (2). In the article, “Being Bilingual Boosts Brain Power,” Miranda Hitti suggests that “people who are bilingual have an advantage....The bilingual brain develops more dense material, giving it an advantage in various abilities and skills” (1). Researchers Andrea Mechelli of London’s Wellcome Department of Imaging Neuroscience along with experts from the Fondazione Santa Lucia in Rome looked at brain densities of people who know more than one language. First, they recruited 25 people who spoke one language and 25 who learned a second European language before age 5. All participants spoke English as their primary language. According to research, the brain has two types of tissue visible to the naked eye termed grey and white matter, and studies have shown a correlation between grey matter density in areas such as language, memory, and attention. Brain imaging from the testing showed that bilingual speakers had denser grey matter compared with monolingual participants. The difference was especially noticeable in the brain’s left side, an area known to control language and communication skills. In conclusion, the

researchers stated that although language was thought to be mediated by functional changes in the brain, one's bilingual ability could structurally change the brain.

In its publication, *Education for Global Leadership*, the National Committee for Economic development indicates that children who are exposed to a foreign language at a have greater cognitive development at an earlier age. Likewise, Pease-Alvarez and Hakuta found that there is sizeable literature on the cognitive functioning of bilingual children that suggests that bilingualism promotes cognitive growth. The National Foreign Language Center at the University of Maryland proposed that “cognition” is of the many “primary benefits to the individual” that learns a second language. This same group noted that the cognitive advantages of second and foreign language acquisition were numerous. For example, it has been shown that children who were exposed to a foreign language early in childhood showed stronger listening and memory skills and achieved higher levels of cognitive development sooner than their peers.

In 1962, Peal and Lambert found that bilinguals performed significantly better than monolinguals in most of the cognitive tests and subtests when group differences in sex, age, and socioeconomic status were appropriately controlled. Students who spoke multiple languages performed significantly higher on tests of both verbal and nonverbal abilities. Speakers of more than one language often acquired experience in switching from one language to another, possibly trying to solve a problem while thinking in one language, and then when blocked, switching to another. This habit helped students develop symbolic reorganizational patterns since they demanded a readiness to drop one hypothesis or concept and try another. More specifically Peal and Lambert explained that bilingual children think verbally while performing non-verbal tasks, and are able to

switch from one language to another while performing these tasks. This process creates a habit of switching languages which stimulates the ability to more readily discard doubtful hypotheses and formulate new ones to find a correct solution to the problem involved. Overall, Peal and Lambert determined that speakers of foreign language have a more diversified pattern of abilities than monolingual peers.

Author Leopold noted the direct effect of bilingualism on cognitive development. Several studies have shown that bilinguals are more cognitively “flexible” than monolinguals. The term “flexibility” refers to one’s performance on tests of general reasoning and intelligence. Likewise, in 1977, Ben-Zeev’s studied Hebrew-English bilingual children and found further evidence for cognitive flexibility. When compared to monolinguals, bilingual children showed a marked superiority in symbol substitution tasks which involved children’s ability to substitute words in a sentence according to the experimenter’s instructions. In addition, the students in Ben-Zeev’s study outperformed the monolingual group on certain aspects of matrix transposition tasks and isolating the underlying dimensions of the matrix.

Linguistic and Metalinguistic Implications

Furthermore, Diaz offered insight into the studies of linguistic and metalinguistic benefits of foreign language learners. For example, Leopold suggested that bilingualism promotes an early separation of the word sound from the word meaning and that the separation of sound and meaning leads to an early awareness of the conventionality of words and the arbitrariness of language. Vygotsky saw similar cognitive advantages and stated that “bilingualism frees the mind from the prison of concrete language and phenomena” (38). Furthermore, Vygotsky analyzed metalinguistic awareness and found

that bilinguals could express the same thought in different languages. In terms of semantic development, Ianco-Worrall showed that not only do semantic preferences increase with age, but bilinguals outranked monolinguals in choosing words along a semantic dimension. In addition, bilinguals were more aware than monolinguals of the conventional nature of words and language. In 1978, Cummins investigated metalinguistic development of third and sixth-grade Irish-English students and discovered that on both levels bilinguals showed a greater awareness of the arbitrary nature of linguistic reference. Hakuta investigated two different types of metalinguistic awareness: childrens' awareness of grammatical errors in their first language and their ability to perceive their two languages as different language systems. In the experiment, the metalinguistic awareness tasks consisted of eight ungrammatical Spanish sentences and eight Spanish sentences with one English word in each. The results showed that bilingual children demonstrated recognition of the independence and proper separate usage of their two languages. Finally, in 2001, Demont conducted a study to validate the effects of second language learning on children's linguistic awareness. More specifically, it examined whether a bilingual background improved the ability to manipulate morph-syntactic structure. The results showed an advantage for children who attended bilingual classes since kindergarten; they were better at grammatical judgment, correction tasks, and word judgment.

Bilingualism and metalinguistic skills. Galambos and Golden-Meadow organized an experiment designed to tests the effects of learning two languages on levels of metalinguistic awareness. The research included 32 Spanish-speaking and 32 English-speaking monolinguals. The Spanish and English metalinguistic tests each contained 15

different ungrammatical constructions and 15 grammatically correct “fillers.” For each item, the children were asked in the appropriate language to note whether the construction was correct or incorrect, to correct the errors they noted, and to explain why those errors were wrong. Data suggested that the experience of learning two languages precipitated the development of certain metalinguistic skills in young children but did not alter the course of that development.

Concept-formation Abilities

Similar to Piaget, Inhelder, and Szeminska, Lieder, and Nelson constructed a test on concepts of linear measurement. The test measured six different aspects of linear measurement: reconstructing relations of distance, conservation of length with change of position, conservation of length with distortion of shape, measurement of length, and subdividing of a straight line. The authors found that balanced bilinguals enjoyed some advantages in concept-formation abilities and an even greater grasp of linear measurement concepts and facility to discover additive rules in a string of numbers.

Divergent Thinking Skills and Creativity

Divergent thinking skills and creativity are also directly affected by the ability to speak more than one language. In 1966, Torrance conducted a large-scale study comparing the creative functioning of foreign language speakers versus non-foreign language speakers. Torrance developed tests that measured fluency, flexibility, originality, and elaboration, involving both verbal and visual stimuli. As expected, the results of the study showed that monolinguals surpassed bilinguals on both measures of fluency and flexibility. In addition, bilinguals tested higher in both originality and

elaboration. In order to support the research, Landry (1974) examined the creative abilities of students who were learning a foreign language in FLES (Foreign Language in the Elementary School) programs. Landry disclosed significant advantages on all measures of the Torrance tests and concluded that the flexibility produced by learning a second language was conducive to both divergent thinking and originality.

During the last two decades, many studies have presented evidence showing a positive influence of foreign language learning on a student's cognitive and linguistic abilities. Language learners showed definite advantages on measures of metalinguistic formation, concept formation, field independent and divergent thinking skills. As a result, it can be said that learning a second language accelerates cognitive development by creating an early awareness of the objective and structural components of language.

Academic Benefits

Parents and educators have expressed concerns that learning a second language will have detrimental effects on students' reading and verbal abilities, but research suggested otherwise. In fact, positive correlations have been established in numerous areas: achievement on standardized tests (SAT, ACT, Basic Skills Test, etc.), verbal and nonverbal intelligence, arithmetic testing, major subject areas such as English, reading, and science, and narrowing achievement gaps. Standardized testing has long been a conflicting topic in the national academic agenda. FLL's (Foreign Language Learners) experience benefits in a variety of academic settings. Researchers have even published findings linking students' overall sense of achievement with their participation in foreign language classrooms.

Achievement on Standardized Testing

SAT and ACT. In 2003, the College Board released a number of statements regarding the effects of language learning. Results from the Scholastic Aptitude Test (SAT) showed that students who had studied a foreign language for four or more years outscored other students on the verbal and math portions of the test. Similarly, students who completed at least four years of a foreign language scored more than one hundred points higher on each section of the SAT than students who took a half year or less. In 2004, Cooper and Eddy noted that students who studied four or five years of a foreign language scored higher on the verbal section of the 2004 SAT than students who had studied any other subject for the same number of years. Cooper investigated tests based on the SAT and reported that when verbal ability was controlled, students who studied foreign language for longer periods of time performed at a superior level on various SAT sub-tests and on the SAT verbal section. Similarly, Olsen (1992) analyzed the ACT (American College Test) scores for 17,451 students applying for college admission between 1981 and 1985 and found that high school students who studied a foreign language consistently scored higher on ACT English and mathematics components than students who did not study a foreign language in high school. Timpe (1987) broke down the records of 7,460 students at Southern Illinois University to assess the extent to which foreign language study correlated with ACT performance. For both “gifted” and “non-gifted” control groups, years of foreign language study led to improved composite ACT scores with the highest effect on scores in the English sub-section of the test.

Verbal and Nonverbal Intelligence

Caldas, Boudreaux, Hakuta, Collier, and Abbot correlated bilingual proficiency with higher scores on standardized tests and tests of both verbal and nonverbal intelligence. Armstrong, Rogers, Saunders, Masciantonio, Rafferty, Andrade, and Kretschmer noted that foreign language learners consistently outperformed control groups in core subject areas on standardized tests. Bruck, Lambert, Tucker, Hakuta, and Weatherford found that people who were competent in more than one language consistently outscored monolinguals on tests of verbal and nonverbal intelligence.

Arithmetic and Basic Skills Testing

More specifically, in 1997, Armstrong and Rogers studied the effects of foreign language instruction on reading, math and language arts. Students were randomly assigned to receive 30-minute Spanish lessons three times a week for one semester. The lessons emphasized oral-aural skills and were completed in Spanish. Students in the Spanish classes scored higher than the group without Spanish instruction in math and language on the Metropolitan Achievement Test (MAT). Johnson, Ellison, and Flores conducted a pilot study which compared the effects of foreign language instruction on basic skills. One classroom received Spanish instruction for 25 minutes per day for the spring semester, while the other classroom followed the regular curriculum. The results suggested that the groups receiving language instruction had higher mean scores in arithmetic and English grammar. Furthermore, Lopoto measured over one hundred students in French classrooms. The experimental groups received daily 15-minute French lessons from fluent teachers. Instruction was aural-oral, and the Stanford Achievement Test was given as a re-test at the beginning of the school year. At one of

the school locations, FLL's scored higher on average arithmetic scores, and at another site, students scored higher on the spelling section. In 1986, Rafferty conducted a statewide study in Louisiana which showed that elementary students who participated in 30-minute foreign language programs scored significantly higher on the Basic Skills Language Arts Test. The data suggested that language study contributed to students' ability to acquire language arts skills, and by extension, math skills. Barik and Swain (1978) assessed a Canadian French immersion program in which English-speaking pupils attending English schools were taught partially or completely in French. Students were administered several measures including the Canadian Cognitive Abilities Test and Canadian Test of Basic Skills. The results indicated that immersion group students were on the same level or ahead of regular English students in most academic areas.

Academic Progress in Other Subject Areas

Research has also shown that studying a foreign language leads to academic progress in other areas. For example, through applying the current standard practices of foreign language instruction ("The Five C's"), one finds a direct correlation between studying a foreign language and other content areas: Communication, Culture, Connections with other disciplines, Comparisons with students' native language and culture, and the use of the foreign language in Communities outside the classroom. All of these areas reinforce English course content of other coursework. In 2004, Curtain and Dahlberg found that learning another language can enhance knowledge of English structure and vocabulary. Likewise, Cunningham and Graham (2000) were able to increase native English vocabulary recognition through Spanish immersion programs. Findings support the idea that positive transfer (cross linguistic reference) occurs from

Spanish as a foreign language to native English receptive vocabulary. In 1971, Hoffenberg, analyzed the effect of one year of daily Latin instruction on academic achievement, as measured by the vocabulary section of the Iowa Test of Basic Skills. Results indicated that Latin instruction was effective in building English vocabulary. Dumas discovered in 1999 that children taking foreign language classes did better on the English section of the Louisiana Basic Skills Test than those who did not. A total of 13,200 students of all different races, genders, and academic abilities participated in the survey.

Furthermore, a number of authors, including Armstrong, Saunders, Masciantonio, Rafferty, Andrade, and Kretschmer have noted that time spent in foreign language study strongly reinforces the core subject areas of reading, English language literacy, social studies, and math. One particular study conducted by Armstrong in 1997 found that students scored significantly higher in math and language arts after one semester of foreign language study 90 minutes per week. Eaton (1994) studied students who started kindergarten in Kansas City foreign language magnet schools who surpassed national averages in all subjects by the time they reached fifth grade, especially in mathematics. Saville-Troike (1984) determined that mastering the vocabulary of a second language enhanced students' comprehension and abilities in reading, writing, and mathematics. In 1977, Masciantonio ascertained that early second language study promoted achievement in English vocabulary and reading skills, and foreign language learners consistently scored higher than non-language-learners in measures of English vocabulary, particularly when the language studied had Latin roots.

Reading abilities. Authors D'angiulli, Siegel, and Serra (2001) interpreted the development of reading in English and Italian in bilingual children. In comparing bilinguals to English monolinguals on tasks in English, the bilingual readers scored higher on word-reading and spelling tasks than monolingual readers. Diaz (1982) revealed that recently arrived Puerto Rican students to the United States who participated in bilingual reading programs in Spanish and English performed significantly better than students who did not participate in the programs. More specifically, the results of the study indicated a significant improvement in reading achievement tests. Similar to these experiments, Garfinkel and Tabor (1991) linked foreign language study with improved reading skills for students of average and below average intelligence.

Science. Research indicates a link between second language learning and students' ability to hypothesize in science. In 1980, Kessler and Quinn examined the positive effects of bilingualism on science problem-solving tasks. The experimental group treatment consisted of 12 science inquiry film sessions and 6 discussion sessions, all taught by the same teacher in English. The quality of scientific hypotheses and the complexity of the language used to express them were found to be significantly higher for both experimental and control groups, but the bilingual children consistently outperformed monolingual children both in the quality of hypotheses generated and in the syntactic complexity of the written language.

Second Language Study Narrows Achievement Gains

Early foreign language study is less dependent on previous verbal learning which allows some students to succeed who have otherwise experienced repeated failure in

school. Garfinkel and Tabor (1991) demonstrated that foreign language study could help to alter the trajectory for students of average intelligence and narrow the achievement gap. Furthermore, Cincinnati's Foreign Language Magnet program had a student population that was 57% African American and 43% Caucasian, with 52% of students receiving free and reduced lunch. Achievement for these students far surpassed national norms in reading and math, and the foreign language magnet program had the highest test scores of all other magnet programs in the Cincinnati area. Finally, McGill University (1988) determined that working class students performed just as well in foreign language as middle-class students even though their English skills were not as strong.

Sense of Achievement

Masciantonio (1977), Saunders (1998), and Andrade (1989) in separate studies found that foreign language study is an area where children not accustomed to achievement in school are able to excel. According to these researchers, the resulting benefits to self-image, self-esteem, and satisfaction with school experiences were enormous. Evidence from these studies showed that language students demonstrated a higher self-concept than non-language students. In 1990, Cummins mentioned that language study is an area in which ELL (English language learners) students can be successful in front of their peers, since bilingual children learn additional languages more quickly and efficiently than monolingual children. Furthermore, Cummins (1981) recommended that offering foreign language study to ELL students validates the extension of cultures other than the mainstream. Research supported that studying a second language enhanced a student's understanding of how language itself works, and therefore, increased the ability to manipulate languages in the service of thinking and problem solving.

College Acceptance, Achievement, and Attainment

In 1985, Wiley examined high school foreign language study and its correlation with college academic performance and found that those who studied Latin, French, German, or Spanish in high school may be expected to perform better academically in college than students of equal academic ability who did not take a foreign language. Horn and Kojaku (2001) researched students who were in “rigorous” programs in high school that included three years of foreign language study and found that these students were likely to earn better grades in college and less likely to drop out. It is important to note the students of this study could have already been self-selected as more intelligent which would account for their higher grades in college. Similarly, Bastian (1980) found that graduating high school seniors with two or more years of foreign language study demonstrated superior performance on achievement tests in college English classes compared with non-foreign language students.

All of this research represented a correlation between foreign language learning and academic success. Studies have shown that standardized testing; verbal and nonverbal intelligence; arithmetic skills; major subjects such as English, reading, and science; and achievement gaps are all positively affected by learning a second language. Researchers continue to find numerous correlations with other academic areas as foreign language programming increases.

Cultural Awareness and Competency

According to the research of Piaget and Lambert, the age of ten is a crucial time in the development of attitudes towards nations and groups perceived as “other.” At this age, children are in the process of moving from egocentricity to reciprocity of related

information. In an age of global interdependence and an increasingly multicultural and multiethnic society, early foreign language study offers students unique insight into other cultures and builds cultural awareness in a manner which few other disciplines do. In 2004, Curtain and Dahlberg recognized the value suggesting that exposure to a foreign language builds a bridge to intercultural competence. The understanding of global communities can be improved when children have the opportunity to become immersed in another culture through a foreign language. Furthermore, Curtain and Dahlberg cited instances in which a positive impact of cultural information was significantly enhanced when the foreign language was accompanied by culturally authentic experiences. In 1990, Limburger proposed that experiences in foreign language learning and learning another culture facilitated positive teacher interactions with students in the learning environment. Competent teachers understood that positive self-concept and positive identification with one's culture were the foundations for academic success. Research has even suggested that foreign language learners are more tolerant of the differences among others.

Understanding Security in Community and Society

Research also suggested that attitudes about other people groups are formed by the age of ten and are often developed between the ages of four and eight. As a result, Curtain and Pesola (1988) noted that learning a language at a young age helped to connect a child with another culture while they were still open-minded and have not yet begun to restrict their views of others whom they perceive as different. In addition, Bialystok (2004) studied the benefits of foreign language study throughout one's lifetime and indicated that knowing two languages may help stave off age-related mental decline,

adding to the overall health of a given society. Researchers in this particular study compared monolingual adults to bilingual adults in a test of cognitive function and found that bilingualism offered a protective benefit. The Center of Applied Linguistics also noted the benefits to a society are numerous. Americans fluent in other languages improve global communication, enhance economic competitiveness abroad, and aid in political and security interests. For example, international trade specialists, overseas media correspondents, diplomats, airline employees, and national security personnel need to be familiar with other languages and cultures in order to be successful at their respective occupations. Teachers, healthcare providers, customer service representatives, and law enforcement personnel serve their constituencies more effectively when they can transcend language and cultural barriers.

Career Opportunities

Studies have shown that speaking a second language enhances career opportunities. The National Research Council found in 2007 that studying a foreign language helped students understand English grammar and improved their overall communication and problem-solving skills. Knowledge of a foreign language facilitated travel, enhanced career opportunities, and enabled others to learn about different peoples and cultures. Furthermore, in 2004 Grosse conducted a survey of 581 alumni of The American Graduate School of International Management, and most of the participants said they gained a competitive edge from their knowledge of foreign languages and other cultures. They mentioned that not only was language study often an important factor in hiring decisions and enhancing their career paths, but it also provided for personal fulfillment, mental discipline, and cultural enlightenment. In recent years, the U.S

General Accounting Office has expressed a need for fluent speakers of languages other than English, particularly in less commonly taught languages such as Arabic and Chinese. Carreira and Armengol discovered in 2001 that studying a foreign language directly affected career opportunities. Finally, Villano found that knowing a foreign language can also give people a competitive advantage in the work force by opening up additional job opportunities.

Personal Benefits

An obvious advantage of knowing more than one language is having increased access to people and resources. Individuals who speak and read more than one language possess the ability to communicate with more people, read literature, and benefit more fully from traveling to other countries. Introducing students to differing methods of expressing themselves and to different cultures also gives greater depth to the understanding of human experience by encouraging an appreciation for the customs and achievements of people beyond one's own communities.

Concluding Remarks from Current Literature

In truth, there is no limit to discovering the benefits of learning a second language, and researchers all over the world continue to examine the multi-faceted effects of becoming bilingual. Analysts have shown the numerous cognitive and linguistic benefits including: a correlation between bilingualism and offset of age-related cognitive losses, a positive relationship between bilingualism and intelligence, improved memory skills, problem-solving capability, verbal and spatial techniques, abstract and creative thinking skills, multi-linguistic application, concept formation abilities, and divergent and

creative thinking skills. Research has suggested that academic benefits include: higher achievement on standardized testing, narrowed achievement gaps, improved SAT and ACT scores, verbal and nonverbal intelligence, arithmetic and skills testing, reading and science abilities, sense of achievement and attainment, and college acceptance rates. Cultural benefits include: an increased awareness and competency for other languages and cultures and an increased understanding of community and society. Finally, studies have shown that learning a second language directly effects career opportunities and holds other important personal benefits and implications.

CHAPTER THREE

Methods

Design of Study

Foreign Language Teacher Survey

The Foreign Language Teacher Survey on the effects of second language learning forms the basis for the critical data from the experiment. The language survey consisted of eight questions intended to interview foreign language teachers from the United States to discover the benefits of second language learning and its effect on students. The questions focused on the impact of foreign language learning on students rather than professors or teachers. Personal identification was not used in the survey. Each teacher or professor provided the following information: name, date, subject area, school, and years of foreign language teaching experience. The eight questions in the survey were the following (Appendix B):

- (1) *What are the benefits students gain by learning a second language and/or becoming bilingual (cognitive benefits, academic benefits, cultural awareness and competency, career opportunities, etc.)?*
- (2) *What is your second language, and how did you personally learn this language?*
- (3) *How has second language learning affected your life in a positive way?*
- (4) *Share an example of how learning a second language positively impacted one of your students (economically, socially, personally, etc.).*
- (5) *What is your opinion of the effect of learning a second language on a student's intellectual capacity?*

- (6) *What future opportunities might arise from a student's ability to speak more than one language?*
- (7) *What other aspects of a student's education are directly affected by learning a second language? (For example, other content areas such as mathematics, reading, science, etc.)*
- (8) *Why does foreign language teaching matter, and how do you see your role impacting students?*

The survey was completed in Adobe Forms Central, a program designed to collect and distribute surveys of various kinds. Each teacher or professor responded to the survey electronically using a link provided online. The survey participants completed and submitted their responses to the questionnaire electronically between September 29, 2014, to November 14, 2014. Each respondent answered the questions freely without any specified length. The survey was distributed to foreign language teachers in five categories of institutions: private and public universities, private and public secondary schools, and elementary schools.

Sources for Data

The sources for the foreign language teacher survey included forty-three different participants from schools throughout the United States (Appendix C). This included foreign language teachers of Spanish, French, German, Latin, Russian, and Japanese ranging from Level 1, Level 2, Level 3, or Level 4 (Appendix E). In addition, the participants identified their gender and total years of foreign language teaching experience. Of the forty-three participants, eleven were male, and thirty-two were female (Appendix D). Thirteen worked in private universities, nine in public universities, nine in secondary private schools, ten in secondary public schools, and two in elementary schools (Appendix D). Thirty-three were teachers or professors of Spanish, three French,

three German, two Latin, one Russian, and one Japanese. With regards to the level of language class, twenty-four taught Level 1, twenty-one Level 2, twenty-one Level 3, and seventeen Level 4. More specifically, the participants included seven secondary Pre-AP (Advanced Placement) teachers at Level 2 or Level 3, and eight secondary AP teachers at Level 4. There was also one Level 2 university native speaker course. The number of years of teaching experience ranged from two years to forty years. In total, the participants combined for 790 years of foreign language teaching experience. It is also important to note that eight of the professors taught upper level classes in either linguistics or literature within their respective language.

Variables

There were a number of variables that affected the data collection process. The most significant of these variables was the fact that some of the questions from the survey were either repetitive or overlapped with one another. For example, the first question which addressed the cognitive benefits, academic benefits, cultural awareness, and career opportunities was expressed in similar thematic form in Questions 5, 6, and 7 of the survey. Question 5 dealt with the effect of learning a second language on a student's intellectual capacity which is a cognitive factor. Question 6 addressed the future benefits which arise from a student's ability to speak more than one language which is related to career opportunities. Finally, Question 7 dealt with other academic content areas (such as math, language arts, or science) directly affected by learning a second language which is related to academic benefits. Other variables included professors not providing their level of language teaching (introduction), teaching multiple languages (Question 2), and acquiring multiple first languages at the same time (Question 2). More specifically, in

Questions 2 and 3 which addressed the positive outcomes for both teachers and professors or students, respondents overlapped their responses. Other difficulties arose in Question 7 as the respondents did not reply with a specific subject area directly affected by language learning and in Question 8 in which respondents only partially addressed the issue. Finally, a contributing factor to the data collection process was the extension of the deadline from November 1, 2014 to November 14, 2014 to submit the survey which added approximately ten additional responses to the study.

CHAPTER FOUR

Results: Responses to Second Language Survey

Each question was analyzed individually based on the responses of the various participants. Specific responses were evaluated and chosen to be included in the following sections because of their relevance to the scholarly research and the topic studied. Certain responses were omitted based on their repetition or their irrelevance to the topic. As responses were received for each individual question, the data was organized into graphs displaying the total frequency of all responses. In addition, each question provides concluding remarks which support, reject, or add additional information to the scholarly research.

Question 1

What are the Benefits Students Gain by Learning a Second Language and/or Becoming Bilingual (Cognitive Benefits, Academic Benefits, Cultural Awareness and Competency, and Career Opportunities)?

The purpose of the first question was to directly address the benefits of learning a foreign language as referred to in the scholarly research. In most cases, the respondents of the survey confirmed that learning a second language provides cognitive benefits, academic benefits, cultural awareness and competency, and increased career opportunities. Each time a teacher or professor mentioned a positive relationship between foreign language learning and one of these four categories, a tally was made. The most common benefit was career opportunities (43), while the least common benefit

was Cultural Awareness and Competency (23). Each of the four categories was analyzed independently (Figure 4.1).

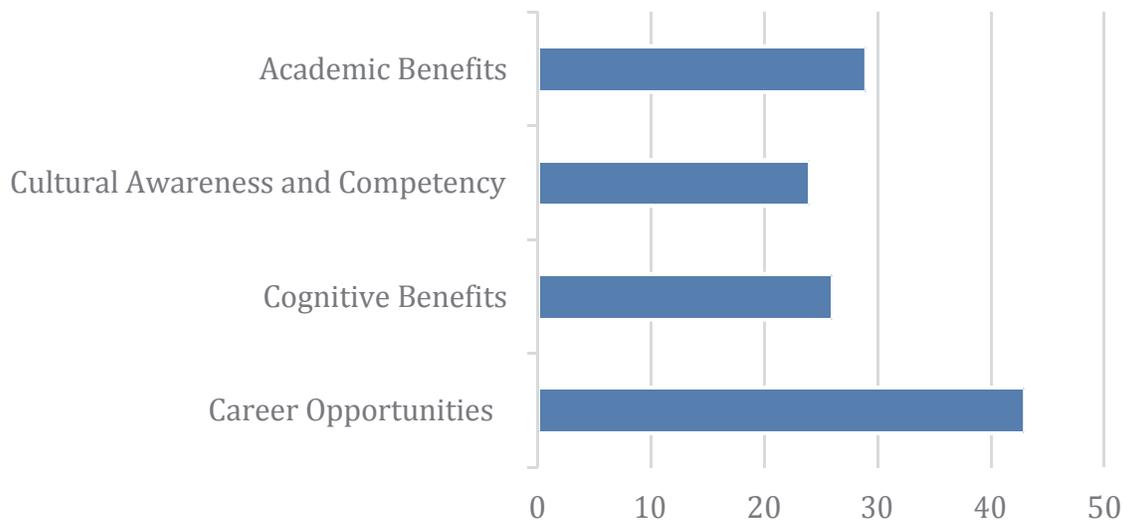


Figure 4.1. Entries based on frequency of benefits of learning a second language.

Beginning with the cognitive benefits, Participants mentioned (1) the prevention of brain deterioration as a result of learning a foreign language; (2) improved logic, reasoning, and critical thinking skills; (3) students' improved IQ through studying a foreign language; (4) how language has power over the ways people think and interact as citizens in a consumer society. Other participants mentioned a student's greater ability to think with precision and the fact that foreign language learning helped students gain cognitive skills that can last a lifetime. They also noted cognitive benefits such as improved engagement of different parts of the brain, increased memory skills and retention rates for other content areas, and more cognitive flexibility facilitated by a sharper mind and memory. Respondents also referenced the brain's ability to understand syntactic and lexical aspects of language and improved metalinguistic awareness from

becoming bilingual. Hence, as one participant mentioned, students improved in their ability to see different patterns and alternative ways of expressing ideas. Another survey respondent commented that students developed the ability to think “outside the box” through second language learning.

Participants observed a general cognitive increase and the positive impact on a brain’s wiring so it functions more effectively in other areas due to learning a second language. Participant 26 commented, “Students who learn a foreign language develop certain mental disciplines that enable them to appreciate language learning as a time-consuming and complex process.” Furthermore, instructors also referenced studies indicating a positive correlation between becoming bilingual and the delay of dementia as well as various medical studies showing positive effects of language learning on overall brain health.

Continuing with Cultural Awareness and Competency, instructors noted the positive connection between learning a second language and cultural awareness and appreciation/respect for others, as follows:

- (1) Improved social interactions.
- (2) General cultural awareness or “sensitivity.”
- (3) Tools to function in different cultures and societies.
- (4) Students gained cultural awareness through developing a desire to help others in the language studied.
- (5) Increased cultural empathy and tolerance for international perspectives.
- (6) Ability to think critically in other cultures and the strength to see the world through a different lens both linguistically and culturally.
- (7) Development of flexibility and awareness of different cultural conditionings which resulted in better communication with real people in real situations.

- (8) Elimination of conflicts which arise among different populations that live in the same location.

With regard to academic improvement, participants noted:

- (1) Access to other content areas such as literature, philosophy, and science.
- (2) Development of the generic vocabulary needed to talk about language.
- (3) Confidence to continue studying language at the university level.
- (4) Insight into one's native language through the discovery and decoding of root words and phrases in English.
- (5) Improved understanding of current international events and governmental systems.
- (6) Ability to think in different patterns and reflect on alternative ways of expressing ideas.
- (7) Increased performance on standardized test, including the SAT and ACT which lead to more scholarship opportunities.
- (8) Skill of reading different nuances in literature texts and greater achievement in reading comprehension.
- (9) Personal poise in speaking.

Furthermore, almost all of the samples highlighted the direct connection between learning a second language and career opportunities. General benefits included: (1) overall hiring advantages and job prospects, (2) overseas jobs, (3) superior qualifications for bilingual applicants in the global working environment, and (4) improved communication skills which lead to advancement in one's career. Salient examples included: (1) career opportunities available to proficient speakers of languages of Spanish, Chinese, or Arabic; (2) Spanish teachers who work as translators in almost every field: teachers, doctors, nurses, policemen, firemen, lawyers, and business owners; and (3) career opportunities in jobs (education, government, psychology, and social work) which require employees to work with diverse people groups and maintain respect

for distinct cultures. In contrast, one participant spoke of the disadvantages of not speaking a second language and how international business partners are less likely to hire non-bilingual applicants. Finally, one respondent utilized the word “crucial” to describe the advantage bilingual applicants have over their monolingual competitors.

Question 2

What Is Your Second Language, and How Did You Personally Learn This Language?

Because the majority of the respondents were Spanish teachers or professors, twenty-eight of the forty-three who participated had learned Spanish as their second language. Of the remaining respondents, four had learned English as a second language, two Latin, five French, one German, one Russian, one Czechoslovakian, and one Tok Pisin (Appendix F). Relating to the second part of Question 2, teachers and professors provided differing reasons for how they learned their second language which included: travel, living overseas, self-taught methods, earning a degree in a second language, teaching a second language, taking classes in a second language, participating in a study abroad program, learning from a family member or close relative, going on a mission trip or other significant religious experiences, marrying a native speaker of the target language, listening to music in the target language, participating in an immersion program, watching television or listening to the radio in the target language, reading books, working in an environment which required the use of the target language, or participating in a summer institute (Figure 4.2). The most frequently cited reason was taking classes in a second language (27) and the least cited reasons were listening to the radio (1), reading books (1), and career or job requirements (1).

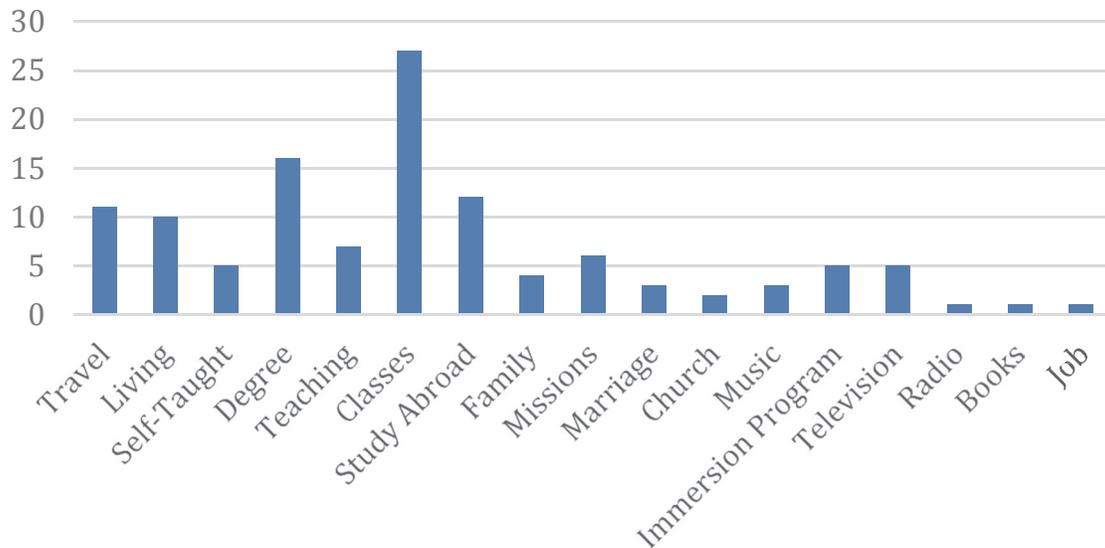


Figure 4.2. Entries based on frequency of resources for learning a second language.

In order to more accurately understand the sources through which these teachers and professors learned their second language, it is important to take note of their individual stories. The uniqueness and variation of their perspectives are compelling. For example, childhood experiences included one instructor who grew up in San Diego, California which borders Tijuana, Mexico, another instructor who learned a second language through growing up in a missionary family in New Guinea, and a third instructor who grew up in a home where parents and siblings only spoke the target language. In the case of another, English was a self-taught second language and was learned simultaneously with the German language. Other unique examples included: (1) learning Latin while taking college classes and earning a Bachelor of Arts degree in language; (2) participating in a study abroad program in Querétaro, Mexico which resulted in the shift of a foreign language minor to a foreign language major; (3) learning French, Spanish, German, and Japanese at the same time; (4) working internationally in Columbia as part of an adult preparation program designed to offer training in language

and linguistics; (5) taking music theory classes which utilized the practical skills of playing scales and arpeggios; (6) earning a Master's Degree in Spain and a Ph.D. in the United States; (7) coming to the United States and listening to television and radio; and (8) developing the ability to communicate in a second language through conversing with immigrant workers.

Question 3

How Has Second Language Learning Affected Your Life in a Positive Way?

The third question focused on the positive effects of learning a second language on the teacher or professor. The various responses ranged from: career, travel opportunities, missions, increased understanding of other cultures and languages, translation, and observances of benefits for students (Figure 4.3). The most frequently noted positive impact was an increased understanding of other cultures and languages (25), while the least frequent was translation (2).



Figure 4.3. Entries based on frequency of positive impacts of learning a second language on teachers and professors.

More specifically, Participant 1 was able to travel extensively throughout Europe where knowing the second language enabled the respondent to see the beauty in different cultures and languages. These experiences were brought into their classroom which ignited a similar passion for language and culture in their students. Feeling confident and privileged to know a second language, Participant 2 mentioned how work opportunities doubled because of their ability to communicate between two different languages. Winning grants and various scholarships, obtaining a teaching assistant position, making international contacts, and acquiring the experience needed to be hired in a teaching position, Participant 4 cited the obvious positive effects in employment through learning a second language. Traveling extensively with students overseas, Participant 5 referenced how teaching a second language opened doors for students to learn the language and interact with people groups in other countries. Coordinating multiple mission trips to Mexico and interacting with native Spanish speakers, Participant 8 highlighted a new found respect and love for Hispanic culture. Raising bilingual children and connecting with new friends throughout the world, another participant mentioned the importance of knowing a second language in order to be a translator in various communities in the United States especially in the South. Likewise, Participant 16 had worked as a professional translator and interpreter in the target language and acquired a global understanding of different international cultures. Respondent 21 noted the overall advantage which bilinguals hold over monolinguals in communication throughout the world. Noting the difficulty of learning a second language and acquiring fluency, another survey respondent discussed an improved empathy and compassion toward immigrant groups in the United States. Broadening perspectives and developing an awareness of

different subcultures, one instructor believed learning a second language positively changed their worldview and caused them to be excited rather than fearful of changing worldwide demographics. Participant 35 spoke of an increased humility and hospitality toward foreigners, while Participant 38 attributed learning a second language to attaining steady employment and raising a family. Finally, Participant 43 mentioned the overall satisfaction that language teaching provided through knowing they are contributing to the world in a positive manner.

Question 4

Share an Example of How Second Language Learning Positively Impacted One of Your Students (Economically, Socially, Personally, Etc.)?

This survey question was intended to address the multi-faceted, positive impact of learning a second language on students (Figure 4.4). The benefits included:

- (1) Obtaining a degree in the target language.
- (2) Participating in an overseas mission trip.
- (3) Being better equipped to learn a third language.
- (4) Participating in a study abroad program.
- (5) Developing new friendships and increased social skills.
- (6) Marriage.
- (7) Increased awareness of other cultures and people groups.
- (8) Traveling internationally.
- (9) Obtaining scholarships.
- (10) Translating in significant settings.
- (11) Career and job opportunities.
- (12) Other academic benefits.

The most common benefit for students was career and job opportunities (16), and the least common benefits were marriage (3) and scholarship (3).

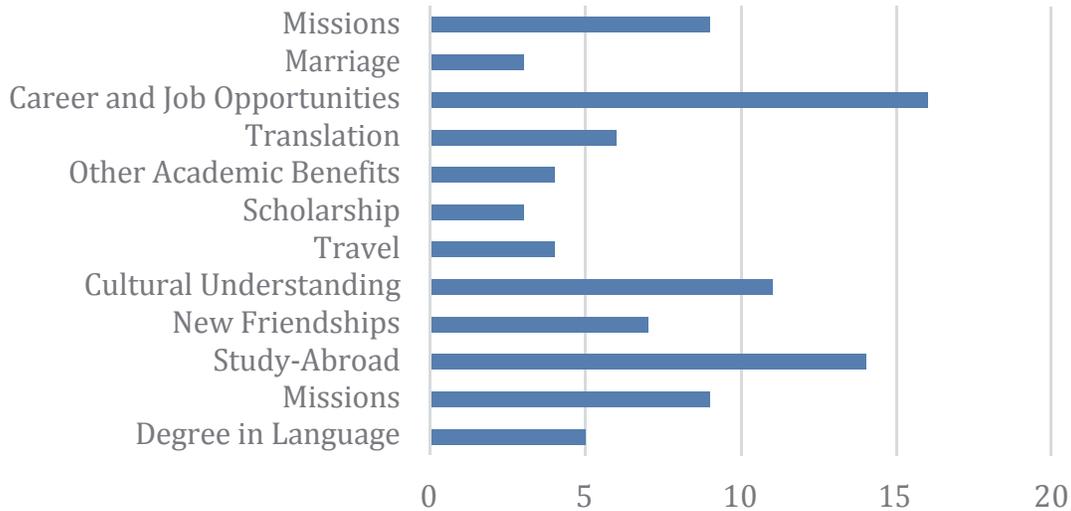


Figure 4.4. Entries based on frequency of positive impacts of learning a second language on students.

In answering Question 4, most of the teachers and professors responded with anecdotes citing personal stories of how second language learning positively impacted one of their students. General categories included: overall positive impact of language learning for their students, admission to academic programs based on their second language, and qualified for summer study abroad programs which earned college credit. These same students expressed an advantage in comprehending grammar and vocabulary in other collegiate classes compared to their peers. Participant 6 cited a particular student who was able to obtain a year-long Fulbright Scholarship teaching English in Malaysia. Although the second language was not related to the Malaysian language, the study abroad experience developed confidence in the student's ability to reach out to another culture. Eventually becoming a missionary in New Guinea through Wycliffe Translators,

Participant 8 referenced a student who found the mastering of a second language simplified the learning of a third language. Another instructor stated students who were bilingual had a greater acceptance rate to medical schools than students who were monolingual. One respondent mentioned a student who eventually obtained a Ph.D. in the target language from an international school and as a result married into a Hispanic family. Knowing a second language enhanced students' employment opportunities in the areas of health care, business, and ministry. For example, a bilingual student is now one of the most prominent immigration lawyers in the United States. Other former students obtained translation careers in international shipping companies and multi-national businesses. A Japanese professor noted students' capacity to approach the Japanese people group and culture with confidence and ease when traveling abroad. Taking courses in a second language also transformed students' perspectives on how they voted in local and national elections. Participant 35 discussed a student who developed a passion for the Spanish language and eventually taught Spanish at the secondary level. Obtaining employment and earning over \$100,000 per year working for a Fortune 500 company in its international business division, Participant 38 referenced a student who returned to college to earn a double major in Spanish and economics. Finally, Participant 43 mentioned students who are now working as immigration lawyers, doctors, nurses, and speech pathologists who can communicate effectively with patients who are unable to speak English.

Question 5

What Is Your Opinion on the Effect of Learning a Second Language on a Student's Intellectual Capacity?

As previously mentioned, much of the preliminary scholarly research focused on the cognitive benefits of learning a second language and/or becoming bilingual. By focusing on how language learning directly affects brain patterns, multiple scholars researched the direct effects on the brain through different testing methods. To more accurately address the cognitive benefits, Question 5 was included in the survey to focus on the improvement in a student's overall intellectual capacity. As a result, additional cognitive benefits were discovered.

Multiple respondents highlighted improved mental acuity, prevention of the onset of dementia, and the brain's overall long-term health. Participant 8 mentioned that students were more intellectually capable because learning a foreign language utilized more parts of the brain, while Participant 9 focused on how students' brains were rewired. They also noted the ability to make cognitive comparisons between different languages and to have increased linguistic precision due to fluency in multiple languages. Participant 2 cited specific examples of students who developed problem solving skills and the ability to use language creatively in various scenarios. They acknowledged how metalinguistic awareness (the ability to talk about language and visualize systems and patterns) improved through discerning and imitating sounds in other languages. Some instructors mentioned improved creative thinking and problem solving skills. Other instructors believed that second language teaching enabled students to be more intellectually curious. For example, Participant 18 stated that knowing a second language stretched one's mental capacity, and Participant 19 noted how mastering a language

required the development of the five senses. Second language learning also disciplines the brain to learn various memorization skills. Thus, some respondents emphasized how different language learning patterns caused students to create new utterances. Participant 22 correlated foreign languages with increased brain connections in other fields of study. Participant 25 held that bilingualism contributed to well-rounded intellectuals who had strong and well-conditioned minds. Participant 28 also noted the cognitive benefit of a disciplined brain which helped develop consistent and efficient study skills, and others noted how language study kept the brain sharp (mental flexibility or elasticity, memory, and brain development). One respondent focused on the mind's broadened understanding of creative and "outside the box" thinking. By deciphering the code of a new language while listening to a stream of speech, instructors also emphasized students' increased awareness of strategizing and thinking critically. For example, they mentioned higher-level thinking skills developed through learning a second language.

Question 6

What Future Opportunities Might Arise from a Student's Ability to Speak More Than One Language?

The scholarly research provided insight into career opportunities for bilingual students, and Question 6 added to the literature through broadening the context of future opportunities. In general, participants tended to focus bilingual students' advantages in hiring and increased contributions in the following fields:

- (1) Business, translation, government, immigration, and education.
- (2) Medical personnel and translators in hospitals.
- (3) Bilingual teachers in health care, law, social work, social services, and science.

(4) Bilingual pharmacists, police officers, counselors, and clerks.

(5) Homeland security, military, and national defense.

(6) All fields of public or interpersonal nature.

Personally, bilingual students benefited in: (1) the ability to work with diverse people groups in mission fields throughout the world, (2) broadening global connections, (3) economic advantages especially in international communities who expand in overseas markets and consistently pay higher wages to bilingual staff, (4) increased variety of career options, (5) and a competitive edge in the job market. In the community, students gained: (1) social skills and improved interaction with their international peers, (2) the ability to build bridges with different people groups close to home, (3) and an overall involvement in community-based projects and programs.

Question 7

What Other Aspects of a Student's Education Are Directly Affected by Learning a Second Language (For Example, Other Content Areas such as Mathematics, Reading, Science, Etc.)?

Most of the scholarly research referring to the academic benefits of learning a second language focused on students' achievement on standardized tests with only a few references to improvement in other academic content areas. However, the current ACTFL guidelines emphasize "Connections" as one of the "5 C's" for language learning. Question 7 provided support for the specific content areas of a student's education directly affected by learning a second language or becoming bilingual. More specifically, participants noted the positive connection between learning a second language and reading (17 instructors), mathematics (16), science (11), history (8), social studies (8), students' native language (8), music (8), writing (7), speech (5), art (3), geography (2),

religion (1), law (1), and drama (1). The highest frequency response was reading (17), while the least frequent responses were religion (1), law (1), and drama (1).

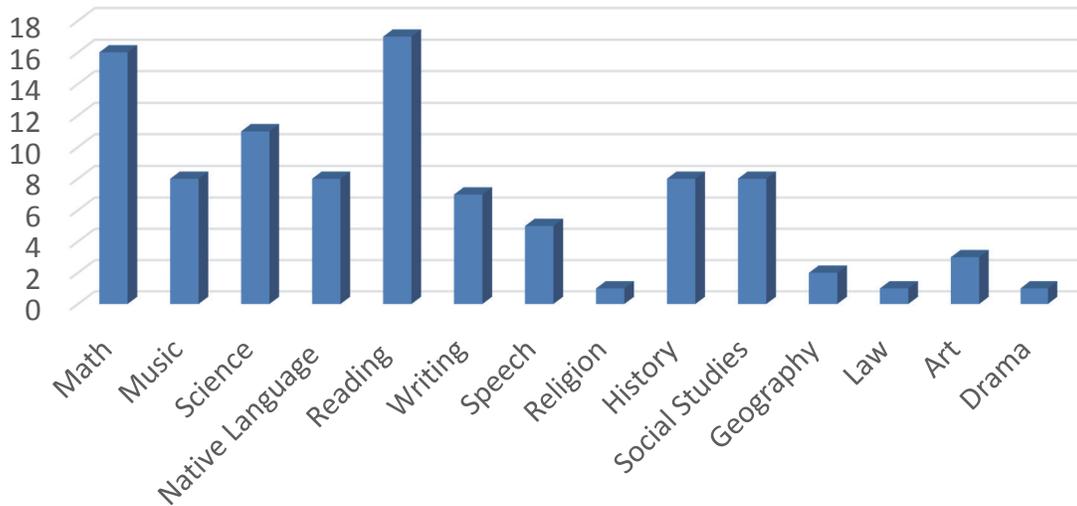


Figure 4.5. Other subject areas affected by second language learning.

Focusing on the specific parts of the brain utilized for learning math, reading and music, Participant 1 connected language learning with these other content areas. Developing the skills required to manipulate equations, Participant 2 mentioned a positive correlation between math, science, and second language learning. Participant 4 emphasized a student's improved vocabulary acquisition and utilization skills as well as the ability to handle abstract concepts in reading, writing, literature, speech, and problem solving skills. Participant 7 cited examples of various students who now understand the grammar rules of English more effectively after learning Spanish. Participant 9 believed students who studied French or German expanded their overall reading skills; while Participant 11 noted a student's increased understanding of history, geology, and world politics. With regard to Latin, several teachers noted an increased awareness in music,

art, science, and law or of Latin roots in biology and chemistry. Referencing the relationships between art, drama, and music, Participant 18 mentioned a student's development of different creative thinking skills through learning a second language. Another respondent focused on how language study transferred general writing conventions and developed reading skills that led to overall awareness and deeper understanding of foreign cultures. Participant 32 believed knowing a second language improved a student's understanding of language structure which provided for greater access to research materials in a variety of content areas. Finally, participant 36 stated that students expanded their understanding of geographic regions worldwide.

Question 8

Why Does Foreign Language Learning Matter, and How Do You See Your Role Impacting Students?

The final question from the survey addressed the broader question of why foreign language learning is important and how educators view their role inside the classroom. This was perhaps the greatest contribution of the thesis data because it illustrated how the language profession viewed itself and its broader impact. Many of the instructors viewed their role as “character coaches” in: (1) helping students become more self-aware and self-reflective, (2) developing an attitude of humility and integrity toward the difficult process of learning a second language, (3) fostering maturity, (4) sharpening life skills, (5) encouraging flexibility through connecting real-life conversations with real-life experiences and modeling sensitivity in peer interactions, (6) reducing prejudices towards minorities, (7) cultivating appreciation, thankfulness, and patience, (8) developing study disciplines that apply to other content areas, (9) eliminating fear, discrimination,

prejudices, and oppression towards other people groups (10) narrowing students' goals and aspirations which leads to a more meaningful career, (11) and learning to accept correction and value the process of working hard to obtain various goals. In addition, teachers and professors viewed their role as classroom facilitators as follows:

- (1) Expanding students' worldviews through encouraging adeptness to other viewpoints.
- (2) Broadening and overcoming students' limited vision of world systems through modeling other people groups and exposing students for the first time to different cultures.
- (3) Encouraging students to understand the complex background and manners of living for different people groups through focusing on the social issues which pertain to each individual culture.
- (4) Enriching personal lives through helping students to think creatively and critically.
- (5) Eliminating the tendency for students to isolate themselves from the rest of the world.
- (6) Challenging students to be multilingual citizens through developing relationships with competitive global business partners.
- (7) Connecting students to international communities and study-abroad programs.
- (8) Sparking interest in future study of language
- (9) Helping students to see and reach their full academic potential through consistent encouragement and affirmation.

More specifically, one salient example cited how the Modern Language Association (MLA) explained trends in American society and in its ability to produce a multicultural and multilingual citizenry. This example proved that language instructors see themselves not only as individuals but also as ones accountable to a larger association. Another unique response noted that monolingualism in the 21st century is the equivalent of illiteracy in the previous century and educated citizens are fluent in multiple languages. Finally, one teacher summed up the profession's role in this way: "Language

teachers are ambassadors for changing the attitudes and perspectives of students towards other cultures.”

CHAPTER FIVE

Discussion: Synthesis of Second Language Survey and Scholarly Research

Implications from Question 1: Cognitive Benefits, Academic Benefits, Cultural Awareness and Competency, and Career Opportunities

The survey supported the studies conducted by scholars in the field while also adding additional insight. Respondents validated the research claims for the cognitive benefits of learning a second language in the following areas: correlation between bilingualism and the offset of age-related cognitive losses, intelligence, memory skills, problem-solving skills, verbal and spatial abilities, abstract and creative thinking skills, flexibility of the brain, metalinguistic skills, and divergent thinking skills. While the language utilized by the respondents and the researchers was similar, the survey provided additional benefits not mentioned by scholars. For example, respondents noted the positive effect of language learning to offset dementia. Researchers in the field tended to draw conclusions about cognitive benefits based on specific tests created specifically for measuring cognitive ability, while the respondents of the survey tended to draw upon personal knowledge and personal examples.

Academically, both scholars and survey respondents mentioned similar correlations between learning a second language and students' education including: improved SAT and ACT scores, arithmetic and basic skills testing, standardized testing, reading, science, college acceptance rates, and students' sense of achievement. The survey provided additional implications not mentioned by previous research: access to other linguistics groups in the areas of philosophy and theology, insight into students'

native languages related to vocabulary and grammar, the discovery of root words in the native language, and advanced test-taking strategies. Of particular note, teachers and professors who completed the survey failed to comment on the narrowed achievement gaps and improved non-verbal intelligence indicated by research. Once again, researchers tended to analyze specific standardized tests to provide support for their claims on academic benefits, while the respondents of the survey utilized real-life experiences.

With regard to cultural awareness and competency, terminology differences arose in communicating the benefits of bilingualism. Scholars researched the critical age for acquiring a second language and linked their findings to a child's improved ability to understand other world cultures. In addition, the academics concentrated on internal cultural competence, positive self-concept and/or self-identification with one's own culture, global communication, and international economic competitiveness. In contrast, respondents to the survey emphasized students' improved character and included more value-based statements such as: an appreciation and respect for other people groups and an increased tolerance for international perspective, cultural empathy and sympathetic feelings towards members of a different race, improved social skills and social interaction, and an overall expanded world-view. Most of these findings are descriptive and not easily measured, yet the quantity of language teachers mentioning these advantages illustrates that these are perceived and experienced benefits in real life.

The association of career opportunities and learning a second language remained consistent between researchers and survey respondents. Both groups mentioned the competitive edge students gain in the job market through being bilingual, the value of

second language learning in hiring decisions, and the personal fulfillment and mental discipline associated with improving one's work environment. The survey respondents mentioned additional benefits in improved qualifications for international internships and the increased need for translators in every major work field.

Implications from Question 2: Teachers' Second Language and How They Personally Learned This Language

Question 2 contributed pertinent knowledge to the study of the benefits of learning a second language. The diverse responses collected from Question 2 suggest that foreign language learners gain new insights from student-teacher and student-professor interactions. The variance in root source for learning a language demonstrated by the respondents substantiates the broadened world-view students gain from language teachers and professors. Responses encompassed: travel, living overseas, self-teaching methods, earning a degree, teaching a second language, taking classes in a second language, participating in a study abroad program, learning from a family member or close relative, going on a mission trip, marrying a native speaker, listening to music, participating in an immersion programs, watching television or listening to the radio, reading books, working in an environment which required the use of the target language, participating in a summer institute, or benefitting from private lessons. Furthermore, individual teachers offered unique insights into other cultures and perspectives because of their divergence in travel, familial ties, and studying or living abroad. Many countries such as Mexico, Papua New Guinea, Columbia, Spain, and Japan, were mentioned in the survey. These international experiences are irreplaceable in the classroom and provide a language and cultural understanding that can only be acquired through first-hand

experience. Students become more equipped to develop cultural awareness and competency because of the unique backgrounds of these teachers and professors in the United States.

Implications from Questions 3 and 4: Effects of Language Learning on Teachers and Professors and Examples of how Language Learning has Positively Impacted Students

Questions 3 and 4 furthered the research on the benefits of learning a second language by isolating the outcomes into two separate categories: students versus teachers and professors. More significantly, these questions expanded on the personal benefits associated with language learning. In examining scholarly articles, previous studies lacked contributions beyond the four major areas of cognition, academia, cultural awareness, and career opportunities. Although these categories are linked to personal benefits, sources failed to extend the research by thoughtfully dissecting the areas of cognition, academia, cultural awareness, and career opportunities. Closer examination of the survey provides additional assertions for personal benefits from learning a second language. Question 3 frequently produced responses citing specific examples of teachers and professors who benefited from teaching a second language in the following areas: career opportunities, travel enjoyment, overseas mission work, increased understanding of other cultures and languages, translation, and direct benefits for students. Question 4 generated similar responses for students in these areas: obtaining a degree, participating in overseas mission trips, learning a third language, study abroad programs, new friendships, social skills, awareness of other cultures and people groups, traveling internationally, scholarships, translation, career opportunities, and marriage. In total, nearly 150 examples were shared noting students, teachers, and professors who

personally benefited in these areas from knowing a second language. Most interesting is the fact that most of these fields were derived from the instructor's personal experiences.

Implications from Question 5: Language Learning on Intellectual Capacity

Examples of cognitive benefits provided additional support to various scholars who have identified similar patterns of language learning. In addition, they provided unique perspectives into the scholarly literature and offered new insights into the cognitive benefits of learning a second language. These insights included an improvement in the following areas: articulation across multiple languages, stimulation of intellectual curiosity, the ability to discern and imitate sounds in other languages, enhancement of the five senses, and developments in brain discipline and memorization skills. With the addition of Question 5 to the survey, new insights were discovered regarding the effects of learning a second language on the brain.

Implications from Question 6: Future Opportunities for Bilingual Students

Answers to Question 6 suggested multiple opportunities arising from second language acquisition; for example, increased involvement in international missions, business, government, health care, law, social work, sociology, and translation. Each of these areas were supported by teachers and professors who mentioned specific instances of students working in these occupations and contributing in a positive manner to the work environment.

Implications from Question 7: Other Content Areas Directly Affected by Learning a Second Language

Question 7 reinforced the academic benefits of learning a second language and extended previous research by noting teachers and professors who mentioned other content areas directly affected in a student's education. The variety of subject areas positively impacted through bilingualism supported the claim that students apply the methods and practices of language learning to other classes at the primary, secondary, or tertiary level. Content areas mentioned by survey participants included: reading, math, science, history, social studies, the student's native language, music, writing, speech, art, geography, religion, law, and drama. Of these fourteen categories, math and reading held the highest frequency. Each subject area directly affected by language learning provided additional insight into the academic benefits in the field of study.

Implications from Question 8: Why Foreign Language Teachers Matter

Question 8 was included in the survey to support the academic literature as well promote language teaching in America. Some additional benefits mentioned by the respondents of the survey included: increased self-awareness, self-reflection, self-evaluation, increased humility, patience and integrity towards the demanding process of acquiring a second language; reduced anger and oppression towards other people groups considered "other" by the student; and improved study skills in all subjects. Furthermore, responses provided insight into the different ways instructors view their roles as language teachers. Their particular opinions are worth noting: Language teachers are facilitators and guides who encourage and affirm students on the journey of learning a second language; Language professors provide a means for students to contribute and

communicate in real-life situations. Furthermore, teachers of language are ambassadors for changing attitudes and perspectives of students towards other cultures.

Closing Remarks

Although the process of acquiring a second language is often daunting at first, and it may be difficult to see immediate progress, the finish line is closer than most language learners recognize. The tedious journey begins with basic grammar rules; expands to vocabulary, reading, and writing; and finishes with conversation skills and fluency. Despite the hurdles that most students face on the journey, benefits from learning a second language are too numerous to disregard. Cognitive benefits, academic benefits, cultural awareness, career opportunities, and personal gains are all advantages of bilingualism. Students acquire skills to transcend language and cultural boundaries throughout the world. Students at all levels (primary, secondary, and tertiary) possess a unique opportunity to offer a priceless commodity to their international peers: the gift of language. As Carlos Fuentes stated, “Monlingualism is a curable disease.”

APPENDICES

APPENDIX A

Letter to Professors and Teachers of Foreign Language

Dear Foreign Language Teachers and Professors,

My name is Ben Moss, and I am currently completing a Master's Degree in Spanish at Baylor University in Waco, TX. In May of 2013, I graduated from Baylor with a B.A. in Secondary Education (with a teaching emphasis in Spanish) and decided to pursue my love for the Spanish language further. During my undergraduate experience, I had the opportunity to intern in a number of secondary schools within the Waco and Midway Independent School Districts and began to realize the many benefits of foreign language teaching. Learning another language truly is a priceless gift that provides opportunities that can completely transform a student's life. It is for this reason I decided to pursue a field-based thesis project within my Master's Degree designed to represent foreign language teachers across the nation. I hope this project will provide support to language learning in America and will give an in-depth analysis of the positive effects associated with second language acquisition. Your assistance in completing the attached survey is greatly valued and appreciated.

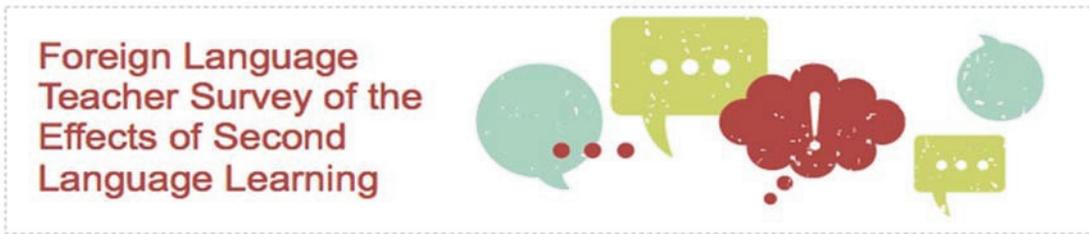
Sincerely,

Ben Moss

The survey is exempt from IRB qualifications at Baylor because it is for anonymous adults, and no professor or teacher names will be used in the final thesis product.

APPENDIX B

Foreign Language Teacher Survey of the Effects of Second Language Learning



Name (No names will be utilized in the thesis)

Date



Subject Area (Please be specific):

Ex.- Pre Ap Spanish 3

School (public high school, private school, university): Ex.- Baylor University

Years of Foreign Language Teaching Experience:

Ex.- One Year, Two year, etc.

Guidelines: This survey is intended to interview foreign language teachers from the United States to discover the benefits of second language learning and its effect on students. These questions focus on the impact of foreign language learning on students, NOT on teachers. Please respond in detail to the following questions. Personal identification information will NOT be used in the thesis. Thank you for your time in contributing to this research initiative and for selecting one of the most valuable professions in the world: teaching.

1. What are the benefits students gain by learning a second language and/or becoming bilingual (cognitive benefits, higher achievement on standardized tests, cultural awareness and competency, career opportunities, etc.)?

2. What is your second language, and how did you personally learn this language?

3. How has second language learning affected your life in a positive way?

4. Share an example of how second language learning positively impacted one of your students (economically, socially, personally, etc.).

5. What is your opinion on the affect of learning a second language on a student's intellectual capacity?

6. What future opportunities might arise from a student's ability to speak more than one language?

7. What other aspects of a student's education are directly affected by learning a second language? (For example, other content areas such as mathematics, reading, science, etc.)

8. Why does foreign language teaching matter, and how do you see your role impacting students?

9. Any final thoughts/comments?

APPENDIX C

Foreign Language Teacher Survey Critical Data *Master*

Foreign Language Teacher Survey of the Effects of Second Language Learning: Critical Data *Master*

#	Male	Female	UPR	UPU	SPR	SPU	ELEM	SPAN	FREN	GER	LAT	RUS	JAP	OTHER	Level of Language Class				Years of Teaching						
															1	2	3	4							
1		✓		✓	✓											✓	✓		✓	AP	16				
2		✓								✓						✓						2			
3	✓			✓				✓							LIT							27			
4		✓									✓									✓	PAP	✓	AP	8	
5	✓		✓					✓												✓	H			17	
6				✓				✓												✓				24	
7		✓			✓			✓												✓				16	
8	✓			✓				✓												✓				10	
9	✓			✓				✓	✓	✓										✓				30	
10	✓			✓				✓												✓	PAP	✓	AP	8	
11		✓			✓			✓												✓				12	
12		✓	✓					✓												✓				27	
13		✓						✓												✓				8	
14	✓				✓			✓												✓				24	
15		✓	✓					✓												✓				40	
16		✓					✓	✓												✓				10	
17		✓			✓			✓												✓				36	
18		✓			✓			✓												✓				34	
19	✓			✓	✓			✓												✓			✓	AP	8
20		✓		✓				✓							LING					✓				35	
21		✓	✓					✓							LIT					✓				36	
22		✓				✓		✓												✓			✓	AP	30
23		✓				✓		✓												✓	PAP			8	
24		✓				✓		✓					✓							✓	PAP	✓	AP	19	
25	✓					✓		✓												✓	PAP	✓	AP	2	
26		✓				✓		✓												✓	PAP			5	
27		✓				✓		✓												✓				2	
28		✓		✓				✓												✓		✓		25	
29	✓					✓		✓												✓		✓		16	
30		✓				✓		✓												✓	PAP			5	
31		✓		✓				✓							LIT					✓				26	
32		✓	✓					✓												✓				30	

Foreign Language Teacher Survey of the Effects of Second Language Learning: Critical Data *Master*

33		✓		✓				✓											✓	✓	✓	✓		25	
34		✓		✓				✓							LIT					✓				17	
35		✓		✓				✓												✓		✓		24	
36		✓				✓		✓	✓											✓		✓	✓	AP	4
37		✓				✓		✓												✓	PAP	✓	AP	20	
38	✓			✓				✓												✓		✓		29	
39		✓		✓				✓												✓		✓		15	
40		✓		✓				✓												✓		✓		2	
41		✓		✓				✓				✓								✓		✓		13	
42		✓		✓				✓	✓						LIT					✓		✓		12	
43		✓		✓				✓							LING					✓				33	
TOT	11	32	13	9	9	10	2	33	3	3	2	1	1						24	21	21	17		790	

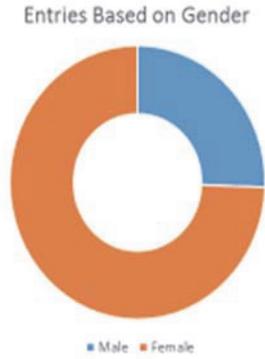
KEY	
UPR=	University Private
UPU=	University Public
SPR=	Secondary Private
SPU=	Secondary Public
ELEM=	Elementary
SPAN=	Spanish
FREN=	French
GER=	German
LAT=	Latin
RUS=	Russian
JAP=	Japanese
LIT=	Literature
LING=	Linguistics
H=	Heritage Speakers
PAP=	Pre-AP
AP=	AP
TOT=	Total
#=	Entry Number

APPENDIX D

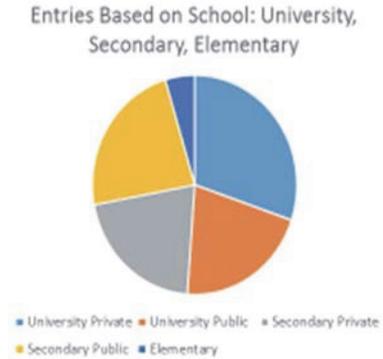
Entries Based on Gender and Entries Based on School: University, Secondary, Elementary

Critical Data

Critical Data #1



Critical Data #2



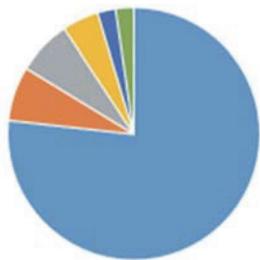
APPENDIX E

Entries Based on Language and Entries Based on Level of Language Class

Critical Data

Critical Data #3

Entries Based on Language



■ Spanish ■ French ■ German ■ Latin ■ Russian ■ Japanese

Critical Data #4

Entries Based on Level of Language Class



■ Level 1 ■ Level 2 ■ Level 3 ■ Level 4 ■ Other

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